Insights

Core Portfolio Construction Principles

A strong flexible portfolio begins with the core. It provides a stable foundation to pursue specific investment goals. An effective core may differ from one investor to the next, but four construction principles apply to all.

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A strong, flexible portfolio depends on how you allocate assets in the core. That's because the core is the largest part of a portfolio and research has long shown that asset allocation decisions explain over 90% of the variance in portfolio returns.[1] Simply put, it all starts with asset allocation. And today's low return expectations make building a low-cost, diversified core more important than ever, as costs accumulate over time, eroding a portfolio's total return.

While an effective core may look different for each investor, we believe that there are four principles to core construction:

1. Broaden Your Reach
2. Customize to Your Client's Needs

3 Control Costs

4 Impose Discipline

1. Broaden Your Reach

We believe today's core should reflect an expansive investment universe, including US equities, international equities and fixed income. Investors have a well-documented tendency to exhibit a home bias (a heavier allocation to domestic stocks).[2] Given how globalized the economy has become, where countries outside the US represent 75% of nominal global GDP,[3] international equities are essential to broaden reach, mitigating any home bias tendency.

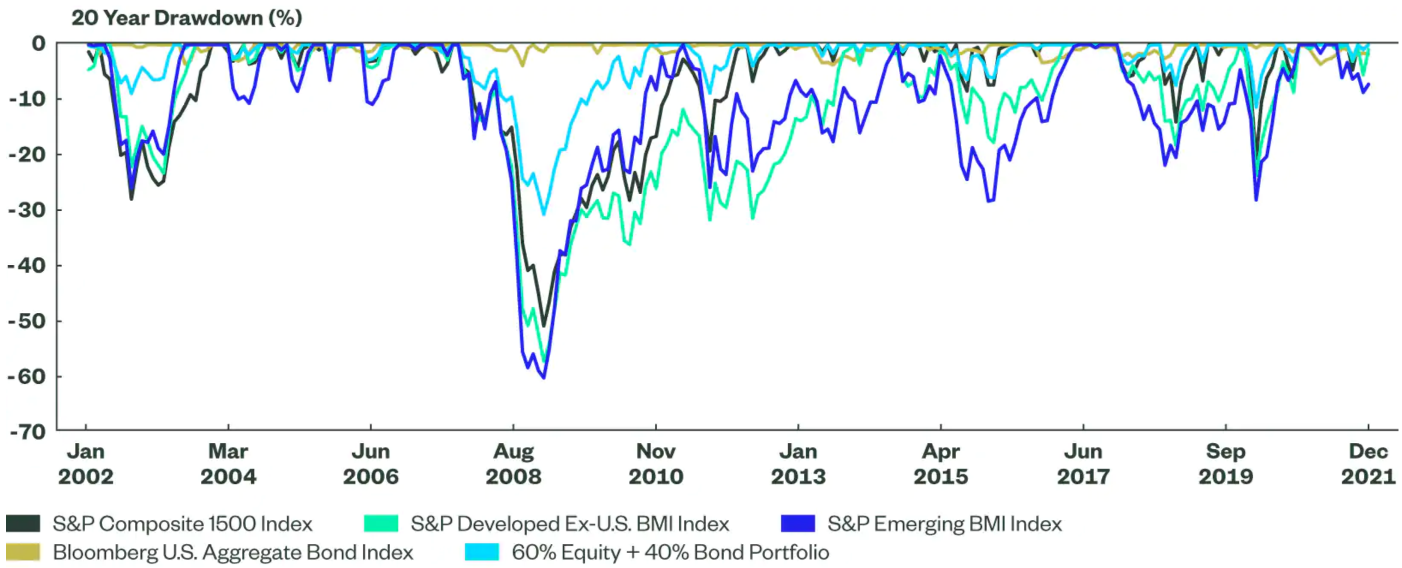
Yet, while a portfolio concentrated in equities has historically generated strong returns over the long term, these returns merely compensate for the higher risks assumed. And not all investors can tolerate the significant drawdown risk inherent within equities. Diversifying your core by allocating to bonds may help mitigate portfolio drawdowns and improve returns per unit of risk.[4] As shown in Figures 1 and 2, relative to a pure equity portfolio, a hypothetical portfolio comprised of 60% equity and 40% fixed income reduced drawdowns and more quickly recovered its maximum losses after stock market crashes.

