



ADAPTIVE
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Monthly Market Review

May 2026

Did You Know?

Rocket Fuel: The Potential Impacts of Major Index Changes This June

Index changes may look routine, but the trading they trigger can come at a real cost to index investors. As Russell's reconstitution and fast-tracked IPO additions approach, we unpack how forced trading can impact prices and fund performance.

Academic Perspective

Social Security Claiming Decisions: Don't Dismiss the Math, but It Doesn't Always Apply to Real Life

By Hal Hershfield, Ph.D.

The optimal claiming age may look clear on paper, but real life is messier. We discuss why Social Security decisions are often driven as much by psychology and personal goals as by math.

Market Review

- Global stocks rallied for the second straight month, led again by emerging markets.
- Soaring information technology stocks largely drove the U.S. market higher.
- Treasury yields rose amid inflation concerns, but all key bond market sectors logged gains for May.

Appendix

- Glossary

Did You Know?

Rocket Fuel: The Potential Impacts of Major Index Changes This June

While recent financial news headlines have given a great deal of attention to the slate of expected U.S. mega-cap IPOs, a few relevant storylines may have slipped under investors' radar.

Despite geopolitical and economic uncertainty in the first five months of 2026, global stock market indexes have quietly posted solid results. The S&P 500® Index is up more than 11% on the year, while non-U.S. stocks (measured by the MSCI ACWI ex-USA IMI Index) are up more than 14%. That's likely to mean many investors may be pleasantly surprised by their portfolios thus far.

Another upcoming event to watch is the annual FTSE Russell index reconstitution, scheduled for the fourth Friday in June.¹ On that day, Russell will reclassify the holdings in its U.S. indexes for the first time since last June.

Stocks will be placed in the various indexes based on the underlying firm's characteristics, such as its market capitalization, the price multiple at which it trades relative to its book value, or changes in its earnings. **Figure 1** summarizes notable changes coming to commonly watched Russell U.S. indexes.

Figure 1 | June 2026 Russell Index Reconstitution Highlights

Largest Large-Cap (as of 4/30) \$4.8T	Russell 1000 + 62 companies added - 37 companies deleted	Largest Changes for 1000 Value & Growth + Apple and Microsoft Added to Russell 1000 Value (now held in growth and value indexes) - Alphabet and AMD Deleted from Russell 1000 Value (now held only in the growth index) + Micron and SanDisk Added to Russell 1000 Growth (now held in growth and value indexes)
Small-Cap Upper Limit \$5.7B Small-Cap Lower Limit \$146.4M	Russell 2000 + 237 companies added - 163 companies deleted	Largest Changes for 2000 Value & Growth - Lumen Deleted from Russell 2000 Growth (now held only in value index) - Praxis Precision Meds Deleted from Russell 2000 Value (now held only in growth index)

Sources: Avantis Investors, FTSE Russell.

¹ Russell announced that the June 2026 reconstitution will be the final annual rebalance of its U.S. equity indexes. Going forward, the indexes will be reconstituted semi-annually (June and December) starting in December 2026.

Rocket Fuel: The Potential Impacts of Major Index Changes This June

What may seem like routine index maintenance can have real implications for investors. When Russell reconstitutes its indexes, funds and investors attempting to track those indexes must place trades to:

- Sell securities leaving each index.
- Buy securities joining each index.
- Buy or sell securities to adjust the old weights of securities staying in each index to their new weights.

Given the substantial assets in funds tracking Russell’s U.S. market indexes (estimated at more than \$12 trillion as of June 2025), this annual event triggers significant single-day turnover for those funds and their investors.

As a result of the reconstitution, Jefferies anticipates about \$350 billion in trades at the end of the day on June 26, driven solely by index funds, up from about \$220 billion traded around the 2025 Russell reconstitution. **Figure 2** presents the expected dollar amount that index funds tracking various Russell indexes will trade.

Figure 2 | Huge Sums Will Trade Hands in June as Index Funds Aim to Stay in Line with Announced Russell Index Changes
Value of Expected Index Fund Trades on June 26 for a Selection of Russell Indexes (\$B)



Estimates as of 5/22/2026. Sources: Avantis Investors, Jefferies.

