MARKET OUTLOOK | DEC. 31, 2022

# North America Market Outlook: 2023

Near-term turbulence, but clearer skies ahead.


Morningstar Equity Research

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# U.S. Equity Market Valuation Overview

Near-term turbulence, but clearer skies ahead.

# U.S. Equity Market Trades at a 16% Discount to a Composite of Our Equity Fair Valuations

**U.S. Stock Market Trading at a Deep Discount to Fair Value Estimates**
After starting the year trading well above our fair value estimates, the market has dropped deep into undervalued territory. Furthermore, in our 2022 Market Outlook we noted that the market would have to contend with four main headwinds during 2022, each of which had taken a toll on the markets.

Based on a composite of our intrinsic valuations on more than 700 stocks we cover that trade on U.S. exchanges, as of Dec. 27, 2022, we calculated that the U.S. equity market was trading at a price/fair value of 0.84, representing a 16% discount to our fair value estimates.

According to our valuations, investors appear best positioned in a barbell-shaped portfolio of being overweight in the value and growth categories and underweight in the core category.

Across capitalizations, large-cap and mid-cap valuations are in line with the broad market average, whereas small-cap stocks are trading at an over-30% discount.

While we think the market is undervalued, we expect the markets will remain turbulent over the foreseeable future. Based on our outlook that the economy will be stagnant in the first half of 2023, we expect volatility will remain high over the next two quarters. However, an economic recovery in the second half of 2023 should allow equity markets to begin to recover toward our long-term, intrinsic valuations.

**Morningstar Equity Research Coverage Price/Fair Value**
Valuations of Morningstar's equity research coverage by Equity Style Box

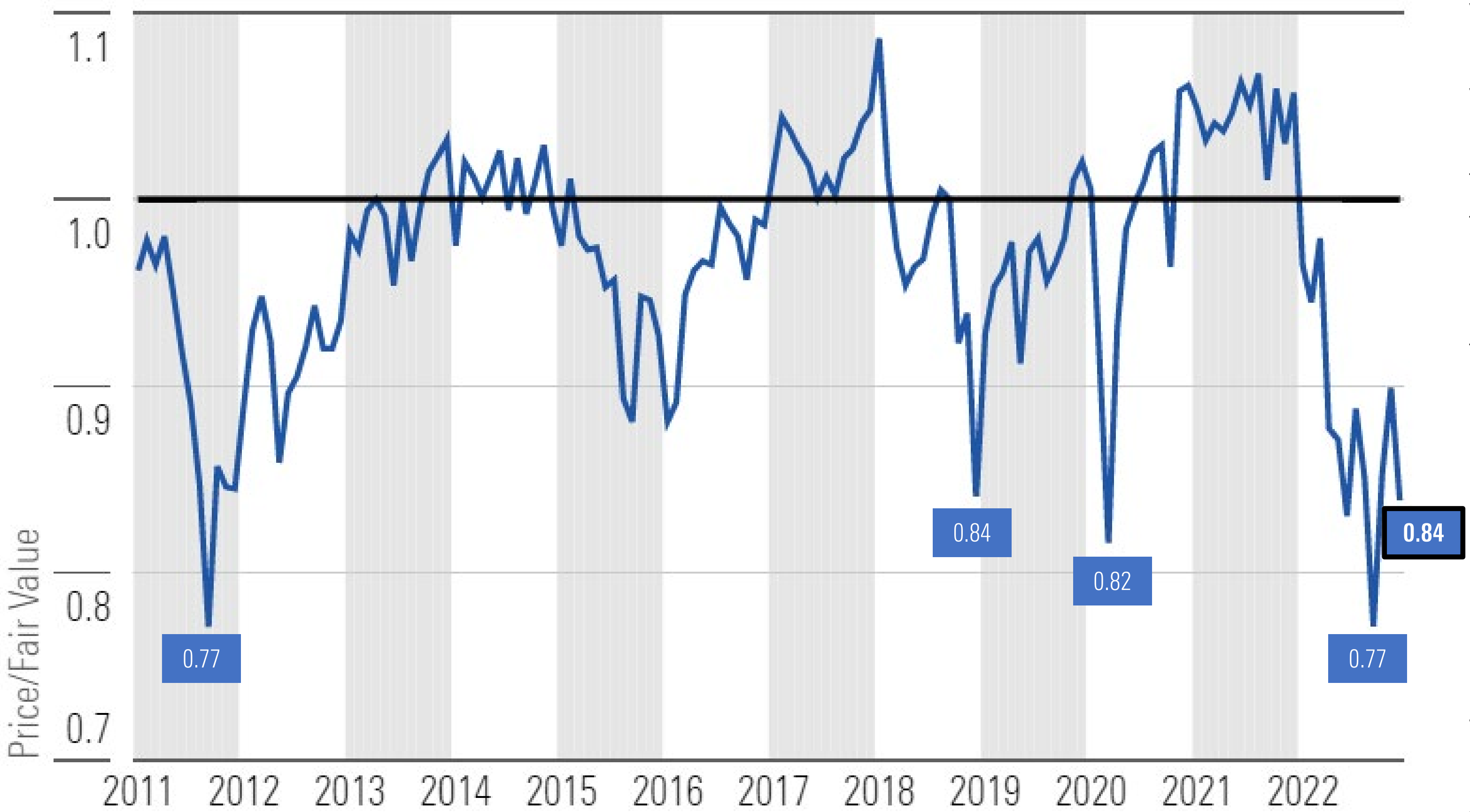
| Size \ Style | All | Value | Core | Growth |
|---|---|---|---|---|
| All | **0.84** | 0.80 | 0.89 | 0.80 |
| Large | 0.84 | 0.81 | 0.89 | 0.80 |
| Mid | 0.84 | 0.79 | 0.89 | 0.80 |
| Small | 0.68 | 0.60 | 0.72 | 0.75 |

Source: Morningstar. Data as of Dec. 27, 2022.

# U.S. Equity Market Has Rarely Traded at Such a Large Discount to Our Intrinsic Valuations

**Historical Morningstar U.S. Equity Research Coverage Price/Fair Value Estimate at Month-End**

Near-term market dynamics will drive further volatility, but low valuations provide a large margin of safety.




Source: Morningstar. Data as of Dec. 27, 2022.

Tightening monetary policy, a weak economy, high inflation, and rising interest rates have taken a toll on valuations. While the near-term outlook remains challenging, according to our long-term intrinsic valuations, the market is trading deep into rarely seen undervalued territory. Since 2010's end, the market has traded at or below the current discount only 5% of the time.

Prior to the emergence of the pandemic in early 2020, there have only been a few other instances in which the market has traded at such a discount to our valuations. In December 2018, the Federal Reserve had been tightening monetary policy for a year and markets were pricing in a global growth scare. In 2011, markets were under pressure based on concerns that contagion from the Greek debt crisis would spread to other European countries and prompt systemic defaults among European banks.

While near-term conditions may pressure earnings in the short term, at current valuations we think the market has fallen more than enough to incorporate those headwinds. In our view, the market is overly pessimistic regarding the long-term outlook.

# Bear Takes a Bite Out of Equity Market

**Morningstar US Equity Market Index Dropped 19.7% Year to Date**
Value outperformed growth by the widest percentage since 2000.

| Size \ Style | All | Value | Core | Growth |
|---|---|---|---|---|
| All | **-19.7%** | -0.7% | -14.5% | -37.6% |
| Large | -20.7% | 0.2% | -14.4% | -40.9% |
| Mid | -16.1% | -1.9% | -14.1% | -33.1% |
| Small | -18.8% | -6.5% | -14.5% | -34.3% |

Source: Morningstar. Data as of Dec. 27, 2022.

Morningstar US Equity Market Index has dropped 19.7% year to date through Dec. 27, 2022.

The value category significantly outperformed growth by its widest percentage since 2000. The amount that value has outperformed this year has erased all the prior outperformance by growth since February 2019.

Coming into 2022, we noted that value stocks were trading at a slight discount to our fair value estimates, whereas both core and growth categories were overvalued. The outperformance of the Morningstar US Value Index as compared with the Morningstar US Equity Market Index was driven by:

- Overweight sectors that outperformed including:
    - Energy, Consumer Defensive
- Underweight sectors that underperformed including:
    - Technology, Consumer Cyclical

The underperformance of the Morningstar US Growth Index as compared with the Morningstar US Equity Market Index was driven by:

- Overweight sectors that underperformed:
    - Technology, Communications, Consumer Cyclical
- Underweight sectors that outperformed including:
    - Energy, Consumer Defensive

# Bear Market Leads to Widespread Undervaluation Across All Styles and Capitalizations

Over the course of the year, we have increased our fair value estimates on 56% of stocks under our coverage, left 8% unchanged, and decreased fair value estimates on 37%. Among value stocks, we increased our fair value estimates over 10% on 20% of our coverage and lowered our fair value estimates by more than 10% on 27%. In the core category, we increased our fair value estimates over 10% on 30% of our coverage and lowered our fair value estimates by more than 10% on 16%. Across growth stocks, we increased our fair value estimates over 10% on 38% of our coverage and lowered our fair value estimates by more than 10% on 22%.

**Change in Morningstar Equity Research Coverage Price/Fair Value Estimates Over the Course of the Year**

All categories are now trading at various degrees of undervaluation.

**December 31, 2021**

| Size | All | Style: Value | Style: Core | Style: Growth |
|---|---|---|---|---|
| All | **1.06** | 0.97 | 1.12 | 1.05 |
| Large | 1.06 | 0.98 | 1.11 | 1.06 |
| Mid | 1.06 | 0.95 | 1.15 | 1.06 |
| Small | 0.90 | 0.88 | 1.01 | 0.72 |

**December 27, 2022**

| Size | All | Style: Value | Style: Core | Style: Growth |
|---|---|---|---|---|
| All | **0.84** | 0.80 | 0.89 | 0.80 |
| Large | 0.84 | 0.81 | 0.89 | 0.80 |
| Mid | 0.84 | 0.79 | 0.89 | 0.80 |
| Small | 0.68 | 0.60 | 0.72 | 0.75 |

Source: Morningstar. Data as of Dec. 27, 2022.

# Energy Soared Higher, While Communications and Cyclicals Plummeted

According to our valuations, energy was the most undervalued sector coming into 2022 and has soared higher over the course of the year.

Based on the defensive nature of their sectors, utilities are close to unchanged, whereas consumer defensive and healthcare have both outperformed to the downside.

Communications is the worst-performing sector and it significantly underperformed in 2022. While almost all stocks in the sector fell, performance is skewed as Alphabet has dropped 40% and Meta Platforms plunged 65%. These two stocks account for 42% and 10%, respectively, of the market capitalization of the sector.

Weak economic growth and rising interest rates have taken their toll on those sectors that we determined were some of the more overvalued ones coming into the year. For example, technology, real estate, and consumer cyclicals — each with varying degrees of overvaluation at the beginning of the year — have all underperformed.

**Returns by Sector**

Defensive sectors hold best to downside, communications plummets, and those most leveraged to growth underperform.

| Cyclical Sectors | All | Sensitive Sectors | All | Defensive Sectors | All |
|---|---|---|---|---|---|
| Basic Materials | -10.38% | Comm. Services | -41.64% | Consumer Defensive | -1.49% |
| Consumer Cyclical | -36.28% | Energy | 63.82% | Healthcare | -5.43% |
| Financial Services | -12.98% | Industrials | -7.69% | Utilities | 2.86% |
| Real Estate | -25.31% | Tech | -32.29% | | |

Source: Morningstar. Data as of Dec. 27, 2022.

# 2022 Headwinds: Are They Beginning to Abate Yet?

In our 2022 Market Outlook, we noted that the U.S. equity market was overvalued and would need to contend with four main headwinds during the year:

1. Slowing rate of economic growth
2. Tightening monetary policy
3. Inflation running hot
4. Rising long-term interest rates

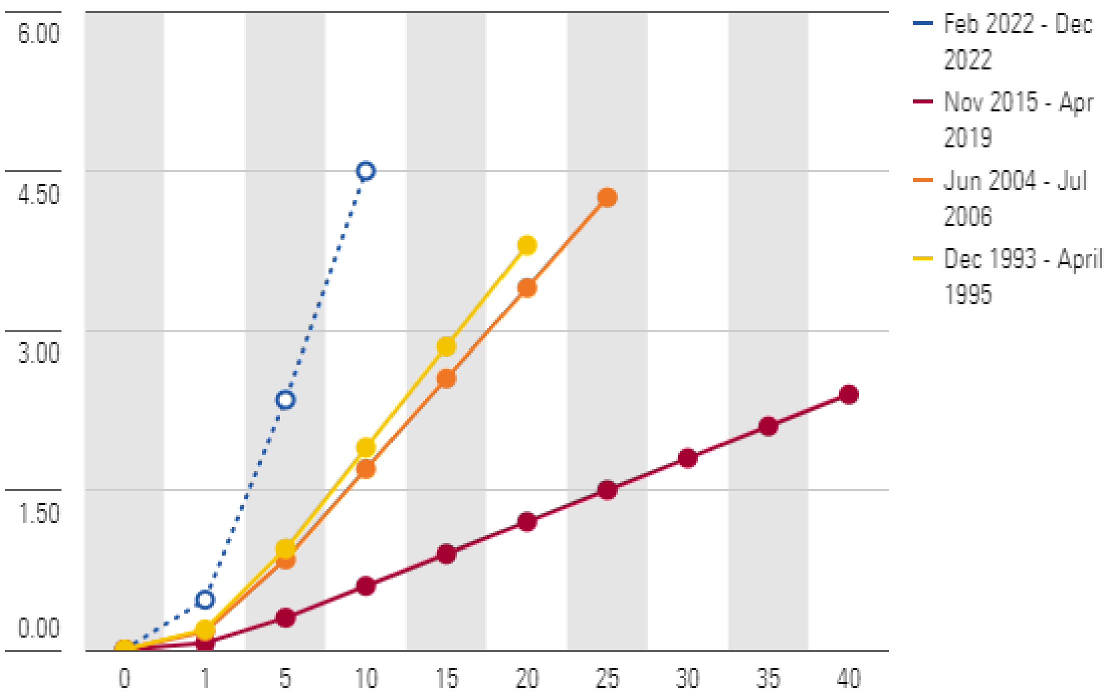
These headwinds were further compounded by the surge in the value of the U.S. dollar and the fallout from the Russian invasion of Ukraine.

The questions for 2023 include:
- Are these headwinds starting to abate? And if not, when?
- How quickly will each headwind die down?
- When will these headwinds turn to tailwinds?

# Federal Reserve Has Embarked on a Monetary Tightening Policy to Tame High Inflation

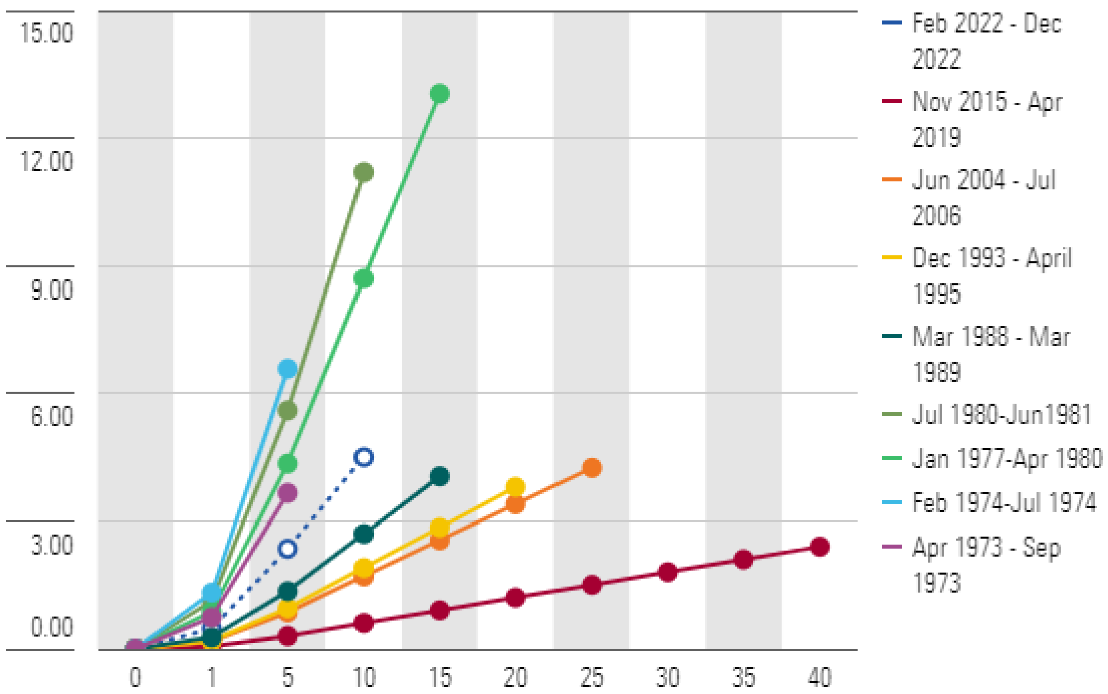
During 2022, the Fed conducted the fastest interest-rate-hiking cycle since the early 1980s, when inflation was in the double digits.

### Fastest Monetary Tightening Cycle in Recent History …




Source: Federal Reserve and Morningstar. Data as of Dec. 23, 2022.

### … But Slower and Shallower Than Those in the 1970s and 1980s




Source: Federal Reserve and Morningstar. Data as of Dec. 23, 2022.

# Federal Reserve Hikes Interest Rates to Battle Inflation

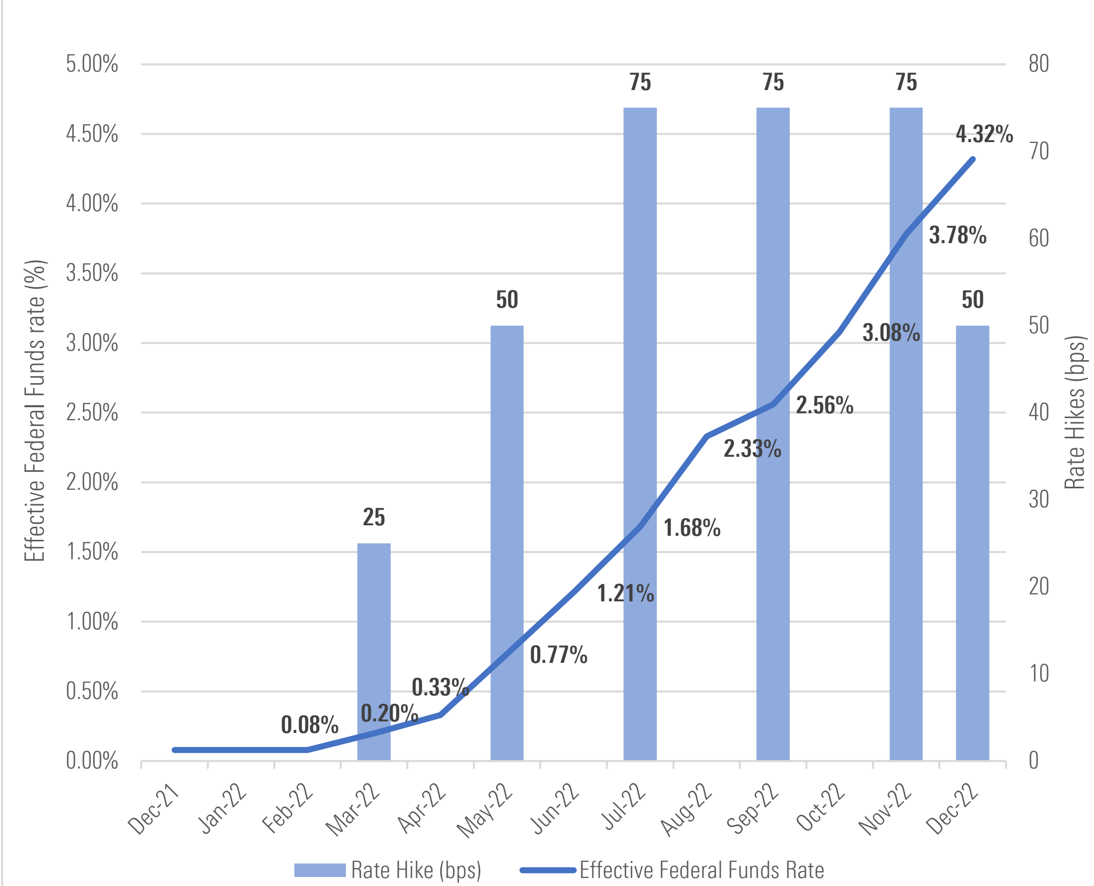
As inflation has been anything but transitory, the Federal Reserve began to tighten monetary policy. First with a 25-basis-point hike in March 2022, which increased to a 50-basis-point hike in May 2022, followed by three 75-basis-point increases, and ending the year with a 50-basis-point hike in December.

Compounding the impact of hiking interest rates, the Fed had also begun a quantitative tightening program that allows $95 billion of Treasuries and mortgage-backed securities roll off its balance sheet each month.

Monetary policy often acts with a lag in the real economy and the negative economic effects have begun to hit the most interest rate-sensitive industries.

**Interest Rate Hikes and Effective Federal-Funds Rate (%)**

After interest rates were ramped up, the pace is now beginning to decline.



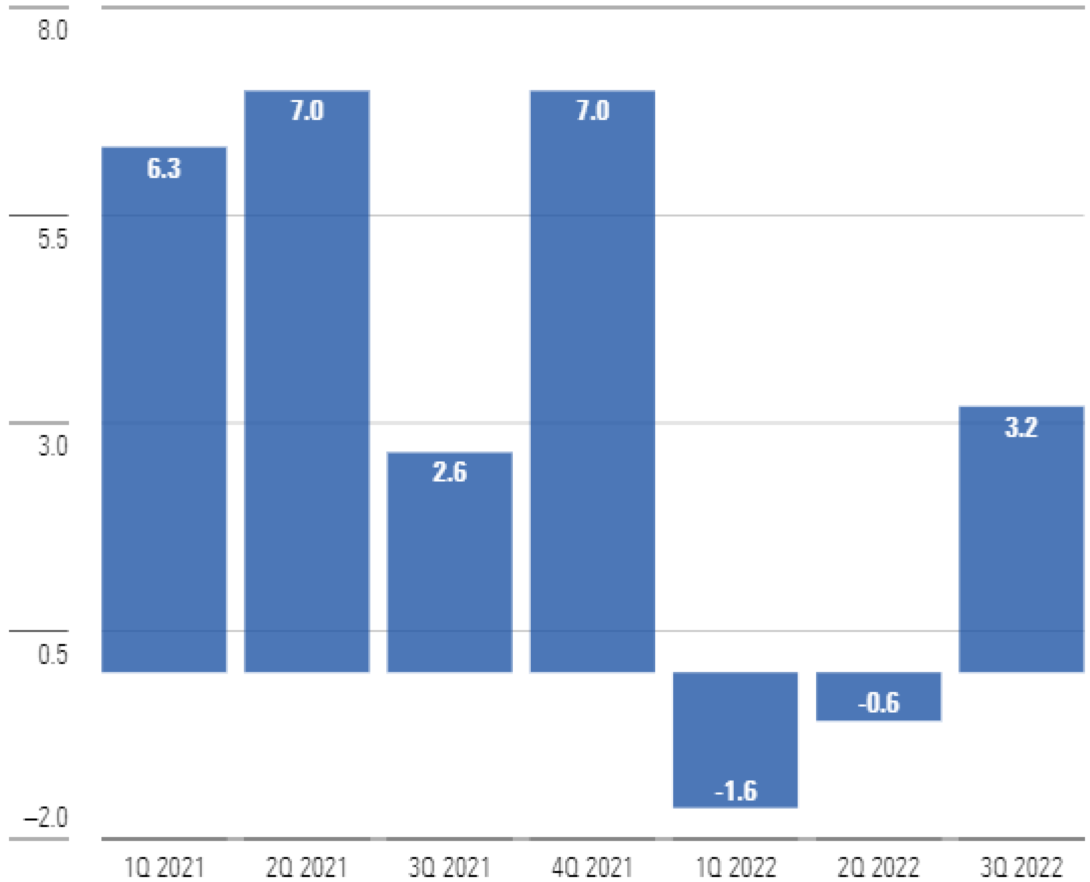

Source: U.S. Bureau of Economic Analysis, Morningstar. Data as of Dec. 23, 2022.

# U.S. Economy Slides in First-Half 2022, Recovering in Second Half

After posting a strong economic rebound in 2021 following the pandemic-induced decline in 2020, the U.S. economy contracted in the first half of 2022. The declines in the first half of the year were driven by reductions in net exports and inventory levels – two areas that corrected in the third quarter.

**U.S. Real Gross Domestic Product (%)**

The economy stumbled in the first half, but factors that drove decline are normalizing.




Source: U.S. Bureau of Economic Analysis. Data as of Dec. 23, 2022.

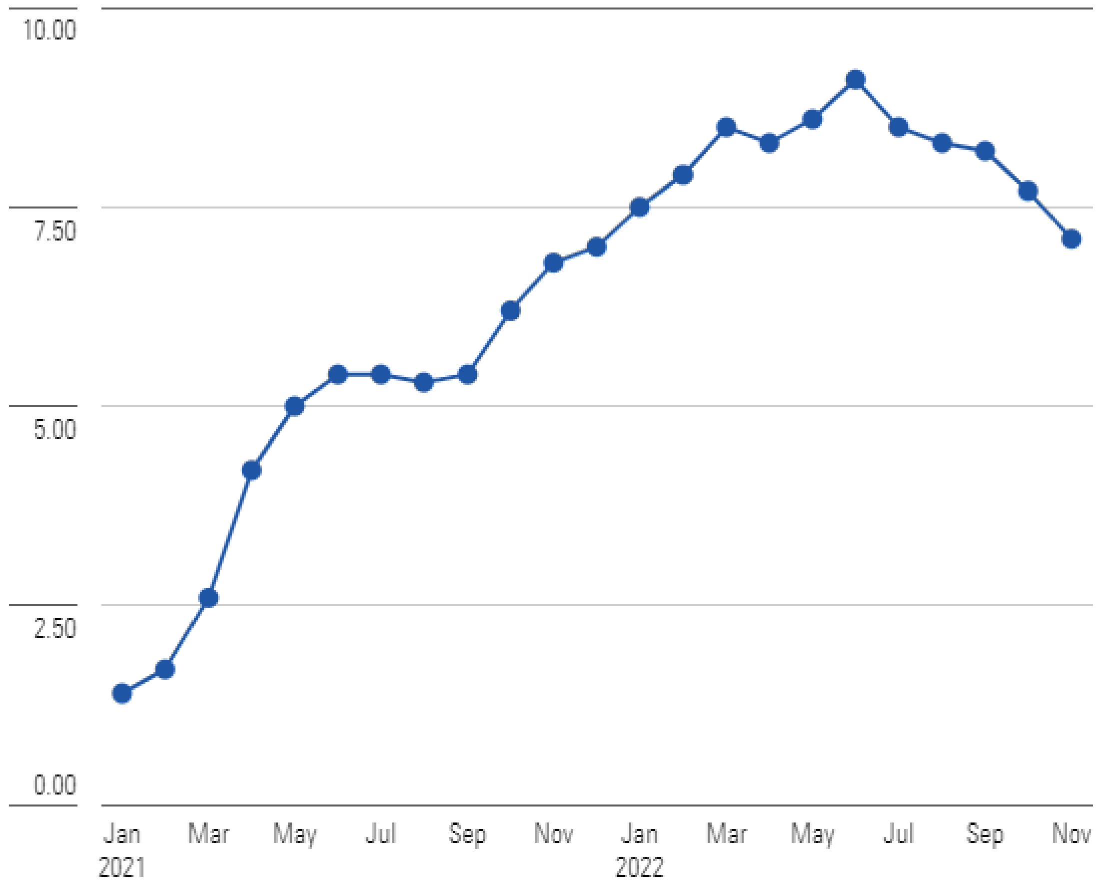
# Inflation Running Hot

After pausing in fall 2021, inflation came roaring back in 2022. Rising oil prices, supply chain issues, and bottlenecks took their toll, with inflation peaking at 9.1% in June 2022.

Inflation had been mainly concentrated in a few categories and as oil prices rolled over in the second half of the year and supply chains normalized, it has begun to decelerate. Interest rate hikes have begun to reduce activity in interest rate sectors such as new home building.

**Consumer Price Index Year-Over-Year Increase (%)**

Inflation, while moderating, is still at its highest level in decades.