Figure 1: Broaden Reach for Potential Diversification Benefits

Description	20 Year						
	Annualized Return	Annualized Standard Deviation	Return per Unit of risk	Max Draw Recovery Period	Max Drawdown	Worst Return 1 Year	Best Return 1 Year
S&P Composite 1500 Index	9.68	14.79	0.65	37.00	-50.84	-43.18	58.73
60% Equity + 40% Bond Portfolio	7.77	8.99	0.86	20.00	-32.67	-27.88	38.77

Source: FactSet, for the period from 01/01/2002 to 12/31/2021. The 60% Equity + 40% Bond Portfolio consists of 36% of the S&P Composite 1500 Index, 17% of the S&P Developed ex-U.S. BMI Index, 7% of the S&P Emerging BMI Index, and 40% of the Bloomberg U.S. Aggregate Bond Index, rebalanced annually, without considering transaction costs. The returns were achieved by mathematically combining the actual performance of the indexes listed above. **Past performance is not a reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income.

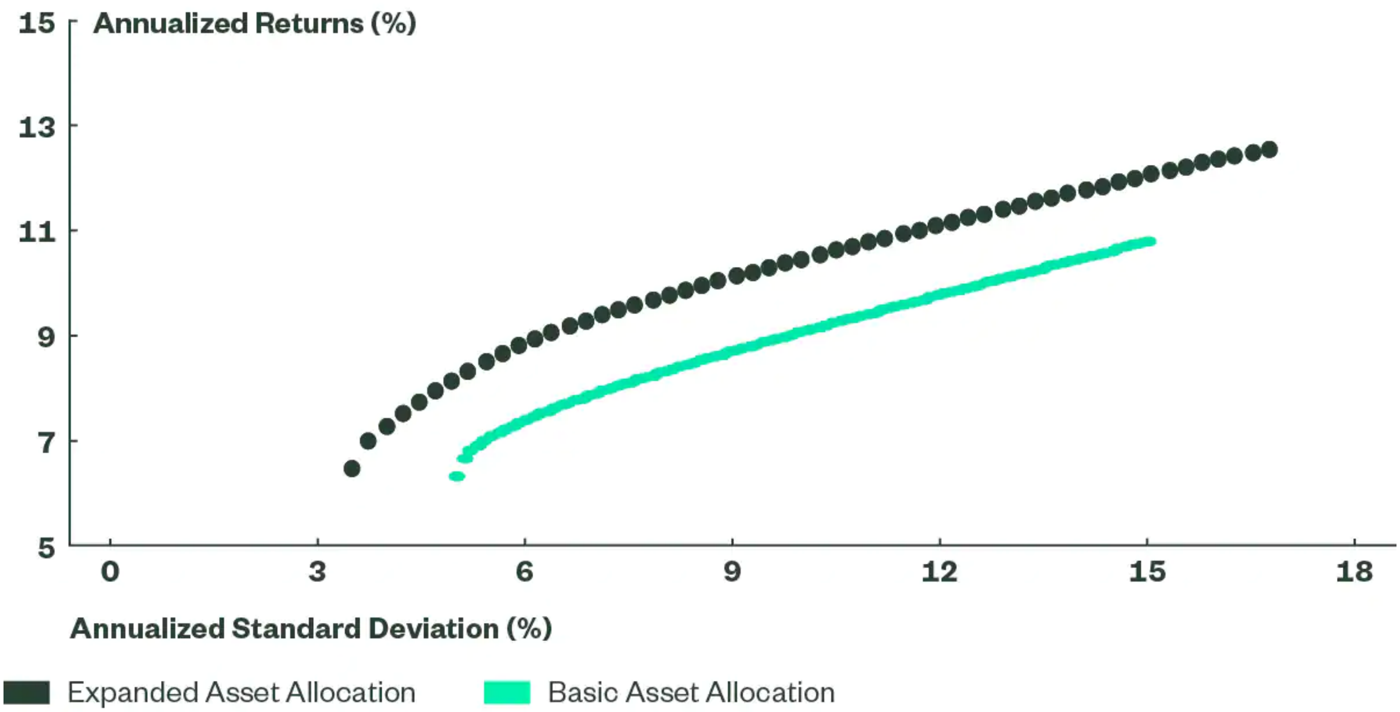
Figure 2: Broaden Reach for Potential Drawdown Mitigation