Rocket Fuel: The Potential Impacts of Major Index Changes This June

The considerable trading activity triggered by the Russell reconstitution makes this one of the highest aggregate trading volume days in the U.S. market each year. The impact on traded volume at the individual security level can also be significant, not just in small-caps, where average trading volumes tend to be lower.

As shown in **Figure 3**, many names moving between indexes or changing weights will need to trade at volumes hundreds or thousands of times higher than typical for these stocks.

Figure 3 | Too Much to Trade?

Highest Expected % of Average Daily Trading Volume among Largest Announced Buys and Sells during the June 2026 Reconstitution

Panel A | Russell 1000

Buys

COMPANY	SECTOR	ESTIMATED NET FLOW (\$M)	% AVG. DAILY VOLUME
Sunbelt Rental Holdings	Industrials	\$1,042	541%
Ascendis Pharma	Health Care	\$415	230%
Simon Property Group	Real Estate	\$589	212%

Sells

COMPANY	SECTOR	ESTIMATED NET FLOW (\$M)	% AVG. DAILY VOLUME
Dycom Industrials	Industrials	\$1,356	800%
Nextpower Inc	Industrials	\$2,278	706%
Coeur Mining	Materials	\$2,185	620%

Panel B | Russell 2000

Buys

COMPANY	SECTOR	ESTIMATED NET FLOW (\$M)	% AVG. DAILY VOLUME
Neptune Insurance Holdings	Financials	\$343	1,400%
Highwoods Properties	Real Estate	\$403	1,088%
Service Titan	Technology	\$671	995%

Sells

COMPANY	SECTOR	ESTIMATED NET FLOW (\$M)	% AVG. DAILY VOLUME
SB Financial Group	Financials	\$20	11,141%
Standard Bio Tools	Health Care	\$47	2,276%
Tootsie Roll Industries	Cons. Staples	\$116	2,258%

Sources: Avantis Investors, Jefferies.

Rocket Fuel: The Potential Impacts of Major Index Changes This June

The data prompts an important question: Does it really make sense to force all this trading into a single day? Most would agree that attempting to trade multiples of a security's typical volume should come at a cost.

If an index fund is required to buy or sell stocks in order to closely track its benchmark, what motivates the other side of the trade to participate? Price is often that incentive, and it typically means paying higher prices for the stocks that need to be acquired and lower prices for the stocks that need to be sold.

Several studies have sought to measure the impact of high liquidity demands around index rebalance events. For example, one study estimated that funds tracking the Russell 2000 Index lost between 1.30% and 1.84% per year as a result of the liquidity demands around its annual reconstitution and related investor arbitrage activity (i.e., investors buying securities known to be demanded by index funds to earn a profit from their need for immediacy at reconstitution).² While various studies may yield different results, what's clear is that the unseen costs of infrequent index rebalancing can be meaningful.

Now, back to those [highly anticipated mega-cap IPOs painting headlines](#). This same liquidity-demanding dynamic is likely to be at play as index providers respond to the inclusion of these companies in market indexes. New IPO inclusion rule changes for Russell and other index providers may exacerbate the impact on index fund investors.

Russell recently announced plans to “fast-track” the inclusion of large IPOs such as SpaceX, Anthropic and OpenAI. Companies that meet the fast-track requirements (e.g., those within the size range of the 500 largest companies) will be eligible for inclusion after five trading days.

This fast-tracking approach has precedent. The Center for Research in Security Prices (CRSP) has fast-tracked larger IPOs (inclusion after five trading days) since 2017, providing a dataset for research into the potential impacts of index providers adopting a similar approach.

² Honghui Chen, Gregory Noronha, and Vijay Singal. “Index Changes and Unexpected Losses to Investors in S&P 500 and Russell 2000 Index Funds,” March 2005. Available at SSRN.

Rocket Fuel: The Potential Impacts of Major Index Changes This June

A 2025 study found that fast-tracked IPOs, on average, outperformed non-fast-tracked IPOs by more than 5% from the IPO close date through the index inclusion date (the 5th trading day). After being added to the indexes (and index funds tracking them), price gains quickly reverted on average.

Figure 4 summarizes the findings over the sample from 2017 through 2023. While a relatively small sample, the results suggest investors may buy up shares of popular IPOs, knowing that index fund managers will soon have strong demand to acquire them to keep their funds in line with the index they track.

