Miller/Howard INVESTMENTS

Dividends—The Best Way to Fund Your Retirement?

DECEMBER 31, 2024

WHAT'S THE BEST WAY TO FUND RETIREMENT? Everyone's situation is different, but traditional advice tends to have two key features:

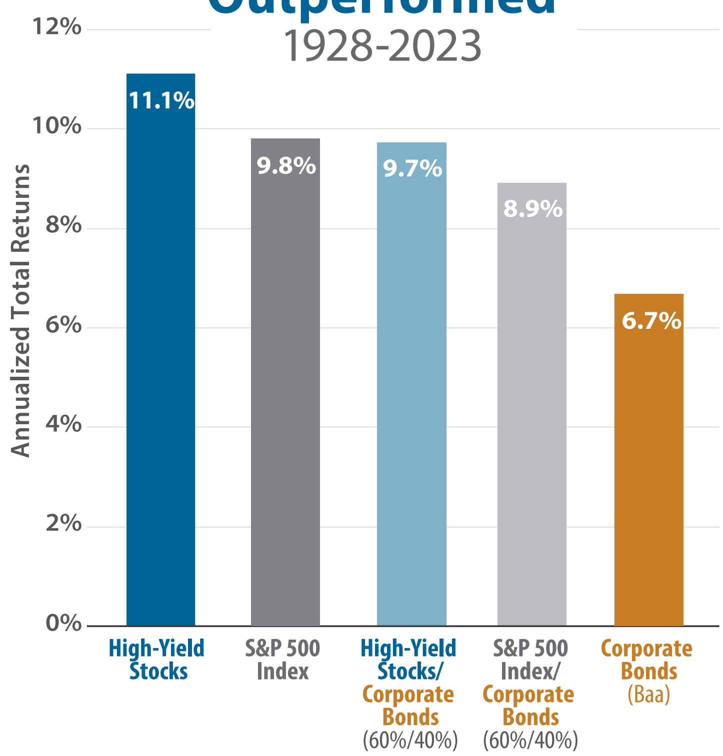
- **Spending plans** that are unconnected to investment outcomes. The classic "4% Rule" is one such plan—at retirement, spending is set at 4% of savings and then grows by the rate of inflation *regardless of investment performance*. There are many variations of this rule, such as setting a higher percentage in early retirement years and then scaling back as age restricts leisure activities. The key characteristic is that spending is delinked from investment results.
- **Investment plans** that sacrifice returns for safety. Bonds are a lower returning asset class, but they are used in the classic 60% stocks/40% bonds portfolio to reduce downside risk. Whether the ratio is 60/40 or 70/30 or 80/20, in every case, investors are trading off long-term returns for safety. Another related strategy is to combine a stock portfolio with 3, 5 or even 10 years of cash to cover spending in a stock market downturn. Historically, cash (or short-term bonds) has had inferior returns to equities, so like with 60/40 portfolios, holding years of cash is just another way to sacrifice investment returns for safety.

Dividend investing provides an alternative to these traditional retirement solutions. High-yield stocks (stocks in deciles 7, 8, & 9 as provided by Fama/French) have historically had a higher average total return than the S&P 500 Index, so for those who believe that "time in the market beats timing the market," high-yield stocks are an enticing investment option, unburdened by compromises for safety.

High-yield stocks also, as we will show, have generated income above the 4% Rule in most years. Dividend payments can fall in bad times, so unlike the 4% Rule and its variants, spending from dividends is linked to investment performance. Some retirees may view a link between spending and investment results as problematic while others may view it as realistic. We take a pragmatic approach, quantifying how frequently dividend spending would require retirees to tighten their belts and how often dividends generate spending budgets below the 4% Rule. As a broad overview of our historical simulations, we found that **using dividends to set budgets never resulted in retirees running out of money and allowed for higher average spending than the 4% Rule.**

High-Yield Stocks have Outperformed

1928-2023



As of December 31, 2023. Sources: Morningstar Direct; Federal Reserve Bank of St. Louis (FRED); Fama/French; Damodaran Historical Returns US (NYU Stern School of Business); Miller/Howard Research & Analysis. See full list of definitions on last page.

Forecasting a couple years out is hard enough, so anticipating what will happen over the course of your retirement is pretty much impossible. Will we finally see flying cars? At Miller/Howard, our view is that long-term forecasting is foolhardy—it's better to choose a strategy that would perform well in a wide variety of investing environments. The past century has provided a remarkable laboratory to pressure test various investment and spending strategies. Our database goes back to 1928 (the earliest date across our sourced datasets), a period that includes the dismal stock market returns of the Great Depression, inflation spikes following World War II and again in the 1970s, and an assortment of both bull and bear markets. Using these historical returns, we simulated 67 30-year retirements from 1928-1957 (all ranges are inclusive), 1929-1958, and so on through 1994-2023.

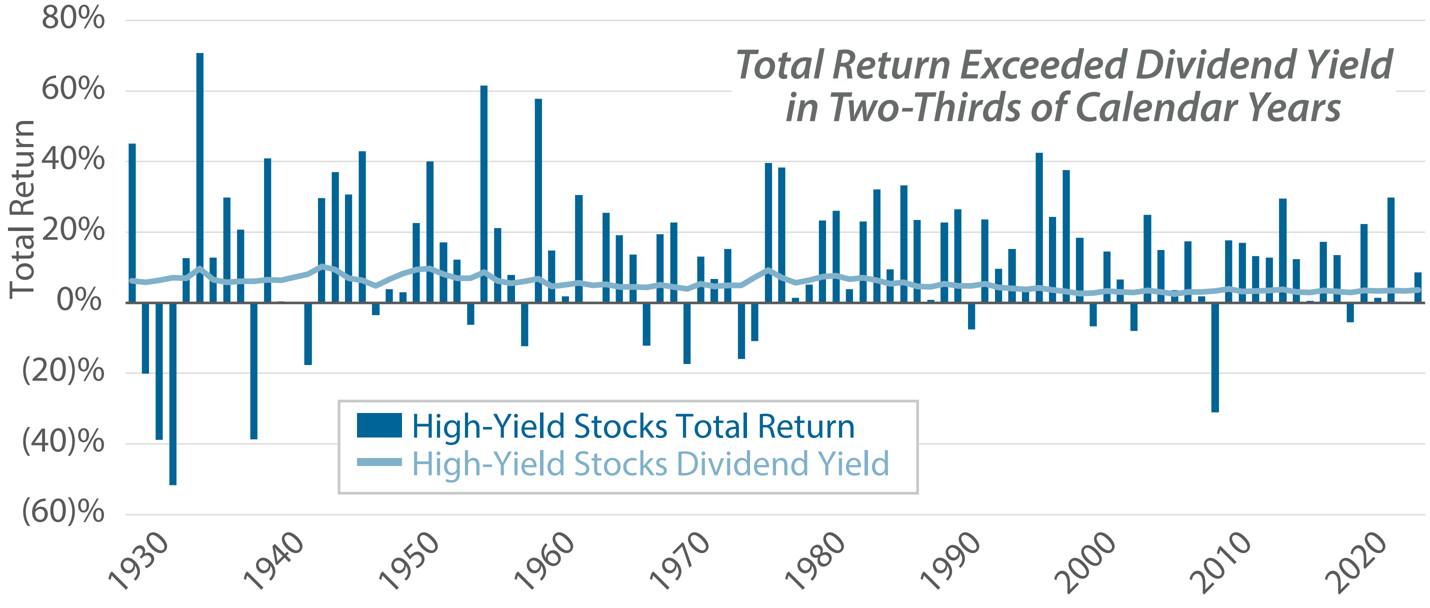
In Miller/Howard's 3Q 2024 Quarterly Report, *Will Inflation Ruin Your Retirement?*, we compared retirement outcomes across high-yield stocks, the S&P 500, bonds, and related 60/40 strategies, all assuming spending is 4% of their starting point adjusted for inflation. Using the 4% Rule, a 60/40 portfolio using high-yield stocks and bonds was the only strategy that never ran out of money in all 67 simulated 30-year retirements.

Yet, even for the most risk-averse retiree, choosing a 60/40 strategy is a compromise because the bond part of that portfolio historically has reduced investment performance, meaning less for retirees and less for their heirs. High-yield stocks generate enough income to allow for a completely different spending rule—suppose retirees set their spending budgets equal to dividend income. We will show that in our simulations, spending out of dividends is superior to the 4% Rule, both in terms of safety as well as enabling higher average retirement spending.

Why spending from dividends works

Looking at the 1928-2023 period, total returns for high-yield stocks exceeded dividend yield in two-thirds of the calendar years. In those years, retirees could spend the dividend and still have a higher account balance at the end of the year. Relative to the fluctuations in total returns, dividend yields wiggle by modest amounts year-to-year. For almost all of our simulated 30-year retirements, high-yield stocks compound up over time, leading to higher dividend *income* as the relatively stable dividend yields are applied to higher and higher account balances.