Source: FactSet, for the period from 01/01/2002 to 12/31/2021. The 60% Equity + 40% Bond Portfolio consists of 31% of the S&P Composite 1500 Index, 29% of the S&P Developed ex-U.S. BMI Index, 7% of the S&P Emerging BMI Index, and 40% of the Bloomberg U.S. Aggregate Bond Index, rebalanced annually, without considering transaction costs. The returns were achieved by mathematically combining the actual performance of the indexes listed above. **Past performance is not a reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income. Performance returns for periods of less than one year are not annualized.

The sample 60% global equity and 40% US bond portfolio is only a starting point for diversification. The diversification benefits could be enhanced if investors include more asset categories that are less or negatively correlated to each other. As shown in Figure 3, by including more granular asset classes, such as small and mid caps, dividend stocks, high yield and investment grade bonds of different duration, inflation-protected securities, etc., the portfolio has the potential to improve returns across all risk spectrums without taking additional risks.

Figure 3: Efficient Frontiers



Source: Morningstar, State Street Global Advisors. The Expanded Asset Allocation portfolio consists of S&P 500, S&P MidCap 400, S&P Small Cap 600, Dow Jones US Dividend 100, S&P Developed ex US BMI, S&P Emerging BMI, Bloomberg Barclays U.S. Corporate, ICE BofA US High Yield, Bloomberg Barclays U.S. Treasury, Bloomberg Barclays U.S. MBS, Bloomberg Barclays U.S. TIPS Indices. The Basic Asset Allocation Portfolio consists of Russell 3000, S&P Developed ex US BMI, S&P Emerging BMI and Bloomberg Barclays U.S. Aggregate Bond Indices. Historical standard deviation, returns and correlations of indexes over the past 20 years through 12/31/2019 are used to generate efficient frontiers.

2. Customize Your Client's Needs

Your client's risk tolerance, return expectations and time horizon inform a blueprint for constructing a core with the necessary foundational support. And, obviously, a core that's appropriate for one client may not be appropriate for another.

In general, longer investment horizons tend to result in greater risk tolerance and higher return expectations. For example, young investors just starting their careers likely have longer investment horizons and greater risk tolerance than retirees who rely on the income from their portfolio to fund their retirement. A young couple preparing to buy their first home may have different risk and return expectations than a middle-aged couple saving for their kids' college.

Again, the combination of core asset classes can create a portfolio core tailored to clients' risk and return requirements. As shown below, five hypothetical core examples calibrate the risk level by adjusting the broad allocations to US equities, international equities and fixed income. A more conservative investor should have a higher allocation to bonds. If your client needs to access principal relatively soon, making withdrawals during one of those equity drawdowns shown in Figure 2 simply won't work. On the contrary, a more risk-seeking investor might be more willing to ride out those drawdowns to seek higher total returns over the long term.

Thus, as shown in Figure 4, as you move up the risk tolerance scale, you take on exposure to equities, both domestic and international.

Figure 4: Match Core Allocations to Client Risk Profiles

		Conservative (%)	Moderate Conservative (%)	Moderate (%)	Moderate Aggressive (%)	Anggressive (%)
Wilshire 5000 Total Market Index	US Equity	12.5	25.0	36.0	44.5	54.0
S&P Developed ex-U.S. BMI Index	Developed ex-US	6.5	11.0	17.0	21.5	25.0
S&P Emerging BMI Index	EM	1.0	4.0	7.0	9.0	11.0
Bloomberg U.S. Aggregate Bond Index	Fixed Income	80.0	60.0	40.0	25.0	10.0

Source: State Street Global Advisors, as of 12/31/2021. All asset allocation scenarios are for hypothetical purposes only and are not intended to represent a specific asset allocation strategy or recommend a particular allocation. Each investor's situation is unique and asset allocation decisions should be based on an investor's risk tolerance, time horizon and financial situation.