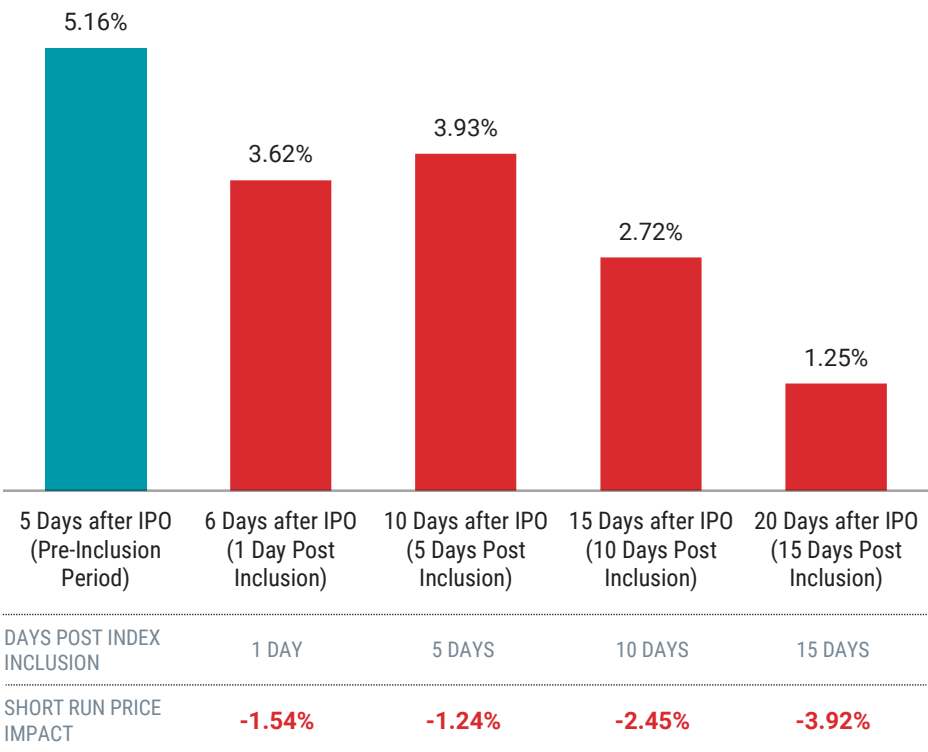
These hidden potential costs, whether from recurring index rebalancing events or new IPO inclusions, are often unknown to index fund investors, yet research shows they can be meaningful. Importantly, it’s not the only option.

We believe investors can do better by avoiding purchases of companies around the time they’re announced for addition to market indexes. This helps mitigate the risk of buying at elevated prices that often accompany high short-term demand for these securities.

Further, a process that allocates investor assets based on current (rather than stale) information to determine which securities to buy or sell and at what weights is expected to add value over time. This doesn’t mean investors have to trade a lot each day, only what’s necessary to keep the portfolio in the desired position. This method allows for consistent focus on the desired asset class rather than forced trades made only once or twice a year.

Figure 4 | CRSP Index Fast-Tracked IPOs Have, on Average, Cost Index-Tracking Funds

Performance of IPOs Fast-Tracked into CRSP Indexes vs. Other IPOs Included by CRSP (Pre- and Post-Inclusion), 2017-2023



Data from 2017 – 2023. Source: Chris Murray and Marco Sammon, “Primary Capital Market Transactions and Index Funds,” July 2025. Available at SSRN. Short run price impact is the difference between the fast-track IPO return premium over the 5 days after IPO (pre-index inclusion) and the return premium from IPO through day 6/10/15/20 thereafter. The results show that the outperformance observed in the 5 days after IPO (prior to index inclusion) has on average dissipated materially in the weeks after index inclusion (after the first 5 days from IPO).

Academic Perspective

Social Security Claiming Decisions:

Don't Dismiss the Math, but It Doesn't Always Apply to Real Life

I'll admit it: "Let's talk about Social Security claiming" isn't usually my opening line when I meet friends for dinner. And yet, with Peak 65 recently occurring (when more Americans turned 65 every day than in any previous year), it's never been more important to talk about Social Security claiming, given the enormous implications this decision holds for so many people.