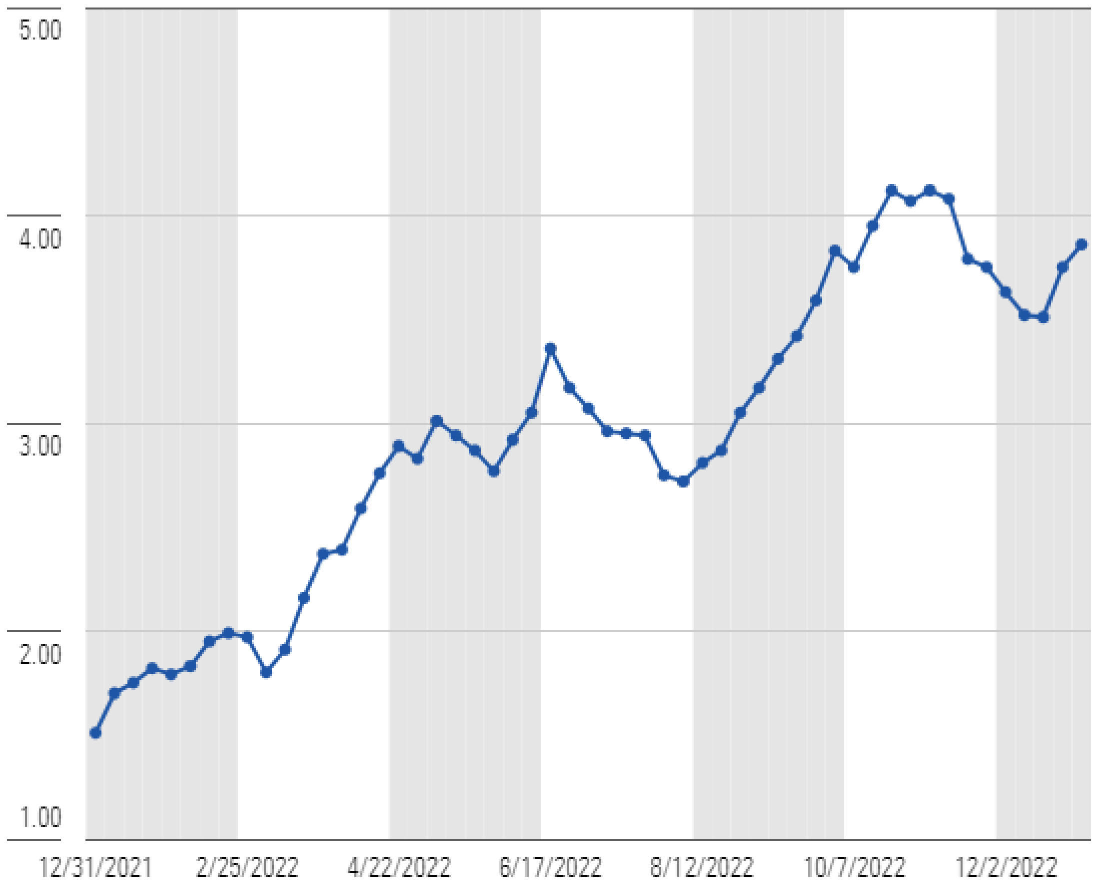

Source: U.S. Bureau of Labor Statistics. Data as of Dec. 23, 2022.

# Rising Long-Term Interest Rates

The yield on the 10-year U.S. Treasury has risen about 235 basis points over the course of 2022 to 3.85%, its highest since April 2010. Not since prior to the 2008-09 global financial crisis has the 10-year consistently traded higher.

**10-Year U.S. Treasury Yield (%)**

Long-term interest rates are at their highest in over a decade.

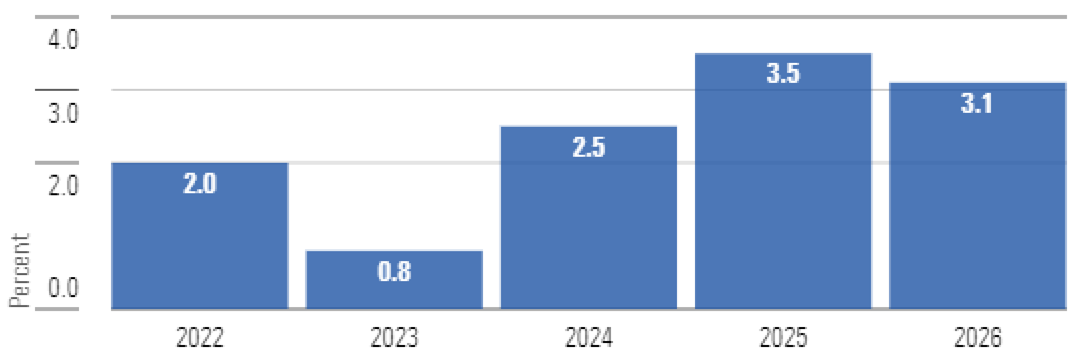



Source: Federal Reserve Bank of St. Louis, Morningstar. Data as of Dec. 27, 2022.

# How Long Will Bear Market Last?

After contracting in the first and second quarters of 2022, the U.S. economy recovered in the third and we forecast it will grow by 2.7% in the fourth quarter. However, we expect that the economy will be stagnant in the first half of 2023. We forecast a contraction of 0.8% and 0.4% in the first and second quarter, respectively, until growth begins to reaccelerate in the second half of the year.

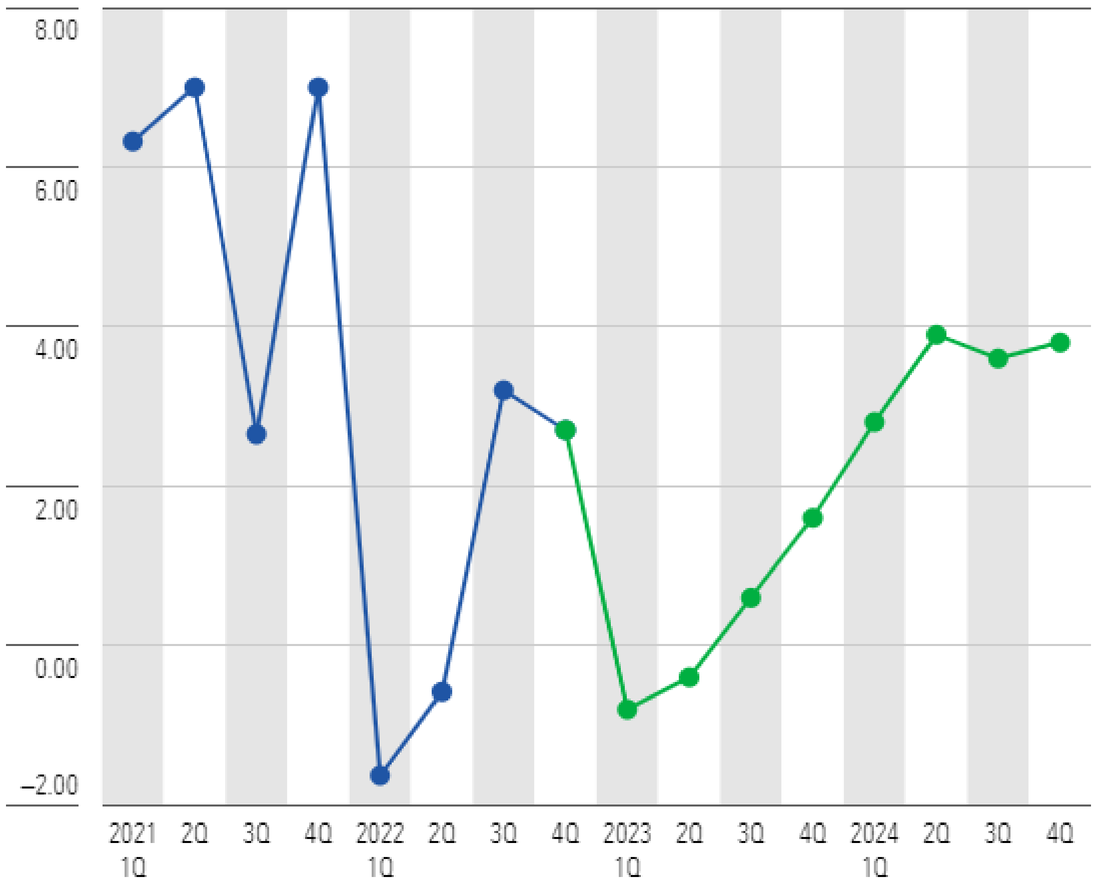
**U.S. Real GDP Forecasts (%)**




Source: Morningstar. As of Dec. 23, 2022.

**U.S. Real GDP Quarterly Forecasts (%)**

Economic activity projected to slow in first half before reaccelerating in the second half.




Source: U.S. Bureau of Economic Analysis, Morningstar. Data as of Dec. 23, 2022.

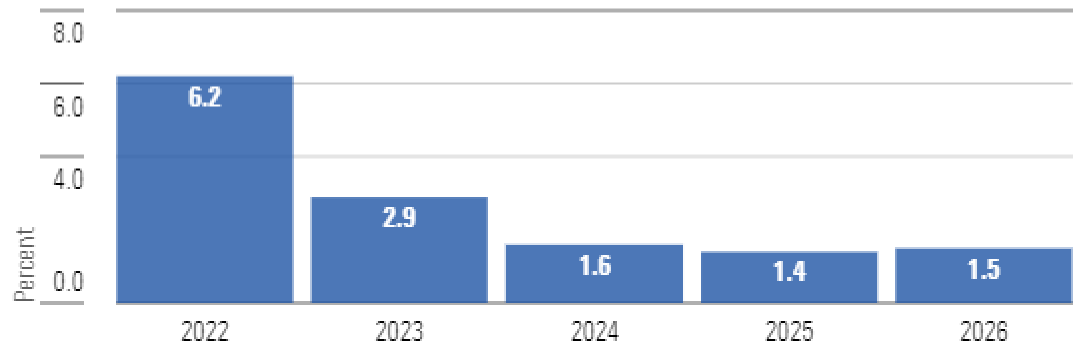
# What Will It Take for Equity Market to Establish a Bottom and When Will That Occur?

We forecast that inflation will remain on a downward trend and average only 2.9% in 2023 and continue to fall thereafter. We also expect that the preponderance of increases we expected in long-term interest rates is behind us. We forecast the yield on the 10-year U.S. Treasury will average 3.50% in 2023, decline to 2.50% in 2024, and bottom out at an average of 2.25% in 2025 before beginning to increase toward a normalized level.

We project that the combination of a weak economy in the first half of 2023 in conjunction with declining rate of inflation will allow the Federal Reserve to pause further monetary tightening in early 2023 and in the second half of the year turn to an easing policy.

In order to sustainably rally back to fair value, we think the markets will be looking for indications that the Fed will halt further monetary policy tightening, that economic growth is accelerating, and further data that inflation has peaked and remains on a downward trajectory.

**Average Annual Inflation Forecast**




Source: Morningstar. Data as of Dec. 20, 2022.

**Average Annual Interest Rate Forecasts (%)**

| Interest Rate (%) | **2022E** | **2023E** | **2024E** | **2025E** | **2026E** |
|---|---|---|---|---|---|
| Federal Funds | 1.60 | 4.40 | 2.75 | 1.63 | 1.88 |
| 10-Year UST | 3.00 | 3.50 | 2.50 | 2.25 | 2.75 |

Source: Morningstar. Data as of Dec. 20, 2022.

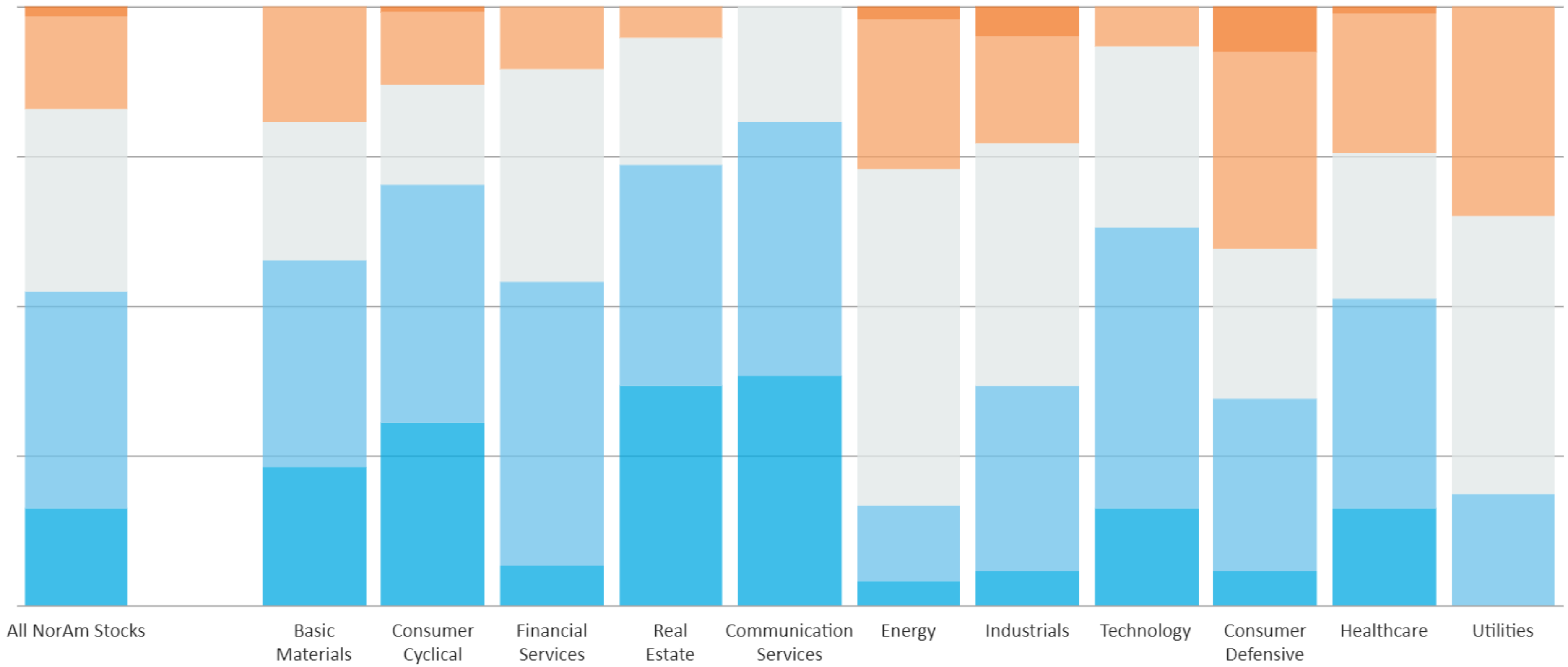
# Sector Valuations and Top Picks

SECTOR AND TOP PICKS

# Opportunities Abound Across Sector Coverage

As the equity markets continue to tread water in undervalued territory, the number of undervalued stocks remains high. Of the stocks we cover that trade in North America, 52% are rated 4 or 5 stars whereas only 17% are rated 1 or 2 stars. This is a sharp reversal from the end of 2021 when only 24% were 4 or 5 stars and 32% were 1 or 2 stars. The greatest number of undervalued stocks reside in the communications sector, closely followed by the real estate and consumer cyclical sectors. Energy and utilities remain the most unattractive sectors as only 17% and 19% are rated 4 or 5 stars, respectively.

**Morningstar Equity Star Ratings by Sector**




Source: Morningstar. Data as of Dec. 27, 2022.

# Communications Sector Most Undervalued, Followed by Consumer Cyclical and Technology

Across our sector coverage, communication services is the most undervalued by far, trading at a 43% discount to our fair value estimate. The consumer cyclical sector is the next most undervalued, trading at a 30% discount to fair value.

While technology was one of the more overvalued sectors as the beginning of the year, we think the pendulum has swung too far to the downside and see significant opportunities for investors that can ride out the volatility.

The remaining cyclical sectors are all undervalued as we think the market is overly pessimistic regarding the depth and/or length of an expected economic downturn.

While energy was the most undervalued coming into 2022, following a 64% return, the sector is now the most overvalued, and is trading at a 12% premium over our fair value estimates.

Defensive sectors have generally held up in 2022 and each of them are trading at a slight premium.

**Morningstar Price/Fair Value Metric by Sector Weighted by Intrinsic Value**

Figures below 1 are undervalued, while above 1 are overvalued.

| Cyclical Sectors | All | Sensitive Sectors | All | Defensive Sectors | All |
|---|---|---|---|---|---|
| Basic Materials | 0.87 | Comm. Services | 0.57 | Consumer Defensive | 1.04 |
| Consumer Cyclical | 0.70 | Energy | 1.12 | Healthcare | 1.04 |
| Financial Services | 0.86 | Industrials | 0.96 | Utilities | 1.05 |
| Real Estate | 0.85 | Tech | 0.81 | | |

Source: Morningstar. Data as of Dec. 27, 2022.

# Cyclical Sectors: Best Picks

The number of 4- and 5-star-rated stocks doubled across the cyclical sectors since the end of 2021. While we expect economic growth in 2023 will be soft, and there is a high probability of a recession in the first half, we think that the market is overly pessimistic. We expect that any such recession would be short and shallow and that the economy will rebound in 2024 and thereafter. Both the consumer cyclical and real estate sectors have a high percentage of 4- and 5-star-rated stocks at 70% and 74%, respectively.

**Best Picks From Our Directors Across the Cyclical Sectors**

| Name/Ticker | Rating | Price ($) | Fair Value ($) | P/FV | Economic Moat | Uncertainty | Sector | Style Box |
|---|---|---|---|---|---|---|---|---|
| Celanese CE | ★★★★★ | 104 | 160 | 0.65 | Narrow | Medium | Basic Materials | Mid Value |
| Ecolab ECL | ★★★★ | 145 | 210 | 0.69 | Wide | Medium | Basic Materials | Large Core |
| Lithium Americas LAC | ★★★★★ | 19 | 65 | 0.30 | None | Very High | Basic Materials | Mid Growth |
| Carnival Corp CCL | ★★★★★ | 8 | 22 | 0.35 | None | High | Consumer Cyclical | Mid Value |
| Hanesbrands HBI | ★★★★★ | 6 | 22 | 0.28 | Narrow | High | Consumer Cyclical | Small Value |
| V.F. VFC | ★★★★★ | 27 | 61 | 0.45 | Narrow | Medium | Consumer Cyclical | Mid Value |
| Berkshire Hathaway BRK.A | ★★★★ | 461,955 | 555,000 | 0.83 | Wide | Low | Financial Services | Large Core |
| Blackstone BX | ★★★★ | 74 | 115 | 0.64 | Narrow | High | Financial Services | Large Core |
| Citigroup C | ★★★★★ | 44 | 75 | 0.59 | None | Medium | Financial Services | Large Value |
| Park Hotels & Resorts PK | ★★★★★ | 12 | 28 | 0.42 | None | High | Real Estate | Small Growth |
| Simon Property Group SPG | ★★★★ | 118 | 160 | 0.74 | None | Medium | Real Estate | Mid Core |
| Ventas VTR | ★★★★★ | 46 | 69 | 0.66 | None | Medium | Real Estate | Mid Core |

Source: Morningstar. Data as of Dec. 27, 2022.

# Economically Sensitive Sectors: Best Picks

The energy sector is the only area where there are fewer 4- and 5-star-rated stocks now as compared with the beginning of the year. Currently, only 17% of the energy sector is rated 4 or 5 stars, whereas at the beginning of the year, 47% of the sector was either a 4- or 5-star rating. The communications sector has the highest percentages of undervalued stocks as 4- and 5-star-rated stocks comprise 81% of the sector.

**Best Picks From Our Directors Across the Economically Sensitive Sectors**

| Name/Ticker | Rating | Price ($) | Fair Value ($) | P/FV | Economic Moat | Uncertainty | Sector | Style Box |
|---|---|---|---|---|---|---|---|---|
| Alphabet GOOG | ★★★★★ | 88 | 160 | 0.55 | Wide | High | Communication Services | Large Growth |
| Comcast CMCSA | ★★★★★ | 35 | 60 | 0.58 | Wide | Medium | Communication Services | Large Value |
| The Walt Disney Company DIS | ★★★★★ | 86 | 155 | 0.56 | Wide | Medium | Communication Services | Large Growth |
| Equitrans Midstream ETRN | ★★★★★ | 7 | 14 | 0.48 | Narrow | High | Energy | Small Value |
| ExxonMobil XOM | ★★★ | 110 | 102 | 1.08 | Narrow | High | Energy | Large Core |
| TechnipFMC FTI | ★★★★ | 12 | 15 | 0.80 | None | Very High | Energy | Small Core |
| Fortune Brands Home & Security FBIN | ★★★★ | 57 | 78 | 0.73 | Narrow | Medium | Industrials | Mid Value |
| FedEx FDX | ★★★★ | 177 | 217 | 0.82 | Narrow | High | Industrials | Large Value |
| Southwest Airlines LUV | ★★★★ | 34 | 56 | 0.61 | None | High | Industrials | Mid Core |
| ASML Holding ASML | ★★★★ | 537 | 700 | 0.77 | Wide | Medium | Technology | Large Growth |
| Salesforce CRM | ★★★★ | 131 | 220 | 0.59 | Wide | High | Technology | Large Growth |
| ServiceNow NOW | ★★★★ | 381 | 640 | 0.59 | Wide | High | Technology | Large Growth |

Source: Morningstar. Data as of Dec. 27, 2022.

# Defensive Sectors: Best Picks

Defensive sectors held their value better than the overall market in 2022, and while we do see more undervalued stocks than at the beginning of the year, the percentage of opportunities is generally lower than cyclical and sensitive sectors. For example, only 19% of the utility sector and only 35% of the consumer defensive sectors are rated with 4 or 5 stars.

**Best Picks From Our Directors Across the Defensive Sectors**

| Name/Ticker | Rating | Price ($) | Fair Value ($) | P/FV | Economic Moat | Uncertainty | Sector | Style Box |
|---|---|---|---|---|---|---|---|---|
| Boston Beer Co SAM | ★★★★★ | 333 | 670 | 0.50 | Narrow | High | Consumer Defensive | Small Growth |
| The Hain Celestial Group HAIN | ★★★★★ | 16 | 38 | 0.43 | None | Medium | Consumer Defensive | Small Core |
| Tyson Foods TSN | ★★★★★ | 62 | 102 | 0.60 | None | Medium | Consumer Defensive | Mid Value |
| Illumina ILMN | ★★★★ | 189 | 307 | 0.61 | Narrow | High | Healthcare | Mid Core |
| Moderna Therapeutics MRNA | ★★★★ | 180 | 266 | 0.68 | None | Very High | Healthcare | Large Core |
| Zimmer Biomet ZBH | ★★★★ | 127 | 175 | 0.73 | Wide | Medium | Healthcare | Mid Core |
| Edison International EIX | ★★★★ | 66 | 73 | 0.90 | Narrow | Medium | Utilities | Mid Value |
| Alliant Energy LNT | ★★★★ | 56 | 58 | 0.97 | Narrow | Low | Utilities | Mid Core |
| NiSource NI | ★★★★ | 28 | 32 | 0.87 | Narrow | Low | Utilities | Mid Value |

Source: Morningstar. Data as of Dec. 27, 2022.

# Valuation by Economic Moat

# Companies With Wide Economic Moats Are Significantly Undervalued

As a category, stocks with a wide economic moat have underperformed the broader market. The Morningstar Wide-Moat Composite Index has fallen 21.92% through Dec. 27, 2022. However, when incorporating a valuation overlay, the Morningstar Wide-Moat Focus Index has fallen less than the broad market, only decreasing 13.77% to date.

According to our valuations, it appears the market is undervaluing these companies' ability to generate excess returns on invested capital over the long term.

We also believe that in addition to being able to generate excess returns on invested capital over the long term, wide-moat companies generally have greater pricing power. As such, they should be able to pass through any cost increases to clients and be able to better maintain their margins and thus maintain their valuations in an inflationary environment.

**Price/Fair Value Estimate by Economic Moat Rating Across Size and Style**

High-quality companies with long-term, durable competitive advantages are undervalued.

| | | Size | | | Style | | |
|---|---|---|---|---|---|---|---|
| Moat | All | Large | Mid | Small | Value | Core | Growth |
| None | **0.80** | 0.79 | 0.83 | 0.69 | 0.76 | 0.87 | 0.75 |
| Narrow | **0.90** | 0.93 | 0.84 | 0.66 | 0.82 | 0.99 | 0.86 |
| Wide | **0.80** | 0.80 | 0.86 | 0.74 | 0.79 | 0.84 | 0.76 |

Source: Morningstar. Data as of Dec. 27, 2022.

# Undervalued Large-Cap Stocks With Wide Economic Moats and Low or Medium Uncertainty

**Examples of Low- or Medium-Uncertainty-Rated Companies With Long-Term, Durable Competitive Advantages at Rarely Seen Discounts to Our Estimate of Intrinsic Valuation**

| Name/Ticker | Rating | Price ($) | Fair Value ($) | P/FV | Economic Moat | Uncertainty | Sector |
|---|---|---|---|---|---|---|---|
| The Walt Disney Company DIS | ★★★★★ | 86 | 155 | 0.56 | Wide | Medium | Communication Service |
| Comcast CMCSA | ★★★★★ | 35 | 60 | 0.58 | Wide | Medium | Communication Service |
| Yum China YUMC | ★★★★★ | 57 | 84 | 0.68 | Wide | Medium | Consumer Cyclical |
| Ecolab ECL | ★★★★ | 145 | 210 | 0.69 | Wide | Medium | Basic Materials |
| Medtronic MDT | ★★★★★ | 78 | 112 | 0.69 | Wide | Medium | Healthcare |
| Wells Fargo WFC | ★★★★ | 41 | 58 | 0.71 | Wide | Medium | Financial Services |
| U.S. Bank USB | ★★★★ | 44 | 60 | 0.73 | Wide | Medium | Financial Services |
| Microsoft MSFT | ★★★★ | 237 | 320 | 0.74 | Wide | Medium | Technology |
| Intuit INTU | ★★★★ | 383 | 503 | 0.76 | Wide | Medium | Technology |
| CME Group CME | ★★★★ | 168 | 215 | 0.78 | Wide | Medium | Financial Services |
| Intercontinental Exchange ICE | ★★★★ | 102 | 130 | 0.79 | Wide | Medium | Financial Services |
| Dominion Energy D | ★★★★ | 62 | 78 | 0.79 | Wide | Medium | Utilities |

Source: Morningstar. As of Dec. 27, 2022.

# Undervalued Mid-Cap Stocks With Wide Economic Moats and Low or Medium Uncertainty

**Examples of Low- or Medium-Uncertainty-Rated Companies With Long-Term, Durable Competitive Advantages at Rarely Seen Discounts to Our Estimate of Intrinsic Valuation**

| Name/Ticker | Rating | Price ($) | Fair Value ($) | P/FV | Economic Moat | Uncertainty | Sector |
|---|---|---|---|---|---|---|---|
| TransUnion TRU | ★★★★★ | 56 | 98 | 0.57 | Wide | Medium | Industrials |
| Equifax EFX | ★★★★★ | 194 | 315 | 0.62 | Wide | Medium | Industrials |
| Masco MAS | ★★★★★ | 47 | 74 | 0.64 | Wide | Medium | Industrials |
| Tyler Technologies TYL | ★★★★★ | 321 | 500 | 0.64 | Wide | Medium | Technology |
| International Flavors & Fragrances IFI | ★★★★★ | 104 | 150 | 0.69 | Wide | Medium | Basic Materials |
| Zimmer Biomet ZBH | ★★★★ | 127 | 175 | 0.73 | Wide | Medium | Healthcare |
| Tradeweb Markets TW | ★★★★ | 64 | 84 | 0.77 | Wide | Medium | Financial Services |
| BNY Mellon BK | ★★★★ | 45 | 55 | 0.81 | Wide | Medium | Financial Services |
| Rockwell Automation ROK | ★★★★ | 258 | 306 | 0.84 | Wide | Medium | Industrials |
| West Pharmaceutical Services WST | ★★★★ | 237 | 280 | 0.85 | Wide | Medium | Healthcare |
| Northern Trust NTRS | ★★★★ | 88 | 100 | 0.88 | Wide | Medium | Financial Services |
| Kellogg's K | ★★★★ | 73 | 82 | 0.89 | Wide | Medium | Consumer Defensive |

Source: Morningstar. Data as of Dec. 27, 2022.