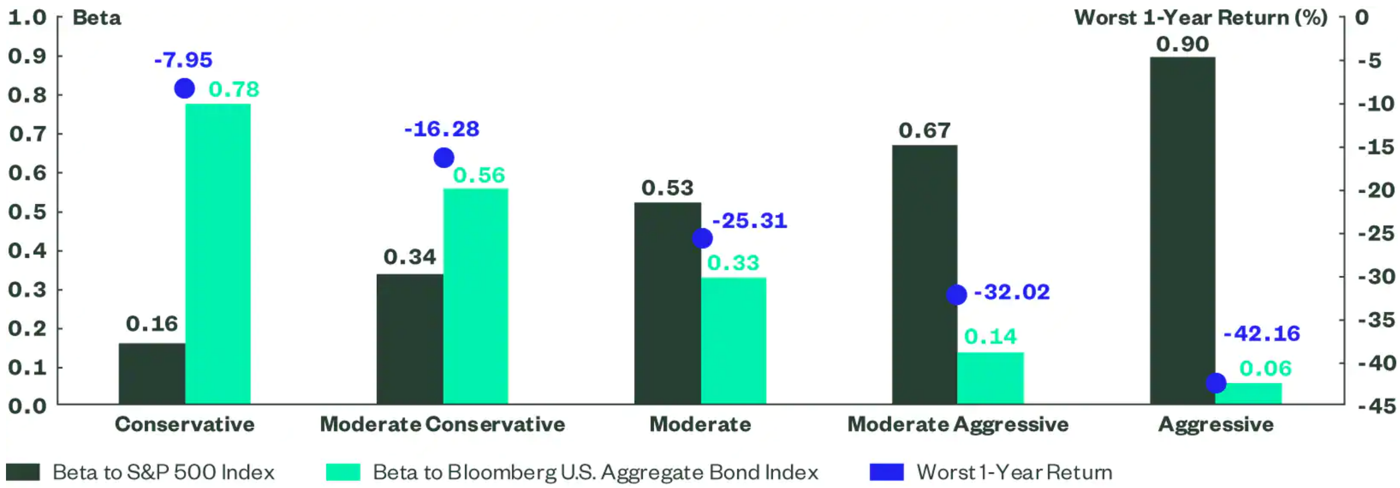
It's all about underlying exposures. If a client is more focused on capital growth over the longer term, a portfolio can be tailored to move up the risk spectrum and allocate more to equities, becoming more equity-like, as measured by the beta to the S&P 500® Index, and less bond-like, as measured by the beta to the Bloomberg U.S. Aggregate Bond Index.

Equity market fluctuations typically have a larger impact on more risk-seeking portfolios, while shifts in the bond market typically impact more risk-averse allocations. The difference is most stark when examining the worst 1-year return periods, as more bond-sensitive portfolios experienced less significant drawdowns.

However, the risk and return relationship is generally asymmetrical. The Conservative allocation with 20% equities does have some sensitivity to the stock market, while the Aggressive allocation with only 10% bonds has nearly no sensitivity to the bond market.

This underscores how even slight asset allocation differences can impact risk and return, as shown in Figure 5.

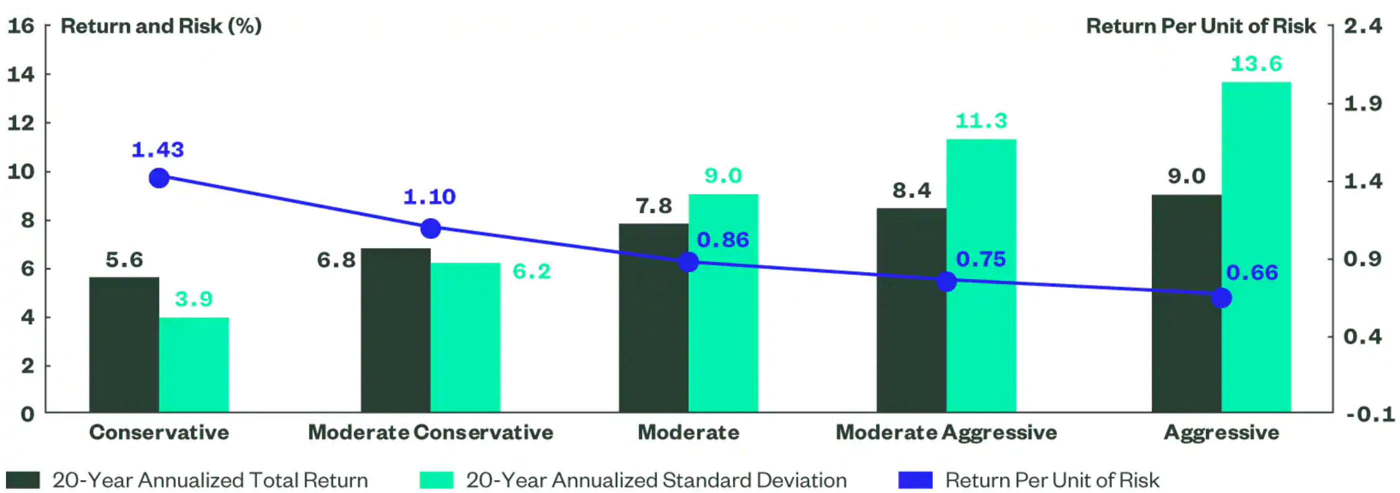
Figure 5: Portfolio Sensitivities to Stocks and Bonds (Last 20 Years)



