

ADAPTIVE
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Monthly Market Review

April 2026

Did You Know?

Beyond the Hype: What Investors Need to Know About Mega-IPOs

We break down the data behind historical IPO performance and explain why it's critical that investors have a holistic framework for evaluating the expected returns of companies, whether an IPO or a long-tenured public listing.

Academic Perspective

Converting Wealth into Well-Being: 'Shirtsleeves to Shirtsleeves in Three Generations'

By Meir Statman, Ph.D.

We explore considerations for generational wealth transfer and discuss tradeoffs between bestowing wealth versus well-being.

Market Review

- After declining in March, global stocks bounced back in April, led by emerging markets.
- Solid corporate earnings results contributed to U.S. stocks logging their best monthly gain since 2020.
- The Fed held rates steady, Treasury yields moved modestly higher, and U.S. bonds advanced slightly.

Appendix

- Glossary

Did You Know?

Beyond the Hype: What Investors Need to Know About Mega-IPOs

News of initial public offerings (IPOs) by well-known private companies typically makes headlines. The expected IPOs of SpaceX, OpenAI and Anthropic are no exception in this respect.

What's unusual about these highly anticipated IPOs is their size. SpaceX is reportedly seeking a valuation of \$1.75 trillion to \$2 trillion, while OpenAI and Anthropic are both expected to price their IPOs at valuations near \$1 trillion or more.

The current record valuation, or market capitalization, at IPO is \$1.7 trillion for Saudi Aramco in 2019. Alibaba holds the mantle for the largest IPO on a U.S. stock exchange, with a market capitalization of about \$169 billion.

SpaceX could become the largest IPO ever by total valuation and immediately jump into the top 10 of the world's largest publicly traded companies.



SpaceX

Beyond the Hype: What Investors Need to Know About Mega-IPOs

For added context, **Figure 1** shows how SpaceX, with a market capitalization of \$1.8 trillion, would compare in size to the largest IPOs we've seen to date, as well as some of today's largest publicly traded companies.

Should Investors Include IPOs in Their Portfolios?

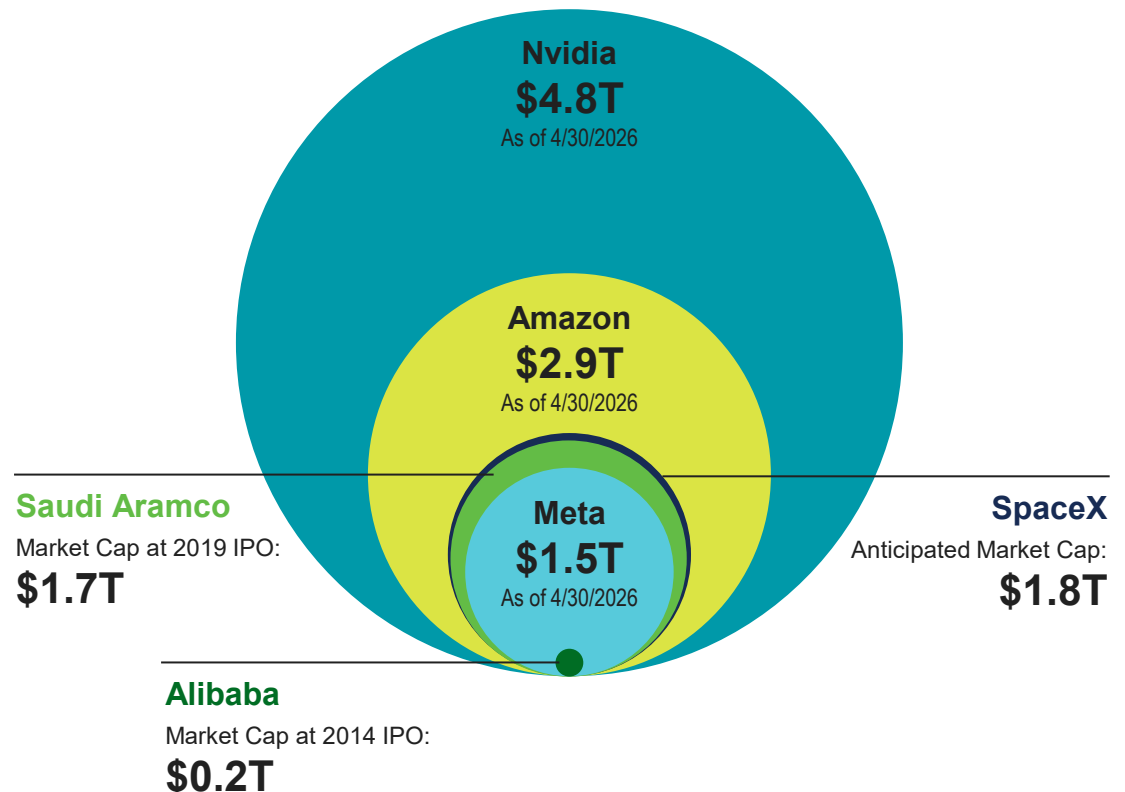
It's easy to see why there's buzz about these companies going public, but whether they should be viewed as good investments when they hit the market is a separate issue.

Consider past high-profile IPOs from Facebook (now Meta) and Uber. Both companies managed widely used consumer products, and their IPOs were the first opportunities for everyday investors to own shares in these businesses.

Four months after the Facebook/Meta IPO in May 2012, the stock declined by more than 50% and took over a year to return to its IPO price.

Similarly, Uber saw its price slide by about a third in the first five months and also took more than a year to trade consistently above its IPO price.