High-Yield Stocks: Total Return Often Exceeds Dividend Yield, Compounding Portfolio Value



As of December 31, 2023. Sources: Fama/French; Morningstar Direct; Miller/Howard Research & Analysis. High-Yield Stocks dividend yield was calculated as the 12-month sum of the monthly difference between the total return minus price return. The resulting sum was divided by the calendar year starting balance to calculate a yield.

Higher Spending with Safety?

Let's compare dividend spending versus the 4% Rule for investors in high-yield stocks from two perspectives:

Inflation-adjusted spending relative to the initial investment—higher is better. On average, retirees spending dividends in our simulations had budgets well above what would be afforded using the 4% Rule. On average, by the 30th year of retirement, dividend spending is three times greater than the 4% Rule would allow.

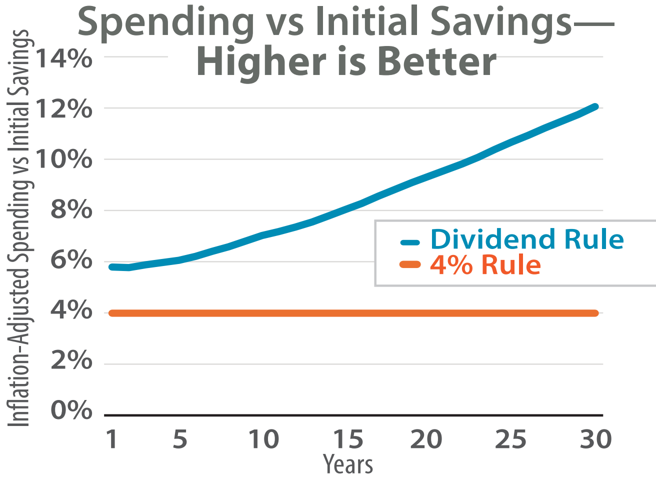
Spending as a percent of the account balance at the end of the previous year—lower is safer. Running out of money always involves withdrawing sequentially higher and higher fractions of remaining savings. On average, both retirees spending dividends and those using the 4% Rule had downward-sloping withdrawal rates, withdrawing a smaller fraction of their savings each year as their retirement progressed.

Dividend spending is safe yet allows retirees a larger budget, on average. But we all get just one retirement so good results "on average" is not enough. That's why it's important to examine how the dividend strategy works in all retirement periods, including those with challenging markets.

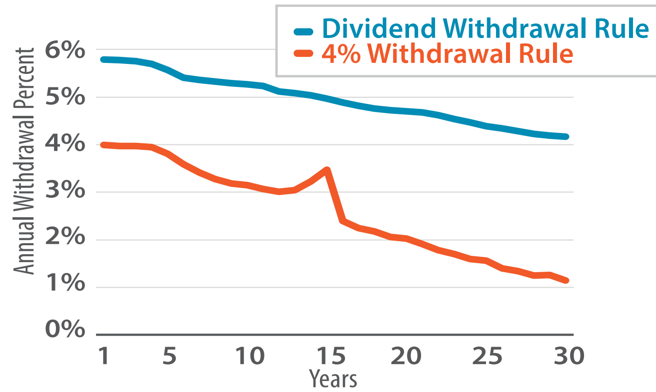
In 53 out of 67 simulated 30-year retirements, the dividend approach would allow for higher spending than the 4% Rule *every year of retirement*. The remaining 14 simulations, a combination of low dividend yields and poor total returns force retirees to spend less than the 4% Rule would afford for a portion of the 30-year period.

Dividend Spending in High-Yield Stocks Allows for a Larger Budget

Spending vs Initial Savings—Higher is Better

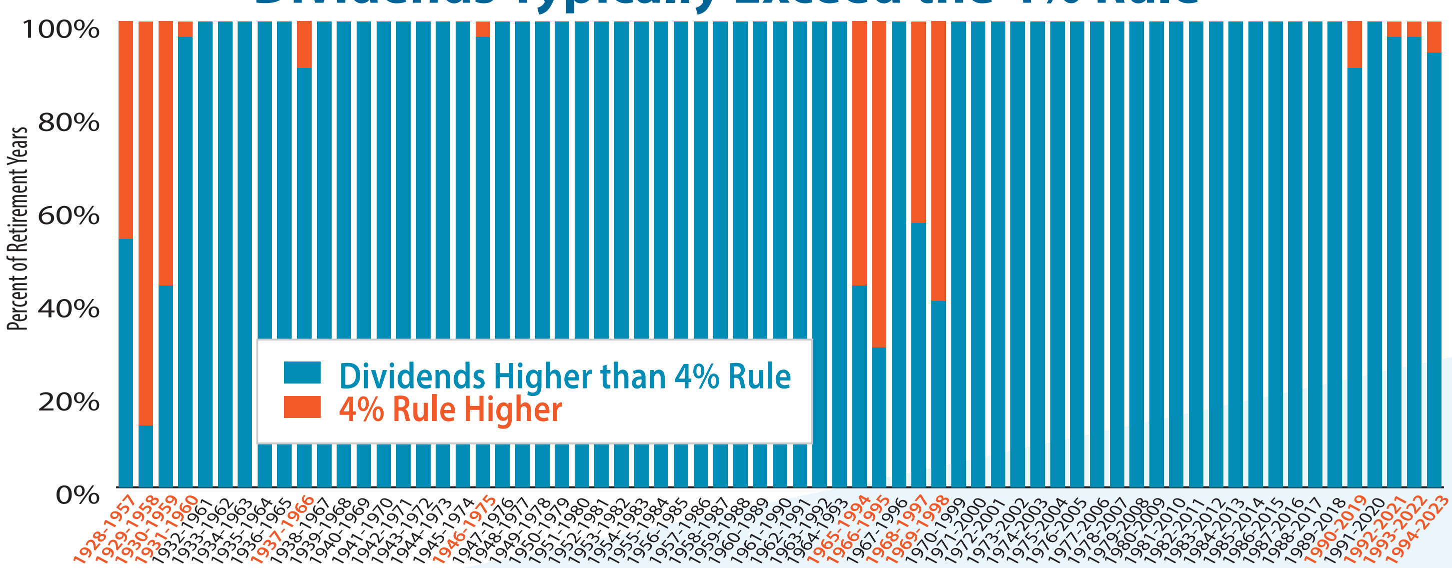


Spending vs Account Balance—Lower is Safer



Sources: Morningstar Direct; Federal Reserve Bank of St. Louis (FRED); Fama/French; Damodaran Historical Returns US (NYU Stern School of Business); Miller/Howard Research & Analysis. High-Yield Stocks Dividend Rule, income is not reinvested at the end of each calendar year for the 30-year periods. Spending vs initial savings is income generated divided by $100,000 (inflation-adjusted). Dividend Rule Portfolios, Withdrawal Percent is annual income generated divided by calendar year ending balance. 4% Rule Portfolios, Withdrawal Percent is annual inflation-adjusted 4% withdrawal divided by calendar year ending balance.

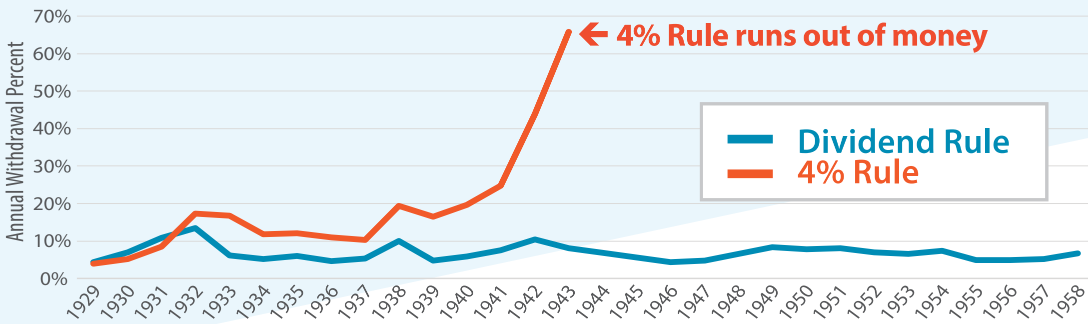
Dividends Typically Exceed the 4% Rule



Sources: Morningstar Direct; Federal Reserve Bank of St. Louis (FRED); Fama/French; Damodaran Historical Returns US (NYU Stern School of Business); Miller/Howard Research & Analysis. Chart shows the percentage of calendar years when the income generated was greater than or less than 4% of inflation-adjusted $100,000 over a 30-year investment period.