Source: FactSet, for the period from 01/01/2002 to 12/31/2021. Each portfolio is rebalanced annually, without considering transaction costs. The returns were achieved by mathematically combining the actual performance of the indexes listed above. **Past performance is not a reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income.

Figure 6 also illustrates the impact of moving up and down the risk spectrum and how modest adjustments to an allocation can dictate risk sensitivities.

Figure 6: 20-Year Risk and Return Profile



Source: FactSet, for the period from 01/01/2002 to 12/31/2021. Each portfolio is rebalanced annually, without considering transaction costs. The returns were achieved by mathematically combining the actual performance of the indexes listed above. **Past performance is not a reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income.

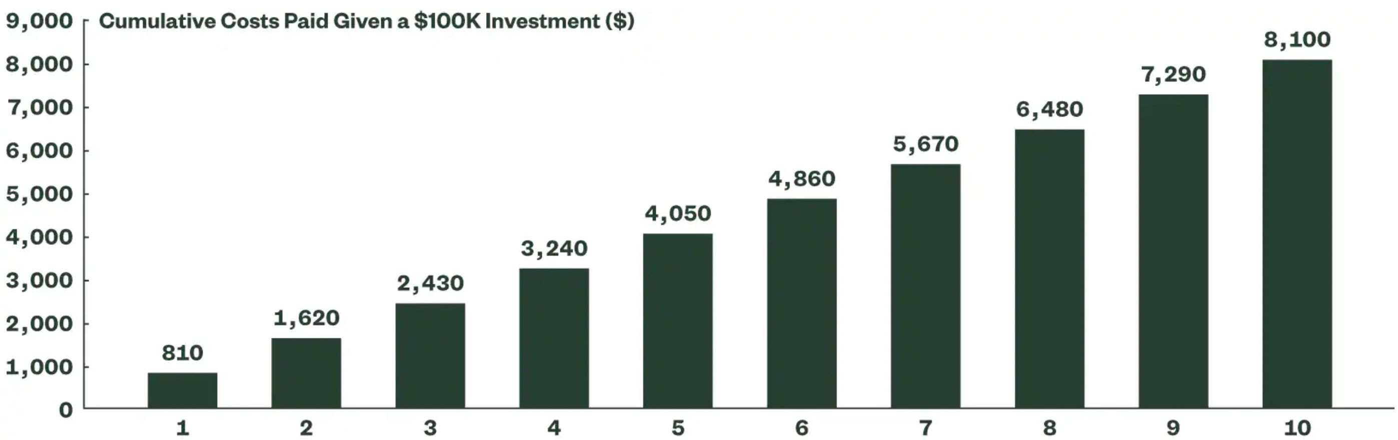
3. Control Costs

It's this simple: high costs erode portfolio returns. And, as the largest part of your portfolio, the core should never be the most expensive component. So, as you add asset classes to the core to help improve stability, generate income or pursue performance, it's important to ensure your portfolio's cost profile remains under control.

How can high costs impact portfolio returns over the long term? Consider that the expense ratio of the median US-listed mutual fund is 0.81% a year.[5] While that doesn't seem like much, assuming an industry standard return target of 6.99%[6] was met each year over a decade, investors consistently using mutual funds to gain core exposures would end up paying cumulative fees of 8.4% of starting principal. That's more than 1% higher than one year of portfolio returns.