# Undervalued Small-Cap Stocks with Wide or Narrow Economic Moats and Low or Medium Uncertainty

**Examples of Low- or Medium-Uncertainty-Rated Companies With Long-Term, Durable Competitive Advantages at Rarely Seen Discounts to Our Estimate of Intrinsic Valuation**

| Name/Ticker | Rating | Price ($) | Fair Value ($) | P/FV | Economic Moat | Uncertainty | Sector |
|---|---|---|---|---|---|---|---|
| Vontier VNT | ★★★★★ | 19 | 37 | 0.52 | Narrow | Medium | Technology |
| Mattel MAT | ★★★★★ | 17 | 27 | 0.63 | Narrow | Medium | Consumer Cyclical |
| Guidewire Software GWRE | ★★★★★ | 60 | 95 | 0.63 | Wide | Medium | Technology |
| WESCO International WCC | ★★★★★ | 124 | 182 | 0.68 | Narrow | Medium | Industrials |
| Littelfuse LFUS | ★★★★ | 219 | 318 | 0.69 | Narrow | Medium | Technology |
| John Bean Technologies JBT | ★★★★ | 90 | 121 | 0.75 | Narrow | Medium | Industrials |
| John Wiley & Sons WLY | ★★★★ | 39 | 52 | 0.76 | Wide | Medium | Communication Service |
| Western Union WU | ★★★★ | 14 | 18 | 0.77 | Wide | Medium | Financial Services |
| Crane Company CR | ★★★★ | 101 | 126 | 0.80 | Narrow | Medium | Industrials |
| ICU Medical ICUI | ★★★★ | 156 | 195 | 0.80 | Narrow | Medium | Healthcare |
| Stericycle SRCL | ★★★★ | 50 | 61 | 0.82 | Narrow | Medium | Industrials |
| Oshkosh OSK | ★★★★ | 88 | 107 | 0.83 | Narrow | Medium | Industrials |

Source: Morningstar. Data as of Dec. 27, 2022.

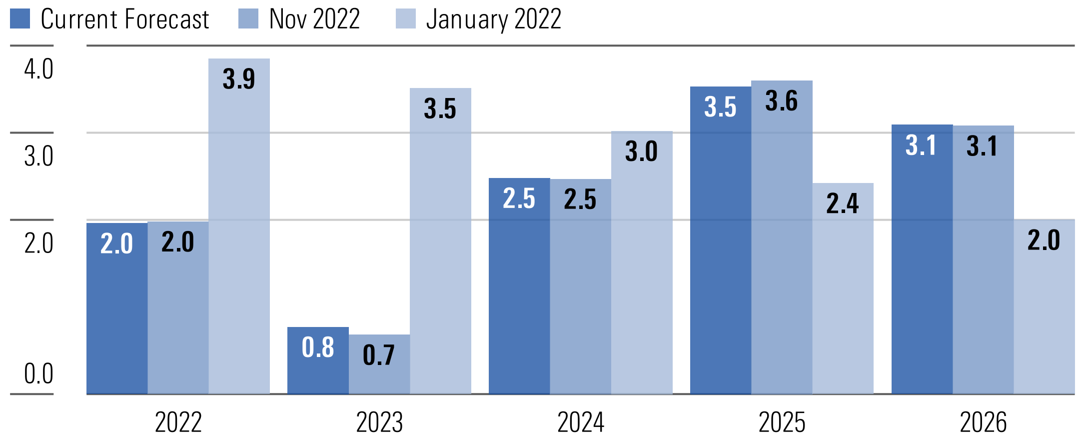
# U.S. Economic Outlook

# We Still Expect Inflation to Plummet, Allowing the Fed to Cut Rates and Jump-Start GDP Growth

## We Expect Growth to Trough in 2023 and Then Accelerate in 2024

Our forecasts haven't changed much since our last update (U.S. Economic Outlook: Fourth-Quarter 2022). Financial conditions have loosened a bit (the 10-year Treasury yield is down 40 basis points in the last month), thanks to good inflation data, but we had already expected this to play out in 2023. A formal recession in 2023 remains a 30%-50% possibility, but we expect growth to rebound strongly in 2024 and after, as the Federal Reserve pivots to monetary easing. We expect federal-funds rate cuts to begin in the second half of 2023 as inflation falls about in line with the Fed's 2% target. For more detail, see our U.S. Economic Pulse: December 2022.

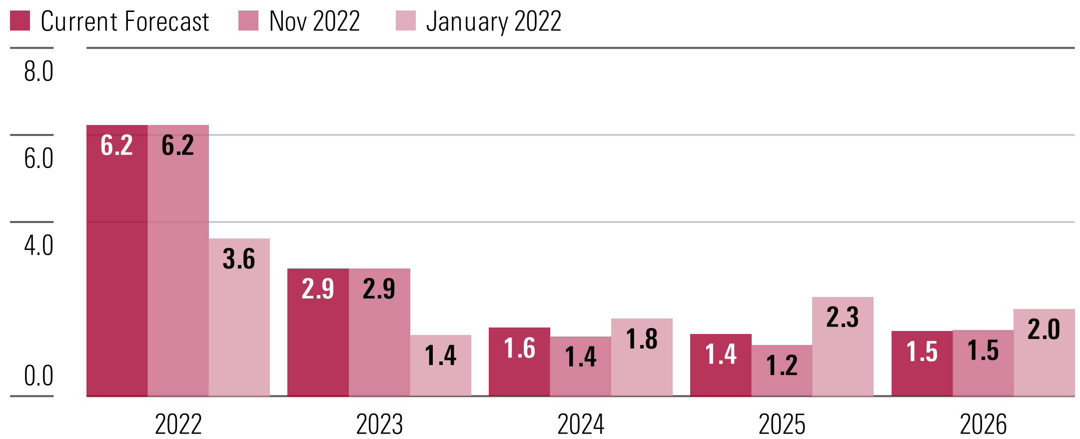
**GDP Forecast Revisions**




## Inflation Should Return to Normal in 2023

The last two Consumer Price Index reports show our thesis that inflation will return to normal is beginning to play out. While this bolsters our confidence in our forecasts (indeed, energy and core goods prices are falling even faster than anticipated), recent data showing a sharp uptick in wage growth is more concerning. These two factors offset, leaving our forecasts essentially unchanged.

**Inflation Forecast Revisions**




Source: Morningstar.

# We Remain More Optimistic Than Consensus on Strong GDP Growth and Mild Inflation

## We're More Bullish Than Consensus on Long-Run GDP

Our GDP forecasts for 2022 and 2023 are about in line with consensus. But starting in 2024, we become far more optimistic. Altogether, we expect a cumulative 250 basis points of more real GDP growth through 2026 than consensus does.[1]

Consensus remains overly pessimistic on the recovery in the labor supply and has overreacted to near-term productivity headwinds, in our view. We expect a growth rebound in 2024 as the effects of supply shocks fade, with the Fed providing support by backpedaling on monetary tightening as needed.

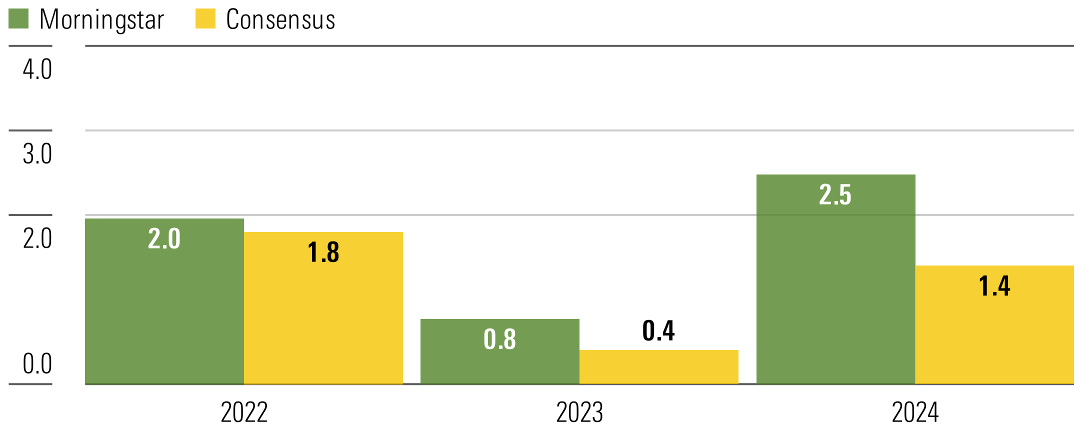
## We Expect Inflation to Fall Much Faster Than Consensus

On inflation, our views diverge significantly from consensus. While consensus has largely given up on the "transitory" story for inflation, we still think most of the sources of today's high inflation will abate (and even unwind in impact) over the next few years. This includes energy, autos, and other durables.

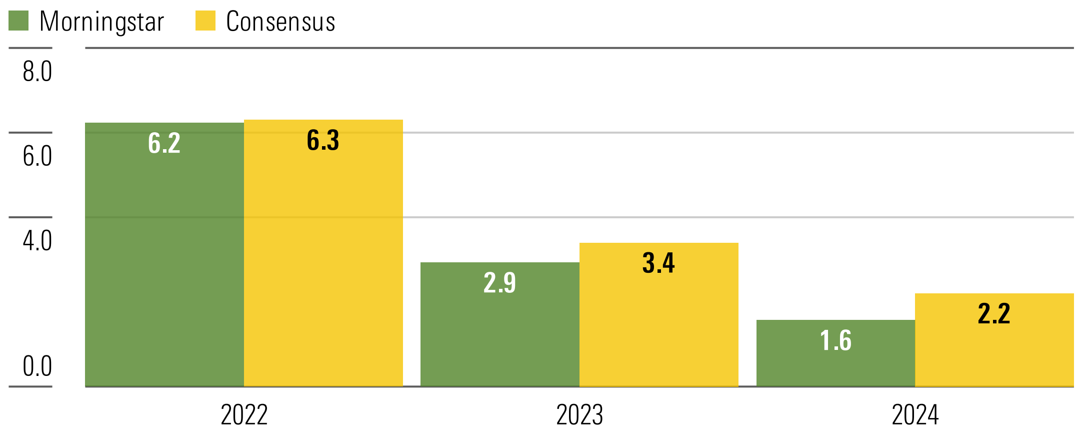
[1]This is based on those forecasts that extend to 2026. Consensus averages typically end just two to three years ahead, which is why we don't display 2025 and 2026 on the chart.

Source: Bloomberg, Morningstar.

### Real GDP Forecast Comparison




### Inflation (Personal Consumption Expenditures) Forecast Comparison

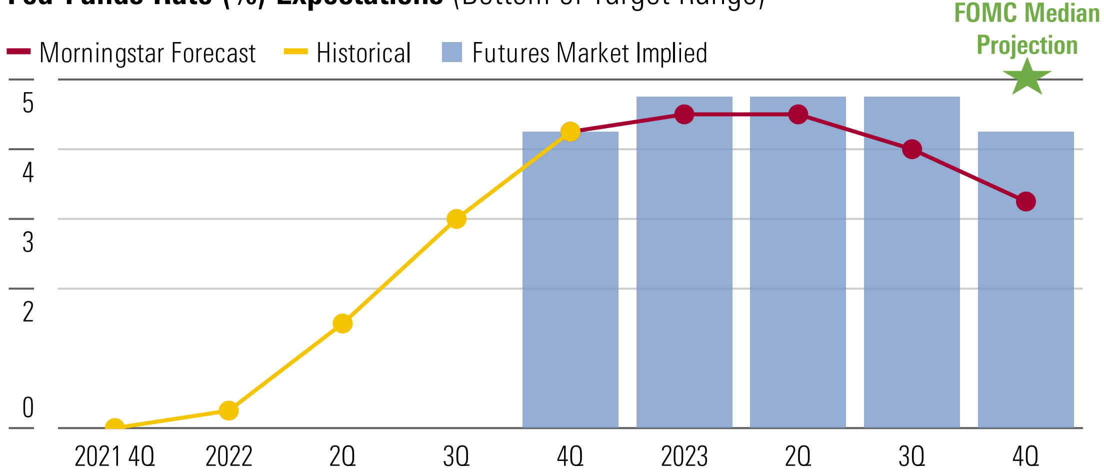


# Improving Inflation Data Will Help Clear the Way for Rate Cuts in 2023

**Despite Fed Rhetoric, We Expect Rate Cuts to Come in 2023**

As widely anticipated, the Fed downshifted to a 0.5-percentage-point increase in the federal-funds rate in its December meeting following four consecutive 0.75-point-increases. Now attention has pivoted from the speed of rate hikes to the eventual destination, as well as how long rates will remain on that plateau. Fed commentary remains adamant that no rate cuts are on the horizon, but markets are beginning to price in rate cuts later in 2023. We expect a federal-funds rate of 3.25%-3.5% at the end of 2022, below the market expectation as well as the Fed's projections. We think the Fed will pivot as inflation eases substantially and the need to shore up economic growth comes to the fore.

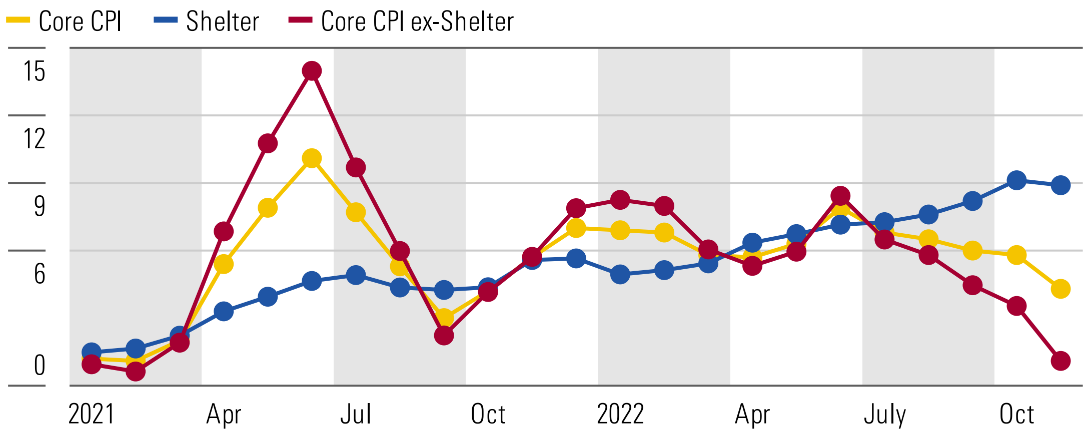
**Fed-Funds Rate (%) Expectations** (Bottom of Target Range)




**Core Inflation Is Trending Down Sharply**

Core CPI inflation has averaged just a 4.3% annualized rate in the past three months, and it's trending down fast. Among other factors, easing supply constraints have caused a sharp decline in core goods inflation. Strikingly, core CPI excluding shelter (housing) has grown at just a 1.1% rate, indicating that the inflation problem has been mostly solved outside of shelter. We expect shelter prices to start to cool in 2023, owing to expanding housing supply and weak demand.

**Core CPI, With and Without Shelter Prices (3-Month % Change, Annualized)**




Source: Federal Reserve, Chicago Mercantile Exchange (top), U.S Bureau of Labor Statistics (bottom).

# Spotlight | Mega-Cap Stocks

# Overvalued Mega-Cap Stocks Struggle in 2022

**Almost Two Thirds of Mega-Cap Stocks Rated 1 or 2 Stars at the End of 2021 Have Underperformed the Market in 2022.**

| Name/Ticker | Rating 12/31/21 | Rating 12/27/22 | Price ($) 12/31/21 | Price ($) 12/27/22 | Change (%) | Fair Value 12/31/21 | Fair Value 12/27/22 | Change (%) | P/FV 12/31/21 | P/FV 12/27/22 |
|---|---|---|---|---|---|---|---|---|---|---|
| Apple AAPL | ★★ | ★★★ | 178 | 130 | **-26.8%** | 124 | 130 | 4.8% | 1.43 | 1.00 |
| Tesla TSLA | ★★ | ★★★★★ | 352 | 109 | **-69.0%** | 227 | 250 | 10.3% | 1.55 | 0.44 |
| Nvidia NVDA | ★★ | ★★★★ | 294 | 141 | **-52.0%** | 194 | 200 | 3.1% | 1.52 | 0.71 |
| UnitedHealth Group UNH | ★★ | ★★ | 502 | 532 | 5.9% | 382 | 426 | 11.5% | 1.31 | 1.25 |
| The Home Depot HD | ★ | ★★ | 415 | 320 | **-23.0%** | 244 | 270 | 10.7% | 1.70 | 1.18 |
| Procter & Gamble PG | ★ | ★★ | 164 | 154 | **-5.9%** | 118 | 125 | 5.9% | 1.39 | 1.23 |
| Bank of America BAC | ★★ | ★★★★ | 44 | 33 | **-26.9%** | 38 | 39 | 2.6% | 1.17 | 0.83 |
| Pfizer PFE | ★ | ★★★ | 59 | 51 | **-13.4%** | 46 | 48 | 5.5% | 1.30 | 1.07 |
| Broadcom AVGO | ★★ | ★★★★ | 665 | 554 | **-16.8%** | 500 | 624 | 24.8% | 1.33 | 0.89 |
| Netflix NFLX | ★ | ★★★ | 602 | 284 | **-52.8%** | 275 | 290 | 5.5% | 2.19 | 0.98 |
| Cisco Systems CSCO | ★★ | ★★★★ | 63 | 48 | **-25.0%** | 54 | 54 | 0.0% | 1.17 | 0.88 |
| Nike NKE | ★★ | ★★★★ | 167 | 118 | **-29.5%** | 128 | 134 | 4.7% | 1.30 | 0.88 |
| Eli Lilly LLY | ★★ | ★★ | 276 | 365 | 32.1% | 235 | 273 | 16.2% | 1.18 | 1.34 |
| Thermo Fisher Scientific TMO | ★★ | ★★★ | 667 | 545 | **-18.3%** | 520 | 590 | 13.5% | 1.28 | 0.92 |
| Accenture ACN | ★ | ★★★ | 415 | 265 | **-36.0%** | 258 | 258 | 0.0% | 1.61 | 1.03 |

Source: Morningstar. Data as of Dec. 27, 2022.

# Updated List of Overvalued Mega-Cap Stocks for 2023

Eleven of the 15 overvalued mega-cap stocks we identified at the end of last year have dropped off the list either because their prices fell enough such that the star rating moved above 2 stars or the market capitalization fell below our cutoff. Currently, there are now 10 stocks that have 1-or 2-star ratings with market capitalizations of over $250 billion. Almost all the additions to the list are in defensive sectors.

**Stocks Rated 1 or 2 Stars With Market Capitalizations of $250 Billion and Greater**

New additions to the list are concentrated in defensive sectors.

| Name/Ticker | Rating | Price ($) | Fair Value ($) | P/FV | Economic Moat | Uncertainty | Sector | Style Box | Market Cap ($B) |
|---|---|---|---|---|---|---|---|---|---|
| UnitedHealth Group UNH | ★★ | 532 | 426 | 1.25 | Narrow | Medium | Healthcare | Large Core | 496.4 |
| Johnson & Johnson JNJ | ★★ | 177 | 164 | 1.08 | Wide | Low | Healthcare | Large Core | 464.0 |
| Procter & Gamble PG | ★★ | 154 | 125 | 1.23 | Wide | Low | Consumer Defensive | Large Core | 361.7 |
| Eli Lilly LLY | ★★ | 365 | 273 | 1.34 | Wide | Medium | Healthcare | Large Growth | 349.6 |
| Chevron CVX | ★★ | 180 | 149 | 1.21 | Narrow | High | Energy | Large Core | 343.0 |
| The Home Depot HD | ★★ | 320 | 270 | 1.18 | Wide | Medium | Consumer Cyclical | Large Core | 324.8 |
| AbbVie ABBV | ★★ | 163 | 120 | 1.36 | Narrow | High | Healthcare | Large Value | 288.4 |
| Merck & Co. MRK | ★★ | 112 | 97 | 1.16 | Wide | Medium | Healthcare | Large Core | 283.6 |
| Coca-Cola KO | ★★ | 64 | 58 | 1.11 | Wide | Low | Consumer Defensive | Large Core | 276.0 |
| Pepsico PEP | ★★ | 183 | 170 | 1.08 | Wide | Low | Consumer Defensive | Large Core | 251.1 |

Source: Morningstar. Data as of Dec. 27, 2022.

# Updated List of Undervalued Mega-Cap Stocks

Markets can often act like a pendulum and swing too far in one direction or another.

- Over the course of 2022, four stocks that were identified at the beginning of the year on the Overvalued Mega-Cap list have now traded down enough to be included in our list of Undervalued Mega-Cap Stocks. Those are Tesla, Nvidia, Bank of America, and Broadcom.

**Heading Into 2023, There Are Nine Mega-Cap Stocks Rated 4 or 5 Stars**

Pendulum swings too far, four mega-caps now undervalued were overvalued at the beginning of the year.

| Name/Ticker | Rating | Price ($) | Fair Value ($) | P/FV | Economic Moat | Uncertainty | Sector | Style Box | Market Cap ($B) |
|---|---|---|---|---|---|---|---|---|---|
| Microsoft MSFT | ★★★★ | 237 | 320 | 0.74 | Wide | Medium | Technology | Large Growth | 1,779.6 |
| Alphabet GOOGL | ★★★★★ | 87 | 160 | 0.55 | Wide | High | Communication Servic | Large Growth | 1,158.4 |
| Amazon.com AMZN | ★★★★★ | 83 | 150 | 0.55 | Wide | High | Consumer Cyclical | Large Growth | 869.7 |
| Berkshire Hathaway BRK.A | ★★★★ | 461,955 | 555,000 | 0.83 | Wide | Low | Financial Services | Large Core | 675.6 |
| Tesla TSLA | ★★★★★ | 109 | 250 | 0.44 | Narrow | Very High | Consumer Cyclical | Large Growth | 388.9 |
| Nvidia NVDA | ★★★★ | 141 | 200 | 0.71 | Wide | High | Technology | Large Growth | 374.1 |
| Meta Platforms META | ★★★★★ | 117 | 260 | 0.45 | Wide | High | Communication Servic | Large Value | 313.8 |
| Bank of America BAC | ★★★★ | 33 | 39 | 0.83 | Wide | Medium | Financial Services | Large Value | 260.5 |
| Broadcom AVGO | ★★★★ | 554 | 624 | 0.89 | Narrow | Medium | Technology | Large Core | 230.9 |

Source: Morningstar. Data as of Dec. 27, 2022.

# Representative Exchange-Traded Funds

# Representative Exchange-Traded Funds Categorized Into Morningstar Style Box

Representative exchange-traded funds sorted into the Morningstar Style Box. Screening conducted using:

- Morningstar Category
- Morningstar Analyst Rating
- Morningstar Rating for Funds
- Annual Report Adj. Expense Ratio
- Estimated Market Capitalization
- Estimated Avg. Daily Trading Volume

**Representative ETFs Categorized by Morningstar Style Box With Gold or Silver Morningstar Ratings**

| Size / Style | Value | Core | Growth |
|---|---|---|---|
| Large | VTV<br>SPYV | IVV<br>VOO | VUG<br>SPYG |
| Mid | VOE<br>DON | VO<br>IWR | VOT<br>IWP |
| Small | VBR<br>DFAT | VB<br>IJR | VBK |

Source: Morningstar. Data as of Dec. 27, 2022.

Note: Data and opinions are subject to change without notice. References to specific securities should not be considered an offer (as defined by the Securities and Exchange Act) to purchase or sell that specific investment.

# Representative Exchange-Traded Funds Listed by Style Box Category

**Gold- and Silver-Rated ETFs by Style Box Category**

| Style | Fund | Ticker | Morningstar Analyst Rating | Morningstar Rating for Funds | Annual Report Adj. Expense Ratio (%) | Est. Market Capitalization ($) | Est. Avg. Daily Trading Volume ($) |
|---|---|---|---|---|---|---|---|
| Large Value | Vanguard Value ETF | VTV | Gold | 5 | 0.04 | 99,237,310,274 | 442,159,271 |
| Large Value | SPDR® Portfolio S&P 500 Value ETF | SPYV | Silver | 4 | 0.04 | 15,091,360,595 | 138,092,292 |
| Large Blend | iShares Core S&P 500 ETF | IVV | Gold | 4 | 0.03 | 289,248,050,000 | 1,874,654,887 |
| Large Blend | Vanguard S&P 500 ETF | VOO | Gold | 4 | 0.03 | 261,922,146,579 | 1,575,045,223 |
| Large Growth | Vanguard Growth ETF | VUG | Gold | 4 | 0.04 | 67,395,905,331 | 335,345,120 |
| Large Growth | SPDR® Portfolio S&P 500 Growth ETF | SPYG | Silver | 4 | 0.04 | 13,390,331,456 | 130,597,477 |
| Mid Value | Vanguard Mid-Cap Value ETF | VOE | Gold | 4 | 0.07 | 16,034,904,587 | 74,217,121 |
| Mid Value | WisdomTree US MidCap Dividend ETF | DON | Silver | 3 | 0.38 | 3,249,324,000 | 10,649,719 |
| Mid Blend | Vanguard Mid-Cap ETF | VO | Gold | 4 | 0.04 | 49,771,643,278 | 151,341,126 |
| Mid Blend | iShares Russell Mid-Cap ETF | IWR | Silver | 4 | 0.18 | 27,187,115,000 | 126,005,533 |
| Mid Growth | Vanguard Mid-Cap Growth ETF | VOT | Gold | 3 | 0.07 | 9,258,383,670 | 38,119,996 |
| Mid Growth | iShares Russell Mid-Cap Growth ETF | IWP | Silver | 3 | 0.23 | 11,715,835,000 | 88,295,964 |
| Small Value | Vanguard Small-Cap Value ETF | VBR | Gold | 4 | 0.07 | 23,858,938,913 | 90,029,002 |
| Small Value | Dimensional US Targeted Value ETF | DFAT | Silver | 4 | 0.38 | 7,356,554,948 | 16,902,852 |
| Small Blend | Vanguard Small-Cap ETF | VB | Silver | 4 | 0.05 | 40,401,586,624 | 139,829,250 |
| Small Blend | iShares Core S&P Small-Cap ETF | IJR | Silver | 4 | 0.06 | 64,989,628,000 | 411,063,806 |
| Small Growth | Vanguard Small-Cap Growth ETF | VBK | Gold | 3 | 0.07 | 11,885,940,745 | 63,097,084 |

Source: Morningstar. Data as of Dec. 27, 2022. Data and opinions are subject to change without notice. References to specific securities should not be considered an offer (as defined by the Securities and Exchange Act) to purchase or sell that specific investment.

# Representative Exchange-Traded Funds Classified by Morningstar Category

Representative exchange-traded funds sorted into sectors using the Morningstar Category. Screening conducted using:

- Morningstar Category
- Morningstar Quantitative Rating
- Morningstar Rating for Funds
- Annual Report Adj. Expense Ratio
- Estimated Market Capitalization
- Estimated Avg. Daily Trading Volume

Note: Data and opinions are subject to change without notice. References to specific securities should not be considered an offer (as defined by the Securities and Exchange Act) to purchase or sell that specific investment.

**Representative ETFs Categorized by Morningstar Category**

| Cyclical Sectors | All | Sensitive Sectors | All | Defensive Sectors | All |
|---|---|---|---|---|---|
| Basic Materials | VAW FMAT | Comm. Services | VOX XLC | Consumer Defensive | VDC FSTA |
| Consumer Cyclical | VCR XLR | Energy | FENY VDE | Healthcare | XLV VHT |
| Financial Services | VFH XLF | Industrials | VIS XLI | Utilities | RYU VPU |
| Real Estate | IYR XLRE | Tech | VGT XLK | | |

Source: Morningstar. Data as of Dec. 27, 2022.