To be clear, Social Security claiming decisions also raise a much larger conversation about decumulation, in general (that is, how to spend down one's hard-earned retirement nest egg). And, as Nobel Prize-winning economist Bill Sharpe famously said, decumulation is "the nastiest, hardest problem in finance."

Don't despair, though: Academics and financial advisors have been steadily accumulating practical, psychology-driven insights to help with these decisions. Before I jump into them, let me acknowledge that this article takes a slightly different format from my others.

Whereas I normally spotlight ideas and practical findings from a recent research article, here I'm going to highlight takeaways from an episode of my podcast, [The Behavioral Divide](#). For those unfamiliar, each episode of the program features one academic and one financial advisor discussing a single topic in financial decision-making with me.

For [this episode](#), I sat down with Suzanne Shu, Ph.D., a marketing professor at Cornell University who has studied decumulation decisions for over 20 years, and Taylor Schulte, CFP, the founder and CEO of Define Financial, who helps his clients grapple with them on a day-to-day basis.



Hal Hershfield, Ph.D.

Consultant to Avantis Investors

Hal is a professor of Marketing and Behavioral Decision Making in the Anderson School of Management at the University of California, Los Angeles.

His research asks, "How can we help move people from who they are now to who they'll be in the future in a way that maximizes well-being?"

Social Security Claiming Decisions:

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Decumulation Is a Different Beast Than Accumulation

To level the playing field, accumulation is the process of building up retirement assets, and decumulation is what happens when you retire. It involves understanding how consumers use the assets they've saved over the course of their careers to make them last through retirement ... a span of years that, in some cases, can be as long as the time they spent working!

As a result, the feelings associated with decumulation can be quite different from those associated with accumulation. For many clients, accumulation may feel easy — "I made money, I saved money, I didn't do anything stupid, I bought a few ETFs" — but decumulation poses a daunting psychological challenge. After 30–40 years of watching your retirement account balance rise, it suddenly starts to decline.

Helping clients reason through decumulation is inherently difficult — and here, too, it differs sharply from accumulation. For several decades now, researchers and financial services firms have implemented "one-size-fits-all" solutions to help people save more (and save smarter). Famously, defaults (where workers are automatically enrolled in saving plans) and auto-escalation (where their contributions automatically increase over time) have been quite successful.

By contrast, as Shu pointed out, decumulation is a much more customized problem to solve because you're now dealing with differences in life expectancy, family composition, goals, and available options. It requires far more thought and care.

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

Social Security Claiming Decisions:

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Social Security Claiming Can't Be Decided in Isolation

The real question isn't just when to claim, but how the income from Social Security benefits fits into a client's larger portfolio, withdrawal strategy, tax plan, and lifestyle timeline. People often approach claiming as simply "when should I claim?" The advisor's job is to step back and point out that this is part of a much larger decision.

To be fair, clients sometimes view this as a larger decision, even if they are misguided. Schulte, for instance, published a conversation he had about an academic paper that suggested the benefits of claiming as early as age 62. But he was surprised by the number of people who responded with comments like, "How could I claim at 62 when I need to wait until 65 for Medicare to get health insurance?" Even though this sentiment is a misconception, many people nonetheless dismissed the idea of early claiming because of questions about health insurance.

Funny enough, when I had previously considered the idea that claiming age should be integrated into other decisions, I was thinking strictly in terms of other financial decisions. In reality, the aperture should be widened to include non-financial domains, such as health care.

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

Social Security Claiming Decisions:

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Claiming Decisions Aren't Just About Math

Popular finance books have tried to turn Social Security claiming into a math problem. The gist is that if I know how much I want to spend in retirement, how long I expect to live, what rate of return I can earn on my savings, and how I value a dollar today versus a dollar a decade from now, I can solve for the “right” age to claim — somewhere between 62 and 70, where each year I wait permanently boosts my monthly check.

That's before factoring in potential spousal benefits, tax implications, and the need to predict the year of my own death. You can see how this “math” problem can quickly break down when the uncertainty of these components is overwhelming.

The math can break down further when the formula suggests, as it often does, that people spend down their savings first and delay Social Security to 70. In the real world, however, people often do the opposite and claim as early as possible to avoid touching their retirement savings.