Figure 7: The Impact of Fees

Over a decade, a portfolio invested at the median US-listed mutual fund costs would have forfeited 8.1% of starting principal to fees



Median US-Listed Mutual Fund TER = 0.81%
Source: Morningstar, State Street Global Advisors, as of 02/28/2022. Actual fees paid by an investor will differ.

4. Impose Discipline

Once a strategic allocation is set, we believe investors should continue to manage it through systematic and disciplined portfolio rebalancing. Keep in mind that performance of different asset classes may shift the portfolio allocation over time. As shown in Figure 8, after two decades a buy-and-hold portfolio had a greater allocation to equities, exhibiting lower return per unit of risk. Therefore, it's important to have a disciplined rebalancing program in place to ensure your portfolio doesn't deviate significantly from your initial allocation and expose you to additional risk.

Figure 8: Rebalancing Can Impact Returns and Risks

Asset allocation of a 60/40 portfolio after 20 years

	Portfolio As of 12/31/2001	Portfolio as of 12/31/2021: Annual Rebalance	Portfolio as of 12/31/2021: Buy and Hold
S&P Composite 1500 Index	36	36	51
S&P Developed ex United States BMI Index	17	17	17
S&P Emerging BMI Index	7	7	11
Bloomberg U.S. Aggregate Index	40	40	21

	Annual Rebalance	Buy and Hold
20-Year Annualized Return	7.38	7.64
20-Year Annualized Standard Deviation	8.02	10.15
Return Per Unit of Risk	0.92	0.75

Source: FactSet, as of 12/31/2021. The performance does not reflect any transaction costs. **Past performance is not a reliable indicator of future performance.** The returns were achieved by mathematically combining the actual performance of the indexes listed above. Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income.

Invest with SPDR Portfolio ETFs: Low-Cost Building Blocks

For investors seeking to expand their toolbox for diversification, we provide a comprehensive suite of low-cost ETFs covering detailed segments of the broad equity and fixed income exposures. Our family of 22 SPDR Portfolio ETFs covers domestic and international equity and fixed income categories, making it easy to construct cost-efficient customized cores. Whether you seek to generate income, manage risk or grow capital, you can build a core with funds that have a median expense ratio of just 5 basis points.[7]

Figure 9: SPDR Portfolio ETFs

Exposure	Fund Name	Ticker	Net Expense Ratio (%)
US Equity			
Broad Market	SPDR Portfolio S&P 500 Composite Stock Markets ETF	SPTM	0.03
Large Cap	SPDR Portfolio S&P 500 ETF	SPLG	0.03
Mid Cap	SPDR Portfolio S&P 400 Mid Cap ETF	SPMD	0.05
Small Cap	SPDR Portfolio S&P 600 Small Cap ETF	SPSM	0.05
Growth	SPDR Portfolio S&P 500 Growth ETF	SPYG	0.04
Value	SPDR Portfolio S&P 500 Value ETF	SPYV	0.04
Dividend Income	SPDR Portfolio S&P 500 High Dividend ETF	SPYD	0.07
International Equity			
Global Stock	SPDR Portfolio MSCI Global Stock Market ETF	SPGM	0.09
Developed ex-US	SPDR Portfolio Developed World ex-US ETF	SPDW	0.04
Europe	SPDR Portfolio Europe ETF	SPEU	0.09
Emerging Markets	SPDR Portfolio Emerging Markets ETF	SPEM	0.11
Fixed Income			
US Aggregate	SPDR Portfolio Aggregate Bond ETF	SPAB	0.04
Short Corporate	SPDR Portfolio Short Term Corporate	SPSB	0.04
Intermediate Corporate	SPDR Portfolio Intermediate Term Corporate Bond ETF	SPIB	0.04
Long Corporate	SPDR Portfolio Long Term Corporate Bond ETF	SPLB	0.04
Broad Corporate	SPDR Portfolio Corporate Bond ETF	SPBO	0.03
Short Government	SPDR Portfolio Short Term Treasury ETF	SPTS	0.06
Intermediate Government	SPDR Portfolio Intermediate Term Treasury ETF	SPTI	0.06
Long Government	SPDR Portfolio Long Term Treasury ETF	SPTL	0.06
Mortgages	SPDR Portfolio Mortgage Backed Bond ETF	SPMB	0.05
High Yield	SPDR Portfolio High Yield Bond ETF	SPHY	0.1
TIPS	SPDR Portfolio TIPS ETF	SPIP	0.12