The Worst Retirement in History: 1929-1958

High-Yield Stocks with Different Spending Rules



Sources: Morningstar Direct; Federal Reserve Bank of St. Louis (FRED); Fama/French; Damodaran Historical Returns US (NYU Stern School of Business); Miller/Howard Research & Analysis. For the 4% Rule, the 30-year period began with a 4% withdrawal. The withdrawal was then adjusted for inflation at the beginning of each calendar year. For the Dividend Rule, spending is limited to income generated by the portfolio. Dividend Spending represents the withdrawal as a percent of the account balance at the beginning of the year. For the 4% Rule, end-year of the displayed period is the last year before the required withdrawal exceeds the account balance.

Many retirement advisors test investment and spending strategies versus computer-generated bad scenarios. Our view is that history provides a truly bad scenario, one that is unlikely to recur, but still allows us to answer the question, "Would your savings survive the historically worst-case scenario?" Beginning in 1929 through the end of 1931, high-yield stocks fell by a cumulative 76%, presenting a severe test for retirement strategies.

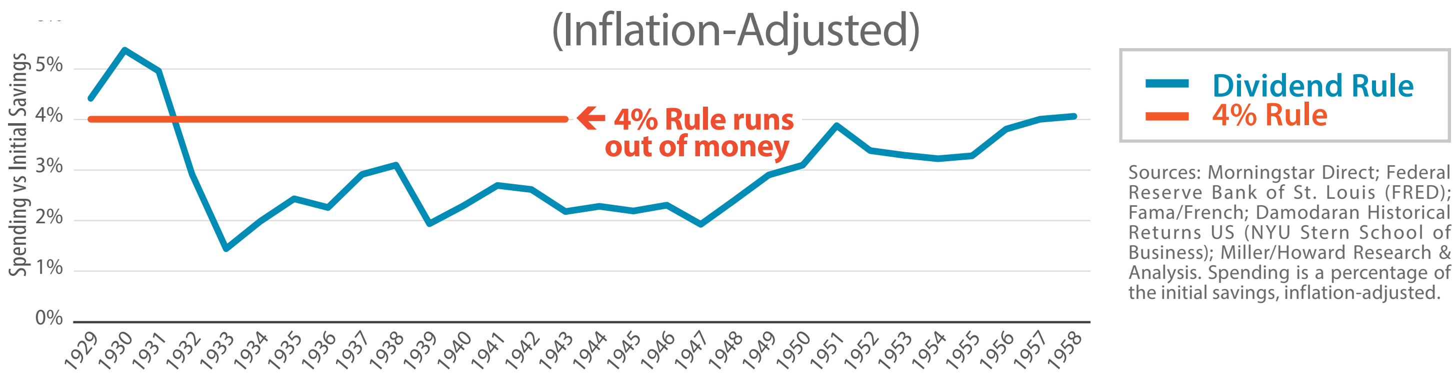
In our 3Q 2024 Quarterly Report, we showed that a simulated retirement beginning in 1929 (using a portfolio of high-yield stocks and the 4% Rule for spending) would run out of money after 15 years, short of our 30-year target. In contrast, spending based on dividend income protected savings, allowing retirement to continue a full 30 years.

We can see how this would play out in two different ways. First, looking at withdrawal rates as a percentage of the previous year's account balance, spending using the 4% Rule overwhelms retirement savings. In the 1929-start scenario, the fatal feature of the 4% Rule is that spending is not throttled as the market plummets, leading to an empty retirement account by the beginning of 1944. In contrast, setting spending equal to dividends leads to a much better outcome. In the simulation, withdrawal rates as the percent of the previous year's account balance drops as the market struggled and then gradually rebounded for the remaining years.

At Miller/Howard, we use the concept of "yield on original investment," defined as dividend income divided by original investment amount. Dividend income tends to rise over time relative to the initial account value. But for a retirement beginning in 1929, this was not true. A dividend spending rule would acknowledge the reality of this dire situation, cutting spending to match income. In contrast, the 4% Rule sets spending independent of investment performance, leading to a disastrous outcome in this simulation.

Adjusting Spending to Dividends Protected Retirement

(Inflation-Adjusted)



Sources: Morningstar Direct; Federal Reserve Bank of St. Louis (FRED); Fama/French; Damodaran Historical Returns US (NYU Stern School of Business); Miller/Howard Research & Analysis. Spending is a percentage of the initial savings, inflation-adjusted.

Dividend Rule for High-Yield Stocks Never Ran Out of Money

Spending Rule:	Dividend Spending	Inflation-Adjusted 4% Annual Withdrawal				
	High-Yield Stocks	Corporate Bond (Baa)	High-Yield Stocks	S&P 500 Index	High-Yield Stocks/ Corp Bond (60%/40%)	S&P 500 Index/ Corp Bond (60%/40%)
Failure	0	30	1	5	0	1
Reduced Ending Estate	2	16	2	6	3	16
Higher Ending Estate	65	21	64	56	64	50

As of December 31, 2023. Sources: Morningstar Direct; Federal Reserve Bank of St. Louis (FRED); Fama/French; Damodaran Historical Returns US (NYU Stern School of Business); Miller/Howard Research & Analysis. "Reduced Ending Estate" and "Higher Ending Estate" starting values are post-inflation-adjusted withdrawal versus initial retirement account. 60%/40% portfolios are rebalanced annually. "Dividend Spending: High-Yield Stocks" withdrawals are not inflation adjusted; withdrawals are income generated by the portfolios during each calendar year of the 30-year periods.

Win-Win…Win?

In our 3Q 2024 Quarterly Report, we compared a variety of investment strategies paired with the 4% Rule for spending. Defining failure as running out of money before 30 years have passed, only a 60/40 high-yield stock/corporate bond portfolio avoided failure across all 67 simulations.

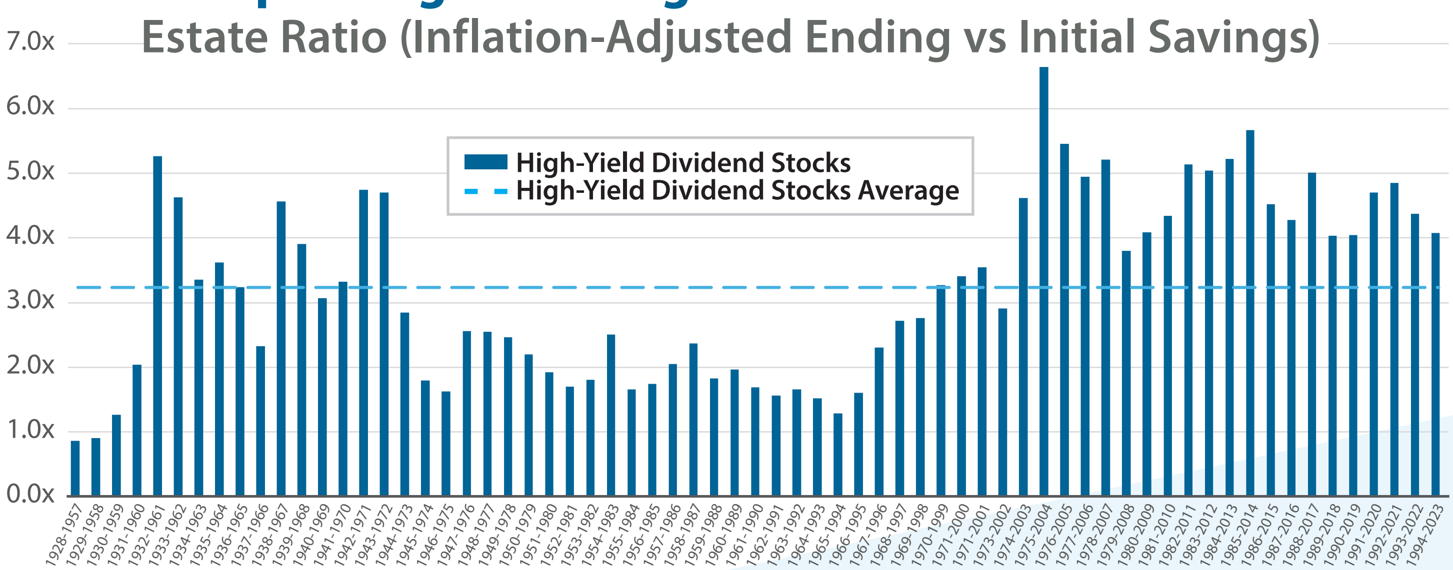
We have shown that using high-yield stocks with spending equal to dividends is a better strategy:

- No failed retirement in our simulations.
- On average, high-yield stocks allowed higher spending in every year of retirement.

But what about the ending estate?

It turns out that investing in high-yield stocks and spending out of dividends leaves a larger estate (on an inflation-adjusted basis) in 65 of the 67 simulated retirements. On average, the remaining estate is over three times the initial account value, including accounting for inflation. Even the two most challenging retirement periods, 1928-57 and 1929-58, still left estates with 80-90% of the inflation-adjusted starting points.