# Representative Exchange-Traded Funds Listed by Sector

## ETFs With Morningstar Quantitative Ratings of Gold or Silver by Sector

| Sector | Fund | Ticker | Morningstar Quantitative Rating | Morningstar Rating for Funds | Annual Report Adj. Expense Ratio (%) | Est. Market Capitalization ($) | Est. Avg. Daily Trading Volume ($) |
|---|---|---|---|---|---|---|---|
| Basic Materials | Vanguard Materials ETF | VAW | Gold | 4 | 0.10 | 2,871,754,291 | 15,506,935 |
| Basic Materials | Fidelity® MSCI Materials ETF | FMAT | Gold | 3 | 0.08 | 439,342,250 | 2,314,735 |
| Communications | Vanguard Communication Services ETF | VOX | Gold | 3 | 0.10 | 2,404,340,405 | 25,749,371 |
| Communications | Communication Services Sel Sect SPDR®ETF | XLC | Silver | 3 | 0.10 | 7,851,577,500 | 309,785,608 |
| Consumer Cyclical | Vanguard Consumer Discretionary ETF | VCR | Gold | 4 | 0.10 | 3,633,937,421 | 24,095,089 |
| Consumer Cyclical | Consumer Discret Sel Sect SPDR® ETF | XLY | Silver | 4 | 0.10 | 12,440,555,077 | 701,909,050 |
| Consumer Defensive | Vanguard Consumer Staples ETF | VDC | Gold | 3 | 0.10 | 6,851,836,269 | 34,774,342 |
| Consumer Defensive | Fidelity® MSCI Consumer Staples ETF | FSTA | Silver | 4 | 0.08 | 1,127,196,000 | 4,476,824 |
| Energy | Fidelity® MSCI Energy ETF | FENY | Gold | 4 | 0.08 | 1,643,652,000 | 23,699,441 |
| Energy | Vanguard Energy ETF | VDE | Gold | 4 | 0.10 | 8,408,373,196 | 94,710,382 |
| Financials | Vanguard Financials ETF | VFH | Gold | 4 | 0.10 | 8,519,004,510 | 54,777,865 |
| Financials | Financial Select Sector SPDR® ETF | XLF | Silver | 4 | 0.10 | 31,290,827,792 | 1,469,654,657 |
| Healthcare | Health Care Select Sector SPDR® ETF | XLV | Silver | 5 | 0.10 | 42,037,067,733 | 1,154,281,590 |
| Healthcare | Vanguard Health Care ETF | VHT | Gold | 5 | 0.10 | 17,262,028,331 | 61,574,314 |
| Industrials | Vanguard Industrials ETF | VIS | Gold | 3 | 0.10 | 3,646,265,758 | 16,791,134 |
| Industrials | Industrial Select Sector SPDR® ETF | XLI | Silver | 4 | 0.10 | 13,572,440,940 | 960,912,499 |
| Real Estate | iShares US Real Estate ETF | IYR | Gold | 3 | 0.39 | 3,138,060,500 | 602,434,210 |
| Real Estate | Real Estate Select Sector SPDR® | XLRE | Silver | 5 | 0.10 | 4,944,322,500 | 271,172,599 |
| Technology | Vanguard Information Technology ETF | VGT | Gold | 4 | 0.10 | 39,027,172,493 | 265,266,716 |
| Technology | Technology Select Sector SPDR® ETF | XLK | Gold | 5 | 0.10 | 37,828,957,808 | 918,274,938 |
| Utilities | Invesco S&P 500® Equal Weight Utilts ETF | RYU | Gold | 4 | 0.40 | 423,799,500 | 4,529,433 |
| Utilities | Vanguard Utilities ETF | VPU | Silver | 4 | 0.10 | 5,755,388,546 | 43,541,882 |

Source: Morningstar. Data as of Dec. 27, 2022. Data and opinions are subject to change without notice. References to specific securities should not be considered an offer (as defined by the Securities and Exchange Act) to purchase or sell that specific investment.

# Fixed-Income Outlook 2023

# Worst Bond Market Ever

2022 was the worst performance for fixed income dating to at least 1976. The Morningstar US Core Bond Index (our broadest proxy for the fixed-income market) fell 12.46% for the year to date through Dec. 23, 2022. No part of the fixed-income markets was spared, as rising interest rates across the entire bond yield curve pushed down bond prices, with the longest durations faring the worst.

**Morningstar US Fixed Income Indexes Returns Year to Date (%)**

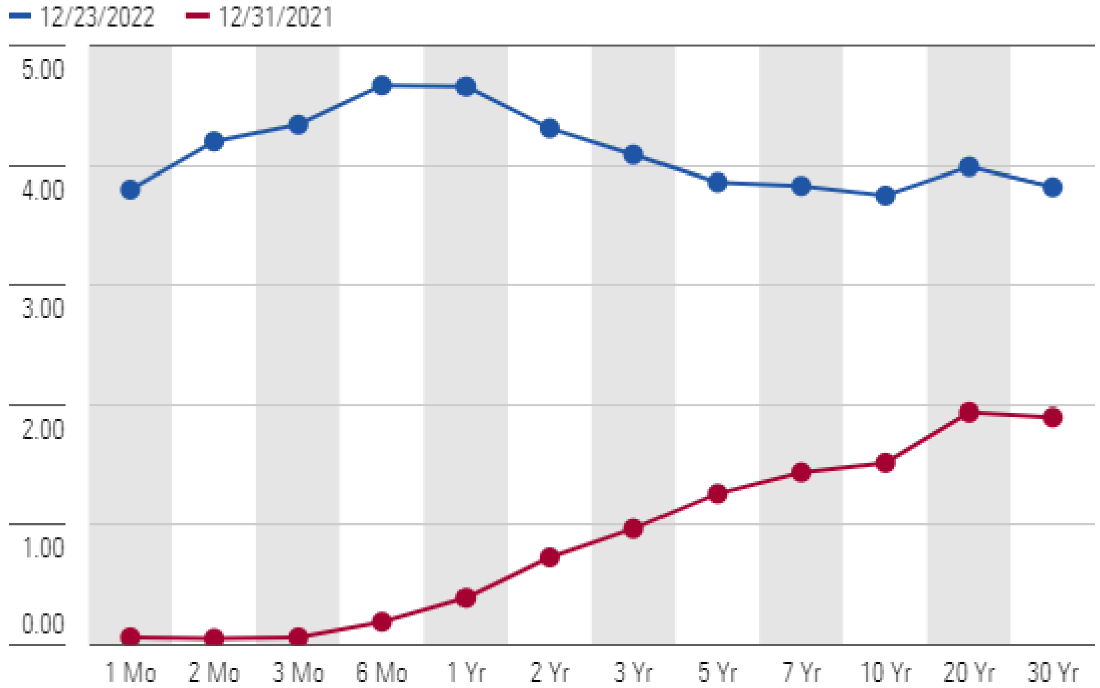
Fixed-income indexes plummet, longest duration hit hardest.

| | | | 2022 | | | | |
|---|---|---|---|---|---|---|---|
| **Morningstar US Index** | **Effective Yield** | **Duration** | **1Q** | **2Q** | **3Q** | **4QTD** | **YTD** |
| ABS | 5.58% | 2.2 | -2.69% | -1.24% | -1.36% | 0.92% | -4.35% |
| CMBS | 5.21% | 4.2 | -5.06% | -2.83% | -3.56% | 1.59% | -9.61% |
| Core Bond | 4.53% | 6.2 | -6.00% | -4.50% | -4.83% | 2.47% | -12.46% |
| Corporate Bond | 5.27% | 7.2 | -7.88% | -6.94% | -5.20% | 4.40% | -15.15% |
| High-Yield Bond | 8.51% | 4.0 | -4.53% | -9.90% | -0.68% | 5.08% | -10.23% |
| MBS | 4.54% | 5.7 | -5.03% | -3.96% | -5.38% | 2.56% | -11.49% |
| TIPS | 1.82% | 5.7 | -2.44% | -6.25% | -5.55% | 2.21% | -11.71% |
| Treasury Bond | 4.08% | 6.0 | -5.50% | -3.65% | -4.53% | 1.28% | -11.96% |

Source: Morningstar. Data as of Dec. 23, 2022.

**Yield Curve Rises and Flattens**

Short end of the curve rises fastest in response to Fed hiking short-term interest rates.




Source: Morningstar. Data as of Dec. 23, 2022.

# Interest-Rate Forecast

We expect that the Fed is nearing the end of its tightening cycle and that the preponderance of interest-rate increases in the long end of the curve is behind us.

Looking forward, we expect that the U.S. economy will be stagnant in the first half of the year with a relatively high probability of slipping into a recession. However, we expect that a recession would be short and shallow, and that economic growth would reaccelerate in the second half of the year. Overall, for 2023, our U.S. economics team is projecting that real U.S. gross domestic product will be only 0.7%.

We also forecast that inflation will remain on a downward trend throughout 2023, averaging 2.9% for the year. In our view, the combination of a weak economy and declining inflation will provide the Fed the room it will need to begin easing monetary policy before the end of the year.

Over the next few months, we could see interest rates increase slightly based on the impact of ongoing quantitative tightening and high inflation, but our forecast is that the interest rate on 10-year Treasuries will end the year below its current level.

For the first half of 2023, the middle of the yield curve (three- to five-year maturities) appears to provide the greatest amount of yield for the least amount of duration risk. Looking a little further into the future, in the second half of 2023, based on our forecasts, investors may look to lengthen their duration into longer-dated bonds.

**Interest-Rate Forecast**

| Interest Rate (%) | 2022E | 2023F | 2024F | 2025F | 2026F |
|---|---|---|---|---|---|
| Federal Funds Rate | 1.60 | 4.33 | 2.50 | 1.63 | 1.88 |
| 10-Year U.S. Treasury | 3.00 | 3.50 | 2.50 | 2.25 | 2.75 |

Source: Morningstar. Data as of Dec. 12, 2022.

# Corporate Bond Market

Although defaults have yet to meaningfully increase, corporate credit spreads widened out in 2022 as investors began to price in higher future default expectations.

Over the next few months, the corporate bond market may encounter some choppy waters, but we expect calmer seas thereafter. For investors that can ride out a potential short-term squall, we find value in the credit spread and high all-in yields that corporate bonds, especially high-yield bonds, provides.

Corporate credit spreads may be under pressure in the first half of 2023 as economic metrics point to a stagnant economy. In our view, this pressure should be short-lived. While bankruptcies may increase, considering we expect a potential recession to be short and shallow, the default rate should not spike meaningfully higher. Over the past year, most companies have extended their debt maturities, so refinancing maturing debt will not be a significant problem. In addition, so long as the recession is relatively short, most firms should have enough liquidity to weather a mild recession.

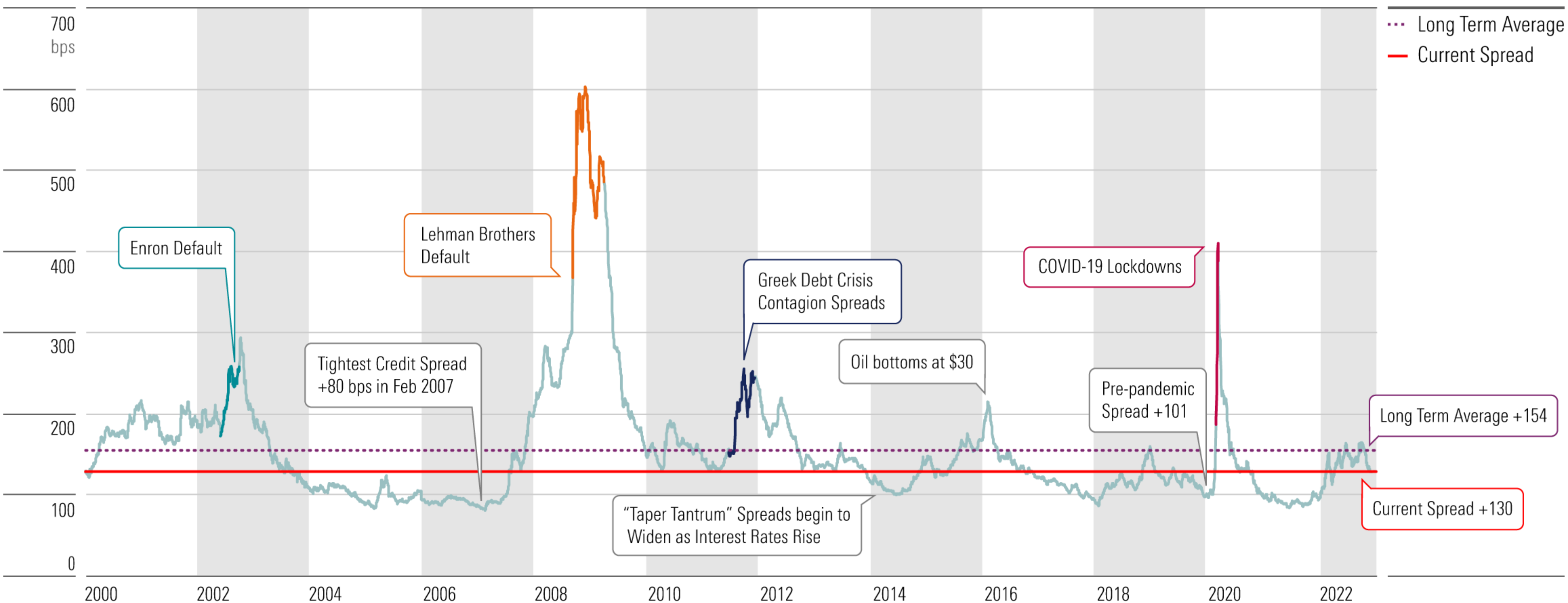
**Corporate Credit Spreads Widen**

Investment-grade and high-yield spreads widened +35 basis points and +154 basis points, respectively.


Source: Morningstar. Data as of Dec. 23, 2022.

# Long-Term Average Credit Spread for Investment-Grade Corporate Bond Market

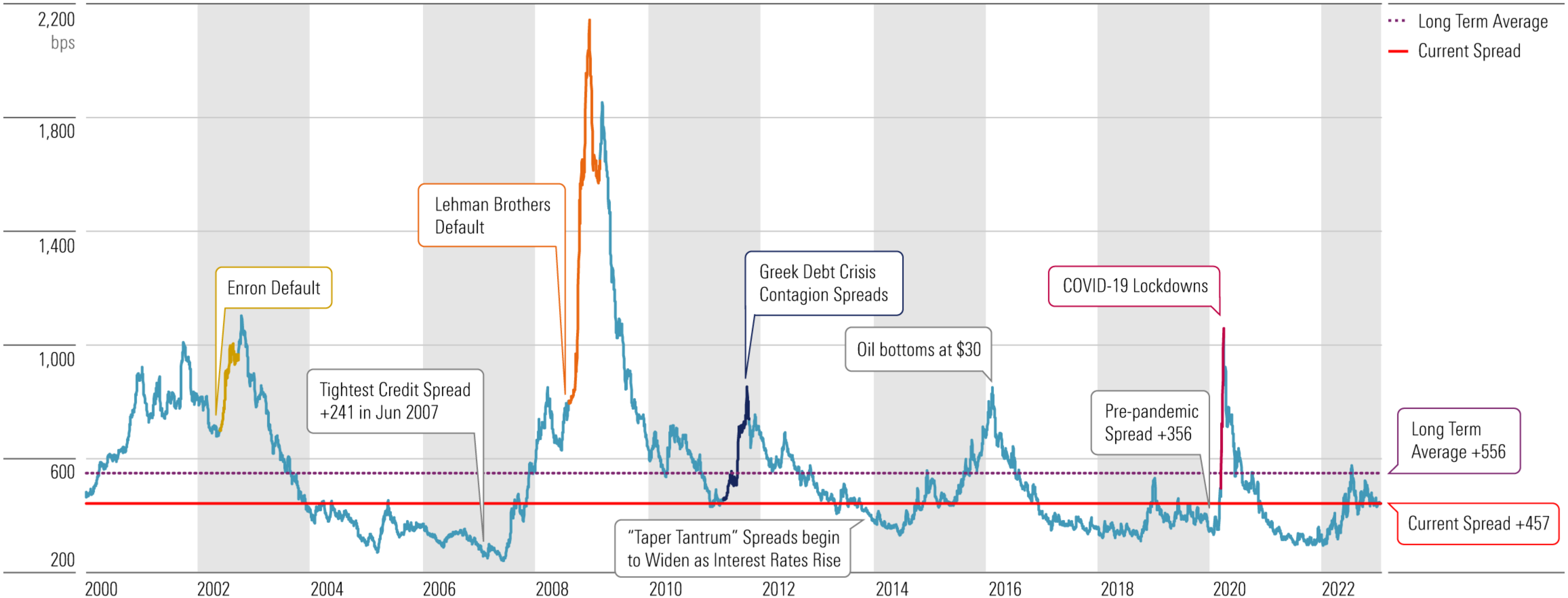
**Morningstar US Corporate Bond Index Average Credit Spread**




Source: Morningstar. Data as of Dec. 23, 2022.

# Long-Term Average Credit Spread for High-Yield Corporate Bond Market

**Morningstar US High-Yield Bond Index Average Credit Spread**




Source: Morningstar. Data as of Dec. 23, 2022.

# Basic Materials

Seth Goldstein, CFA | seth.goldstein@morningstar.com

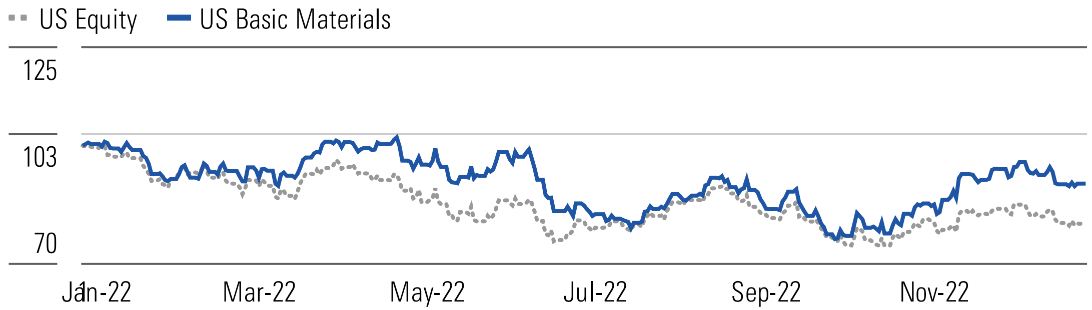
# Basic Materials Sector Outperforms, but We Still See Long-Term Opportunities Amid Broader Market Decline

The Morningstar US Basic Materials Index outperformed the broader market during the fourth quarter of 2022 by roughly 1040 basis points. The materials index rose 17.32% during the quarter, while the U.S. market index was up 6.91%. Year to date, the materials sector outperformed the market by 932 basis points (Exhibit 1). Despite the relative outperformance, we see opportunities across the sector with the majority (54%) of the stocks trading in ether 5-star or 4-star territory (Exhibit 2).

Lithium demand will grow nearly 5 times by 2030 from 2021 largely because of increased electric vehicle adoption. The lithium market is currently undersupplied, leading to prices at all-time high levels above $70,000 per metric ton, up over 10 times from below $7,000 per metric ton in early 2021. We forecast demand growth will outpace new supply in 2023, leading to a widening supply deficit (Exhibit 3). This should support prices remaining near current levels. Based on our cross-price elasticity model, we forecast prices will average $70,000 per metric ton in 2023, which should allow low-cost producers to generate excess returns.

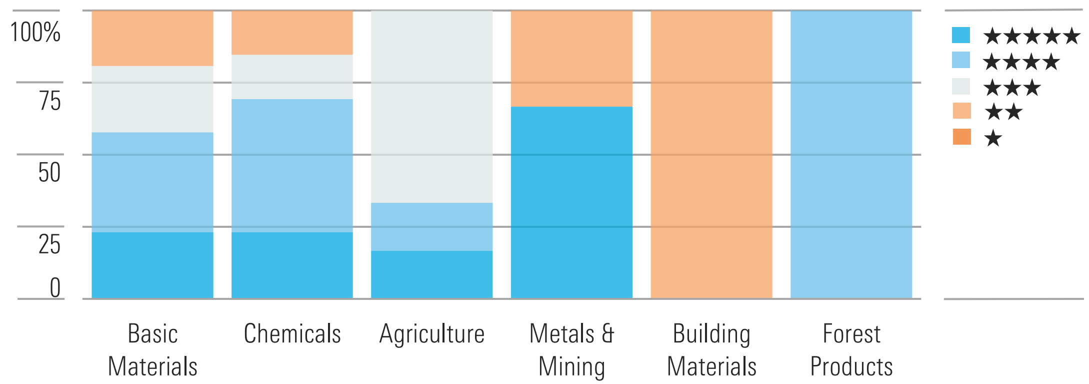
Following a decline in 2022, we see a more stable U.S. commodity-chemicals profit environment in 2023. A directional indicator of U.S. commodity chemicals profits is the ratio of Brent oil prices/Henry Hub natural gas prices. Oil-based naphtha feedstock is typically the marginal cost of production that informs prices, while U.S. producers make chemicals from natural gas-based feedstock. We forecast a rising Brent oil/Henry Hub price ratio in 2023 (Exhibit 4). For low-cost chemicals producers, profits should stabilize even if an economic slowdown weighs on volumes.

**Exhibit 1. Global Materials Index Versus Global Equity Index**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

**Exhibit 2. 54% of Our Basic Materials Names Trade in 5-Star or 4-Star Territory**

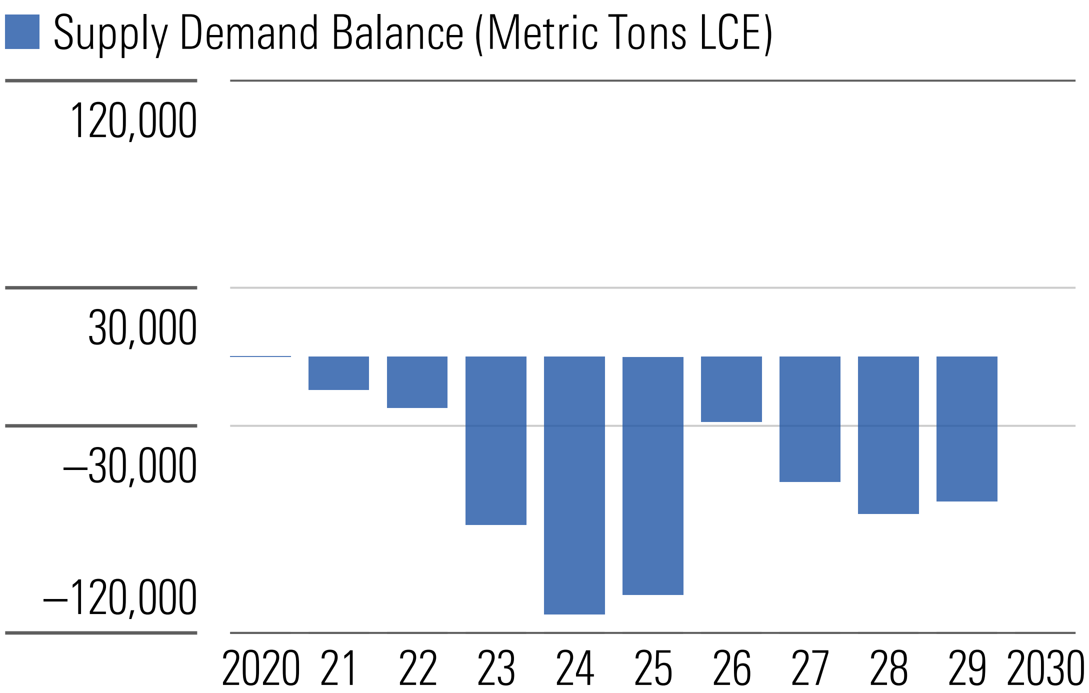



Source: Morningstar equity research. Data as of Dec. 27, 2022.

# Basic Materials Sector Outperforms, but We Still See Long-Term Opportunities Amid Broader Market Decline

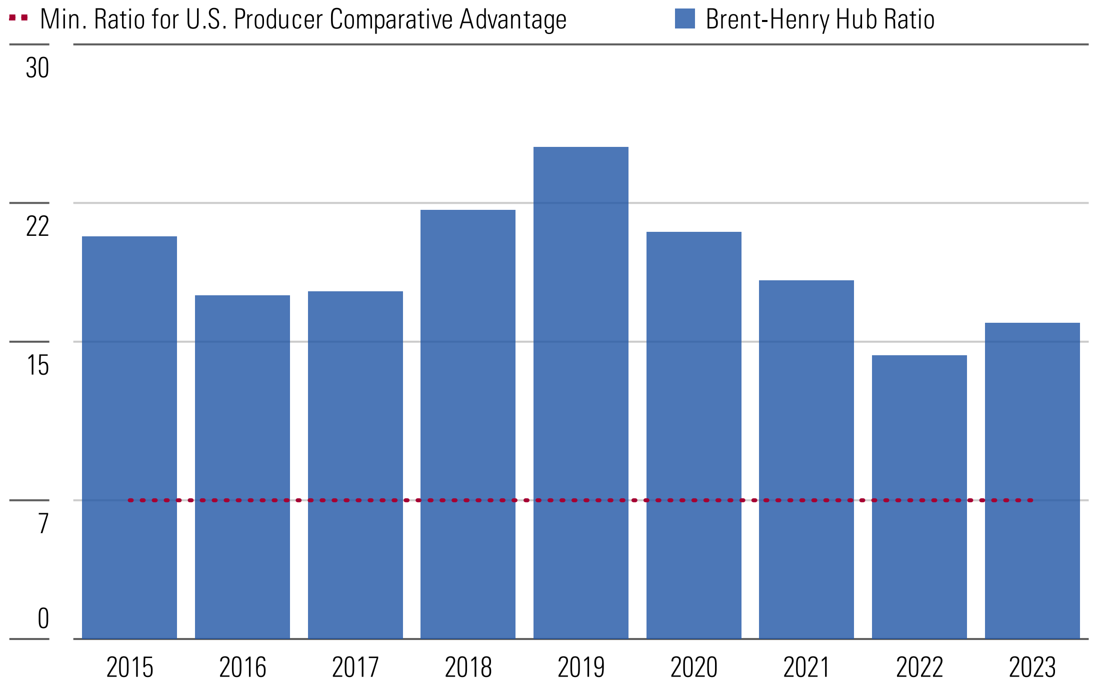
Rising freshwater costs will boost demand for water management systems in manufacturing and industries, such as data centers, which use water for cooling. For specialty chemicals companies that sell water management systems and the chemicals used to recycle water, rising demand should boost sales and profits.

**Exhibit 3. Lithium Will Remain Undersupplied in 2023 Supporting Higher Prices**




Source: Morningstar, lithium producer company filings. Data as of June 30, 2022.

**Exhibit 4. We Forecast a Higher Oil/Natural Gas Ratio in 2023**




Source: Morningstar. Data as of Dec. 13, 2022.

# Basic Materials

| Name/Ticker | | Rating | |
|---|---|---|---|
| Lithium Americas LAC | | ★★★★★ | Lithium Americas is our top pick to play higher enduring lithium prices. The stock trades at less than half of our $65 (CAD 88) per share fair value estimate. Lithium Americas does not currently produce any lithium but is developing three lithium resources that should enter production by the end of the decade, with the first resource entering production in early 2023. Once all projects are fully ramped up, we forecast the company will become a top-five producer by capacity globally. We reiterate our Very High Uncertainty Rating on the name due to elevated company-specific risk as a result of no projects currently operating. However, for long-term investors that can tolerate the volatility, we see massive upside in the stock and view it as one of the best ways to invest in higher lithium prices and growing EV adoption. |
| **Price (USD)** 20.17 | **Fair Value (USD)** 65.00 | **Uncertainty** Very High | |
| **Market Cap (USD B)** 2.67 | **Economic Moat** None | **Capital Allocation** Standard | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Celanese CE | | ★★★★★ | Our top pick to play elevated commodity chemical prices is narrow-moat Celanese. The stock trades at roughly a 35% discount to our $160 per share fair value estimate and in 5-star territory. Celanese is a low-cost producer of commodity chemicals, as the majority of the company's production is made from U.S. natural gas feedstock. Additionally, the company is well positioned to benefit from the long-term recovery in the global auto market as Celanese recently acquired the majority of DuPont's mobility and materials portfolio, making autos the largest end market. We view the current share price as an attractive entry point for the cost-advantaged chemicals producer. |
| **Price (USD)** 102.56 | **Fair Value (USD)** 160.00 | **Uncertainty** Medium | |
| **Market Cap (USD B)** 11.24 | **Economic Moat** Narrow | **Capital Allocation** Exemplary | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Ecolab ECL | | ★★★★ | Our top pick to invest in rising water management systems demand is wide-moat Ecolab. The stock trades at nearly 70% of our $210 per share fair value estimate and is in 4-star territory. The majority of Ecolab's industrial segment comes from its water business. As water management demand grows, Ecolab's water business should be the largest driver of profit growth over the next several years. As the institutional business, which primarily sells cleaning products and services to the hospitality industry, recovers from the COVID-19-related slowdown, Ecolab is poised to return to profit growth in 2023. |
| **Price (USD)** 144.54 | **Fair Value (USD)** 210.00 | **Uncertainty** Medium | |
| **Market Cap (USD B)** 41.65 | **Economic Moat** Wide | **Capital Allocation** Exemplary | |

# Communication Services

Michael Hodel | michael.hodel@morningstar.com

# Advertising Uncertainty Is Weighing Heavily on the Communication Services Sector

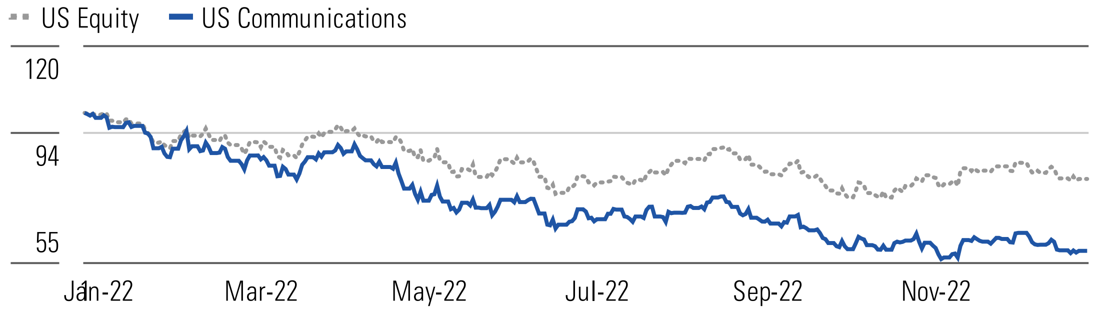
Several communication services stocks have rebounded modestly over the past three months, but Alphabet and Meta continue to overshadow the rest of the sector, comprising about 40% and 10%, respectively, of the Morningstar US Communication Services Index. Advertising generates about one third of aggregate sector revenue but is responsible for most sales at the two online giants. The market remains skittish about the outlook for advertising demand. Growth across the sector has slowed sharply and steadily throughout the past year, outside of a bump from political ad spending that mostly benefits television networks.