Source: State Street Global Advisors, as of 02/28/2022.
A fund's net expense ratio includes waivers and reimbursements. It is the actual expense ratio that investors paid during the fund's most recent fiscal year. Some of the funds listed may have current fee agreements in place that reduces fund expenses and if removed or modified will result in higher expense ratios and reduce fund performance. Complete details can be found in each fund's prospectus on our website spdrs.com.

For thoughts on how you can build portfolios that match your clients' risk/return objectives, check out five illustrative allocation examples. From conservative to aggressive allocations, each of these portfolios seeks to enhance diversification by offering exposure to thousands of securities across more than 90 countries.[8] And all have a weighted average expense ratio between 3 to 4 basis points.

Figure 10: 5 Hypothetical Risk-based Core Portfolio Examples for Around 4 Basis Points

		Conservative (%)	Moderate Conservative (%)	Moderate (%)	Moderate Aggressive (%)	Anggressive (%)
SPTM	US Equities	12.5	25.0	36.0	44.5	54.0
SPDW	Developed ex-US Equities	6.5	11.0	17.0	21.5	25.0
SPEM	Emerging Market Equities	1.0	4.0	7.0	9.0	11.0
SPAB	Bonds	80.0	60.0	40.0	25.0	10.0
Weighted Average Expense Ratio (bps)		**3.1**	**3.4**	**3.7**	**3.9**	**4.1**

Source: State Street Global Advisors, 02/28/2022. Characteristics are as of the date given and should not relied upon as current thereafter.
All asset allocation scenarios are for hypothetical purposes only and are not intended to represent a specific asset allocation strategy or recommend a particular allocation. Each investor's situation is unique and asset allocation decisions should be based on an investor's risk tolerance, time horizon and financial situation.

Do More with Your Core – For Less

While constructing a core with a long-term strategic view, you also want to be able to adjust your allocations with more targeted allocations to address client-specific needs and respond to shifts in market regimes.

A core built with SPDR Portfolio ETFs provides the support you need to pivot confidently in any direction. Our line-up of 22 funds can help you expand your toolkit to pursue outcome-oriented objectives, such as:

Seek Growth and Income

Consider allocating a portion of your core equity exposure to segments focused on stocks with higher-than-average earnings growth and higher than average dividend

- SPYD SPDR Portfolio S&P 500 High Dividend ETF

Seek Capital Appreciation

Consider allocating a portion of your core equity exposure to segments that represent long-term opportunities due to expanding growth rates, improving valuations and demographic shifts.

- SPYV SPDR Portfolio S&P 500 Value ETF
- SPSM SPDR Portfolio Small Cap ETF
- SPMD SPDR Portfolio Mid Cap ETF
- SPEM SPDR Portfolio Emerging Markets ETF

Manage the Impact of Fluctuating Interest Rates

Consider tailoring your core fixed income exposure to either shorten or lengthen duration depending on your view of rate movements, without taking on additional credit risk.

- SPTS SPDR Portfolio Short Term Treasury ETF
- SPTI SPDR Portfolio Intermediate Treasury ETF
- SPTL SPDR Portfolio Long Term Treasury ETF
- SPIP SPDR Portfolio TIPS ETF

Balance Income and Risk Within Bonds

Consider augmenting core aggregate bond allocations with precise credit exposures across different maturity ranges and credit quality brackets that represent a potential source of income.

- SPMB SPDR Portfolio Mortgage Backed Bond ETF
- SPSB SPDR Portfolio Short Term Corporate Bond ETF
- SPIB SPDR Portfolio Intermediate Term Corporate Bond ETF
- SPLB SPDR Portfolio Long Term Corporate Bond ETF
- SPHY SPDR Portfolio High Yield Bond ETF

Choosing low-cost SPDR Portfolio ETFs may help you keep more of your return. Because when building your clients' portfolios, every little bit counts. Visit the Low-Cost Core Portfolio homepage or call 866-787-2257 for more information.