Figure 1 | SpaceX Could List at a Similar Size to Some of Today's Largest Companies



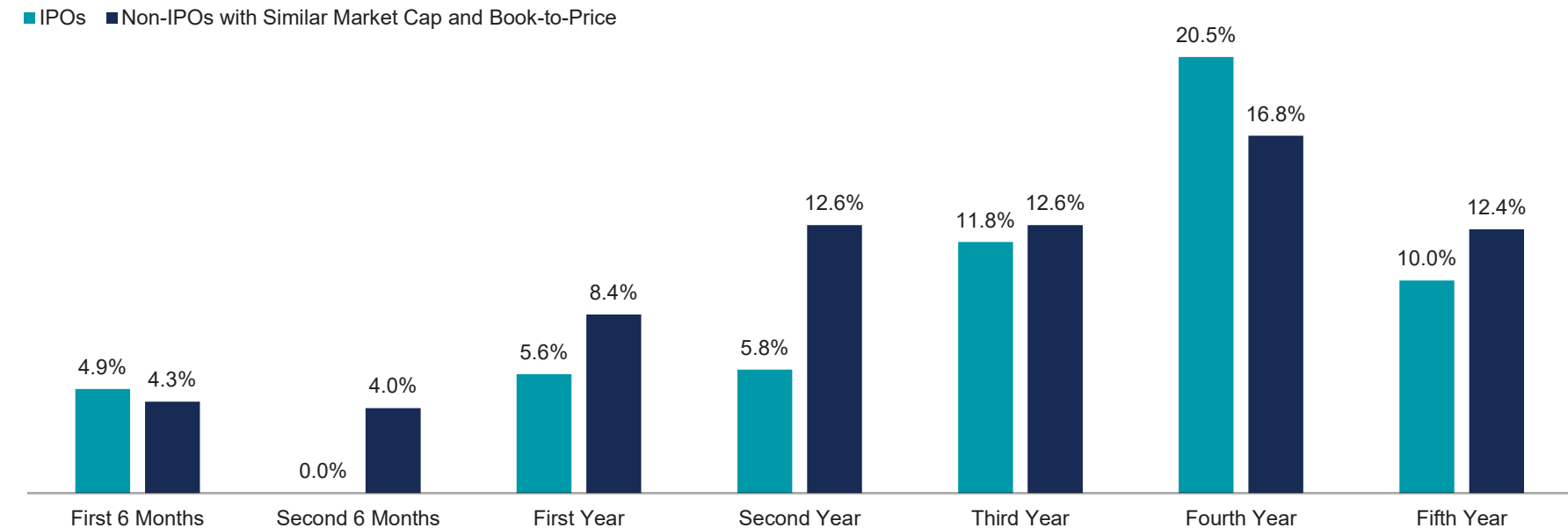
Beyond the Hype: What Investors Need to Know About Mega-IPOs

While these are just two examples of the thousands of IPOs over time, their results aren’t outside the norm. In fact, a broad body of research has shown that, on average, IPOs have historically underperformed for some time after listing relative to similar companies that have traded publicly for years.

Some have attributed this result to the expiration of shareholder lockups, which prevent company insiders from selling their shares until, typically, at least six months after an IPO. The theory is that once these previously restricted shares are made available for sale in the market, the additional supply creates downward selling pressure on the company’s stock price, leading to lower returns for IPOs in the first year after listing.

However, IPO underperformance generally persists beyond one year, as shown in **Figure 2**. Between 1980 and 2024, the average annualized return for IPOs over the five years after listing trailed already-listed peer companies with similar market capitalization and book equity-to-price characteristics by about 2%. The expiration of insider lockups may contribute to some short-term underperformance, but it doesn’t explain the longer-term outcomes.

Figure 2 | U.S. IPOs on Average Underperform Companies of Similar Size and Valuations in the First Five Years After Listing
Returns over Periods Post-IPO (1980-2024)



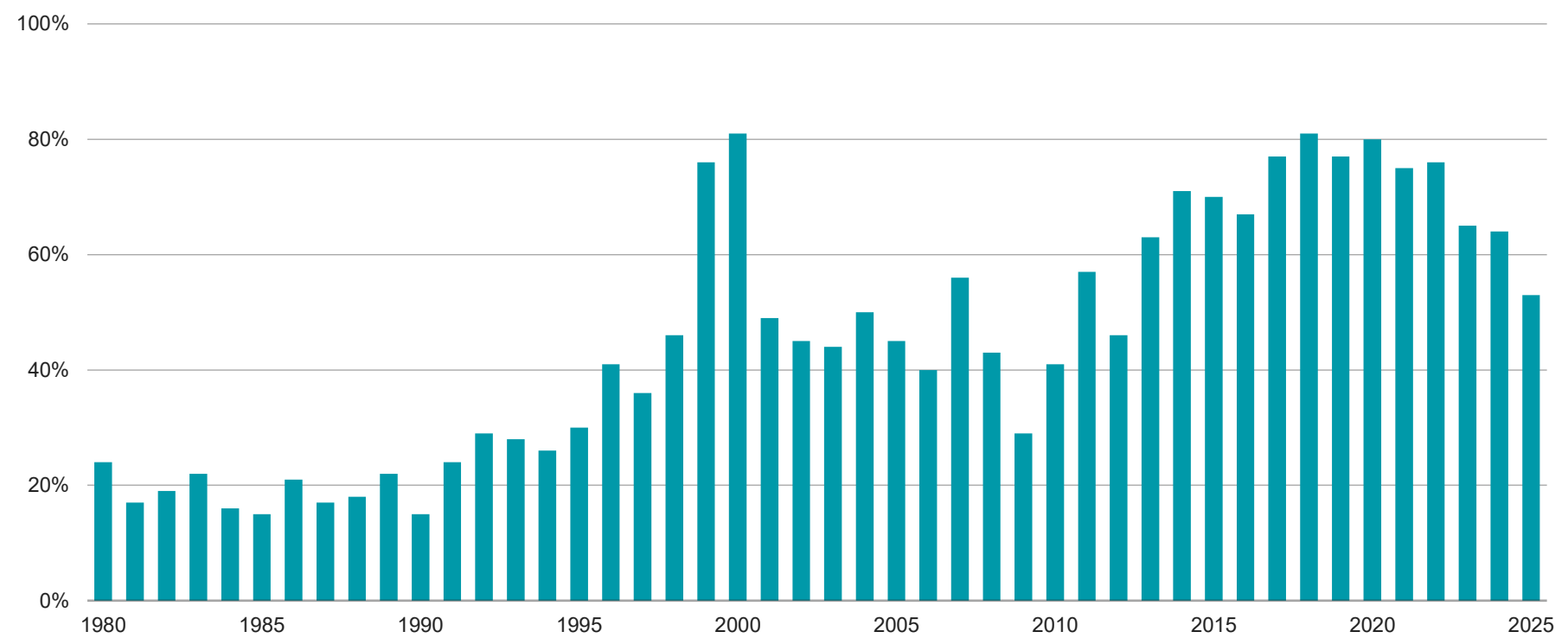
Data from 1/1/1980 – 12/31/2024. Source: Jay Ritter, “Initial Public Offerings: Updated Long-Run Statistics,” Warrington College of Business, University of Florida, March 23, 2026. **Past performance is no guarantee of future results.**

Beyond the Hype: What Investors Need to Know About Mega-IPOs

One noticeable characteristic missing from the selection of listed peer companies for performance comparison is company profitability. This is important because if IPOs have much lower profitability than their already-listed peers, they should have lower expected returns.