The pressure on advertising demand stems primarily from the ongoing impact of changing data privacy standards and economic uncertainty. As data restrictions have weakened the ability to target consumers online, advertisers' willingness to pay has declined. Given that online advertising now accounts for about two thirds of total ad spending, according to Magna Global, shifting data standards have certainly hit the broader ad market and especially the two firms that dominate the online landscape.

However, we suspect the economy is the far bigger of the two factors. Data privacy isn't as big a factor in driving search advertising versus other digital formats as customers literally reveal what they're seeking. Alphabet's search ad revenue has been increasing around 20% annually in recent years, outside of pandemic-driven fluctuations, but increased only 4% during the third quarter. Search demand hasn't grown that slowly at Alphabet since the global financial crisis in 2009, when the search ad business was a tenth of its current size.

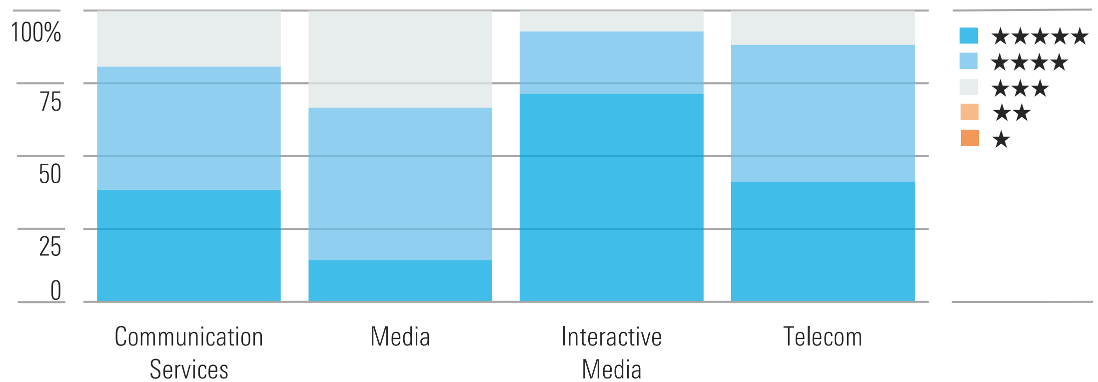
Morningstar believes the odds of a recession in 2023 stand at only between 30% and 50%. We also expect economic growth will rebound strongly in 2024, which would bode very well for advertising demand overall.

**Exhibit 1. Alphabet and Meta Continue to Weigh Heavily on Communication Services**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

**Exhibit 2. Opportunities Abound Across Each Corner of the Sector**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

# Advertising Uncertainty Is Weighing Heavily on the Communication Services Sector

As for data privacy, firms are augmenting the efforts to target consumers without compromising privacy. Companies like The Trade Desk and LiveRamp are building tools that anonymize data and then build consumer profiles. While targeting may not return to prior effectiveness, we expect online ads will remain the best way to find a desired audience. Nearly every firm with ties to advertising revenue has accepted that the market is not going to grow as fast in the coming years as it has recently, and they have taken steps to cut costs. Meta is the leading example of this trend. Less than two weeks after revealing 2023 expense targets in its third-quarter earnings, the firm announced that it would lay off about 13% of its employees. We remain concerned about the potential returns on Meta's investments in the metaverse, but at least there is a limit to what the firm is willing to spend.

**Exhibit 3. Growth Has Slowed but Online Ad Revenue Remains Strong**

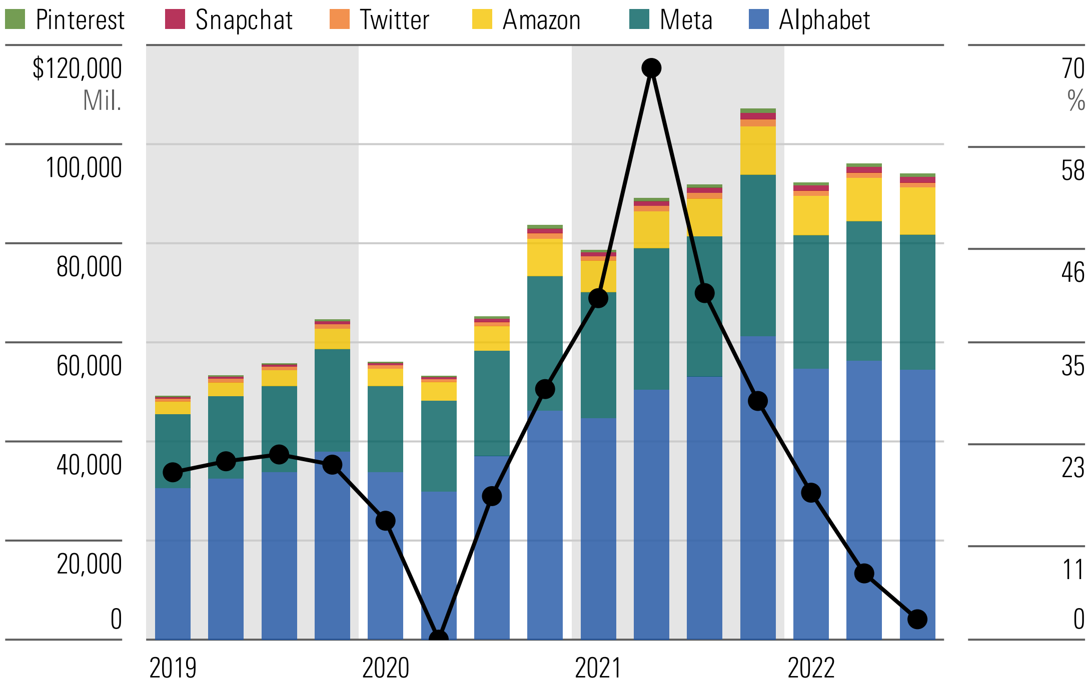
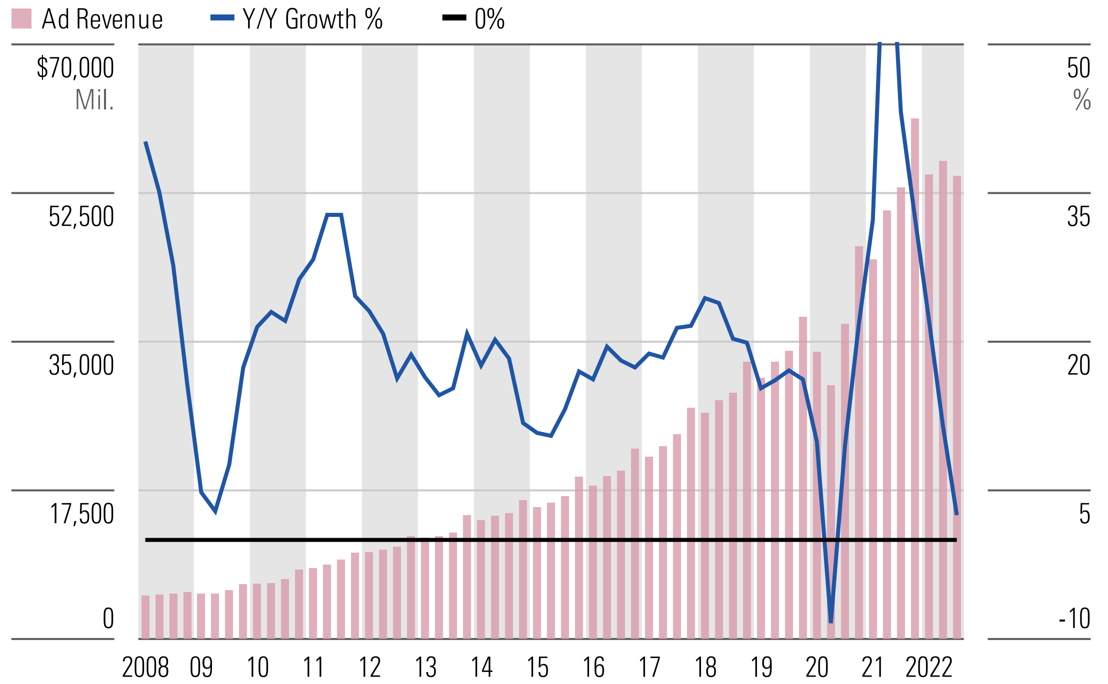



**Exhibit 4. Alphabet's Ad Revenue Was Economically Sensitive Even When the Company Was Far Smaller**




Source: Morningstar equity research, company reports. Data as of Dec. 23, 2022.

# Communication Services

| Name/Ticker | | Rating | |
|---|---|---|---|
| Walt Disney DIS | | ★★★★★ | We don’t expect major strategic shifts at Disney with the return of long-time CEO Bob Iger, and we believe the firm remains the best-situated traditional media firm to navigate the transition to streaming. The firm's deep content library teeming with major franchises and its strong studios provide both Disney’s famous family friendly fare and content suited to older audiences. We expect that fans will continue to flock to the firm's parks and resorts. The cable networks, like ESPN, will likely continue to lose subscribers, but they generate cash flow to fund the firm's streaming ambitions that will gradually displace traditional cable. The firm’s flagship streaming service Disney+ also continues to build momentum with audiences globally, providing the platform that will likely become the primary touchpoint with consumers over the long term. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 88.01 | 155.00 | Medium | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 158.40 | Wide | Standard | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Comcast CMCSA | | ★★★★★ | Comcast faces a double whammy with slowing broadband customer growth and increased content investments at NBC Universal. We expect broadband customer growth will remain very modest as the market is maturing, and the phone companies will likely gain share as their fiber upgrades progress. But we still expect Comcast to increase broadband revenue, primarily through solid pricing power. NBC Universal will need to invest to increase interest around Peacock, but we like the firm’s position overall thanks to its solid stable of content franchises, strong theme parks, and highly profitable traditional television business. With a strong balance sheet, Comcast should be able to direct most of its free cash flow to shareholder returns, including a solid dividend and heavy share repurchases. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 35.14 | 60.00 | Medium | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 151.32 | Wide | Standard | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Alphabet GOOGL | | ★★★★★ | Advertising demand has softened along with the economy, and Alphabet is not immune—the firm’s ad revenue increased 2.5% during the third quarter, the weakest since the financial crisis in 2009, outside of the start of the pandemic in 2020. We expect indications of improvement in the macroeconomic environment, whenever they surface, to push Alphabet shares higher. The firm’s search and YouTube platforms continue to attract a wide range of advertisers—large enterprises as well as small and medium businesses—offering broad-based brand building and direct-response campaigns. The changes in Apple's iOS policies regarding data privacy and security have not affected Alphabet as much as they have hit the likes of Meta and Snap. The cloud business also continues to grow well and make headway toward profitability, reducing dependence on the ad market. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 89.23 | 160.00 | High | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 1,1320.00 | Wide | Exemplary | |

# Consumer Cyclical

Erin Lash, CFA | erin.lash@morningstar.com

# Discounts Largely Intact in Consumer Cyclical as Economic Uncertainty Feeds Investors' Pessimism

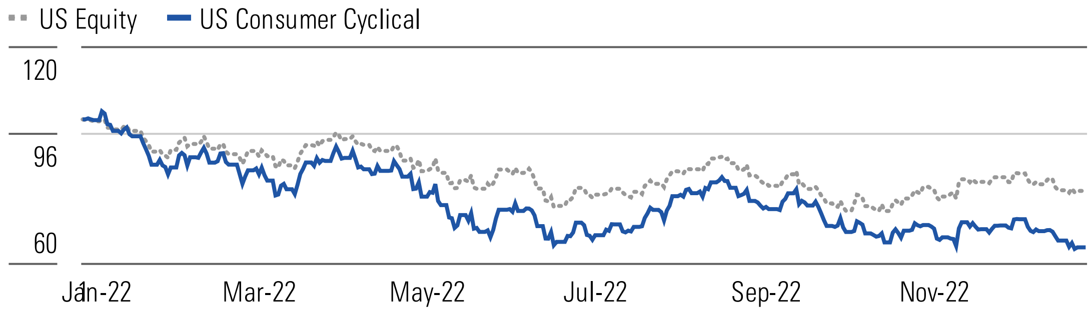
The Morningstar US Consumer Cyclical Index plummeted 7.62% in the fourth quarter, lagging the 6.91% increase the market chalked up, as of Dec. 27, 2022 (Exhibit 1).

As such, the median stock valuation within the consumer cyclical sector trades at a 21% discount to our fair value estimates, with 61% of our coverage trading in 4- or 5-star territory (Exhibit 2). Apparel and travel and leisure top our list of the most undervalued sectors, trading at 39% and 31% respective discounts to our intrinsic valuations. We suspect investors are overweighting near-term concerns regarding persistent inflation, rising interest rates, dollar appreciation, diminishing personal savings, and the likelihood of a recession. While these headwinds continue to challenge companies' profitability, we believe this has disproportionately affected share prices, and anticipated relief has yet to be fully recognized.

U.S. travel spending fell off a cliff in 2020 when COVID-19 induced mobility restrictions and halted international travel. Despite navigating headwinds in 2022 (including inflation and restrictions in China), pent-up demand catalyzed a surge in the travel industry during the second half of calendar 2022 (Exhibit 3). Still shy of a full recovery, we don't posit consumers' penchant to travel has waned, and we expect overall spending to shift more to services than goods over the next few quarters. We also surmise remote-work flexibility will serve as another tailwind for travel-industry growth.

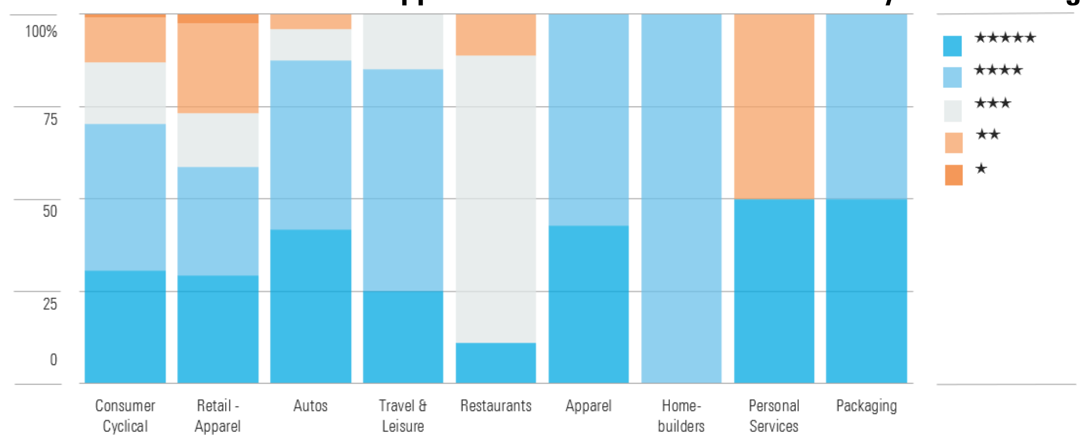
In addition, we think heightened spending on services (as opposed to goods) combined with enhanced capacity levels are serving to ease the pressure that has strained supply chains for the better part of the past few years.

**Exhibit 1. Investors Sour on Consumer Cyclical in Q4 Relative to the Market**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

**Exhibit 2. We See a Slew of Opportunities Across Our Consumer Cyclical Coverage**

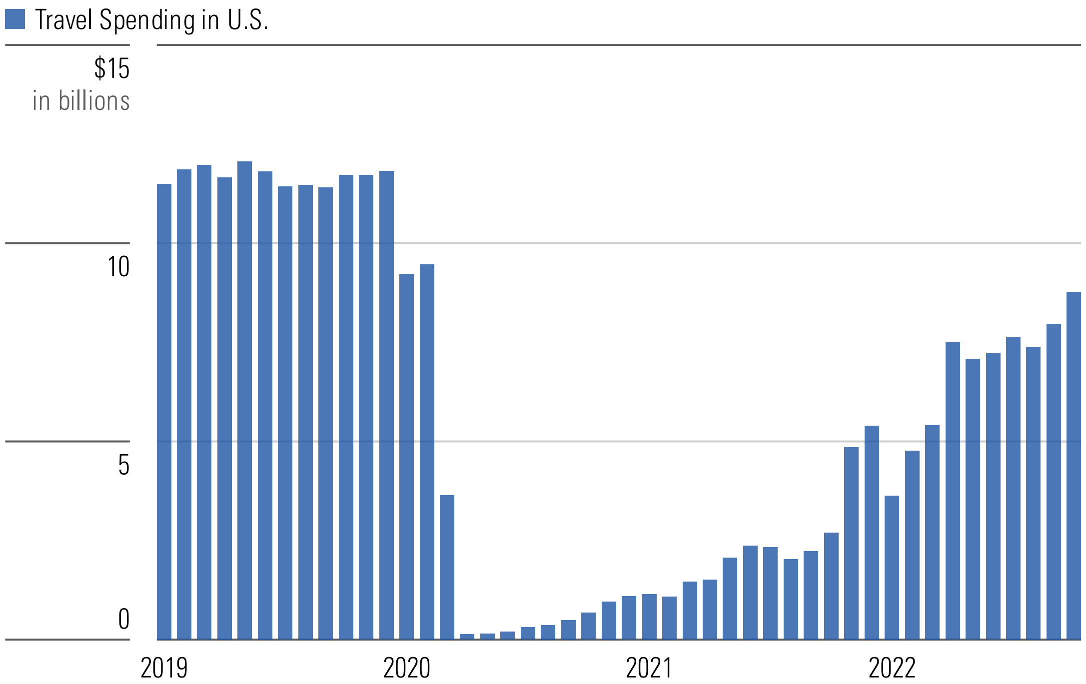



Source: Morningstar equity research. Data as of Dec. 27, 2022.

# Discounts Largely Intact in Consumer Cyclical as Economic Uncertainty Feeds Investors' Pessimism

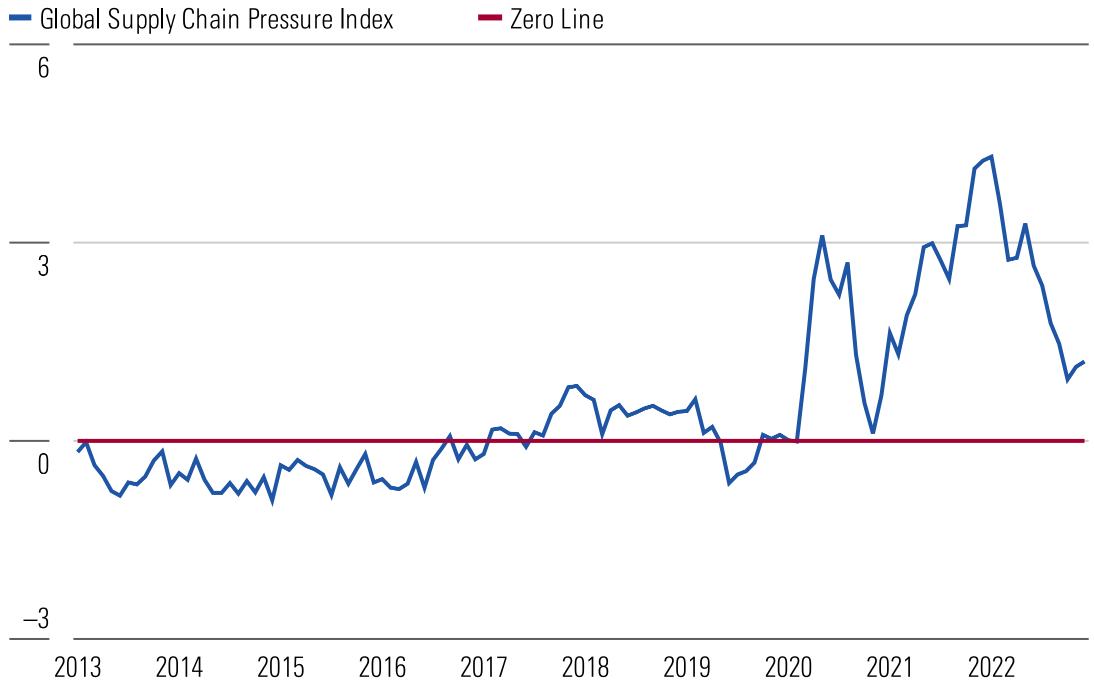
This is evidenced in the Global Supply Chain Pressure Index (Exhibit 4), which while still elevated, has come off its peak at the beginning of calendar year 2022. We think that damped demand from cash-constrained consumers could further alleviate supply chain angst. Even if trepidations around a snarled supply chain re-emerge, we believe moaty firms are best equipped to navigate such challenges, given the stout resources and brand standing they tout.

**Exhibit 3. We Think Demand for Travel Has Further Room to Run**




Source: Trade.gov. Data as of October 2022.

**Exhibit 4. Supply Chain Pressure Has Been Acute, but Relief May Be in the Cards**




Source: Federal Reserve Bank of New York. Data as of Nov. 30, 2022.

# Consumer Cyclical

| Name/Ticker | | Rating | |
|---|---|---|---|
| VF VFC | | ★★★★★ | Narrow-moat VF's shares are attractive, trading at a 57% discount to our fair value estimate. We believe investors are overly focused on its challenges, including the slowdown in Vans' sales, U.S. dollar appreciation, inflation, and elevated inventories. However, we think VF has a reasonable plan to propel Vans' sales and that it and VF's other brands should benefit from the popularity of athleisure, outdoor activities, and streetwear. Moreover, most of VF's staple brands, such as North Face, have fared well despite inflation. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 26.07 | 61.00 | Medium | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 10.53 | Narrow | Exemplary | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Hanesbrands HBI | | ★★★★★ | We believe narrow-moat Hanesbrands, trading at a 73% discount to our $22 fair value estimate, offers a good opportunity for investors. In our opinion, the market has been overly focused on short-term issues, including the impact of inflation, U.S. dollar appreciation, and supply chain challenges, and therefore is underestimating its strengths, including the popularity of Champion, an improving mix shift, and free cash flow generation. Furthermore, we are optimistic that the firm's long-term strategic plan to boost Champion and innerwear, to operate more efficiently, and to better engage consumers will improve profitability after a difficult 2022. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 6.01 | 22.00 | High | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 2.17 | Narrow | Standard | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Carnival CCL | | ★★★★★ | No-moat Carnival shares are attractive, trading at around a 60% discount to our $22 fair value estimate. We contend investors are fixating on the potential for economic conditions to weaken, diminishing consumer appetite for travel. However, demand signals remain positive as cumulative advance-booking volumes (in constant currency) and prices are above 2019 figures. Fleets at Carnival have still not reached full occupancy, which should benefit the cruise line with significantly more passengers in 2023, offering healthy growth metrics. As demand normalizes, we think pricing could grow at a low-single-digit clip, ahead of costs. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 7.81 | 22.00 | High | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 9.99 | None | Poor | |

# Consumer Defensive

Erin Lash, CFA | erin.lash@morningstar.com

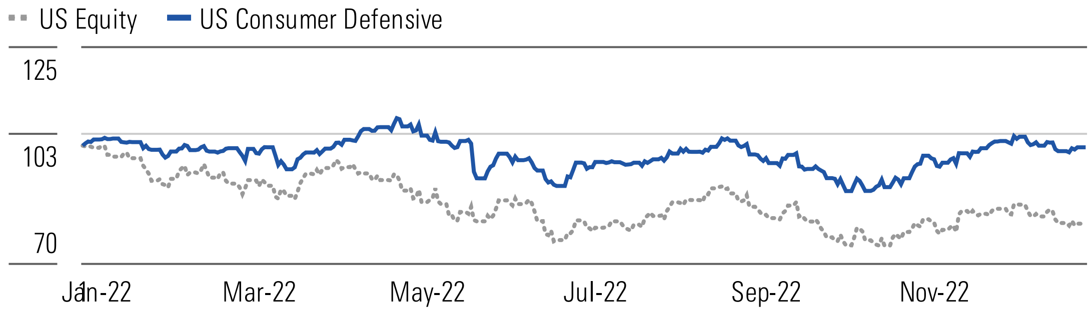
# While Inflation Still Bites, Competitively Advantaged Consumer Defensive Operators Look Poised to Weather an Inclement Period

The Morningstar US Consumer Defensive Index outpaced the overall market in the fourth quarter, chalking up a 13.07% return versus the U.S. equity market's 6.91% increase, as of Dec. 27, 2022 (Exhibit 1).

Undervalued ideas remain scant within our consumer defensive coverage, with the median stock in the sector trading at a 2% premium to our fair value estimates (Exhibit 2). For investors interested in the consumer defensive space, we'd point to alcoholic beverages, where shares trade at a 15% discount to our intrinsic valuations, and consumer packaged goods, or CPG, where nearly 40% of our coverage trades in 4- or 5-star territory. In our view, investors' reluctance to embrace shares in these alcoves stems from concerns surrounding inflation combined with a lack of appreciation for the product innovation and brand prowess that ultimately creates pricing power in the sector.

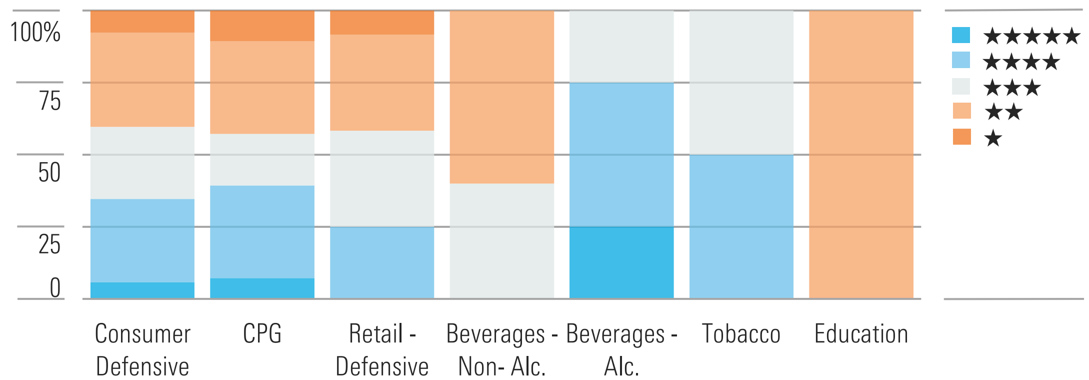
Inflation shows little sign of easing, and even after multiple rounds of price hikes over the past several quarters, further price increases are likely to manifest into 2023. As such, we think consumers may increasingly alter their purchasing patterns, which could spawn greater tradedown to lower-priced private-label fare. To blunt this shift, we're beginning to see promotional spending edge up, as evidenced by the IRI CPG Promotions Index, where a reading of more than 100 showcases increasing promotions (Exhibit 3). However, we don't believe this is conducive to supporting economic moats in the sector. Rather, we surmise investing in consumer-valued innovation and marketing will prove imperative for competitively advantaged CPG firms to cement their standing with retailers and consumers in the long term.