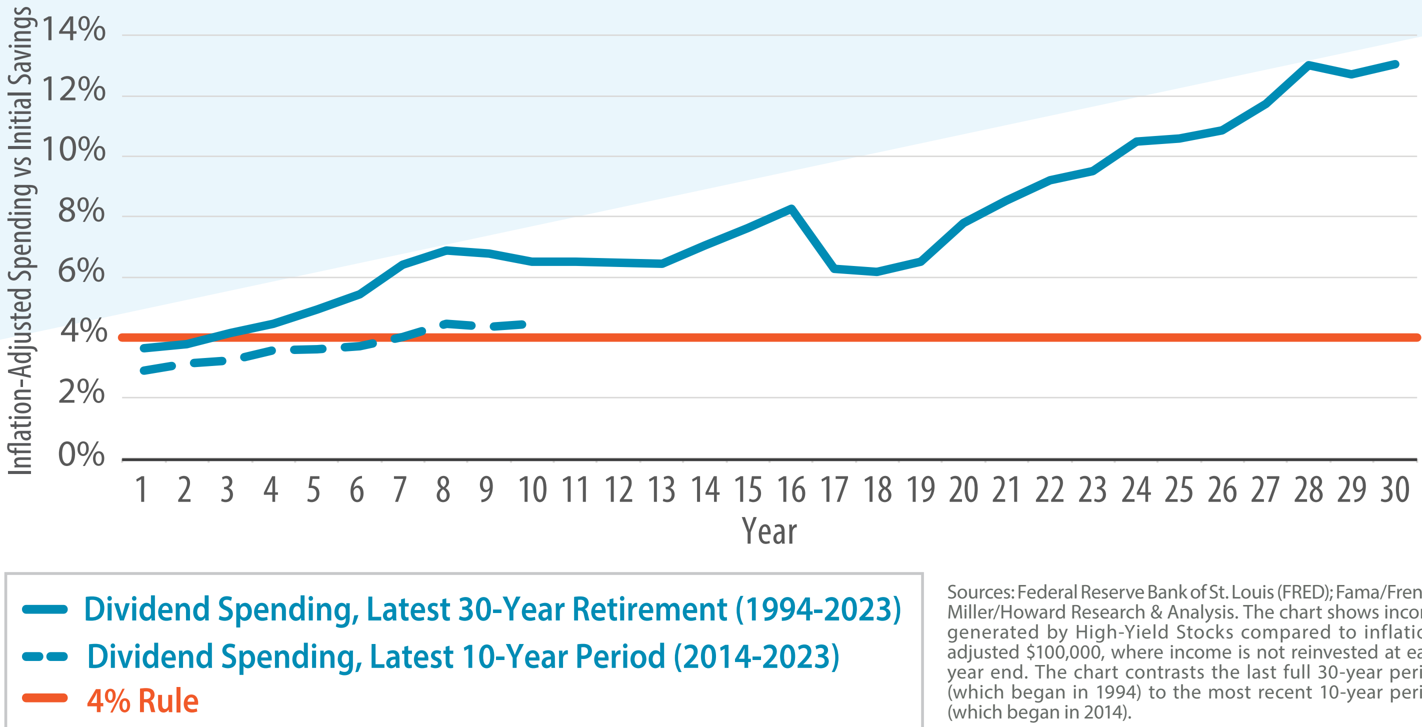
Dividend Spending Rule—High-Yield Stocks Left Sizable Estates



Sources: Federal Reserve Bank of St. Louis (FRED); Fama/French; Miller/Howard Research & Analysis. Estate Ratio is the end balance divided by the inflation-adjusted $100,000 at the 30-year period end.

Dividend Spending When Yields Are Low

Dampened in Early Years, but Can Still Exceed 4% Rule in Later Years



Sources: Federal Reserve Bank of St. Louis (FRED); Fama/French; Miller/Howard Research & Analysis. The chart shows income generated by High-Yield Stocks compared to inflation-adjusted $100,000, where income is not reinvested at each year end. The chart contrasts the last full 30-year period (which began in 1994) to the most recent 10-year period (which began in 2014).

Does Dividend Spending Work When Yields Are Low?

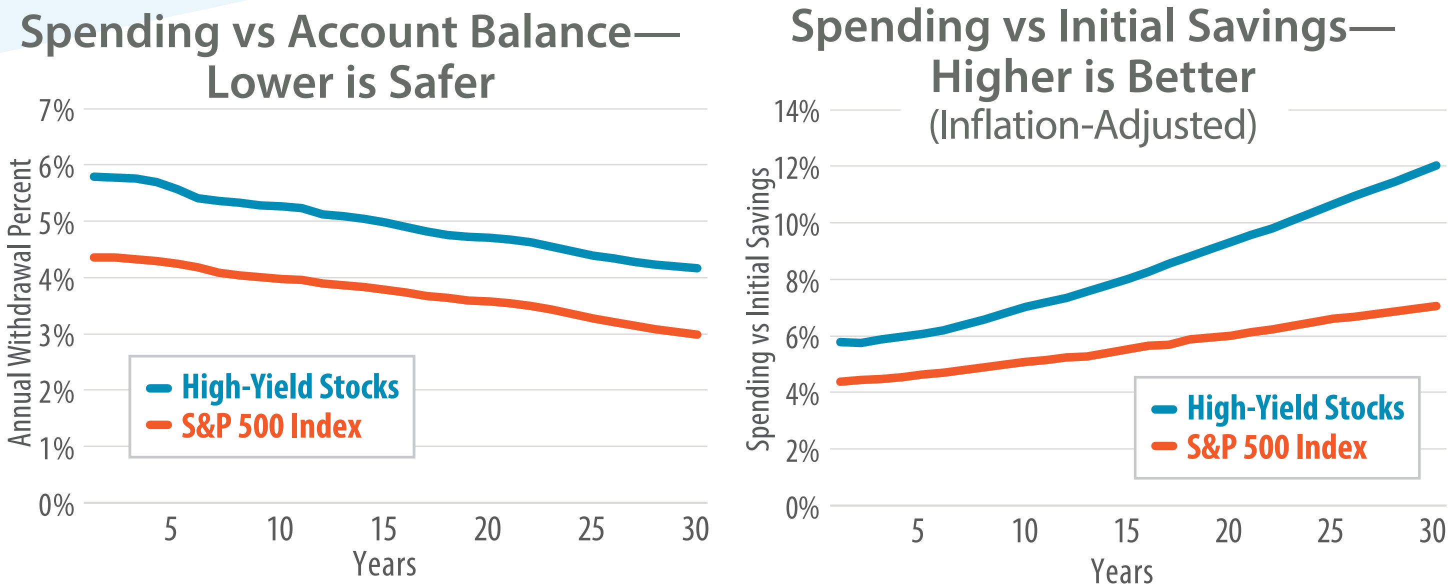
Dividend yields have been lower in recent decades, both for high-yield stocks and the broader market. At the outset of retirement, lower dividend yields clearly will lead to a lower spending budget. The flip side is that lower spending in the early years allows for more compounded returns, enabling higher dividend dollars in later years.

Let's look at our latest full 30-year retirement, 1994-2023. In 1994, high-yield stocks had a dividend yield of 3.6%. Comparing dividend income to savings at the outset of retirement, spending would indeed be lower than 4% in the early years. That condition does not hold for long, because investment returns compound the account value upwards, coming to dominate a lower starting yield.

For the 1994-2023 retirement, the dividend yield on original investment, adjusted for inflation, was over 4% by the third year and was 13% by the 30th year. This 13% yield on initial investment is higher than the 12% average across our 67 retirement simulations, even though the starting dividend yield (3.6% in 1994) was well below the average starting dividend yield of 5.6% for 1928-1994.

A retirement starting in 2014 had an even lower initial dividend yield: 2.9%. Over the first 10 years of this retirement simulation, the yield on original investment has gradually sloped upwards, passing 4% in the 7th year. The point is that spending in both retirement simulations starts low but gets progressively better, even after adjusting for inflation.

Dividend Spending Approach in High-Yield Stocks vs S&P 500 Index



Sources: Morningstar Direct; Federal Reserve Bank of St. Louis (FRED); Fama/French; Damodaran Historical Returns US (NYU Stern School of Business); Miller/Howard Research & Analysis. Income is based on dividends received and is not reinvested at the end of each calendar year for the 30-year periods. Spending vs initial savings is income generated divided by $100,000 (inflation-adjusted). Withdrawal Percent is annual income generated divided by calendar year ending balance.

Comparing High-Yield Stocks to the S&P 500 Using Dividend Spending

Up to this point, we have only examined dividend spending combined with investments in high-yield dividend stocks. But the S&P 500 Index also pays a dividend and has had total returns well above bonds over the long term. Let's compare retirements using the S&P 500 versus high-yield stocks as investments with both simulations using dividends to set spending levels.