As it turns out, many IPOs were not profitable when they were listed. **Figure 3** shows the percentage of IPOs with negative trailing 12-month earnings for each calendar year since 1980. This suggests many IPOs were likely listed at a similar size and book-to-price to older public companies, but with much lower profitability, which implies lower expected returns.

Figure 3 | A High Percentage of IPOs Are Unprofitable
Percentage of U.S. IPOs with Negative Trailing 12-Month Earnings (1980-2025)



Data from 1/1/1980 – 12/31/2025. Source: Jay Ritter, "Initial Public Offerings: Updated Statistics," Warrington College of Business, University of Florida, April 14, 2026.

Beyond the Hype: What Investors Need to Know About Mega-IPOs

The takeaway is not that all IPOs are therefore inherently low-expected-return investments. We need a full set of financials — not just book value and price — to assess their expected return. The price of the company, its equity and its profits are all critical for understanding how an IPO compares to other companies and what allocation, if any, it should have in a portfolio.

How Are Index Providers Responding, and How Could It Affect Investors?

A subtopic within the news about the upcoming mega-cap IPOs is how index providers are preparing for their arrival in the market. Of note is a recent proposal from S&P that would drop its long-held requirement that companies trade publicly for at least 12 months before being admitted to the S&P 500® Index.

For companies among the largest 100 by valuation, the proposal would also eliminate their current requirement to have one full year of positive profits. Reporting indicates the profitability restriction would remain for companies below the 100 largest.

S&P's current criterion famously prevented Tesla, which went public in 2010, from being added to the S&P 500 until 2020, even though it was already among the 100 largest U.S. companies. Public knowledge of OpenAI and Anthropic earnings suggests that each would likely fail to meet the current profitability screens if S&P were to make no changes to its methodology.

Other index providers, such as Russell, MSCI and Nasdaq, are currently evaluating their index rules as well. It's yet to be determined exactly what changes will be made and how quickly the mega-cap IPOs will be included. There are also considerations for the weight each company could have in each index. Indices would likely link their weights to free-float market capitalization, which represents the fraction of a company's shares available for public trading (i.e., excluding restricted shares held by insiders, other strategic investors, etc.).

What's clear is that index providers are working hard to include these companies in widely tracked indexes sooner rather than later. This has important implications for investors.

Beyond the Hype: What Investors Need to Know About Mega-IPOs

When new companies are added to the indexes tracked by an index fund, the fund must quickly acquire shares of those companies to continue closely replicating the index's returns. Anytime there is a set of forced buyers (i.e., index funds) that want shares held by a group of non-forced sellers (i.e., non-index fund investors), there must be an incentive for that transfer to occur.

This can result in index funds paying temporarily inflated prices for new additions to the index they track. This is simply a liquidity issue, but it does negatively impact index funds as they lock in positions at higher prices. Further, adding a company with a large weight means selling others to make room for it, so the rebalancing involves more than just the added company.

For non-index funds, avoiding purchases of companies around the time they are added to popular indexes is expected to add value by steering clear of elevated prices driven by heightened liquidity demands.

Mega-IPOs: Look Past the Hype and Focus on Fundamentals

When large, well-known companies announce their plans to go public, expect to see significant media coverage. These events are newsworthy, especially when they involve companies that are larger than most existing public firms and may introduce new opportunities related to popular investment themes.

As investors, the hype should not stop us from evaluating the merits of these opportunities through a sound framework. If the goal is higher expected returns, we need to consider the full financials of these companies, including their balance sheets and cash flows, as well as their prices.

Whether we are dealing with IPOs or companies that have long traded in the market, those with attractive prices relative to their financials are expected to do better over the long term.

Additionally, strategies that are not strictly tied to indexes can exercise greater flexibility in implementation, whereas index-tracking approaches, by their mandate, are wed to buy-and-sell decisions determined by index houses in their methodology. Flexibility can prove advantageous in these scenarios. We believe all these considerations should be weighed when constructing asset allocations.

Liquidity describes the degree to which an asset or security can be quickly bought or sold in the market without affecting the asset's price.

Investment in an IPO can involve heightened risk compared to seasoned securities and include the possible loss of principal.

IPOs typically have a limited operating history, less publicly available information and no established market price prior to the offering. This may lead to price volatility, especially in early trading and post-IPO due to "lock-up expirations" that may pressure prices.

Academic Perspective

Converting Wealth into Well-Being: 'Shirtsleeves to Shirtsleeves in Three Generations'

Some years ago, I spoke about behavioral finance at a conference for wealthy families, mostly family business owners. Subsequently, I listened to a session in which family members shared their experiences, including how they turned wealth into well-being as they passed it down from generation to generation.

A medical researcher, a member of a family turned wealthy by her father's major invention, implored fellow members to enhance their children's well-being by helping them gain meaningful vocations, as she had, rather than pressure them to join the family business. "Don't turn your wealth into golden handcuffs," she said.

An owner of a thriving financial company spoke about his daughter, a young woman uninterested in his business or in college. Earlier that day, a presentation on art as an investment sparked an idea that brought tears to his eyes.

His daughter was passionate about art, and he realized he could help her build a meaningful vocation by establishing an art gallery she would manage, an endeavor that would enhance her well-being and his own, even though it would likely diminish his wealth.

The proverb "shirtsleeves to shirtsleeves in three generations" describes a sequence, often condemned as a curse, in which family wealth is built by the first generation, diminished by the second and dissipated by the third. I argue, however, that families may do well when they convert wealth into well-being, even if wealth is dissipated along the way.

I know from many conversations with advisers that my view is uncommon. Many advisers have noted that families that had wealth in the millions of dollars decades ago could have been billionaires today if they had done nothing more than invest their millions in an index fund. But I hope to foster discussions among advisers and between them and their clients about a more holistic relationship between wealth and well-being.



Meir Statman, Ph.D.
Consultant to Avantis Investors

Meir Statman is the Glenn Klimek Professor of Finance at Santa Clara University and a consultant to Avantis Investors.

His research focuses on behavioral finance. He attempts to understand how investors and managers make financial decisions and how these decisions are reflected in financial markets.

His latest book, "A Wealth of Well-Being: A Holistic Approach to Behavioral Finance," was published by Wiley in April 2024.