According to Shu, three psychological drivers can help explain why such early claiming occurs:

1. Psychological ownership — “That was my money that I put into the government system, and I want it back.”
2. Loss aversion — The fear that if you don't claim at 62 and don't make it to 70, “I will have lost out.”
3. Control over the nest egg — The 401(k) is a savings account that I control, and drawing it down is painful, so people let it sit and use “the government's money” first.

Social Security Claiming Decisions:

Don't Dismiss the Math, but It Doesn't Always Apply to Real Life

So, you've got several psychological forces that work against a formulaic approach. Don't get me wrong: The math is important; it's just not the whole of the issue. As Schulte put it, "We have to pay attention to the math, but sometimes the math isn't real life."

Here's how he approaches the Social Security discussion with clients: He first outlines the textbook answer, then uses it as a conversation starter to determine a more personalized answer for each client. It's a great opportunity to bring to light what may actually matter to a client in retirement, such as how much money to have, and when and how to spend it.

One reframe from the conversation stuck with me as a way to make that personalized answer easier to reach. Instead of asking a client to predict how long they'll live — an impossible and often anxiety-inducing task — Schulte asks what they're trying to protect against.

Delay until 70 and live to 95, and you'll be grateful for the longevity protection. But claim at 62 and something happens at 73, and you'll have had a decade of income that funded travel and time with grandchildren. You could call it mortality protection.

When the question is framed as "protection" rather than "prediction," the conversation about Social Security claiming age shifts away from guessing a number and toward what matters to clients.

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

Global stocks surged for the second straight month despite continued worries about inflation and the Iran conflict. Bonds also advanced.

- Against a backdrop of solid technology-sector earnings, continued enthusiasm for artificial intelligence-related spending and falling oil prices, U.S. stocks surged. These factors largely overshadowed ongoing uncertainties surrounding Iran and inflation. The S&P 500 Index reached several record-closing highs in the month, finishing with a monthly return of 5.3%.
- With a gain of nearly 16%, the information technology sector largely drove the S&P 500 Index's monthly return. Eight of the index's 11 sectors declined for the month. Amid falling oil prices, the energy sector was the weakest, down nearly 6%.
- Non-U.S. developed markets stocks also delivered another monthly gain, returning 2.8%. Emerging markets (EM) stocks remained top performers, returning nearly 10% for the month.
- Rising energy prices pushed April's annual inflation rates to the highest levels in more than two years in the U.S. and the eurozone. However, U.K. inflation eased amid a sharp slowdown in housing and household services costs.
- The stock market rally was broad-based, with all main U.S. size and style indices delivering solid gains. Large-cap growth stocks were the month's top performers. Outside the U.S., the major size and style indices also rallied, particularly in emerging markets.
- U.S. Treasury yields rose modestly for the month. The broad U.S. bond market index advanced, with corporate bonds outperforming.

Returns (%)

INDEX	1 MO	3 MO	YTD	1 YR	3 YR	5 YR	10 YR
U.S. Large-Cap Equity							
S&P 500	5.26	10.52	11.27	29.78	23.61	14.15	15.65
U.S. Small-Cap Equity							
Russell 2000	4.37	11.26	18.15	43.08	20.25	6.61	11.21
Intl. Developed Markets Equity							
MSCI World ex USA	2.81	-0.34	9.38	24.04	18.79	9.13	9.52
Emerging Markets Equity							
MSCI Emerging Markets	9.69	9.39	25.61	54.31	25.15	7.54	10.66
Global Real Estate Equity							
S&P Global REIT	-0.08	0.28	9.52	13.56	10.50	2.89	4.05
U.S. Fixed Income							
Bloomberg U.S. Aggregate Bond	0.31	-1.35	0.38	5.13	3.95	0.17	1.70
Global Fixed Income							
Bloomberg Global Aggregate Bond	0.34	-1.54	0.50	3.26	3.66	-1.58	0.74
U.S. Cash							
Bloomberg U.S. 1-3 Month Treasury Bill	0.31	0.92	1.50	4.01	4.78	3.54	2.32

Data as of 5/31/2026. 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	11.34	19.95	13.68	8.23
	Small	12.72	21.39	18.30	17.98

- The broad U.S. stock market rallied again in May, pushing the year-to-date gain to more than 11%. Size and style indices also delivered strong monthly returns.
- Large-cap stocks gained more than 5% to outpace small- and mid-cap stocks in May. Small-cap stocks were top year-to-date performers, up 18%.
- Growth stocks fared better than their value-style peers across the board in May. Year to date, value outperformed across size categories, led by small-cap value, up more than 18%.