**Exhibit 1. While the Market Trends Down, Consumer Defensive Finds Favor in Q4**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

**Exhibit 2. The Alcoholic Beverage Space Continues to Look Undervalued to Us**

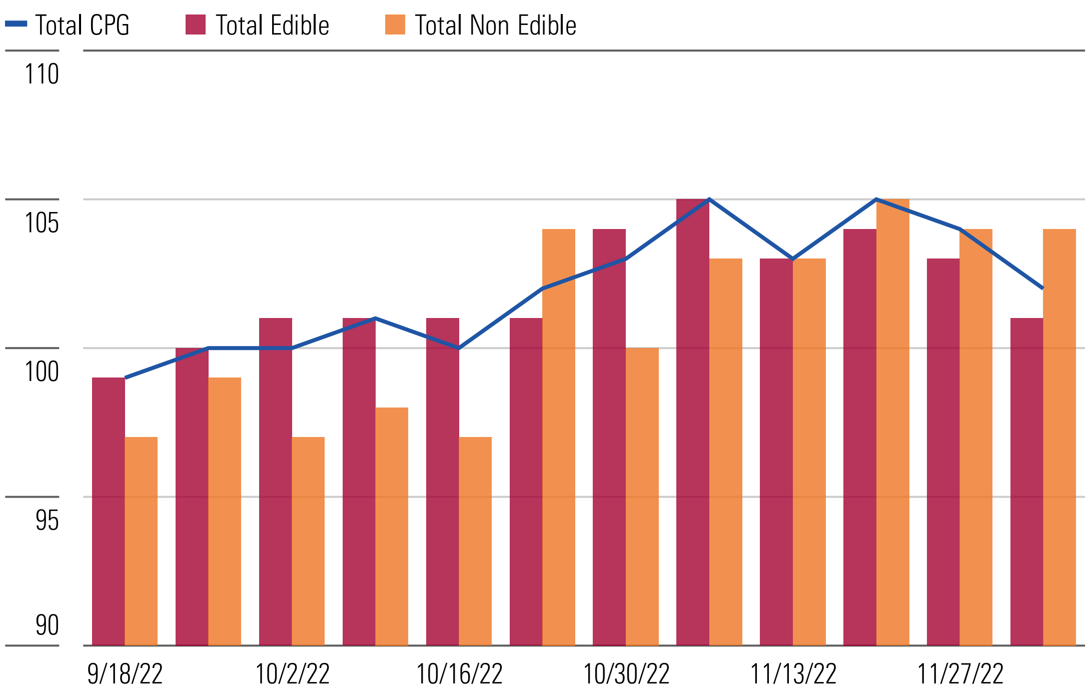



Source: Morningstar equity research. Data as of Dec. 27, 2022.

# While Inflation Still Bites, Competitively Advantaged Consumer Defensive Operators Look Poised to Weather an Inclement Period

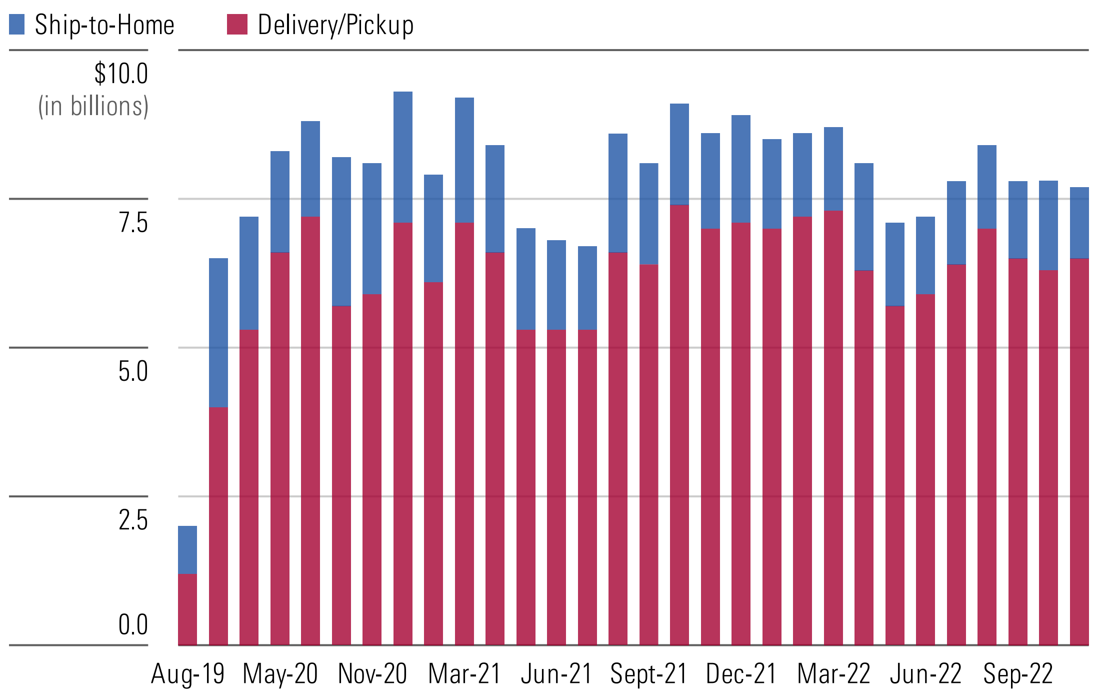
Even as concerns surrounding the pandemic have faded and consumers have resumed visiting multiple outlets to fulfill their CPG needs, they haven't abandoned the e-commerce channel. In our view, the pandemic jump-started consumers' acceptance of purchasing online, and investments to enhance retailers' digital infrastructure over the past several years has afforded the opportunity to meet this demand. We surmise that retailers that differentiate their experiences and offer convenient omnichannel options stand to retain the shoppers they've gained since the pandemic began despite stepped-up competitive intensity.

**Exhibit 3. Promotional Spending Heats Up Across Consumer Products Landscape**




Source: IRI CPG Promotions Index. Data as of Dec. 4, 2022.

**Exhibit 4. Despite Increased Mobility, E-Commerce Still Viable Channel for CPG**




Source: Brick Meets Click/Mercatus Grocery Shopping Survey. Data as of November 2022.

# Consumer Defensive

| Name/Ticker | | Rating | |
|---|---|---|---|
| Tyson Foods TSN | | ★★★★★ | Tyson's stock is on sale, trading at a 40% discount to our $102 fair value estimate. Stout inflationary headwinds have begun impairing demand, as cash-constrained consumers are increasingly opting for less expensive cuts of meat. And while we're skeptical the firm will hit its multiyear sales targets (due to increased chicken and pork supply, which stands to cap prices), we're encouraged that Tyson has more recently prioritized investments in wages and benefits, as well as expanded capacity, which should enhance efficiency long term. Against this backdrop, we think Tyson's stock will gravitate toward our valuation in time. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 61.35 | 102.00 | Medium | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 22.07 | None | Standard | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Boston Beer SAM | | ★★★★★ | Shares of narrow-moat Boston Beer, a leader in U.S. high-end malt beverage and adjacent categories, trade more than 50% below our $670 fair value estimate. We posit that the firm has shown a penchant to align its portfolio with the latest consumer trends and capture a disproportionate share of the economic rents generated from this growth by being one of the first movers. While seltzer trends have slowed, negatively affecting its Truly seltzer line, the firm's innovation prowess should continue to support Boston Beer's sales, evidenced by the launches of hard seltzer Truly Margarita and Hard Mountain Dew. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 336.02 | 670.00 | High | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 4.10 | Narrow | Exemplary | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Hain Celestial Group HAIN | | ★★★★★ | Hain trades at a 60% discount to our $37.50 fair value estimate, partially the byproduct of weakness in its European arm, as well as inflation and supply chain disruptions in the U.S. We view these issues as largely transitory, and with a portfolio of organic and natural fare aligned with consumer preferences, we surmise Hain is well positioned for the long term. Additionally, Hain's supply chain integration efforts strike us as prudent, which should generate significant cost efficiencies and purchasing synergies. All in all, we expect a 13.5% operating margin by 2032, a notable improvement from 2021's 7.5%. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 15.85 | 37.50 | Medium | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 1.43 | None | Standard | |

# Energy

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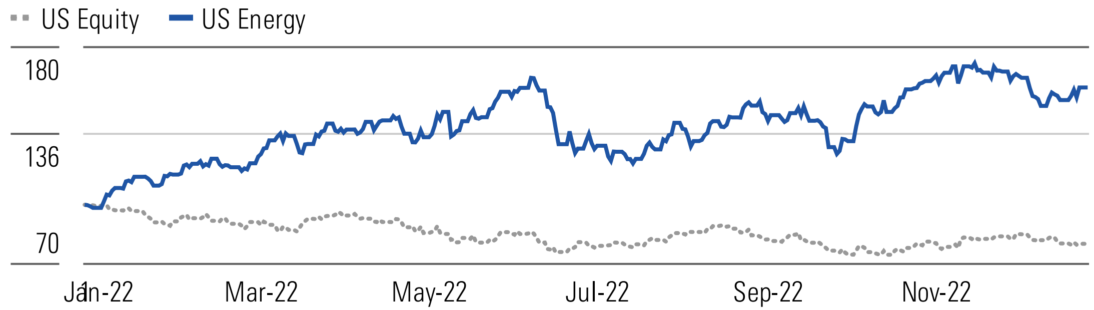
# Energy Markets Face Further Volatility in the New Year

Oil and natural gas prices have simmered down from summer highs, but the respite is probably temporary. Europe has shored up its gas inventories to reduce its dependence on Russian exports. And the impact of sanctions on Russian oil exports has so far been milder than expected, as aggressive discounting has helped Russian products find a way to market. Meanwhile, demand growth in Asia has been weaker than expected due to ongoing zero-COVID-19 policies, and U.S. government stock releases have helped prevent more severe shortages. Thus, while OECD oil inventories are still well below the 5-year average, the deficit marginally improved during 2023. But we suspect the market may have been lulled into a false sense of security.

In 2023, the war in Ukraine will continue to suppress supply. In December, the EU implemented a price cap of $60 on Russian crude in order to stem the tide of funds to the petro state. Western powers hope that even if neutral countries don't participate in the cap, they will be able to use it to secure wider discounts, squeezing Russian revenue without necessarily stemming the flow of crude any further. But the Kremlin has said it will not sell to countries participating in the cap and if it sticks to this position, Russian exports will fall further and push prices higher. Either way, the concurrent EU embargo on Russian oil will force a further reshuffling of trade flows, and we doubt that the rest of the world can accommodate the 2 mmb/d of Russian oil that the EU was previously consuming.

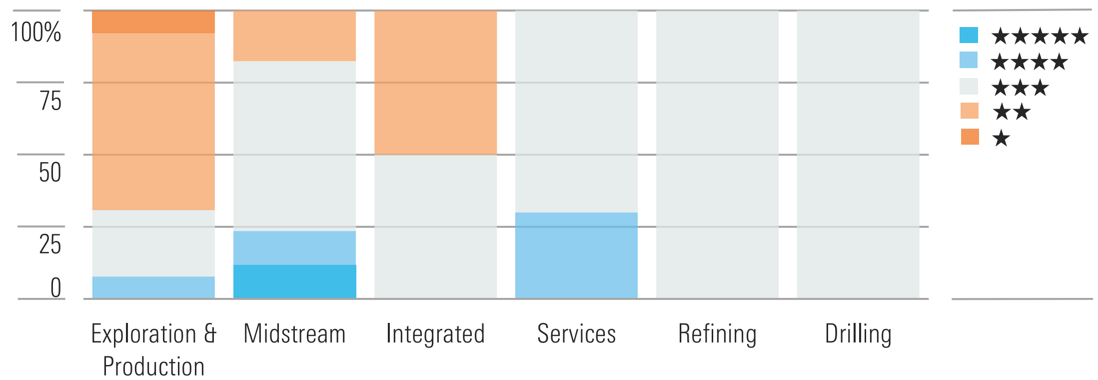
Another variable to watch is OPEC. Members are watching markets closely to inform their next move. In its December meeting, the cartel remained steady on production, continuing to defy calls from overseas consumers to increase production.

**Exhibit 1. Energy Stocks Continue to Outperform the Broader Market**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

**Exhibit 2. Services and Midstream Offer the Most Attractive Opportunities**

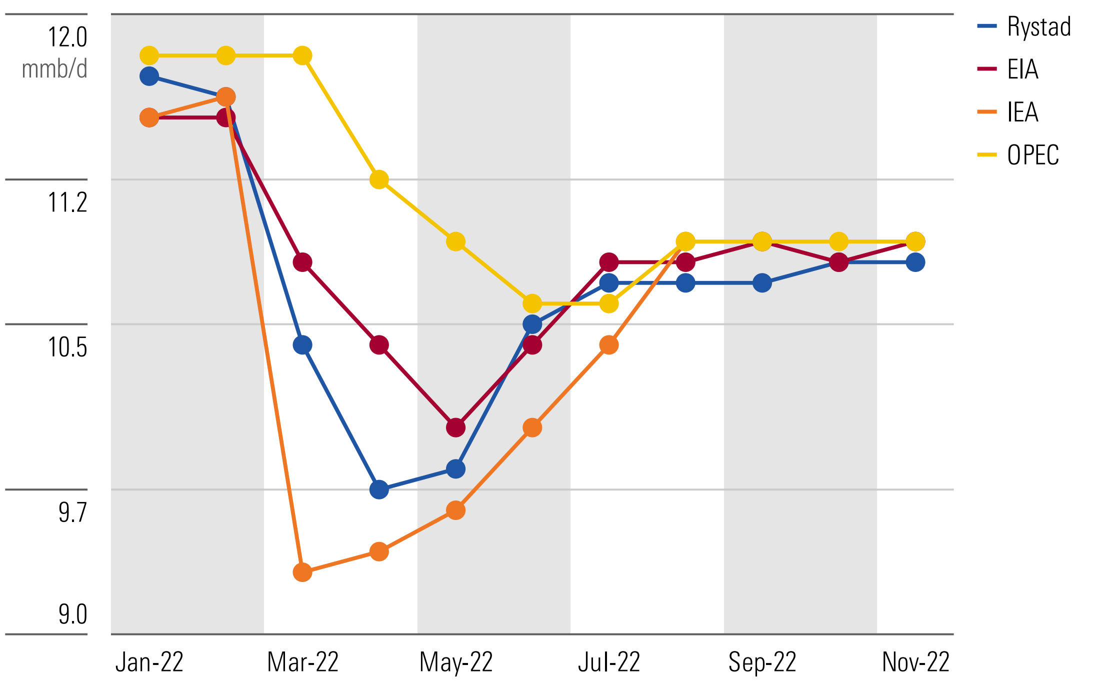



Source: Morningstar equity research. Data as of Dec. 27, 2022.

# Energy Markets Face Further Volatility in the New Year

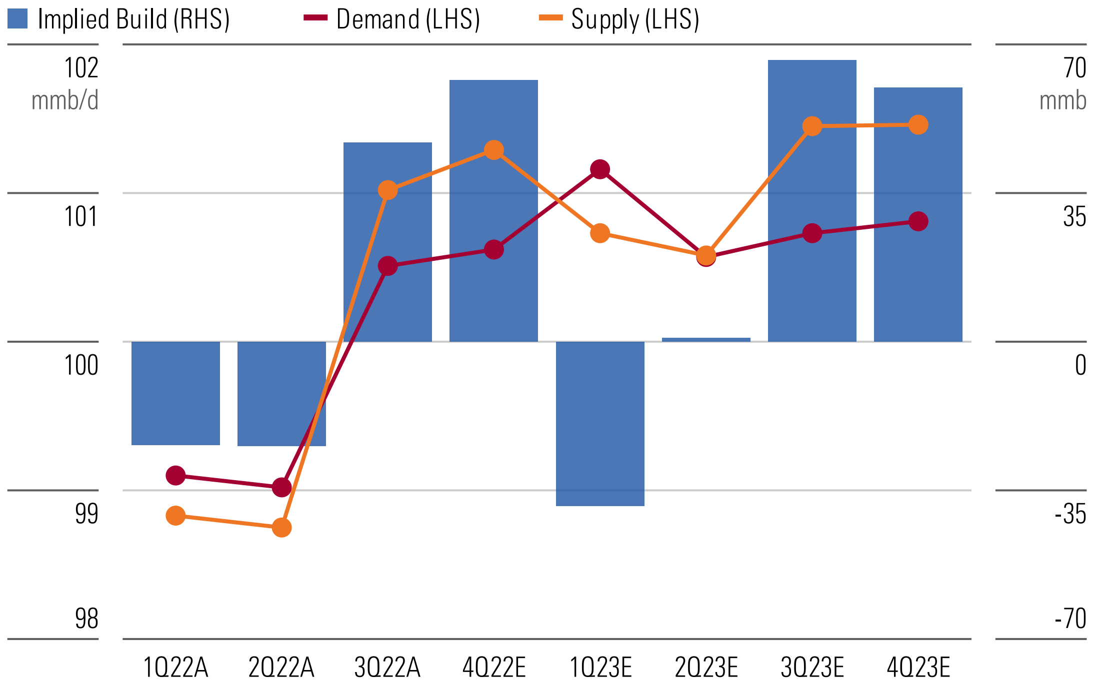
The political unrest in Iran makes progress on the nuclear deal almost impossible, putting sanctions relief out of sight. The U.S. (traditionally another swing producer) is unlikely to deliver substantial growth either. Producers remain committed to capital discipline and would rather funnel surplus cash to shareholders rather than invest in accelerated drilling. But on the demand side, it now looks like China will attempt to wind down zero-COVID-19 policies further in 2023, bringing a massive consumer back to the market. As a result, 2023 is shaping up to be another year of insufficient supply growth and high oil prices.

**Exhibit 3. Forecasts for Fiscal Year 2022: Russia Liquids Supply Partially Recovered**




Source: Rystad, EIA, IEA, OPEC. Data as of Dec. 7, 2022.

**Exhibit 4. Market Tightness Likely to Persist in 2023**




Source: EIA. Data as of Dec. 7, 2022.

SECTOR TOP PICKS

# Energy

| Name/Ticker | | Rating | |
|---|---|---|---|
| TechnipFMC FTI | | ★★★★ | TechnipFMC is the largest subsea service provider, and we foresee ample growth opportunities for the firm as capital investment in subsea engineering and construction continues to increase over the next several years. The firm's share price has rallied in recent months, but we still see upside potential moving forward. TechnipFMC stands out as a leader for its efficiency-boosting products and services such as Subsea 2.0 and integrated projects, which will create more value for the company than the market seems to appreciate. |
| **Price (USD)** 12.12 | **Fair Value (USD)** 15.00 | **Uncertainty** Very High | |
| **Market Cap (USD B)** 5.39 | **Economic Moat** None | **Capital Allocation** Standard | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Equitrans Midstream ETRN | | ★★★★★ | While Equitrans still sees the Mountain Valley Pipeline in service in the second half of 2023, assuming construction can begin by mid-2023, it highlights the need for pipeline permitting reform to do so. The Fourth U.S. Circuit Court remains the primary roadblock, as it has overruled state and federal agencies' technical conclusions more than 10 times at this stage. We expect reform in some fashion to pass, and the odds are improved with the Republicans controlling the House of Representatives. From a financial perspective, Equitrans reaffirmed the current dividend payout as safe and does not see any debt compliance issues. |
| **Price (USD)** 6.63 | **Fair Value (USD)** 14.00 | **Uncertainty** High | |
| **Market Cap (USD B)** 2.93 | **Economic Moat** Narrow | **Capital Allocation** Poor | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Exxon Mobil XOM | | ★★★ | Exxon plans to double earnings from 2019 levels by 2025 and to double cash flow by 2027 on a combination of structural operating cost reductions, portfolio improvement, and growth across its upstream, downstream, and chemical segments. Exxon estimates that, under the current plan, it will generate about $100 billion in surplus cash, after funding investment and paying the dividend, during the next five years. Combined with currently higher-than-expected commodity prices, its current repurchase program of $30 billion through 2023 is likely just the beginning. |
| **Price (USD)** 108.68 | **Fair Value (USD)** 102.00 | **Uncertainty** High | |
| **Market Cap (USD B)** 453.79 | **Economic Moat** Narrow | **Capital Allocation** Exemplary | |

# Financial Services

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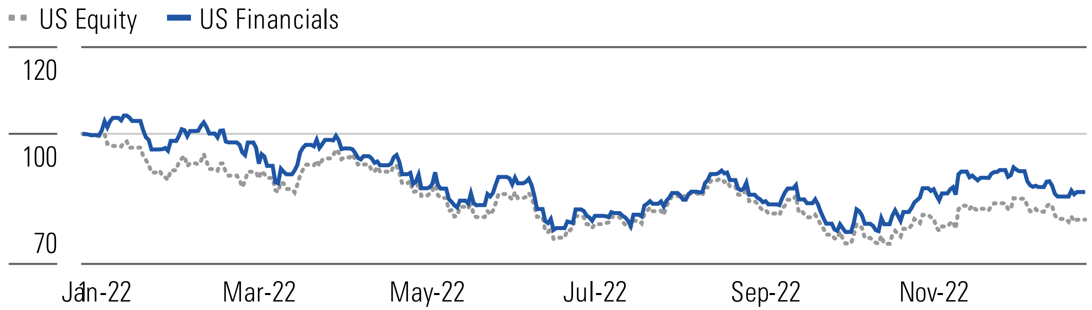
# In 2023, the Benefits of Higher Interest Rates Will Have to Be Weighed Against Likely Slowing Economic Growth

The Morningstar US Financial Services Index outperformed the Morningstar US Markets Index year to date through Dec. 27, 2022, down 12.98% compared with 19.70%, and outperformed fourth quarter to date, up 11.89% compared with the market that's up 6.91% (Exhibit 1). The median North American financial sector stock trades at a 10% discount to its fair value estimate compared with a 23% discount at the end of the third quarter of 2022 and a 2% premium at the end of fourth quarter of 2021. We currently rate around 45% of the North American financial sector stocks coverage as undervalued 5- or 4-star stocks with about 10% rated overvalued 2- and 1-star stocks (Exhibit 2).

Key items to watch for in 2023 for financial sector stocks include a slowdown in the economy, normalization of credit costs, and a potential pivot from the Federal Reserve to more accommodative monetary policy. In December, the Federal Open Market Committee raised the FFR by 50 basis points to a range of 4.25%-4.5%. The 50-basis-point raise is lower than the four most recent raises that were 75 basis points each. The median FOMC member also now believes that the effective federal-funds rate should be 5.1% in 2023 and 4.1% in 2024 contrasted with the belief after the September FOMC meeting of 4.6% and 3.9% (Exhibit 3). With the federal-funds rate near its likely peak and recent inflation readings showing stabilization and the potential start of a downward trend, the moderate recent change in the federal-funds rate seems reasonable.

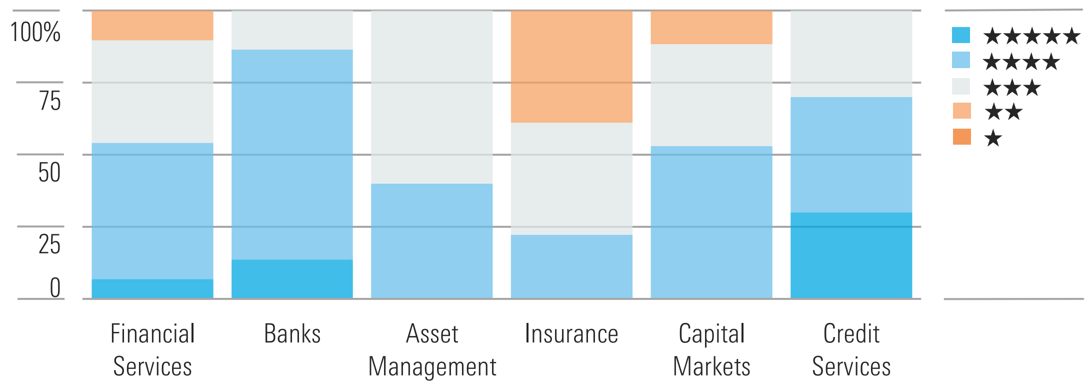
While high interest rates are a boon to many financial sector companies that earn interest income, many economic commentators are worried at the inversion of the yield curve with short-term interest rates being higher than long-term interest rates (Exhibit 4).

**Exhibit 1. Financials Have Been Somewhat More Resilient Than the Overall Market**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

**Exhibit 2. Financials Only Moderately Undervalued Going Into the Uncertain 2023**

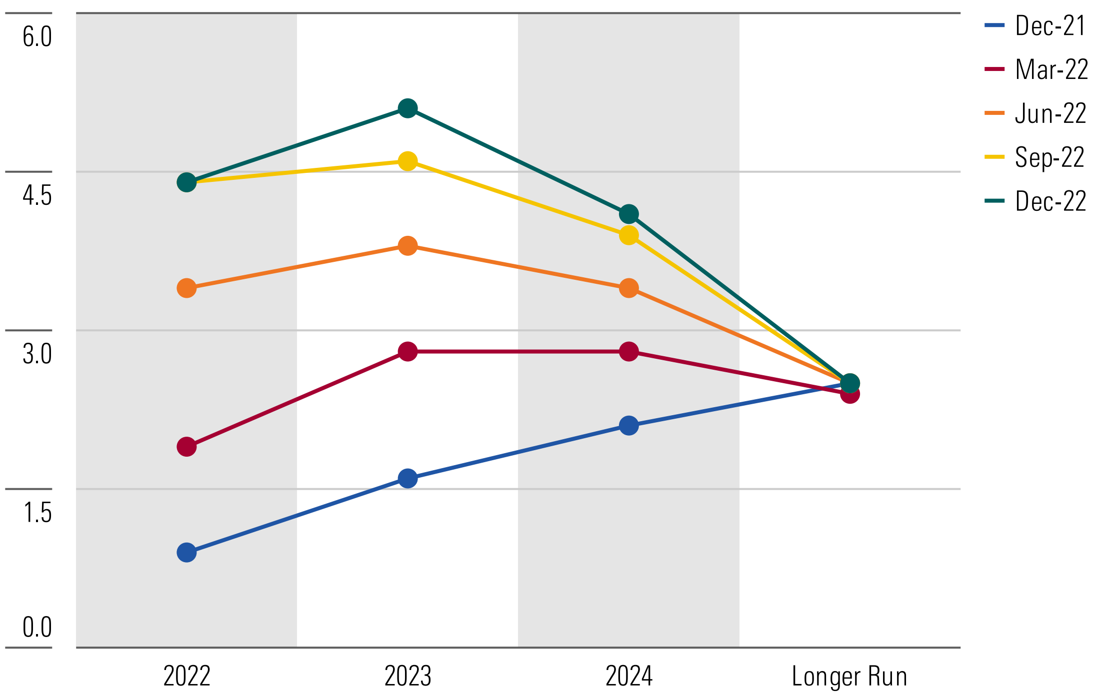



Source: Morningstar equity research. Data as of Dec. 27, 2022.

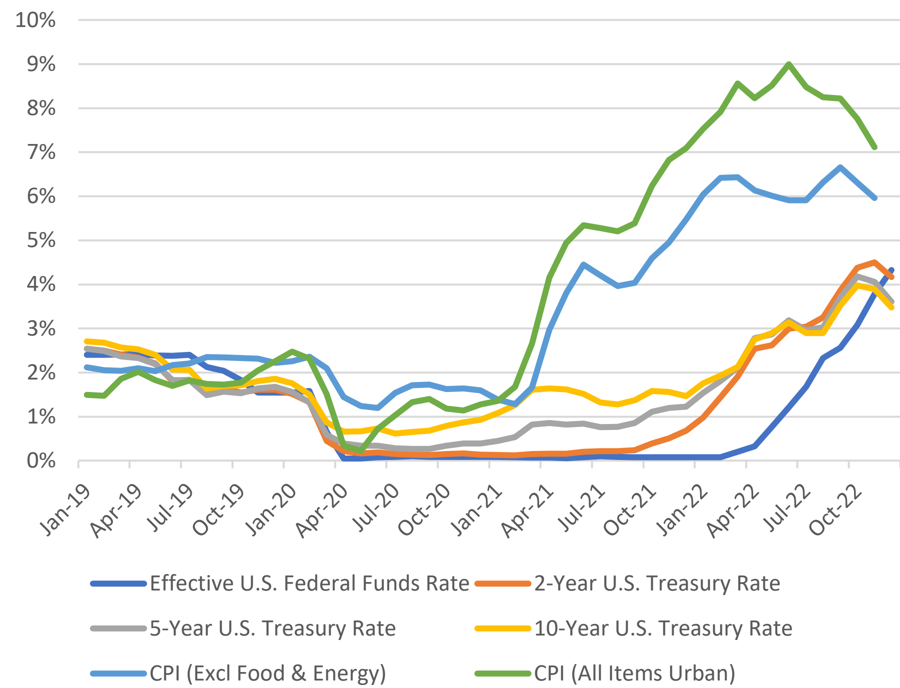
# In 2023, the Benefits of Higher Interest Rates Will Have to Be Weighed Against Likely Slowing Economic Growth

An inverted yield curve, with a comparison of the 2-year and 10-year Treasury rate being common, is often seen as signaling a pending recession. Regardless of if the United States does enter a recession, it's likely that economic growth will slow, the unemployment rate will rise, and bank credit costs will increase from unusually low levels to something more normal. When inflation is more firmly under control, which could occur in 2023 or 2024, the timing and magnitude of a Federal Reserve pivot to lowering interest rates will become a focus for the financial sector.

### Exhibit 3. Anticipated Peak Interest Rates Have Risen




### Exhibit 4. Yield Curve Is Inverted While Inflation Is Stabilizing




Source: Federal Reserve, Morningstar, U.S. Department of the Treasury. Data as of Dec. 19, 2022.