Converting Wealth into Well-Being: 'Shirtsleeves to Shirtsleeves in Three Generations'

Transferring Wealth: Poor, Middle-Class and Top 5% Families

Raising children is expensive, especially relative to the incomes and wealth of poor and middle-class parents. They transfer wealth to their children mostly by raising them. By necessity, they transfer little wealth to their children or grandchildren. Middle-class families, especially upper-middle-class ones, are usually able to transfer modest wealth to their children and grandchildren.

We can divide the top 5% families into two groups: professionals and business owners. Professionals include physicians, dentists, lawyers, engineers, and managers. Businesses are commonly considered "dull-normal," a term used by the authors of "The Millionaire Next Door: The Surprising Secrets of America's Wealthy." These include welding and paving contractors, scrap metal dealers, and pest control services.

The top 5% of wealthy professionals can transfer their financial wealth to their children, but not their university degrees. In contrast, the top 5% of wealthy business owners can transfer both their financial wealth and their businesses to their children.

Many wealthy business owners are eager to see their children take over their businesses, and many of their children are eager to do so. But some children of business owners do not wish to take over their parents' businesses, and some business owners prefer to see their children take a path different from theirs, especially by becoming professionals.

Victor, a successful roofing and excavation contractor as well as a scrap metal dealer, is among these business owners. He hopes his children will achieve a higher standard of well-being than he has, and he aspires for them to become physicians, lawyers or other professionals. The authors of "The Millionaire Next Door" say that Victor "does not realize that being well-educated has certain economic drawbacks." But Victor might well understand that his children's wealth would likely be lower than his, while their well-being would likely be higher.¹

¹ Thomas J. Stanley and William D. Danko, *The Millionaire Next Door: The Surprising Secrets of America's Wealthy* (Longstreet Press, 1996).

Converting Wealth into Well-Being: 'Shirtsleeves to Shirtsleeves in Three Generations'

Transferring Wealth: Top 1% Wealthy Families

The top 1% of wealthy families do not fear the costs of child care, college tuition, a house or even a trust fund, but they fear their children growing up aimless. Great wealth can extinguish all desire for financial independence and accomplishments because it contains magic erasers of failures in school, work, marriage and investments.

These fears are often well-founded. An adult son in a top 1% wealthy family, an intelligent man with an MBA from a top school, quit one job after another. At some point, something would happen at each job that those who had to work for an income would learn to tolerate, but he would say, "I don't want to deal with this." Eventually, he had to say, "I don't have a career."²

Donors promoting education, medicine or the alleviation of poverty commonly place conditions on the use of their donations, perhaps specifying that donations be used to support high school students rather than college students or that donations be used for Alzheimer's research rather than cancer research. The same is true in trusts whose creators might specify that funds be used for education, professional training, maintaining employment, starting a business, reaching certain ages, getting married or having children.

Creators of trusts likely believe that the conditions they set are helpful, enhancing the well-being of their family members. But these beliefs are often wrong. Responding to an article about transferring wealth to future generations, a 58-year-old woman wrote that she and her siblings knew their parents had created seven separate trusts for them but did not know the trusts' "byzantine details."

They are now paying thousands in legal fees to comprehend the trusts' details and expect to pay substantial accounting fees for years to come. Moreover, the trusts forced her to become co-trustee with her brothers and a stepbrother who does not speak to two of his siblings. "What a poor plan my parents made," she wrote.

² Graeme Wood, "Secret Fears of the Super-Rich," *The Atlantic*, April 2011.

Converting Wealth into Well-Being: 'Shirtsleeves to Shirtsleeves in Three Generations'

Generational Wealth: Turning Inheritance into Life Well-Being (Not a Curse)

Families across the wealth spectrum aspire to pass something of value to the next generation. For poor and middle-class families, that value is conveyed primarily through care, love and education. For top 5% families, it includes financial support that expands children's educational and career opportunities. For top 1% families, it often includes trusts designed to transfer wealth even for generations yet unborn. But the central lesson across these groups is the same: Wealth is a means, not an end.

The fear of the shirtsleeves-to-shirtsleeves curse is often misplaced. Dissipation of wealth is not a failure if wealth is converted into life well-being, meaningful vocations, enriching experiences, stronger relationships, and purposeful lives.

Attempts to maintain or expand wealth through rigid trusts can undermine well-being, generating family conflicts, administrative burdens and constraints that clash with the evolving lives of future generations.

In contrast, transfers that grant children and grandchildren autonomy to pursue their own paths to meaning, even when these seem frivolous or unproductive to others, can enhance well-being. Going from shirtsleeves to shirtsleeves in three generations can be a sign that wealth has done its work.

Market Review

The background of the slide features a teal gradient. Faintly visible in the background are a bar chart with several bars of varying heights and a line graph with a dashed line showing an upward trend. The overall aesthetic is professional and data-oriented.

Snapshot

Despite ongoing geopolitical uncertainty, global stocks posted strong returns in April, led by emerging markets (EM) equities. Bonds also logged positive returns, with global bonds outpacing U.S. bonds.

- Stocks rebounded sharply from March's decline. The S&P 500 Index reached seven record closing highs in the month, finishing with a return of 10.5%. April's gain marked the index's best monthly performance since November 2020.
- Most S&P 500 Index sectors advanced, with communication services, information technology and consumer discretionary logging double-digit monthly gains. The energy sector, the only sector with a gain in March, was the weakest in April, declining 3.5%.
- Non-U.S. developed markets stocks also rebounded sharply from a March loss, returning 7.4% in April. EM stocks were top performers, gaining nearly 15% for the month.
- Rising global oil prices contributed to higher inflation rates in the U.S., the eurozone and the U.K. Nevertheless, central banks held interest rates steady in April, while acknowledging the mounting inflation risks.
- April's stock market rebound was broad-based, with all main U.S. size and style indices delivering solid gains. Small-cap growth stocks were the month's leaders, up nearly 15%. Outside the U.S., most major size and style indices in developed and emerging markets also rallied.
- U.S. Treasury yields rose modestly for the month. The broad U.S. bond market index advanced slightly, with corporate bonds leading the way.