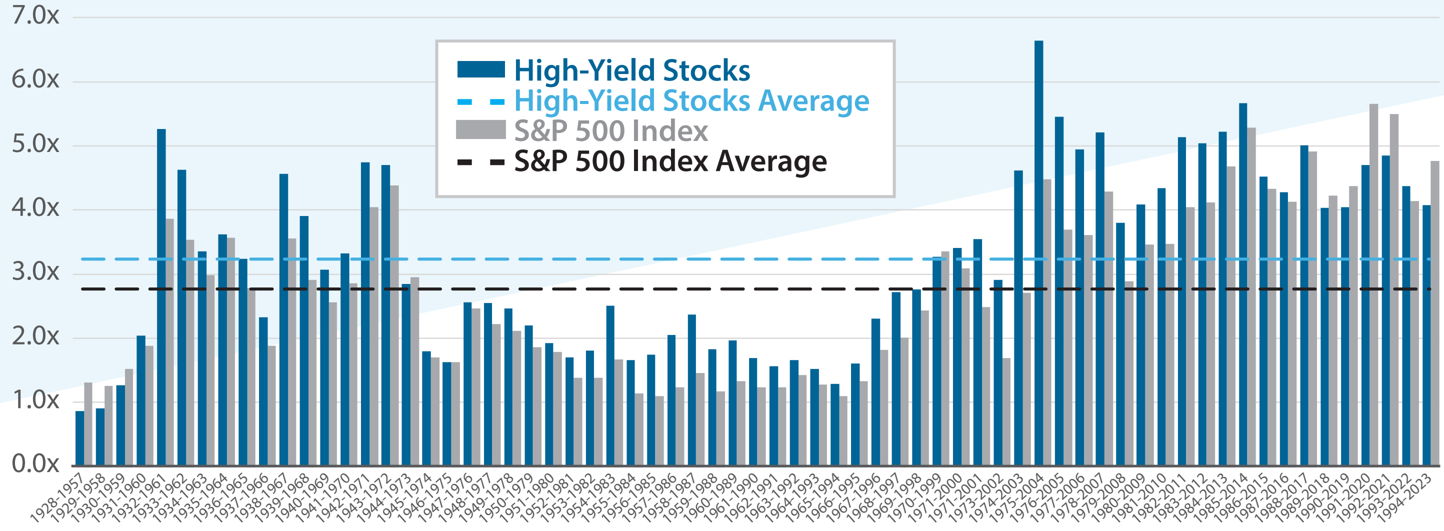
Both strategies never failed, meaning that retirees never ran out of money across all 67 simulated 30-year periods when spending dividends generated by either high-yield stocks or the S&P 500. In our 3Q 2024 Quarterly Report, we showed that using the 4% Rule led to one failure for high-yield stocks and five failures for the S&P 500 in our simulations. By changing spending from the 4% Rule to dividends, failures have been eliminated for both investment strategies.

Which investment strategy generates higher spending budgets? Since high-yield stocks have superior dividend yields, clearly high-yield stocks will tend to generate more dividends in the early years of retirement. Dividend dollars in later years are not so obvious, being a combination of total return, yield, and the accumulative negative impact of withdrawals for spending. It turns out that, on average, high-yield dividend stocks generate more income than the S&P 500 throughout a 30-year retirement.

On average, over the 67 retirement simulations, income from high-yield stocks averaged 5.8% in the first year of retirement, growing over 30 years to a 12% yield on original investment, after inflation. In contrast, income from the S&P 500 averaged 4.4% in the first year, growing to just a 7.1% yield on original investment, inflation-adjusted, after 30 years. Looking at the individual calendar years in our simulations, high-yield stocks generated higher income in 98% of years. We conclude that high-yield stocks are better for income—but are they better for heirs?

Dividend Spending Rule—
High-Yield Stocks Left Larger Estates vs S&P 500 Index

Estate Ratio (Inflation-Adjusted Ending vs Initial Savings)



Sources: Federal Reserve Bank of St. Louis (FRED); Fama/French; Damodaran Historical Returns US (NYU Stern School of Business); Miller/Howard Research & Analysis.
Estate Ratio is the end balance divided by the inflation-adjusted $100,000 at the 30-year period end.

High spending can depress the estate left after retirement. As we have seen, a high-yield stock portfolio generated more income than the S&P 500 in the majority of retirement years. You might think that this leads to high-yield stocks leaving smaller estates, but on average, that has not been true. High-yield stocks have had higher total returns during our 1928-2023 period, and the compounding advantage of this better performance more than offset the higher spending. The estate for high-yield stocks in our simulations was 3.2 times the original account value, adjusted for inflation. In contrast, a retirement using the S&P 500 with dividend spending left an estate of 2.8 times the inflation-adjusted original account value.

What Does It All Mean?

Retirement planning can be very daunting once complexities such as taxes, estate planning, and non-liquid assets are taken into consideration. The simulations presented here are not intended to compete with detailed, personal financial planning, but they do reveal some important principles:

- Spending must be linked to investment performance. We have shown that a dividend spending approach allows for higher spending than the 4% Rule, yet has no failures in our historical simulations. The retiree spending dividends is sensible, knowing to pivot if dividends are cut broadly in the market. In contrast, the 4% Rule and its variants require overly conservative spending for most retirement scenarios, and yet is rigid enough to fail in the worst of times.
- The power of compounding is truly remarkable. In our scenarios, retirees spend at a healthy rate and still, on average, leave an estate that is multiple times the initial account value, even after inflation. What doesn't compound? Cash. In our view, too many retirees have ***too much*** cash set aside for various contingencies. Too much cash can be a significant missed opportunity.
- High-yield stocks have a long history of superior income and better returns. Relative to the broad market, high-yield stocks provide an attractive solution for retirement spending needs.

Revisiting our original question:
What's the best way to fund your retirement?

We believe retirees should consider spending the dividend income generated by high-yield stocks.

Income-Equity

QUARTERLY REPORT 4Q 2024

MILLER/HOWARD'S INCOME-EQUITY portfolios are designed to produce high *and rising* income. How do we know if we are doing a good job? Tracking dividend yield over time does not answer the question because higher stock prices—a good thing—tend to depress dividend yields. In our view, two metrics best discern whether stock-picking is adding to portfolio income growth:

- **The percentage of holdings that announce a dividend during the year**
- **The average size of dividend increases**

Both metrics address buy-and-hold income growth, rather than the short-term income growth that can come from opportunistic trading or special dividends.

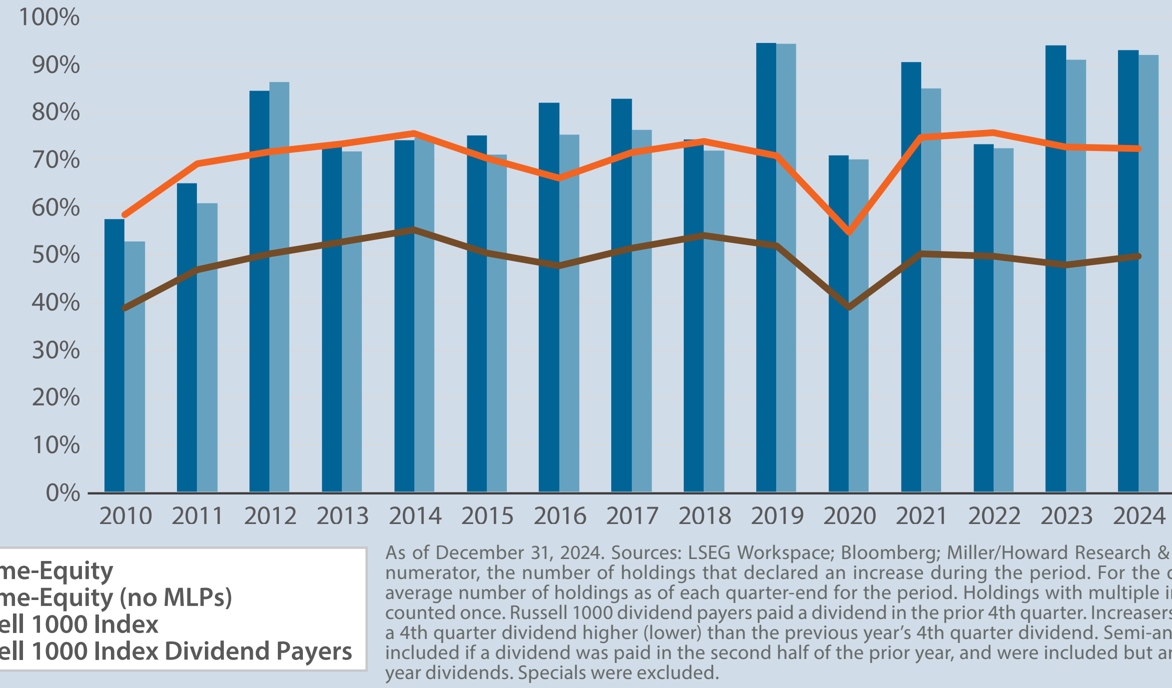
In 2024, over 90% of the holdings in both versions of Income-Equity announced dividend increases. In contrast, only 50% of the Russell 1000 Index constituents announced dividend increases during the year. If we focus just on Russell 1000 stocks that paid a dividend in 2023, only 72% of names announced an increase in 2024.