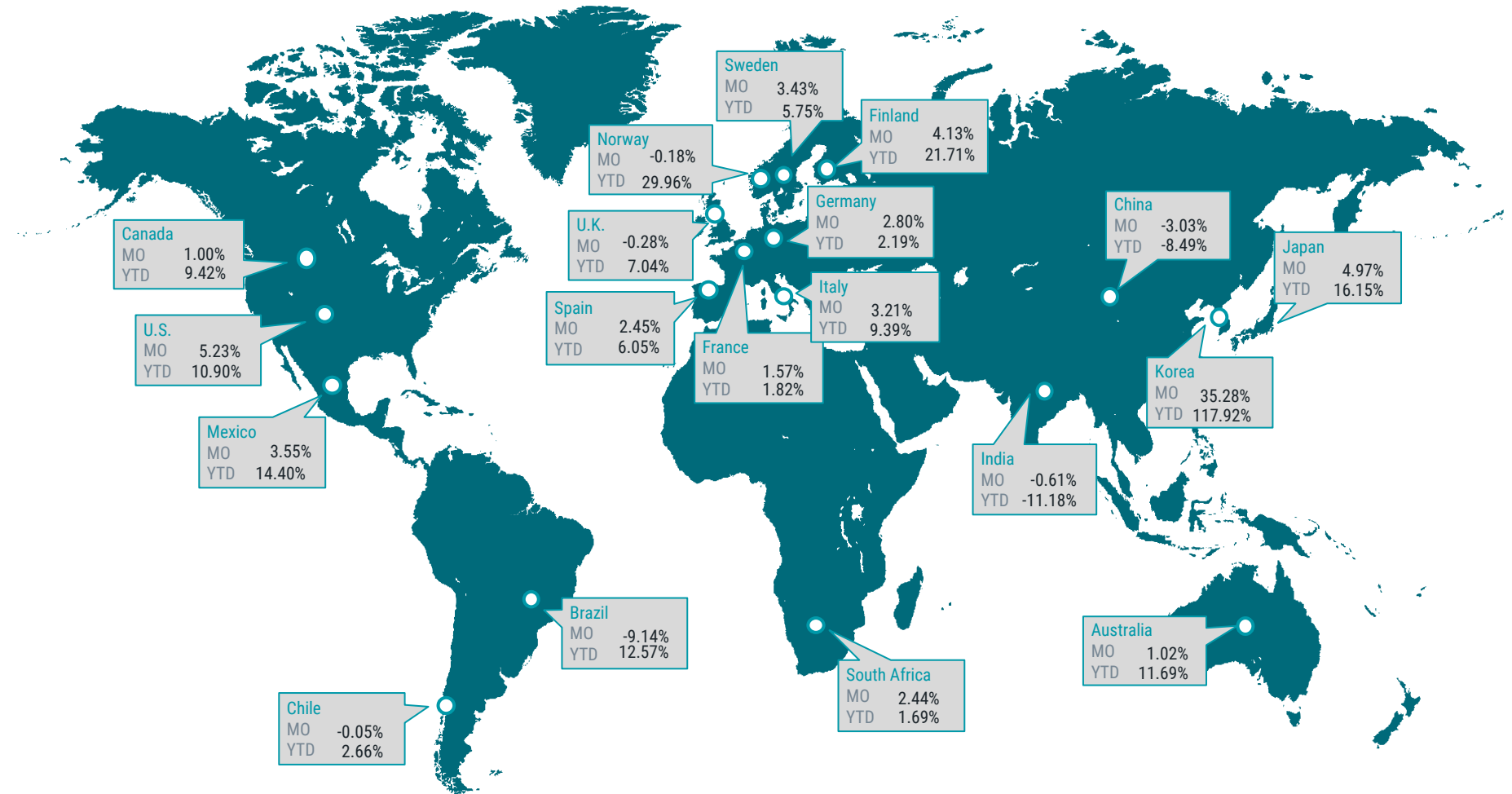
		Non-U.S. Developed Markets			
		QTD (%)		YTD (%)	
		Value	Growth	Value	Growth
Size	Large	9.35	12.76	12.24	6.28
	Small	10.20	15.29	10.05	14.58

- Non-U.S. developed markets stocks advanced but lagged U.S. stocks in May and year to date, with gains of 2.8% and 9.4%, respectively.
- Small-cap stocks outperformed their large-cap peers in May. That trend persisted year to date, with small-caps up 12.3% and large-caps returning 9.4%.
- Growth stocks outpaced value stocks across the board in May. Year to date, the growth style outperformed among small- and mid-caps but underperformed sharply in the large-cap universe.