Returns (%)

INDEX	1 MO	3 MO	YTD	1 YR	3 YR	5 YR	10 YR
U.S. Large-Cap Equity							
S&P 500	10.49	4.19	5.70	31.05	21.69	13.14	15.26
U.S. Small-Cap Equity							
Russell 2000	12.21	7.46	13.21	44.41	18.19	5.75	10.98
Intl. Developed Markets Equity							
MSCI World ex USA	7.39	1.59	6.39	26.33	15.96	9.27	9.09
Emerging Markets Equity							
MSCI Emerging Markets	14.71	5.21	14.52	46.68	20.67	6.05	9.23
Global Real Estate Equity							
S&P Global REIT	8.77	6.48	9.61	16.65	9.14	3.18	4.08
U.S. Fixed Income							
Bloomberg U.S. Aggregate Bond	0.11	-0.04	0.07	4.06	3.46	0.18	1.67
Global Fixed Income							
Bloomberg Global Aggregate Bond	1.25	-0.77	0.16	2.54	2.86	-1.47	0.57
U.S. Cash							
Bloomberg U.S. 1-3 Month Treasury Bill	0.30	0.89	1.19	4.07	4.81	3.48	2.29

Data as of 4/30/2026. Performance in USD. Periods greater than one year have been annualized. Past performance is no guarantee of future results. Source: FactSet.

Equity Returns | Size and Style

		U.S.			
		QTD (%)		YTD (%)	
		Value	Growth	Value	Growth
Size	Large	8.16	11.90	10.43	0.96
	Small	9.66	14.69	15.09	11.47

- The broad U.S. stock market rallied in April, restoring a year-to-date gain. Size and style indices also delivered strong monthly returns.
- Small-cap stocks gained more than 12% to outpace large- and mid-cap stocks. Small-cap stocks also outperformed for the year-to-date period.
- Large- and small-cap growth stocks fared better than their value-style peers in April, while mid-cap value outperformed mid-cap growth. Year to date, value significantly outperformed across size categories.

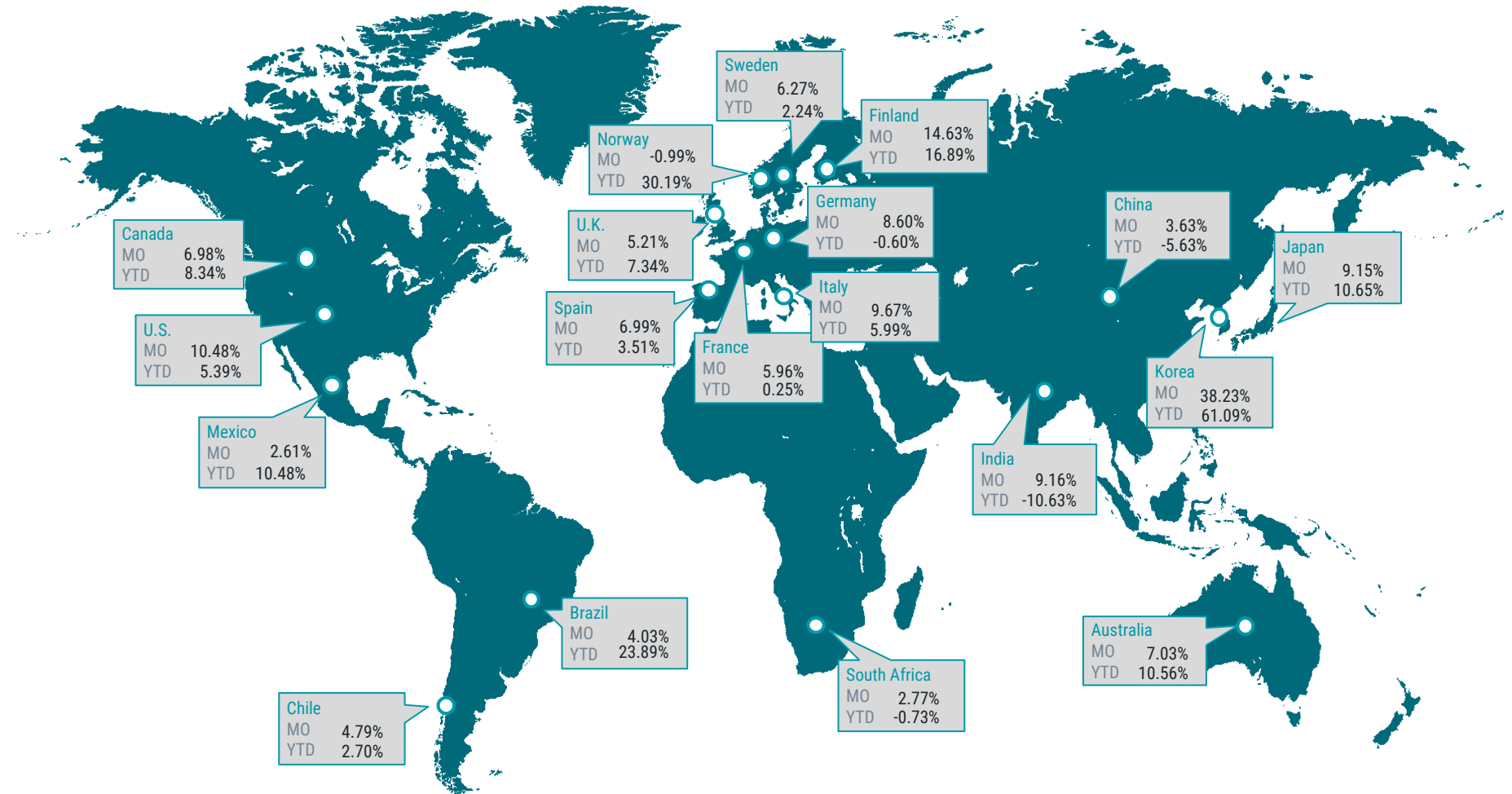
		Non-U.S. Developed Markets			
		QTD (%)		YTD (%)	
		Value	Growth	Value	Growth
Size	Large	6.82	8.45	9.64	2.22
	Small	6.86	10.04	6.71	9.36

- Non-U.S. developed markets stocks advanced but lagged U.S. stocks in April. Year to date, they retained an edge over U.S. stocks.
- With a gain of more than 8%, small-cap stocks outperformed large caps in April. Small-caps also outperformed their large-cap peers for the year-to-date period.
- Growth stocks outpaced their value-style peers across the board in April. Year to date, the growth style outperformed among small-caps but underperformed notably in the large-cap universe.

		Emerging Markets			
		QTD (%)		YTD (%)	
		Value	Growth	Value	Growth
Size	Large	13.07	16.26	14.39	13.59
	Small	11.73	15.14	11.84	13.31

- The broad emerging markets stock index outperformed developed markets stocks in April and for the year-to-date period. The index returned nearly 15% for both periods.
- Large-cap stocks outperformed small-cap stocks in April and year to date. For the month, large-caps rose 14.6% versus 13.4% for small-caps.
- Growth stocks outperformed value stocks for the month, with large-cap growth stocks up more than 16%. Year to date, value outperformed among large-cap stocks but lagged the growth style in the small-cap universe.