As we have argued in the past, using percentages to measure dividend increases is misleading because they can overstate the importance of changes off a small base. Take for example a dividend hike that takes a stock's yield from 1.0% to 1.2% versus an increase from 4.0% to 4.2%. The first increase is 20% versus 5% for the latter, but both would add the same dollar income to a client account. One way to avoid this is using bond conventions, and in these examples, both increases are 20 basis points.

In 2024, the average dividend increase for Income-Equity was 23 basis points and for Income-Equity (no MLPs) was 21 basis points. For Russell 1000 dividend payers the average dividend increase was only 5 basis points, less than a quarter of our Income-Equity results. We do not view this as a coincidence. As we showed in *Dividend Increases: The Underappreciated Tailwind* (our 4Q 2023 Quarterly Report), specific stock characteristics have historically led to bigger dividend increases: higher free-cash flow yield, higher revenue growth, and higher earnings per share (EPS) growth. Our stock selection process tilts towards these factors along with our assessment of management's dedication to dividend increases.

Income-Equity Had More Dividend Increases

Percent of Holdings Declaring Dividend Increases



As of December 31, 2024. Sources: LSEG Workspace; Bloomberg; Miller/Howard Research & Analysis. For the numerator, the number of holdings that declared an increase during the period. For the denominator, the average number of holdings as of each quarter-end for the period. Holdings with multiple increases are only counted once. Russell 1000 dividend payers paid a dividend in the prior 4th quarter. Increasers (decreasers) had a 4th quarter dividend higher (lower) than the previous year's 4th quarter dividend. Semi-annual payers were included if a dividend was paid in the second half of the prior year, and were included but analyzed using full year dividends. Specials were excluded.

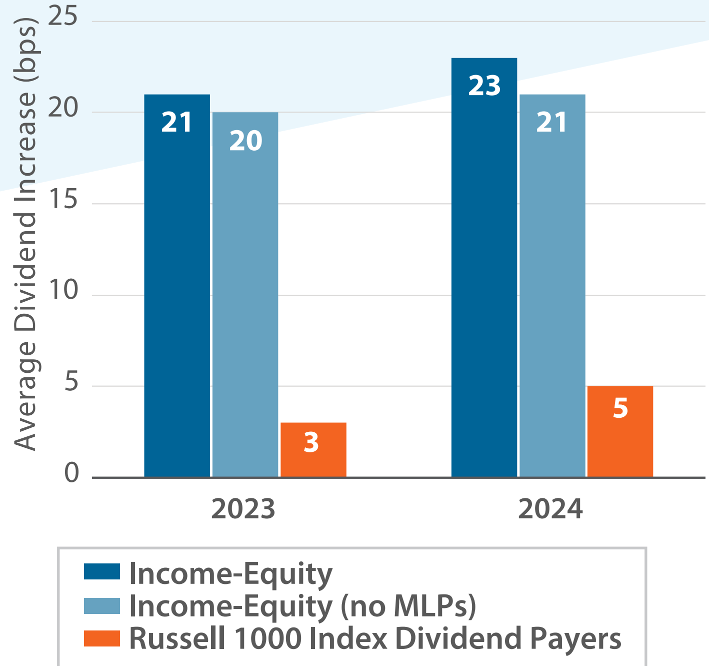
Income-Equity *(continued)*

Looking Ahead

Both versions of Income-Equity outperformed the Russell 1000 Value Index for the fourth quarter and for 2024, but they trailed the broad market for both the quarter and the year. After a hiatus in the third quarter, mega-cap growth stocks surged ahead again to end the year, stretching valuations for the market as a whole. Our view is that large-cap growth stocks are buoyed by overly optimistic long-term forecasts. In our opinion, valuations for Income-Equity holdings are supported by much less demanding long-term forecasts. The average forward price/earnings ratio is lower at 15.2x (versus 21.4x for the Russell 1000) and dividend yields are higher at 3.6% and 3.4% for the with and without MLP versions, respectively (versus 1.4% for the Russell 1000).

See more about ***Income-Equity*** *on page 15.*

Income-Equity Had Much Larger Dividend Increases



As of December 31, 2024. Sources: LSEG Workspace; Bloomberg; Miller/Howard Research & Analysis. Russell 1000 dividend payers paid a dividend in the prior 4th quarter (adjustments were made for semi & annual payers). For our Income-Equity portfolios, we considered names we held during the calendar year. To calculate basis point change, we subtracted the holding's prior calendar year fourth quarter dividend (multiplied by four) from the current calendar year fourth quarter dividend (multiplied by four) and then divided the result by the prior calendar year end price. Specials were excluded from our calculations.

Portfolio Highlights

- **Dividend increases:** Income-Equity (both with and without MLPs) had six dividend increases in the fourth quarter, including **MSC Industrial Direct (MSM), Entergy (ETR), AbbVie (ABBV), Merck (MRK), Royal Bank of Canada (RY),** and **Edison International (EIX).**
- **Special Dividends:** Three holdings announced special dividends in the quarter, including **Lamar Advertising (LAMR), Host Hotels & Resorts (HST),** and **Old Republic International (ORI).**
- **Exited positions:** We sold our position in **MSC Industrial Direct (MSM)** following growth in both income and dividends that was below our expectations. We exited our positions in **Mid-America Apartment Communities (MAA)** and **Camden Property Trust (CPT),** viewing the two apartment REITs as fairly valued and finding better opportunities elsewhere. We sold our remaining position in **LyondellBasell (LYB)** over concerns that weak business trends were putting its dividend at risk.
- **New buys:** We initiated a position in **GSK (GSK),** a global pharmaceutical company with growing revenue and a well-covered dividend. We bought **US Bancorp (USB),** attracted by its high level of fee revenue, making it less sensitive to interest rates and economic fluctuations, in our opinion. Lastly, we added utility company **Edison International (EIX),** and expect it to benefit from strong load growth and a discounted valuation.

MLP & Midstream Energy Income

QUARTERLY REPORT 4Q 2024

THE MIDSTREAM ENERGY SECTOR HAD another positive year—registering its fourth consecutive calendar year with total returns of at least 24%. Midstream (the Alerian MLP Index) also outpaced the broad market S&P 500 Index over the trailing three and five years.

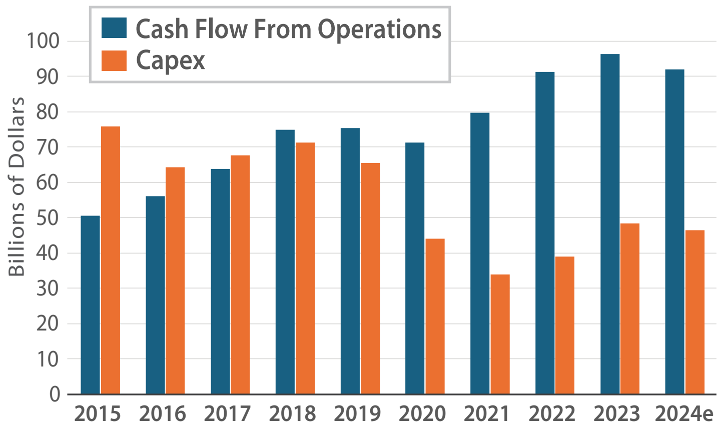
Earlier in its run, performance was driven by better balance sheets (lower leverage) and positive free cash flow (FCF), resulting in companies returning capital to shareholders through dividend increases and, in some cases, share buybacks. However, 2024 marked the start of new trends.

Has midstream become a growth sector? We believe so, with natural gas leading the way. The long build out of additional liquified natural gas (LNG) facilities should finally take hold in 2025, which, in our opinion, should be the beginning of natural gas exports doubling by the end of the decade. Another positive development for natural gas demand is US onshoring of manufacturing (batteries, solar equipment, semiconductors, and other manufacturing). In addition, electric vehicles, although still a small portion of total car sales, need to be charged, and that energy will primarily come from natural gas-powered utilities.

Finally, arguably one of the biggest stories of the year—data centers are poised to drive demand growth. In 2024, midstream companies announced almost $6 billion of projects that will provide natural gas to power data centers. That could be the tip of the iceberg, as there are another $5 billion in projects under consideration, and we think there is more to come.