		Emerging Markets			
		QTD (%)		YTD (%)	
		Value	Growth	Value	Growth
Size	Large	24.50	30.33	25.96	27.34
	Small	17.01	17.42	17.12	15.56

- The broad EM stock index significantly outperformed developed markets stocks in May and year to date. The index returned nearly 26% for the five-month period.
- Large-cap stocks outperformed small-cap stocks for the month. Both categories delivered double-digit year-to-date gains, but large-caps outperformed by more than 10 percentage points.
- Among large-caps, growth stocks outperformed value stocks in May and year to date. Among small-caps, the value style outperformed in both periods.

Equity Returns | Country



Data as of 5/31/2026. 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 remained in positive return territory in May, with corporate bonds outperforming. Amid ongoing inflation worries, Treasury yields rose for the month.

- The Bloomberg U.S. Aggregate Bond Index advanced for the second straight month, returning 0.3%.
- Treasury yields surged through mid-May but eased somewhat by month-end. The yield on the 10-year Treasury note ended the month at 4.44%, up 6 bps from April-end. The two-year Treasury yield rose from 3.87% at the end of April to 4.01% by May-end.
- All key bond sectors advanced in May. Corporates outperformed the broad index average, while MBS and Treasuries lagged. Credit spreads tightened, more so for investment-grade corporates, which outpaced high-yield corporates.
- Most economic data remained upbeat. Manufacturing rose in May, and job growth exceeded market forecasts in April.
- Annual headline CPI jumped to 3.8% in April, the highest since May 2023, as energy prices surged 18%. The annualized core PCE price index, the Fed's preferred inflation gauge, rose from 3.2% in March to 3.3% in April, well above the Fed's 2% target.
- Against this backdrop, the futures market showed growing expectations for a Fed rate hike later in the year. Meanwhile, Kevin Warsh became Fed chair, succeeding Jerome Powell, who opted to stay on at the Fed as a governor.
- Municipal bonds advanced for the month and outperformed Treasuries and the broad U.S. bond market index.
- TIPS advanced and outperformed nominal Treasuries, even as longer-term inflation expectations eased.

Returns (%)

INDEX	1 MO	3 MO	YTD	1 YR	3 YR	5 YR	10 YR
Global Fixed Income							
Bloomberg Global Aggregate Bond	0.34	-1.54	0.50	3.26	3.66	-1.58	0.74
U.S. Fixed Income							
Bloomberg U.S. Aggregate Bond	0.31	-1.35	0.38	5.13	3.95	0.17	1.70
U.S. High-Yield Corporate							
Bloomberg U.S. Corporate High Yield Bond	0.49	0.98	1.68	7.57	9.36	4.39	5.88
U.S. Investment Grade							
Bloomberg U.S. Corporate Bond	0.76	-0.79	0.67	6.09	5.37	0.63	2.81
Municipals							
Bloomberg Municipal Bond	0.37	-0.84	1.34	6.67	3.77	0.92	2.21
U.S. TIPS							
Bloomberg U.S. Treasury Inflation Protected Securities (TIPS)	0.21	0.02	1.64	4.90	4.03	1.23	2.84
U.S. Treasuries							
Bloomberg U.S. Treasury Bond	0.11	-1.70	0.00	3.71	2.82	-0.35	1.05
U.S. Cash							
Bloomberg U.S. 1-3 Month Treasury Bill	0.31	0.92	1.50	4.01	4.78	3.54	2.32

Data as of 5/31/2026. 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 5/31/2026. 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.

Glossary

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.

Mortgage-Backed Securities (MBS): A type of securitized debt that represents ownership in pools of mortgage loans and their payments.

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.

Glossary

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.