Equity Returns | Country



Data as of 4/30/2026. Performance in USD. Past performance is no guarantee of future results. Source: FactSet. Countries are represented by MSCI country indices.

Fixed-Income Returns

U.S. bonds bounced back into positive return territory in April, led by corporate bonds. Amid ongoing inflation concerns stemming from rising oil prices, Treasury yields rose for the month.

- The Bloomberg U.S. Aggregate Bond Index rebounded in April, posting a fractional gain.
- The yield on the 10-year Treasury note ended the month at 4.38%, up 6 basis points (bps) from March-end. The two-year Treasury yield also rose 6 bps to end April at 3.87%.
- Within the Bloomberg U.S. Aggregate Bond Index, corporate bonds and MBS rose in April, while Treasuries declined slightly. Credit spreads tightened for the month, more significantly among high-yield securities, and high-yield corporates outperformed investment-grade corporates.
- Economic data remained resilient, inflation edged higher, and the Fed held interest rates steady again. Policymakers left the target lending rate in a range of 3.5% to 3.75% at the last meeting of Jerome Powell's tenure as Fed chair.
- Annual headline and core CPI rose in March to 3.3% and 2.6%, respectively. The annualized core PCE price index, the Fed's preferred inflation gauge, rose from 3% in February to 3.2% in March, above the Fed's 2% target.
- Municipal bonds rallied for the month, outperforming Treasuries and the broad U.S. bond index.
- TIPS also rallied and outperformed nominal Treasuries in April, as inflation expectations rose.

Returns (%)

INDEX	1 MO	3 MO	YTD	1 YR	3 YR	5 YR	10 YR
Global Fixed Income							
Bloomberg Global Aggregate Bond	1.25	-0.77	0.16	2.54	2.86	-1.47	0.57
U.S. Fixed Income							
Bloomberg U.S. Aggregate Bond	0.11	-0.04	0.07	4.06	3.46	0.18	1.67
U.S. High-Yield Corporate							
Bloomberg U.S. Corporate High Yield Bond	1.69	0.68	1.19	8.84	8.85	4.35	5.90
U.S. Investment Grade							
Bloomberg U.S. Corporate Bond	0.45	-0.27	-0.09	5.29	4.59	0.63	2.72
Municipals							
Bloomberg Municipal Bond	1.15	0.03	0.97	6.34	3.34	0.90	2.20
U.S. TIPS							
Bloomberg U.S. Treasury Inflation Protected Securities (TIPS)	1.15	1.11	1.42	4.07	3.54	1.43	2.75
U.S. Treasuries							
Bloomberg U.S. Treasury Bond	-0.07	-0.02	-0.12	2.53	2.38	-0.30	1.04
U.S. Cash							
Bloomberg U.S. 1-3 Month Treasury Bill	0.30	0.89	1.19	4.07	4.81	3.48	2.29

Data as of 4/30/2026. Performance in USD. Periods greater than one year have been annualized. Past performance is no guarantee of future results. Source: FactSet.

Global Yield Curves



Data as of 4/30/2026. Source: Bloomberg.

Yield is a rate of return for bonds and other fixed-income securities. A yield curve is a line graph that shows yields of fixed-income securities from a single sector (e.g., Treasuries) over various maturities (e.g., five and 10 years) at a single point in time (e.g., 12/31/2020).

Appendix

Glossary

Agencies: Agency securities are debt securities issued by U.S. government agencies such as the Federal Home Loan Bank and the Federal Farm Credit Bank. Some agency securities are backed by the full faith and credit of the U.S. government, while others are guaranteed only by the issuing agency.

Basis points (BPS): Basis points are used in financial literature to express values that are carried out to two decimal places (hundredths of a percentage point), particularly ratios, such as yields, fees, and returns. Basis points describe values that are typically on the right side of the decimal point—one basis point equals one one-hundredth of a percentage point (0.01%).

Bloomberg Global Aggregate Bond Index: A flagship measure of global investment-grade debt from 24 local currency markets. This multicurrency benchmark includes Treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers.

Bloomberg Global U.S. Treasury - U.S. TIPS Index: Consists of Treasury inflation-protected securities issued by the U.S. Treasury with a remaining maturity of one year or more.

Bloomberg Municipal Bond Index: A market value-weighted index designed for the long-term tax-exempt bond market.

Bloomberg U.S. 1-3 Month Treasury Bill Index: A subindex of the Bloomberg Barclays U.S. Short Treasury Index, the Bloomberg Barclays U.S. 1-3 Month Treasury Bill Index is composed of zero-coupon Treasury bills with a maturity between one and three months.

Bloomberg 1-5 Year U.S. Government/Credit Index: Tracks the market for investment grade, US dollar-denominated, fixed-rate treasuries, government-related and corporate securities.

Bloomberg U.S. Aggregate Bond Index: Represents securities that are taxable, registered with the Securities and Exchange Commission, and U.S. dollar-denominated. The index covers the U.S. investment-grade fixed-rate bond market, with index components for government and corporate securities, mortgage pass-through securities and asset-backed securities.

Bloomberg U.S. Corporate Bond Index: Measures the investment-grade, fixed-rate, taxable corporate bond market. It includes U.S. dollar-denominated securities publicly issued by U.S. and non-U.S. industrial, utility and financial issuers.

Bloomberg U.S. Corporate High Yield Bond Index: Measures the U.S. dollar-denominated, high-yield (non-investment grade), fixed-rate corporate bond market.

Bloomberg U.S. Corporate High Yield Bond Index: Measures the U.S. dollar-denominated, high-yield (non-investment grade), fixed-rate corporate bond market.

Bloomberg U.S. Treasury Index: Measures U.S. dollar-denominated, fixed-rate, nominal debt issued by the U.S. Treasury. Treasury bills are excluded by the maturity constraint but are part of a separate Short Treasury Index.

Book-to-Market Ratio: Compares a company's book value relative to its market capitalization. Book value is generally a firm's reported assets minus its liabilities on its balance sheet. A firm's market capitalization is calculated by taking its share price and multiplying it by the number of shares it has outstanding.