Why is this important for midstream energy? Higher demand equals more gathering and processing, pipeline transportation, and storage volumes. Midstream companies are driven by volumes, and increasing demand should have a positive impact on these companies' income. Overall, we believe these tailwinds will require another 20 billion cubic feet per day (Bcf/d) of natural gas (data centers +7 Bcf/d, reshoring +3 Bcf/d, and LNG +12 Bcf/d). This equates to growth of nearly 20%, as the US currently produces ~103 Bcf/d of natural gas. Midstream as a growth sector? Who would have thought?

Midstream Energy: Healthy Free Cash Flow



As of December 31, 2024. Sources: LSEG Workspace; company reports; Miller/Howard Research & Analysis. Based on the midstream energy universe.

Looking Ahead

Despite the increasing capital expenditures (capex) needed to support the aforementioned tailwinds, cash flow from operations continues to be significantly higher than capex, resulting in free cash flow that is supportive of current dividends and potential future dividend increases. Projects in development will eventually lead to higher free cash flow, further supporting an already healthy midstream sector. We believe we are at the beginning of another growth phase for the midstream sector, resulting in growing EBITDA, cash flows, and ultimately, dividend increases to shareholders.

Portfolio Highlights

- **Distribution increases:** This quarter 4 of our 15 holdings announced dividend increases. The average increase was 10% year-over-year.

Infrastructure

QUARTERLY REPORT 4Q 2024

OUR INFRASTRUCTURE PORTFOLIO HELD ITS ground in the fourth quarter, finishing roughly flat. Performance was strong through November before stumbling across the finish line as interest rate headwinds resurfaced. Despite a disappointing conclusion, Infrastructure recorded its strongest calendar year in three years, ahead of its benchmark.

Within the portfolio, interest rate sensitivity was a key driver behind sector performance. Rising interest rates pressured REITs and utilities. Other laggards included renewable developers and hospitals which are thought to have more political risk following the Republican sweep in November. Midstream led as natural gas pipelines continued to benefit from data center and AI trends.

Looking Ahead

Infrastructure, like all of our portfolios, is designed to produce high and rising income. In the last 10 years, the 12-month income generated by the portfolio has more than doubled as income grew at a compound annual growth rate (CAGR) of 9%. Perhaps equally impressive has been the portfolio's ability to deliver a 7% income CAGR over the last 5 years, which included pandemic headwinds.

In assessing the quality of income growth, we suggest investors look at whether income was generated through a buy-and-hold strategy or if it was driven by short-term tactical movements (e.g. capturing special dividends or portfolio allocation). We prefer consistent dividend increases from our portfolio holdings. One key metric we use is the percentage of portfolio holdings that increased, held flat, or cut their dividends. Over the last 5 years, over 80% of the portfolio holdings on average have increased their dividends each year; this exceeds the large-cap dividend-paying universe* in which 70% of constituents on average increased their dividends each year. We also note that outside of two companies adjusting their payouts in the face of COVID, our Infrastructure portfolio's only other dividend "cut" during this period was the result of the spin out of a major operating segment. This is below the large-cap dividend-paying universe in which 7% of constituents on average recorded dividend cuts each year. Overall, the breadth of dividend increases only raises our confidence in the portfolio's ability to continue to provide an income solution for investors.

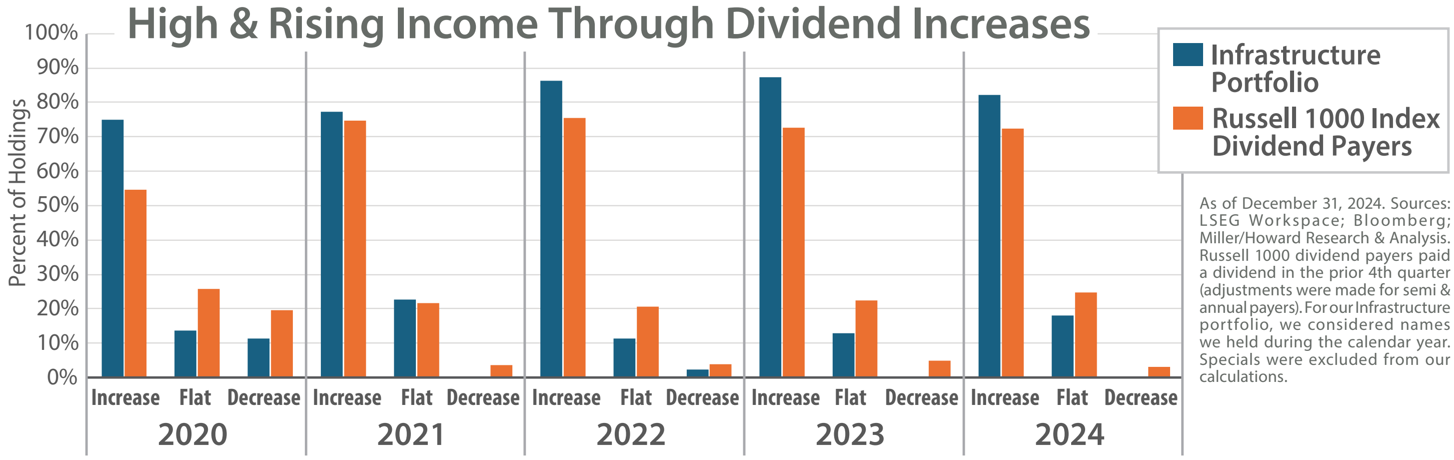
*Members of the Russell 1000 Index that paid a dividend in the prior year.

Portfolio Highlights

- **Dividend increases:** This quarter, 7 of our 35 holdings announced dividend increases with an average increase of ~8%.
- **New position:** We initiated a position in a data center REIT, **Equinix (EQIX),** and we expect the company to continue to benefit from its exposure to the digital economy. Rising demand and limited vacancy should increase EQIX's pricing power.
- **Midstream adjustments:** We sold **Plains GP Holdings (PAGP)** and trimmed our positions in **Antero Midstream (AM)** and **Cheniere Energy (LNG).** We reallocated this capital to **South Bow (SOBO), ONEOK (OKE),** and **TC Energy (TRP).** Overall, we believe these changes should increase the portfolio's dividend yield and dividend growth profile. We also trimmed **Williams (WMB)** after a period of outperformance for risk management purposes; WMB was our largest position at the time of the trim.
- **Political risks:** We trimmed **HCA Healthcare (HCA)** twice during the quarter on increased political risks. The Republican sweep is expected to create a headwind for hospitals as it will make the extension of enhanced exchange subsidies less likely.

Infrastructure Portfolio:

High & Rising Income Through Dividend Increases



As of December 31, 2024. Sources: LSEG Workspace; Bloomberg; Miller/Howard Research & Analysis. Russell 1000 dividend payers paid a dividend in the prior 4th quarter (adjustments were made for semi & annual payers). For our Infrastructure portfolio, we considered names we held during the calendar year. Specials were excluded from our calculations.

Miller/Howard INVESTMENTS

Utilities Plus

QUARTERLY REPORT 4Q 2024

AFTER FOUR CONSECUTIVE QUARTERS OF positive performance and their best quarter in over 20 years, utilities stalled late in the fourth quarter. Interest rate headwinds resurfaced as the yield on the 10-year Treasury increased roughly 80 basis points in the quarter. While the Federal Reserve continued to cut rates, in December, the Fed indicated that it expected fewer rate cuts in 2025 amid higher-than-anticipated inflation. Utilities outperformed the broad market through the first three quarters of 2024 before losing ground through year end. Despite the disappointing conclusion, utilities recorded their strongest calendar year performance since 2019.

Within the group, independent power producers (IPPs) finally took a breather amid lingering uncertainty around co-location. Top performers generally had more idiosyncratic drivers like strategic actions, positive regulatory developments, or strengthening growth profiles. Water utilities and renewable developers lagged the group on interest rate sensitivity and concerns that the Inflation Reduction Act could be modified in 2025.

Looking Ahead

Utilities' unique regulatory structure is designed to provide a reasonable and consistent return on investment. It therefore seems intuitive that their earnings would be easier to project, particularly when looking out more than one year. The difference between actual EPS and two-year forward consensus estimates corroborates this idea. Over the last 20 years, reported EPS for the S&P 500 Index and utilities were above/below the two-year estimate a similar number of times. However, the standard deviation of this difference was nearly 3x higher for the S&P 500 compared to utilities. Current two-year forward EPS estimates suggest the broad market's growth will exceed utilities' growth by 2% per year. We question this excess growth in the context of the higher forecasting error for the S&P 500—with limited visibility into inflation, interest rates, and policy changes.