# Financial Services

| Name/Ticker | | Rating | |
|---|---|---|---|
| Berkshire Hathaway BRK.A | | ★★★★ | We continue to view Berkshire's decentralized business model, broad business diversification, high cash-generation capabilities, and unmatched balance sheet strength as true differentiators for the company. Owing to its diversification and its lower overall risk profile, we believe the wide-moat firm offers one of the better risk-adjusted return profiles in the financial services sector, viewing the market losses recorded on its investment portfolio in 2022 as near-term mark-to-market adjustments representing unrealized losses for a firm that has a rock-solid balance sheet and tends to be a buy-and-hold investor over time. |
| **Price (USD)** 463,400.00 | **Fair Value (USD)** 555,000.00 | **Uncertainty** Low | |
| **Market Cap (USD B)** 676.68 | **Economic Moat** Wide | **Capital Allocation** Standard | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Blackstone BX | | ★★★★ | We believe Blackstone has built a solid position in the alternative-asset management industry, utilizing its reputation, broad product portfolio, investment performance track record, and cadre of dedicated professionals to not only raise massive amounts of capital but maintain the reputation it has built for itself as a "go-to firm" for institutional and high-net-worth investors looking for exposure to alternative assets. With demand for alternatives increasing and investors limiting the number of providers they use, large-scale players like Blackstone are well positioned to gather and retain assets for its funds. |
| **Price (USD)** 74.91 | **Fair Value (USD)** 115.00 | **Uncertainty** High | |
| **Market Cap (USD B)** 54.12 | **Economic Moat** Narrow | **Capital Allocation** Standard | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Citigroup C | | ★★★★★ | Citigroup is the most undervalued traditional U.S. bank under our coverage and is trading below tangible book value. The bank is shedding nonperforming segments, refocusing its operations, and dealing with consent orders from regulators. Further, Citigroup is busy building up capital in response to higher capital requirements, and global recession worries tend to affect non-U.S. economies even more than the U.S., and Citigroup has the largest exposure here. While the bank faces some headwinds, we think a recovery in card balances and its Institutional Clients Group business will help to drive revenue growth for the bank. |
| **Price (USD)** 44.26 | **Fair Value (USD)** 75.00 | **Uncertainty** Medium | |
| **Market Cap (USD B)** 85.98 | **Economic Moat** None | **Capital Allocation** Standard | |

# Healthcare

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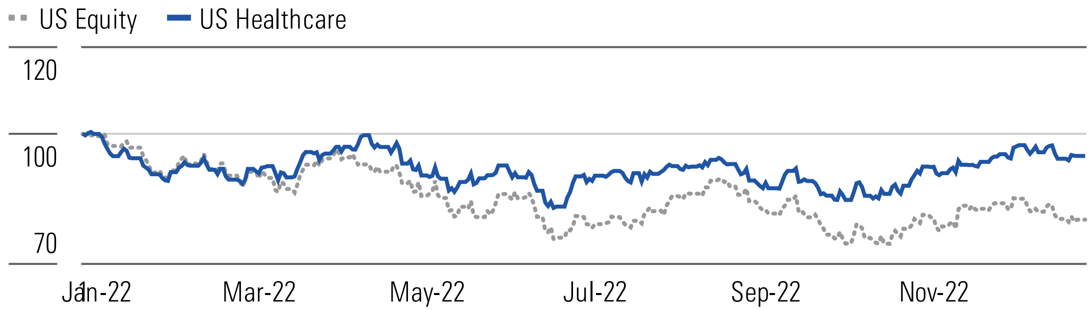
# Healthcare's Defensive Nature Buoys Performance as Macroeconomic Concerns Weigh on Overall Market

As the markets continue to pull back on macro headwinds (concerns around inflation and a recession), year to date through Dec. 27, 2022, the broad equity market fell 19.70%, but Morningstar's US Healthcare Index only fell 5.43% (Exhibit 1). As economic concerns have weighed on the market, we believe the defensive nature of healthcare stocks supports the outperformance. Regarding inflation, we expect our healthcare coverage (especially firms with moats) will be able to largely pass along price increases due to most inflationary pressures given the strong pricing power enjoyed by the sector due to patents and switching costs. However, lags between price increases and inflationary pressures may cause short-term margin pressure for firms that can't move pricing quickly, typically due to regulations slowing price changes. Also, labor shortages are affecting some healthcare services companies, which may limit capacity and pressure margins in the near term for the industry. Despite some macro pressures affecting healthcare, the sector looks more resilient than the overall market, and the inelastic demand for healthcare should keep sales steady if global economic activity falters.

On a market capitalization weighted-basis the sector is fully valued, but with the median price/fair value of stocks within the sector at 0.89, we see just over 40 "buys" in the sector, with close to half of our coverage rated 4 or 5 stars (Exhibit 2). We see relatively broad representation of undervalued stocks across the industries within healthcare, except for managed-care companies, which look more fairly valued.

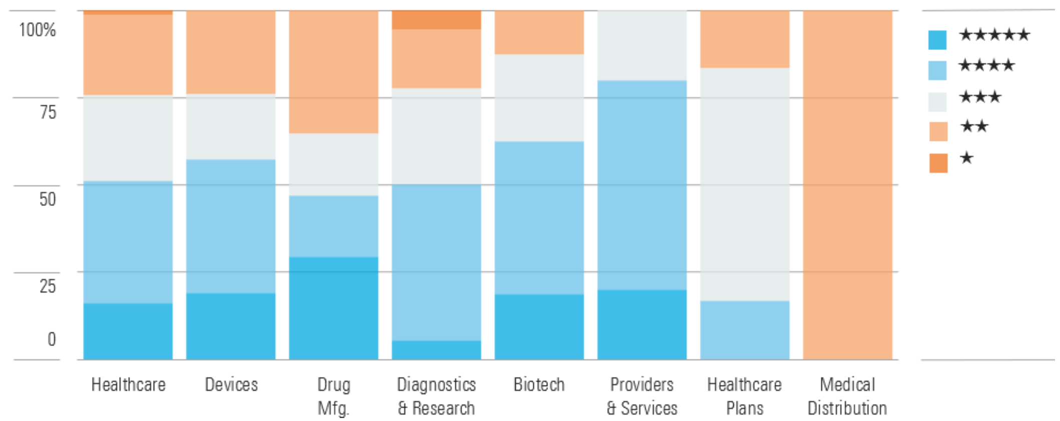
Healthcare looks undervalued across several industries, and we believe the sector should hold up well in the backdrop of several macro pressures (Exhibit 3). The low valuations and the defensive nature of healthcare should enable steady returns for the sector. We view biopharma, the largest industry by market capitalization, as undervalued.

**Exhibit 1. Healthcare Continues to Hold Up Better Than the Overall Market**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

**Exhibit 2. Healthcare Rating Distribution by Industry**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

# Healthcare Appears Undervalued Across Many Industries and Should Hold Up Well Despite a Potential Recession

The recently passed Inflation Reduction Act in the U.S. will likely create manageable industry headwinds. With the passage of this legislation, we believe the political rhetoric around high drug prices will fade as the U.S. government will have less responsibility for drug costs, and elderly patients will have much lower out-of-pocket costs (Exhibit 4). With the U.S. elections yielding a split in power, we do not expect major healthcare policy reforms, leaving healthcare market with a more stable outlook. On the innovation side, we see strong trends across industries. Targeted drugs, new therapeutic mechanisms of action, and advancements in diagnostics and devices will enable strong pricing power and volume expansion.

### Exhibit 3. Favorable Healthcare Outlook Relative to Macro Market Concerns

| Macro Economic Concern | What the Market Is Missing on Healthcare |
|---|---|
| Inflation | The Cost of Goods Sold for most healthcare firms represents a relatively low number. |
| Potential Recession | Healthcare demand is generally inelastic and has held up well during recessions. |
| War in Ukraine | Less than 1% of most healthcare sales are derived from Russia and Ukraine. |

Source: Morningstar equity research, company reports, Kaiser Family Foundation, CBO, MedPAC, CMS. Data as of December 2022.

### Exhibit 4. Medicare Patients and U.S. Responsible for Fewer Drug Costs by 2025

| Payer Group | Current Law (2022) | Inflation Reduction Act (2025) |
|---|---|---|
| Medicare Patient | $3000 plus 5% of catastrophic costs | Capped payments at $2,000 |
| U.S. Government | 80% of catastrophic costs | 20% of catastrophic costs |
| Insurance/Biopharma | Less responsibility of coverage | Increased responsibility of coverage |

Source: Morningstar equity research, company reports, Kaiser Family Foundation, CBO, MedPAC, CMS. Data as of December 2022.

# Healthcare

| Name/Ticker | | Rating | |
|---|---|---|---|
| Illumina ILMN | | ★★★★ | Illumina represents a growth-at-a-reasonable-price opportunity for investors with a long-term horizon. As the leading provider of genomic sequencing tools, the company should be able to capitalize on the continued expansion of these applications in research and clinical settings. Also, Illumina owns the Grail liquid biopsy assets, which are targeting a nascent exponential technology opportunity for the earlier detection of cancer. While regulators may eventually force Illumina to unwind the Grail transaction, we think market sentiment could change by the time of that potential unwinding in mid-2023 to early 2024. While Illumina may face more competition in its legacy genomic sequencing technology in the future, we think the factors that determine its economic moat in genomic sequencing—intangible assets and switching costs for end users—may help Illumina generate economic profits in the long run. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 191.24 | 307.00 | High | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 29.69 | Narrow | Exemplary | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Moderna MRNA | | ★★★★ | The shares were on a roller coaster in 2021. We think investors first became overly enthusiastic about the potential of the company's technology but subsequently too bearish on its postcoronavirus growth. While we have modest expectations for sales of the firm's COVID-19 vaccine following massive pandemic demand in 2021 and 2022, we think Moderna's technology is particularly well validated in the field of respiratory virus vaccines. The firm's RSV vaccine, seasonal flu vaccine and COVID-19 vaccine could eventually form the basis for a single vaccine, as mRNA technology is well suited for combinations. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 199.08 | 266.00 | Very High | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 69.22 | None | Standard | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Zimmer Biomet Holdings ZBH | | ★★★★ | With the addition of smaller competitor Biomet, Zimmer is the undisputed king of large-joint reconstruction, by far. We expect favorable demographics, which include aging baby boomers and rising obesity, to fuel solid demand for large-joint replacement that should offset price declines. However, Zimmer stumbled into a series of pitfalls in 2016-17, including integration issues, supply and inventory challenges, and quality concerns that have caught the attention of the U.S. Food and Drug Administration. But new management has tackled these issues, and the firm is poised to ramp up its growth. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 126.69 | 175.00 | Medium | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 26.71 | Wide | Exemplary | |

# Industrials

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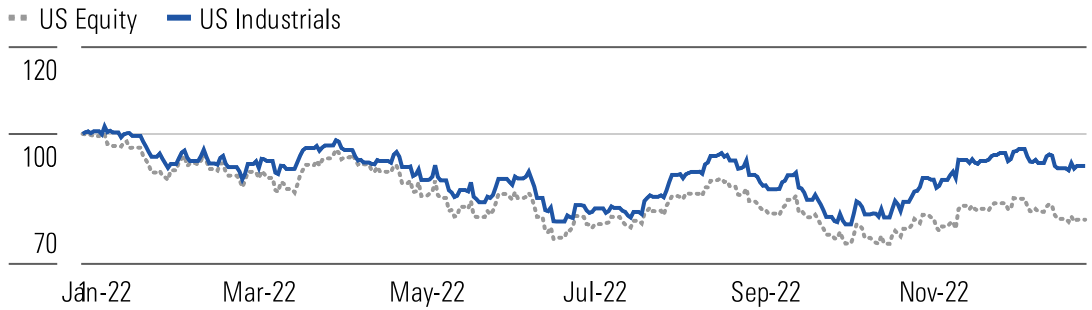
# Industrials Stocks Rally During the Fourth Quarter, but Attractive Opportunities Are Still Available

The Morningstar US Industrials Index firmly outperformed the Morningstar US Market Index during the fourth quarter of 2022, extending its full-year outperformance to over 1,200 basis points (as of Dec. 27). In 2022, the aerospace and defense and farm and heavy construction machinery industries led the Morningstar US Industrials Index's outperformance. The two worst performing industries in our industrials coverage — business services and industrial products—still outpaced the broader market during the year.

The aerospace and defense and farm and heavy construction machinery industries attracted investor flows during the year due to rising geopolitical turmoil and resilient production activity. We also believe investors valued industries with high cash flows and prudent capital allocation amid concerns surrounding the broader economy.

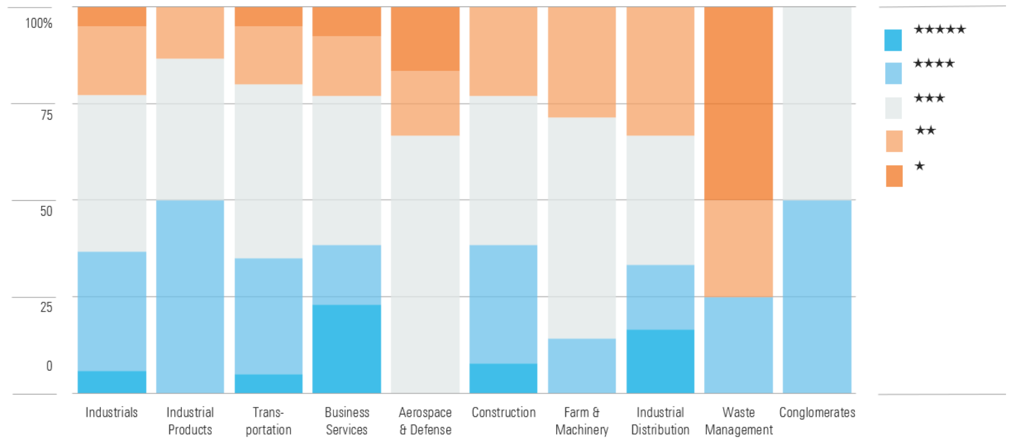
Pandemic lockdowns, a pronounced work-from-home environment, and loose monetary conditions led to robust demand in the housing market and a significant uptick in repair and remodel spending during the pandemic. Sales and margins of homebuilders and building material companies boomed due to unprecedented demand and pricing power. However, rising interest rates and high housing prices have started to dent demand, curbing residential construction activity during the quarter. While we expect near-term pressure in housing and repair and remodel spending to persist, we believe both end markets are exposed to favorable long-term tailwinds. We expect companies with more exposure to the resilient repair and remodel market to adequately weather a softer demand environment.

**Exhibit 1. Industrials Post Strong Q4 Rally**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

**Exhibit 2. Over One Quarter of Industrials Stocks Are Undervalued**

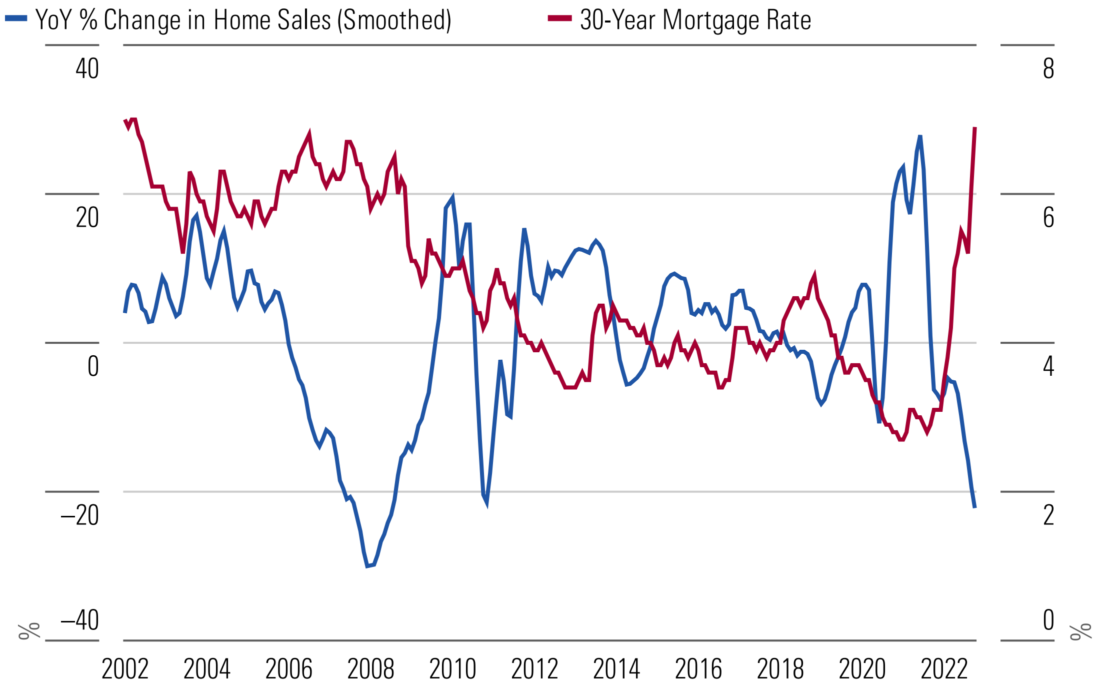



Source: Morningstar equity research. Data as of Dec. 27, 2022.

# Industrials Stocks Rally During the Fourth Quarter, but Attractive Opportunities Are Still Available

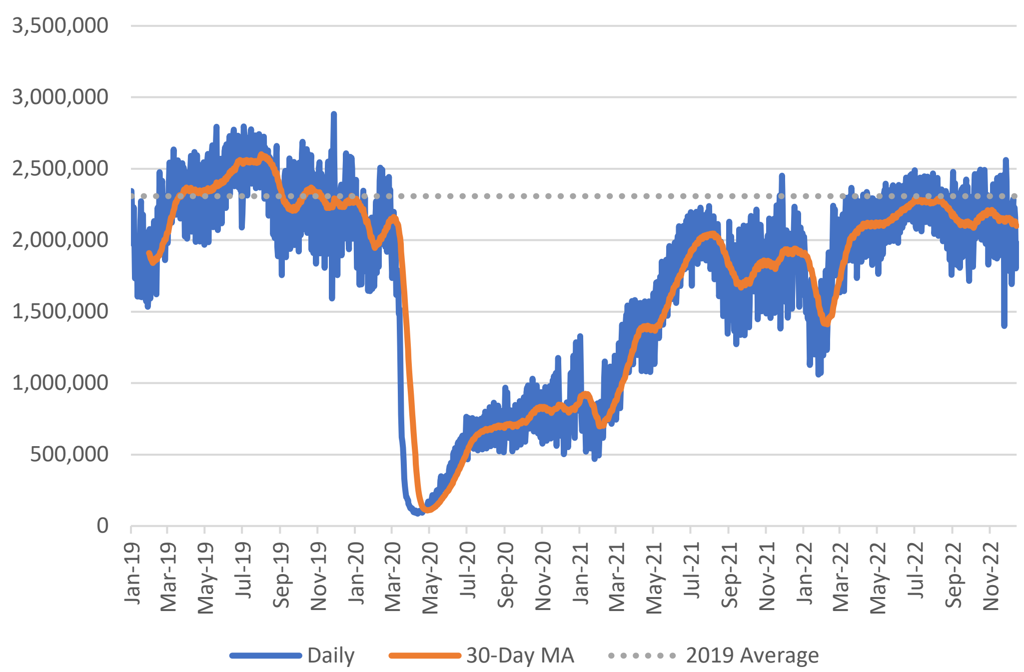
Air travel continued to rebound from pandemic lows in the fourth quarter due to pent-up travel demand, as revenue passenger miles and TSA checkpoint travel numbers approached prepandemic levels. Nonetheless, investor trepidation toward the industry has led to a disconnect in share prices. We believe attractive opportunities are available. Signs of a pullback in consumer goods spending have come to fruition, leading transportation and e-commerce businesses to shift from growth to cost-cutting. Despite near-term obscurity, we believe companies with a prominent national presence will trade at an attractive valuation for long-term investors.

**Exhibit 3. Higher Interest Rates Weigh on Housing Activity**




Source: National Association of Realtors, U.S. Census Bureau, Freddie Mac, Morningstar. Data as of Dec. 19, 2022.

**Exhibit 4. Air Travel Demand Approaches Prepandemic Levels**




Source: U.S. Transportation Security Administration, Morningstar. Data as of Dec. 19, 2022.

# Industrials

| Name/Ticker | | Rating |
|---|---|---|
| Fortune Brands Innovations FBIN | | ★★★★ |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** |
| 56.83 | 78.00 | Medium |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** |
| 7.27 | Narrow | Standard |

Fortune Brands Innovations holds a diverse product portfolio of home goods consisting of kitchen and bath faucets, residential entry and storm doors, security locks, and composite decking. The company benefited during the pandemic from robust demand for home products and remodeling activity. However, fears of a housing slowdown have weighed on the stock. We believe Fortune Brands is exposed to long-term tailwinds in the repair and remodel and residential construction markets. Additionally, Fortune Brands is poised to deliver stronger margins and return on invested capital after spinning off its no-moat cabinets business.

| Name/Ticker | | Rating |
|---|---|---|
| Southwest Airlines LUV | | ★★★★ |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** |
| 36.09 | 56.00 | High |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** |
| 20.15 | None | Standard |

Southwest Airlines is a low-cost carrier and is the largest domestic carrier in the United States, primarily serving the leisure travel market. While we believe brand intangibles do not warrant a competitive advantage for airlines in most scenarios, we acknowledge that Southwest's customer-friendly tactics provide the closest resemblance to brand equity in the highly competitive industry. Additionally, Southwest boasts a robust balance sheet, and we expect passenger volumes to continue recovering from their pandemic lows.

| Name/Ticker | | Rating |
|---|---|---|
| FedEx FDX | | ★★★★ |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** |
| 175.93 | 217.00 | High |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** |
| 44.69 | Narrow | Standard |

FedEx is one of the largest U.S. transportation carriers engaged in small-parcel and less-than-truckload delivery. FedEx has encountered headwinds from labor constraints, high wage/cost inflation, and most recently a normalization in e-commerce demand. These factors have weighed on ground margins, a key focal point for investors. However, we believe management is now broadly shifting from a growth to an efficiency posture, as part of its plan to get ground margins back on track. Execution risk is elevated; the new CEO is under significant pressure to bolster the firm's performance. We expect progress will be made.

# Real Estate

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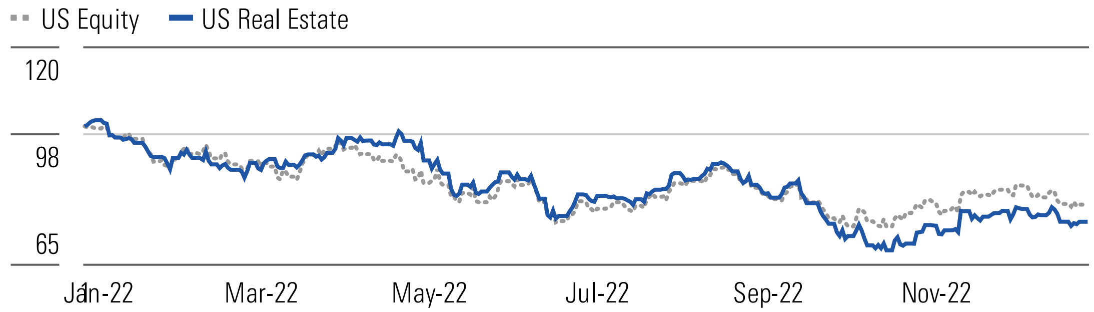
# Despite Inflation Driving High-Rate Growth, Rising Interest Rates Drive Negative Performance for Real Estate Sector

The Morningstar US Real Estate Index is down 25.31% year to date through Dec. 27, 2022 (Exhibit 1), which is worse than the 19.70% decline seen by the broader U.S. equity market over the same period. The real estate sector rose 4.96% in the fourth quarter of 2022, underperforming the broader U.S. equities market that rose 6.91% quarter to date. While the real estate sector has seen negative stock performance over the past 12 months, the sector continues to report strong fundamentals growth with high inflation allowing many real estate subsectors to push rental rate increases that are well above historical averages.

The real estate sector is currently trading significantly below our fair value estimates. The median stock valuation within real estate coverage currently trades at a 25% discount to our estimate of fair value, which is better than many other North American sectors. Currently, 71% of the real estate sector is trading in either the 5-star or 4-star range, 24% is trading in the 3-star range, and only 5% is trading in the 2-star range while no company is currently trading in the 1-star range (Exhibit 2).

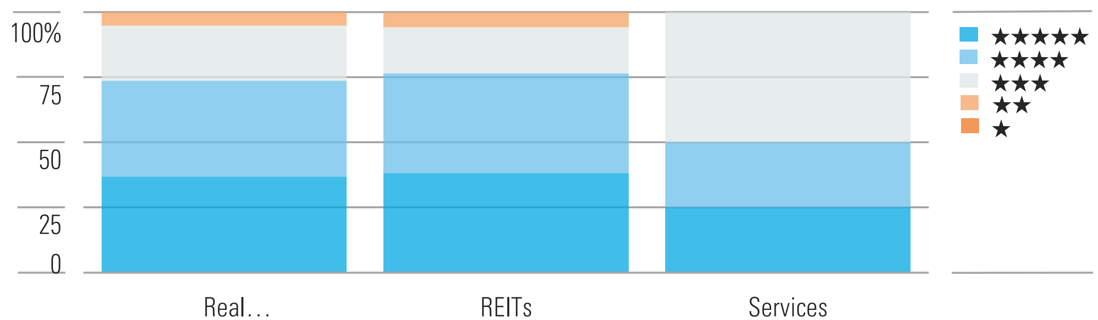
Since 2000, the relative performance of REITs compared with the broader equity market has shown a significant negative relationship to interest rate movements for the 10-year U.S. Treasury (Exhibit 3). While many income-oriented investors favor REIT investments for their dividend payments during periods of low interest rates, rising rates cause income-oriented incomes to rotate money out of the sector and into lower-risk investments. Additionally, rising interest rates increase the debt costs many REITs rely upon to fund acquisitions and development projects, so external growth becomes less accretive to REIT cash flows as interest rates rise.

**Exhibit 1. Real Estate Has Declined Slightly More Than the Market**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

**Exhibit 2. Majority of Real Estate Sector Is Trading at a Discount to Fair Value Estimates**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

# Despite Inflation Driving High-Rate Growth, Rising Interest Rates Drive Negative Performance for Real Estate Sector

Due to the strong negative correlation, rising interest rates in 2022 (Exhibit 4) have directly led to the negative performance of the real estate sector over the past 12 months. We anticipate that interest rate hikes will lead to further declines, in absolute and relative terms to the broader equity markets, for the real estate sector. However, most real estate subsectors should continue to see rate growth, and thus net operating income growth above historical average for the next quarters. Rising interest rates have limited long-term impact on REIT cashflows, so we believe many companies in the sector are trading at a discount due to short-term disruption caused by rising interest rates.