Carbon Emissions Intensity: A measure of emissions efficiency calculated as company emissions normalized by company revenue (metric tons CO2 per USD million sales) and presented as a weighted average of fund or index holdings. Company emissions data includes reported or estimated scope 1 and scope 2 greenhouse gas emissions in carbon dioxide equivalents. If neither reported nor estimated emissions data is available for a company held by the fund or index, emissions data for that company is excluded from the carbon emissions intensity calculation. The calculation of this measure is completed by American Century Investment Management Inc, the investment advisor to the ETFs reporting the measure, based on data sources from MSCI. The Carbon Emissions Intensity figure is solely a result of a mathematical calculation based on the MSCI data, with no additional inputs. Scores and ratings across third-party providers may be inconsistent or incomparable and, in certain cases, incorrect. In addition, data is not currently available for many issuers and, when available, frequently only includes some but not all of the characteristics considered.

CBOE Volatility Index (VIX): Tracks the expected 30-day future volatility of the S&P 500 Index.

U.S. Consumer Confidence Index: A survey administered by The Conference Board that measures how optimistic or pessimistic consumers are about their expected financial situation.

Consumer Price Index (CPI): CPI is a U.S. government (Bureau of Labor Statistics) index derived from detailed consumer spending information. Headline CPI measures price changes in a market basket of consumer goods and services such as gas, food, clothing, and cars. Core CPI excludes food and energy prices, which tend to be volatile.

CRSP U.S. Total Market Index: Consists of nearly 4,000 constituents across mega, large, small and micro capitalizations, representing nearly 100% of the U.S. investable equity market.

Glossary

Credit Quality: Refers to the creditworthiness or financial health of the issuer of the bond. It reflects the likelihood that the issuer will meet its debt obligations, including interest payments and the return of principal, in a timely manner. Credit rating agencies assess and assign credit ratings to bonds based on the issuer's financial strength, stability, and ability to honor its debt commitments.

Credit Rating: Standard & Poor's credit ratings range from AAA (highest quality; perceived as least likely to default) to D (in default). Securities and issuers rated AAA to BBB are considered/perceived to be "investment-grade"; those below BBB are considered/perceived to be non-investment-grade (high yield).

Dow Jones Industrial Average: An average made up of 30 blue-chip stocks that trade daily on the New York Stock Exchange.

Duration: Measures how long it takes, in years, for an investor to be repaid a bond's price by the bond's total cash flows. It is also a measure of a bond's interest rate sensitivity. The longer the duration, the more sensitive a bond is to interest rate shifts.

Effective Duration: The average duration of all the bonds in a fund. It provides an indication of how a fund's net asset value (NAV) will change as interest rates change.

Emerging Markets Debt: Debt issued by countries whose economies are considered to be developing or emerging from underdevelopment.

Environmental, Social and Governance (ESG): Standards used to evaluate a company's operations in terms of sustainability and ethical impact. Environmental criteria consider how a company performs as a steward of nature. Social criteria examine how it manages relationships with employees, suppliers, customers, and communities. Governance criteria assess the company's leadership, executive pay, audits, internal controls, and shareholder rights.

Exchange-Traded Fund (ETF): An ETF represents a basket of securities that trades on an exchange, similar to a stock. An ETF differs from a mutual fund in that its share price fluctuates all day as investors buy and sell the ETF. A mutual fund's net asset value (NAV) is calculated once per day after the market closes.

Expected Returns: Valuation theory shows that the expected return of a stock is a function of its current price, its book equity (assets minus liabilities) and expected future profits, and that the expected return of a bond is a function of its current yield and its expected capital appreciation (depreciation). We use information in current market prices and company financials to identify differences in expected returns among securities, seeking to overweight securities with higher expected returns based on this current market information.

Actual returns may be different than expected returns, and there is no guarantee that the strategy will be successful.

Inverted Yield Curve: An interest rate environment in which long-term debt instruments have a lower yield than short-term debt instruments of the same credit quality.

Market Capitalization: The market value of all the equity of a company's common and preferred shares. It is usually estimated by multiplying the stock price by the number of shares for each share class and summing the results.

Money Market Mutual Funds: These funds invest in short-term debt instruments (e.g., commercial paper, U.S. Treasury bills, repurchase agreements) and are valued for their relative safety and liquidity.

MSCI ACWI Index: A capitalization-weighted index that is designed to measure the equity market performance of developed and emerging markets.

MSCI ACWI ex-USA Index: A market capitalization-weighted index that is designed to measure the equity market performance of developed and emerging markets, excluding the United States.

MSCI Emerging Markets IMI Index: Captures large-, mid- and small-cap securities across 27 emerging markets countries.

MSCI Emerging Markets IMI Value Index: Captures large-, mid- and small-cap securities exhibiting overall value style characteristics across 27 emerging markets countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.

MSCI Emerging Markets Asia IMI Index: Captures large-, mid- and small-cap securities in China, India, Indonesia, Korea, Malaysia, the Philippines, Taiwan and Thailand.

MSCI Emerging Markets EMEA IMI Index: Captures large-, mid- and small-cap securities across 11 emerging markets countries in Europe, the Middle East and Africa (EMEA).

MSCI Emerging Markets Latin America IMI Index: Captures large-, mid- and small-cap securities in Brazil, Chile, Colombia, Mexico and Peru.

MSCI Europe IMI Index: Captures large-, mid- and small-cap securities across 15 developed markets countries in Europe.

MSCI Pacific IMI Index: Captures large-, mid- and small-cap securities in five developed markets countries: Australia, Hong Kong, Japan, New Zealand and Singapore.

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MSCI USA Index: A market capitalization-weighted index designed to measure the performance of the large and mid-cap segments of the U.S. market.

MSCI World ex USA IMI Index: Captures large-, mid- and small-cap representation across 22 of 23 developed markets countries, excluding the U.S.

MSCI World ex USA Small Cap Index: Captures small-cap representation across 22 of 23 developed markets countries, excluding the U.S.

MSCI World ex USA Value Index: Captures large- and mid-cap securities exhibiting overall value style characteristics across 22 of 23 developed markets countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.

Net Asset Value (NAV): The total value per share of all the underlying securities in a portfolio.

Oil and Gas Revenue Percentage: Represents the proportion of total revenue of fund or index holdings that is derived from reported or estimated oil and gas-related activities. If neither reported nor estimated oil and gas-related data is available for held by either the fund or the index, such data for that company is excluded from the calculation.

The calculation of this measure is completed by American Century Investment Management Inc, the investment advisor to the ETFs reporting the measure, based on data sourced from MSCI. The Oil and Gas Revenue Percentage figure is solely a result of a mathematical calculation based the MSCI data, with no additional inputs.

Scores and ratings across third party providers may be inconsistent or incomparable, and, in certain cases, incorrect. In addition, data is not currently available for many issuers and, when available, frequently only includes some but not all of the characteristics considered.

Option-Adjusted Spread (OAS): Measures the difference between the yield of a bond with an embedded option and the yield on Treasuries. Call options give the issuer the right to redeem the bond prior to maturity at a preset price, and put options allow the holder to sell the bond back to the company on certain dates. The OAS adjusts the spread to account for these potential changing cash flows.

Personal Consumption Expenditures (PCE): The PCE price deflator — which comes from the Bureau of Economic Analysis' quarterly report on U.S. gross domestic product — is based on a survey of businesses and is intended to capture the price changes in all final goods, no

matter the purchaser. Because of its broader scope and certain differences in the methodology used to calculate the PCE price index, the Federal Reserve holds the PCE deflator as its preferred, consistent measure of inflation over time.

Price-to-Earnings Ratio (P/E): The price of a stock divided by its annual earnings per share. These earnings can be historical (the most recent 12 months) or forward-looking (an estimate of the next 12 months). A P/E ratio allows analysts to compare stocks on the basis of how much an investor is paying (in terms of price) for a dollar of recent or expected earnings. Higher P/E ratios imply that a stock's earnings are valued more highly, usually on the basis of higher expected earnings growth in the future or higher quality of earnings.

Producer Price Index (PPI): Measures the average change over time in the prices that domestic producers receive for their goods and services. It is a key indicator of inflation at the wholesale level, reflecting the prices producers charge for their output before it reaches consumers.

Profits-to-Book Ratio: Measures a company's profits relative to its book value. A company's profits are generally calculated by subtracting operating expenses from its gross profit. Book value is generally a firm's reported assets minus its liabilities on its balance sheet.

Responsible Equity ETFs: Because the portfolio managers screen securities based on environmental, social and governance (ESG) characteristics, the fund may exclude the securities of certain issuers or industry sectors for other than financial reasons and, as a result, the fund may perform differently or maintain a different risk profile than the market generally or compared to funds that do not use similar ESG-based screens.

Investing based on ESG considerations may also prioritize long-term rather than short-term returns. Furthermore, when analyzing ESG criteria for issuers, the portfolio management team relies on proprietary evaluations and information, ratings and scoring models published by third-party sources (collectively, "ESG Data").

Due to the lack of regulation and uniform reporting standards with respect to ESG characteristics of issuers, ESG Data may be inconsistent across sources and, in certain cases, incorrect. In addition, ESG Data is not currently available for many issuers and, when available, frequently only includes some but not all of the ESG characteristics considered by the team when applying their ESG screens.

See Environmental, Social and Governance (ESG) in the Glossary for more information.

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Russell 1000® Growth Index: Measures the performance of those Russell 1000 Index companies (the 1,000 largest publicly traded U.S. companies, based on total market capitalization) with higher price-to-book ratios and higher forecasted growth values.

Russell 1000® Value Index: Measures the performance of those Russell 1000 Index companies (the 1,000 largest publicly traded U.S. companies, based on total market capitalization) with lower price-to-book ratios and lower forecasted growth values.

Russell 2000® Index: Measures the performance of the 2,000 smallest companies among the 3,000 largest publicly traded U.S. companies, based on total market capitalization.

Russell 2000® Growth Index: Measures the performance of those Russell 2000 Index companies (the 2,000 smallest of the 3,000 largest publicly traded U.S. companies, based on total market capitalization) with higher price-to-book ratios and higher forecasted growth values.

Russell 2000® Value Index: Measures the performance of those Russell 2000 Index companies (the 2,000 smallest of the 3,000 largest publicly traded U.S. companies, based on total market capitalization) with lower price-to-book ratios and lower forecasted growth values.

Russell 3000® Index: Measures the performance of the largest 3,000 U.S. companies representing approximately 98% of the investable U.S. equity market.

S&P 500® Index: A market-capitalization-weighted index of the 500 largest U.S. publicly traded companies. The index is widely regarded as the best gauge of large-cap U.S. equities.

S&P Global REIT Index: A comprehensive benchmark of publicly traded equity REITs listed in both developed and emerging markets.

S&P National AMT-Free Municipal Bond Index: A broad, comprehensive, market value-weighted index designed to measure the performance of the investment-grade tax-exempt U.S. municipal bond market. Bonds issued by U.S. territories, including Puerto Rico, are excluded from this index. It is not possible to invest directly in an index.

SEC Yield: A calculation based on a 30-day period ending on the last day of the previous month. It is computed by dividing the net investment income per share earned during the period by the maximum offering price per share on the last day of the period.

Securitized Debt: Debt resulting from the process of aggregating debt instruments into a pool of similar debts, then issuing new securities backed by the pool (securitizing the debt). Examples include asset-backed and mortgage-backed securities.

Standard deviation: Standard deviation is a statistical measurement of variations from the average. In financial literature, it's often used to measure risk when risk is measured or defined in terms of volatility. In general, more risk means more volatility and more volatility means a higher standard deviation — there's more variation from the average of the data being measured.

Treasury Inflation-Protected Securities (TIPS): A special type of U.S. Treasury security that is indexed to inflation as measured by the Consumer Price Index, or CPI. At maturity, TIPS are guaranteed by the U.S. government to return at least their initial \$1,000 principal value, or that principal value adjusted for inflation, whichever amount is greater. In addition, as their principal values are adjusted for inflation, their interest payments also adjust.

Treasury Yield: The yield of a Treasury security (most often refers to U.S. Treasury securities issued by the U.S. government).

U.S. Treasury securities: Debt securities issued by the U.S. Treasury and backed by the direct "full faith and credit" of the U.S. government. Treasury securities include bills (maturing in one year or less), notes (maturing in two to 10 years) and bonds (maturing in more than 10 years).

Weighted Average Book-to-Market: An average book-to-market ratio resulting from the multiplication of each security's book-to-market by its weight in the portfolio.

Weighted Average Market Capitalization: An average market capitalization resulting from the multiplication of each security's market capitalization by its weight in the portfolio.

Weighted Average Profitability-to-Book: An average profitability-to-book ratio resulting from the multiplication of each security's profitability-to-book by its weight in the portfolio.

Yield to Maturity: The rate of return an investor will receive if an interest-bearing security, such as a bond, is held to its maturity date. It considers total annual interest payments, the purchase price, the redemption value, and the amount of time remaining until maturity.