**Exhibit 3. Relative Performance of REIT Sector Negatively Correlated With Interest Rates**

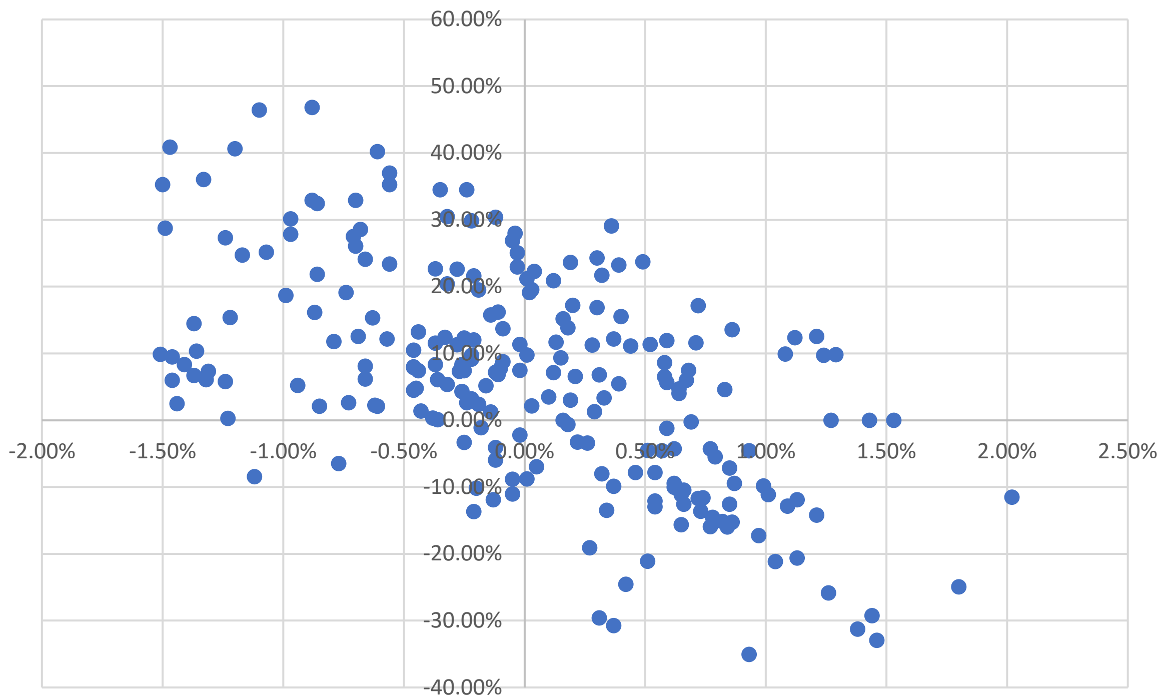
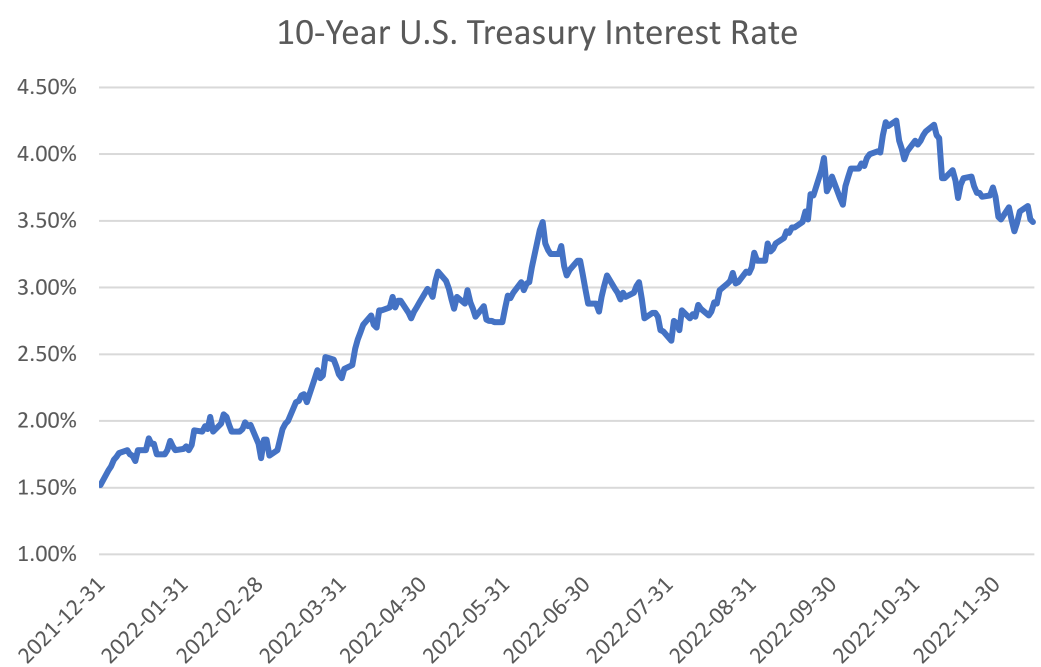



**Exhibit 4. REIT Relative Performance Negatively Correlated With Interest Rates**




Source: FRED, U.S. Bureau of Labor Statistics, FTSE Russell, Morningstar Direct. Data as of Dec. 6, 2022.

SECTOR TOP PICKS

# Real Estate

| Name/Ticker | | Rating | |
|---|---|---|---|
| Simon Property Group SPG | | ★★★★ | Class A malls continue to outperform other forms of brick-and-mortar retail. While the stock sold off significantly during the height of the pandemic, it recovered to prepandemic levels by the end of 2021 as brick-and-mortar sales rebounded with consumers returning to shop in store. Tenants are now much healthier with occupancy costs at the lowest levels in over six years, which should allow Simon to see further occupancy and rent increases. Additionally, Simon recently acquired Class A mall competitor Taubman Centers, which should increase cashflows and provide more leverage when negotiating with tenants. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 117.91 | 160.00 | Medium | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 38.61 | None | Exemplary | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Park Hotels & Resorts PK | | ★★★★★ | While the coronavirus significantly affected Park's operating results with high-double-digit revPAR declines and negative hotel EBITDA in 2020, the company's portfolio has significantly improved operations over the past several quarters. Leisure travel rebounded to prepandemic levels in 2021 with group travel returning to prepandemic levels in 2022. Additionally, business travel has shown recent signs of improvement in 2022. We think business demand will eventually return to close to prepandemic levels by the end of 2024, leading to years of strong growth for Park. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 11.65 | 28.00 | High | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 2.65 | None | Exemplary | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Ventas VTR | | ★★★★★ | Ventas owns high-quality assets in the senior housing, medical office, and life science fields. While the company's medical office and life science portfolios should be relatively unaffected by either the pandemic or a potential recession, the senior housing portfolio saw a large drop in occupancy in the first year of the pandemic as the coronavirus has the highest lethality rate among senior citizens. However, occupancies have slowly recovered in 2021 and 2022 and the industry should see strong long-term growth from the coming demographic wave of baby boomers aging into senior housing facilities. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 45.49 | 69.00 | Medium | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 18.32 | None | Exemplary | |

# Technology

Brian Colello, CPA | brian.colello@morningstar.com

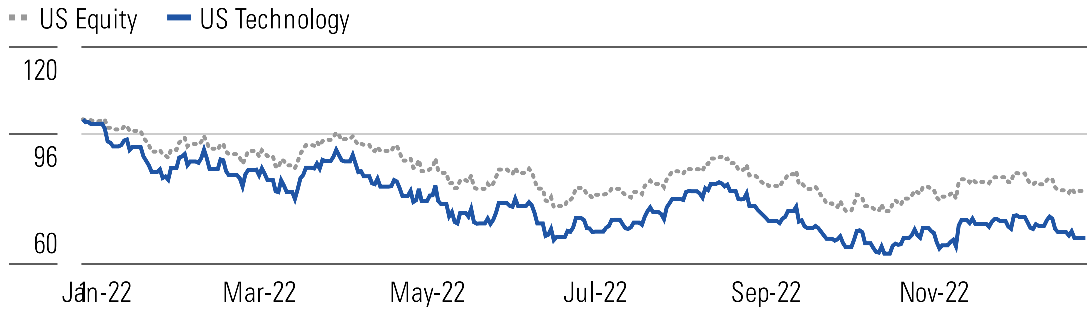
# Technology Remains a Drag on the Broader Market but Wide-Moat Software Stocks Are Still Attractive

Technology was an outperformer in the market in recent years but has crashed back to earth and has been a clear underperformer in 2022. Mega-cap tech stocks (Apple, Microsoft) are still faring better than the overall group, but we see carnage among high-flying growth stocks within tech. The dip doesn't deter our optimism around several secular tailwinds in technology, such as cloud computing and rising semiconductor demand.

Yet, a softer macroeconomic environment and a stronger U.S. dollar may delay some software upgrades and transitions in the near term. PC- and Android-based smartphone demand remains in the doldrums, which continues to pressure chipmakers and device makers with exposure here. Chip demand into automotive and large industrial equipment remains resilient. All in all, we see buying opportunities within tech for long-term, patient investors, especially in wide-moat names across semis and software.

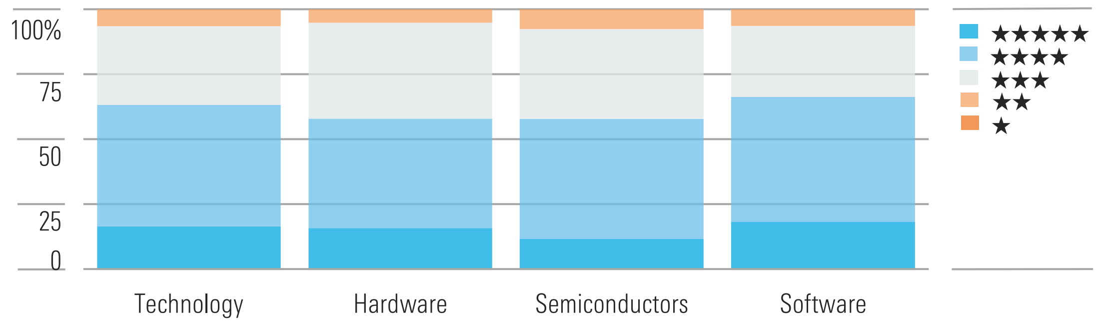
The Morningstar US Technology Index fell 32.29% year to date through Dec. 27, 2022, a massive reversal for a sector that was up 34.42% in 2021. Tech's drop is worse than the U.S. equity market, down 19.70% (Exhibit 1). Quarter to date, tech only rose 2.78% while the U.S. equity market rose 6.91%. The median U.S. technology stock was 20% undervalued, a complete flip-flop from a sector that was 6% overvalued at this time a year ago. Software remains the most attractive subsector of tech as the median stock is 23% undervalued. The median semiconductor stock is 12% undervalued, as compared with 23% undervalued just a quarter ago. The median hardware stock is 15% undervalued (Exhibit 2).

**Exhibit 1. Technology Was an Underperforming Sector in 2022**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

**Exhibit 2. Technology Star Rating Distribution by Industry**

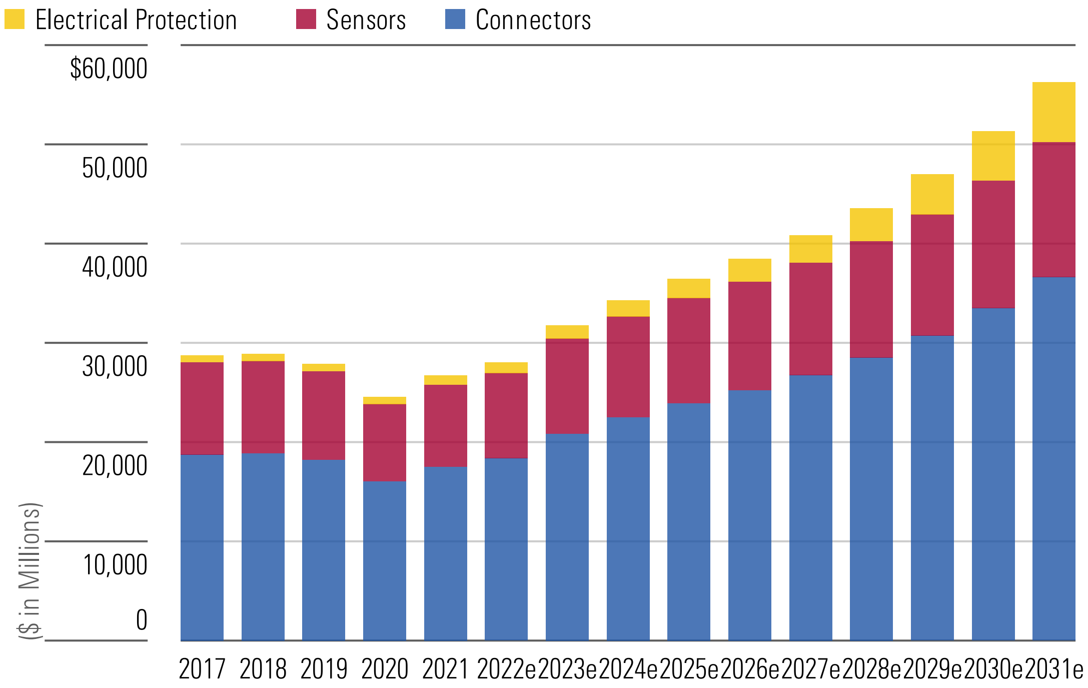



Source: Morningstar equity research. Data as of Dec. 27, 2022.

# Technology Remains a Drag on the Broader Market but Wide-Moat Software Stocks Are Still Attractive

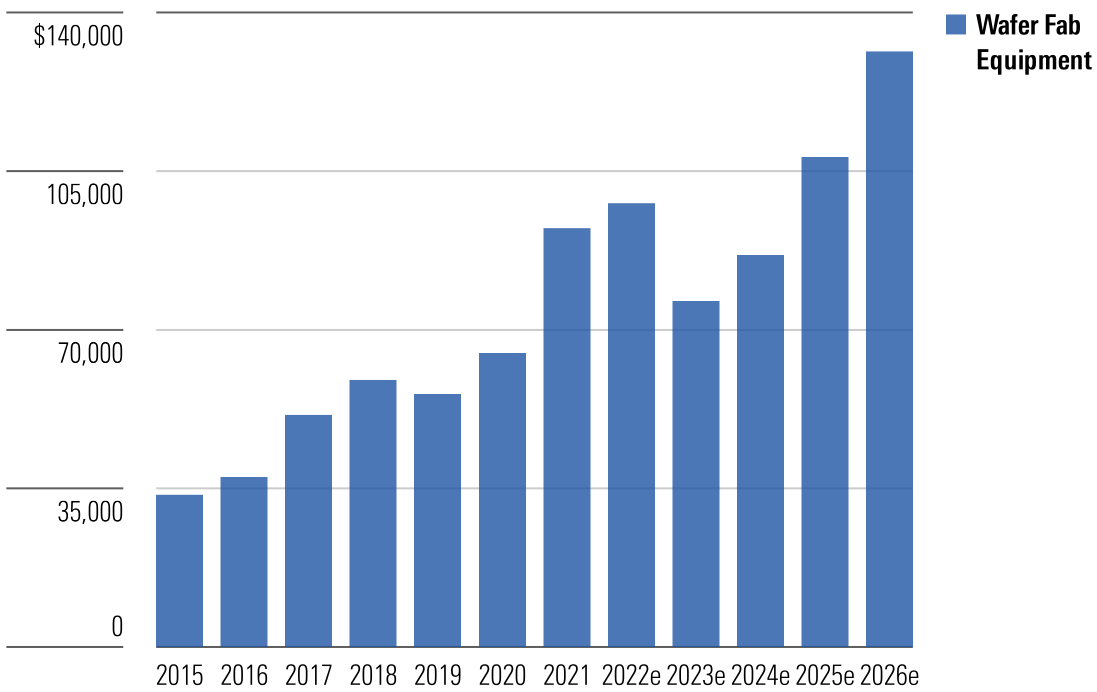
We view the electronic components space (sensors, connectors, electrical protectors, and so on) as underappreciated. These mission-critical electronic components ensure flawless performance of planes, trains, and cars, hence the strong switching costs and pricing power. The electrification of the automotive market is an increasingly important growth theme for suppliers (Exhibit 3). The wafer fab equipment segment has seen strong demand, thanks to secular tailwinds like the rise in public cloud and AI processors. Ongoing chip supply shortages have also boosted equipment spending and fueled a push for local manufacturing in the U.S. and Europe (versus the bulk of production today in Asia). We foresee a dip in spending in 2023 because of headwinds in the memory and PC markets, but it should grow nicely in the long term, providing opportunities for long-term investors (Exhibit 4).

**Exhibit 3. We Forecast the Automotive Electronic Components Market to Grow at a Compound Annual Rate of 8% Through 2031**




Source: Morningstar. Data as of December 2022.

**Exhibit 4. We Expect the WFE Market to Grow in the Long Term Despite a Memory-Driven Cyclical Downturn in 2023**




Source: Morningstar, Gartner, company documents. Data as of Nov. 15, 2022.

# Technology

| Name/Ticker | | Rating |
|---|---|---|
| Salesforce CRM | | ★★★★ |
| Price (USD) | Fair Value (USD) | Uncertainty |
| 129.44 | 220.00 | High |
| Market Cap (USD B) | Economic Moat | Capital Allocation |
| 130.66 | Wide | Standard |

We believe Salesforce.com represents one of the best long-term growth stories in large-cap software due to its ever-expanding portfolio of complementary solutions that allow users to completely embrace their customers, thereby building relationships, strengthening retention, and driving revenue. In our view, Salesforce will benefit further from natural cross-selling among its clouds, upselling more robust features within product lines, pricing actions, international growth, and continued acquisitions such as the recent deals for Slack and Tableau.

| Name/Ticker | | Rating |
|---|---|---|
| ServiceNow NOW | | ★★★★ |
| Price (USD) | Fair Value (USD) | Uncertainty |
| 381.86 | 640.00 | High |
| Market Cap (USD B) | Economic Moat | Capital Allocation |
| 76.89 | Wide | Exemplary |

ServiceNow excels at executing the land-and-expand strategy, and it continues to leverage its strength in workflow automation to penetrate existing customers more deeply in IT and more broadly with HR, customer service specific, and other back-office products. We expect both tiered offerings and vertical specific versions to continue to provide a nice tailwind to revenue. We think ServiceNow has become a key partner in digital transformation as shown in retention statistics, which remains at the elite level. Notably, we are impressed with ServiceNow's excellent balance between strong and highly visible revenue growth and robust margins.

| Name/Ticker | | Rating |
|---|---|---|
| ASML Holding ADR ASML | | ★★★★ |
| Price (USD) | Fair Value (USD) | Uncertainty |
| 551.37 | 700.00 | Medium |
| Market Cap (USD B) | Economic Moat | Capital Allocation |
| 216.56 | Wide | Exemplary |

ASML is one of our top picks in the semiconductor space, thanks to the increasing adoption of extreme ultraviolet lithography at large chipmakers such as TSMC and Intel to support explosive chip demand. Although the firm's first-quarter outlook is negatively affected by supply chain constraints, we think ASML will outgrow the wafer fab equipment industry in the coming years. With TSMC, Intel, and Samsung all vying for process technology leadership, we expect ASML to be a primary beneficiary as it sells tools to all three firms.

# Utilities

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# Can Utilities Sustain Growth Against Macroeconomic Headwinds?

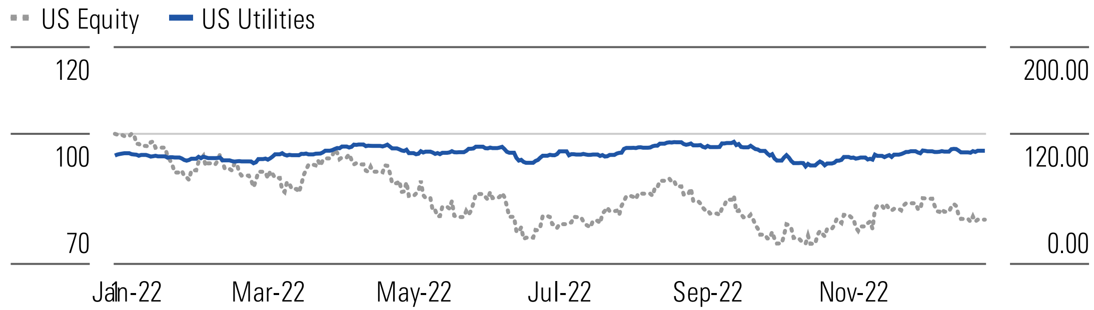
Throughout 2022, utilities faced mixed market signals that created an unusual amount of volatility for a sector prized for its stability. The bad news for utilities investors: Near-term certainty remains elusive. Expect a volatile start to 2023 for utilities stocks.

U.S. utilities stocks are set to finish 2022 with a slight gain, including dividends. Investors might cheer this outcome given the market's downturn. Utilities are set to outperform the U.S. market by the largest margin since 2000. But performance from utilities stocks in 2022 is hardly worth celebrating: Utilities have averaged better than 8% annual returns for the past 30 years with double-digit returns in 18 of those 30 years.

Utilities' relative outperformance in 2022 while the market frets about the economy suggests that utilities remain a defensive haven. Utilities also outperformed ahead of the 2001 and the 2007-09 recessions. However, we think utilities' weak total returns in 2022 should concern investors. For the first time in a decade, the tailwinds supporting utilities' earnings growth and premium valuations (low inflation, low interest rates, and low energy price) are reversing.

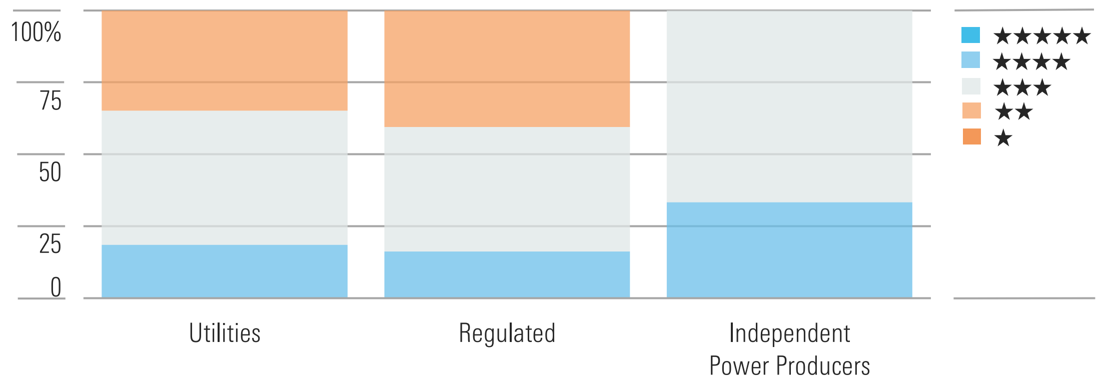
Utilities' growth prospects are our biggest concern going into 2023. Utilities no longer offer a yield premium as bond yields climbed to their highest level in 15 years. Without that yield premium, the only advantage utilities offer investors is earnings growth. This is why high inflation and rising interest rates loom large for utilities in 2023. Inflation, including higher energy prices, will raise customer bills and could force utilities to re-evaluate their growth plans. Higher interest costs will sap cash flow and make infrastructure investments more expensive.

**Exhibit 1. Utilities Rebounded From Their Mid-October Low**




Source: Morningstar equity research. Data as of Dec. 27, 2022.

**Exhibit 2. Most Utilities Trading Near Our Fair Value Estimates**

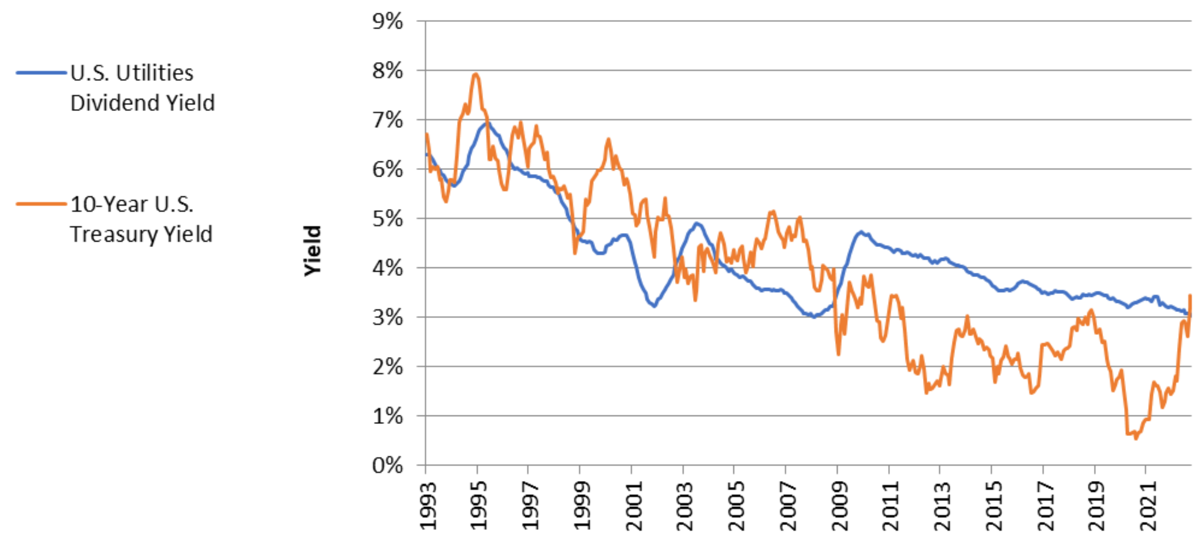



Source: Morningstar equity research. Data as of Dec. 27, 2022.

# Can Utilities Sustain Growth Against Macroeconomic Headwinds?

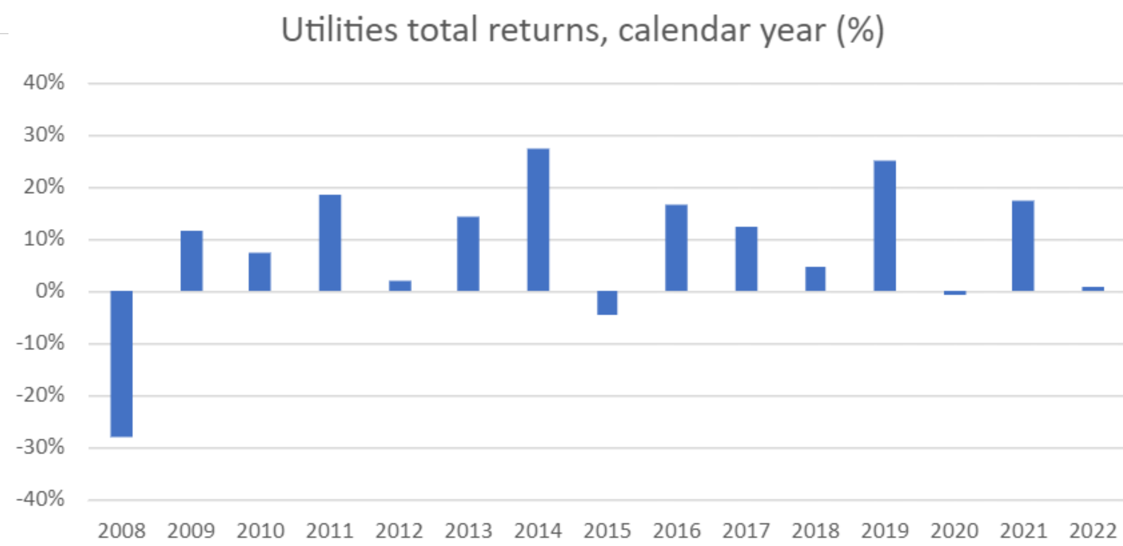
For now, many utilities continue to execute and expand their growth plans. Utilities like Xcel Energy, Alliant Energy, and DTE Energy recently increased their long-term growth plans, in large part to support clean energy investments. At current stock prices, we think utilities that can sustain 5% annual growth will produce fair total returns for investors. But utilities with less favorable regulation, flagging energy demand, or resistance to clean energy investments might have to dial back their growth plans. For those utilities, another year of flat returns in 2023 might be the best outcome.

**Exhibit 3. Bond Yields Top Utilities' Yields for the First Time Since 2008**




Source: Morningstar, U.S. Federal Reserve. Data as of Dec. 18, 2022.

**Exhibit 4. Utilities Suffer One of the Worst Years Since the 2008 Recession**




Source: Morningstar. Data as of Dec. 18, 2022.

# Utilities

| Name/Ticker | | Rating | |
|---|---|---|---|
| Edison International EIX | | ★★★★ | Edison continues to trade at a sizable discount to its peers despite a better growth outlook, 4% dividend yield, and clean energy profile that tops most other U.S. utilities. California's progressive energy policies and utility rate regulation support Edison's $6 billion annual investment plan to harden the grid against natural disasters, integrate renewable energy, and support electric vehicle adoption. We forecast 6% annual earnings growth for at least the next five years and similar dividend growth. Edison is one of the few pure-play electric utilities that owns no power generation and has no direct fossil-fuel exposure. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 65.18 | 73.00 | Medium | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 25.14 | Narrow | Standard | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| NiSource NI | | ★★★★ | We think NiSource offers investors an opportunity to buy a high-growth utility trading at the same valuation as its slower-growing peers. NiSource's transition from fossil fuels to clean energy in the Midwest supports a decade of above-average growth. Its electric utility plans to close its last coal-fired power plant in 2028 and replace the generation with wind, solar, and energy storage. We expect NiSource to invest $12 billion over the next five years and as much as $30 billion during the next 10 years, leading to 7% earnings and dividend growth. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 27.71 | 32.00 | Low | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 11.29 | Narrow | Standard | |

| Name/Ticker | | Rating | |
|---|---|---|---|
| Alliant Energy LNT | | ★★★★ | Alliant Energy is a high-quality utility operating in two of the most constructive regulatory jurisdictions: Wisconsin and Iowa. The company recently increased its capital investment plan by nearly 40%, supporting our expectation that the company will achieve the high end of management's 5%-7% long-term annual earnings growth target. The Inflation Reduction Act supported a boost in renewable energy growth, including ownership of 1.5 gigawatts of solar and 250 megawatts of battery storage. We expect the company's growth investment opportunities to continue into the second half of the decade. |
| **Price (USD)** | **Fair Value (USD)** | **Uncertainty** | |
| 55.30 | 58.00 | Low | |
| **Market Cap (USD B)** | **Economic Moat** | **Capital Allocation** | |
| 14.06 | Narrow | Standard | |

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