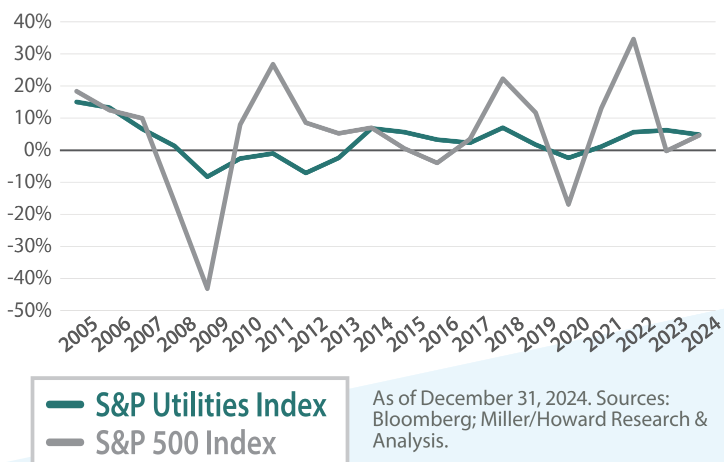
Despite a host of reasons to feel more confident in their EPS forecasts, utilities trade at greatly discounted levels to the market based on forward price-to-earnings ratio (20%), creating a constructive backdrop for risk-adjusted returns in our view (a topic discussed in our 2Q 2024 Quarterly Report). We continue to believe that utilities' ability deliver high and growing income with attractive risk-adjusted returns makes them a compelling solution for client portfolios.

Portfolio Highlights

- **Dividend increases:** This quarter, 10 of our 32 holdings announced dividend increases with an average increase of approximately 20%—including a 150% increase declared by **PG&E Corp. (PCG).**
- **Risk management:** We trimmed our position in **Vistra Corp. (VST)** after a period of continued outperformance. VST was the second-best performing name in the S&P 500 this year, as the company is a key beneficiary of growing electricity demand from data center and artificial intelligence (AI) trends. Despite trimming the name in both the first and second quarters, VST was our highest weight at the time of the trim.
- **Increased conviction:** We added to our position in **PG&E Corp. (PCG)** and expect it to benefit from peer-leading EPS growth and a discounted valuation.

Utilities Have Lower Forecasting Error

Actual vs 2-Year Forward EPS Estimates



As of December 31, 2024. Sources: Bloomberg; Miller/Howard Research & Analysis.

North American Energy (without K-1s)

QUARTERLY REPORT 4Q 2024

IN HINDSIGHT, "SELL IN MAY AND GO AWAY" would have been sage advice for energy investors in 2024. After handily beating the broad market the first four months of the year, our energy benchmark (the S&P 1500 Energy Index) lagged the S&P 500 Index by 24% from May through year-end, despite an ephemeral post-election bounce. Last spring, we pivoted more defensively in the portfolio, trimming refiners and adding natural gas pipelines as emerging beneficiaries of the power-hungry AI/data center boom. These were among our leading performers, helping to drive our ninth year of outperformance in 10 years relative to our energy benchmark.

We attribute the energy slump to disappointing oil demand growth, specifically in China, despite otherwise healthy global GDP growth. Reasons, both temporary and secular, drove stagnation in the world's largest oil-importer, including rising EV and LNG-powered truck sales, falling population, and a business down-cycle. The country will remain a focal point as key issues around US trade policy and potential Chinese fiscal stimulus gain clarity in coming months.

Portfolio Highlights

- **Energy and income:** The portfolio currently offers an indicated yield of 3.3%, which we project is well supported down to approximately $40 oil, combined with a significantly larger variable return of capital commitment at higher commodity prices.
- **Along the energy value chain:** We were active this quarter. Beginning in October, we established a full position in oil pipeline **South Bow (SOBO)**, a spinoff of Canadian pipeline giant **TC Energy (TRP).** South Bow owns the highly stable Keystone Pipeline and, as an added kicker, could benefit from a restart of the Keystone XL expansion. We trimmed frac sand supplier **Atlas Energy (AESI)** following a quick gain, as we had deteriorating selling price concerns. We bought **Liberty Energy (LBRT),** whose CEO was nominated as the US Secretary of Energy. Finally, we added to **SM Energy (SM)** during a pullback, on our favorable view of its Uinta Basin acquisition.

Looking Ahead

We think recent energy volatility reflects elevated macro uncertainty entering 2025. Sector valuations (especially relative to tech) offer appeal, leaning from reasonable to highly attractive, in our view. Meanwhile, efficiency improvements should support returns. The macro, however, will likely dominate. While we possess no crystal ball, here's what we're watching:

On demand, China remains the wild card—where a conjectured fiscal stimulus could reignite consumption. In the US, we expect Strategic Petroleum Reserve replenishment to boost demand.

Supply is trickier. Trump's penchant for dealmaking could augur a "grand bargain" with Iran that allows for greater Iranian exports. Conversely, stricter sanctions enforcement or conflict could dramatically disrupt regional supplies, including for liquefied natural gas (LNG), which could catalyze US natural gas export prices. On the other hand, a deal with Russia that resumes European gas flows could weigh on LNG. Despite election rhetoric, we think most US producers will maintain flat production at current prices. Come what may, whether driven by oil or gas, price or volume, we continue to expect opportunities along the entirety of the North American energy value chain.

Monitoring Drivers of Supply and Demand

(million barrels/day)

	2021	2022	2023	2024	2025e
Global Supply	**95.7**	**100.2**	**102.0**	**102.6**	**104.2**
US	19.9	20.0	20.3	20.3	20.5
Other Non-OPEC	45.4	47.3	49.6	50.2	51.5
OPEC	30.4	32.9	32.2	32.1	32.2
Global Demand	**97.5**	**100.1**	**102.1**	**103.0**	**104.3**
US	19.9	20.0	20.3	20.3	20.5
Other OECD	24.8	25.6	25.4	25.3	25.2
China	15.5	15.4	16.4	16.5	16.7
India	4.7	5.1	5.3	5.5	5.8
Other Emerging Markets	32.7	34.1	34.8	35.4	36.0

Source: EIA; Miller/Howard Research & Analysis.

Miller/Howard INVESTMENTS

Yield, Growth, Strength, Stability

- Our Income-Equity portfolios each offer a high dividend yield that is over 2.5x the yield on the S&P 500 Index, and have ample dividend coverage and reasonable leverage levels (net debt/EBITDA).
- Both portfolios trade at a significant discount to the broad market on price-to-earnings as well.
- We believe the portfolios are well-positioned for dividend growth throughout the full market cycle.

Income-Equity (with MLPs)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Income-Equity Yield	4.2	4.7	4.0	3.7	4.3	3.7	3.6	3.3	3.6	3.7	3.6
S&P 500 Yield	2.0	2.2	2.1	1.9	2.2	1.9	1.5	1.5	1.8	1.5	1.3
Ratio	2.1x	2.2x	1.9x	2.0x	2.0x	2.0x	2.3x	2.2x	2.0x	2.4x	2.7x
Income-Equity Projected Dividend Growth*	7.5	5.8	5.0	6.3	7.8	7.3	5.1	6.0	6.1	5.5	5.5
S&P 500 Projected Dividend Growth**	4.7	4.2	4.0	4.2	5.2	4.2	3.3	5.9	4.8	4.5	5.3
Ratio	1.6x	1.4x	1.2x	1.5x	1.5x	1.7x	1.5x	1.0x	1.3x	1.2x	1.0x
Income-Equity Dividend Coverage Ratio	1.3x	1.3x	1.3x	1.5x	1.9x	2.3x	2.1x	2.0x	2.7x	2.1x	2.1x
Income-Equity Net Debt/EBITDA***	4.2x	2.8x	2.0x	1.9x	1.4x	1.9x	1.9x	1.2x	2.0x	1.8x	2.2x
Income-Equity P/E Ratio Trailing	16.4	14.2	17.2	17.7	12.6	12.8	16.7	14.0	13.6	14.5	15.2
S&P 500 P/E Trailing	18.4	18.8	20.5	21.7	16.5	21.6	27.6	24.1	18.6	21.9	24.7
Premium/Discount	-10%	-24%	-16%	-18%	-23%	-41%	-40%	-42%	-27%	-34%	-38%

Income-Equity (No MLPs)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Income-Equity (No MLPs) Yield	4.0	4.6	3.9	3.7	4.2	3.6	3.5	3.2	3.5	3.4	3.4
S&P 500 Yield	2.0	2.2	2.1	1.9	2.2	1.9	1.5	1.5	1.8	1.5	1.3
Ratio	2.1x	2.1x	1.9x	2.0x	2.0x	2.0x	2.3x	2.1x	2.0x	2.2x	2.6x
Income-Equity (No MLPs) Projected Dividend Growth*	7.7	5.9	5.0	6.4	7.9	7.5	5.2	6.0	6.0	5.6	5.3
S&P 500 Projected Dividend Growth**	4.7	4.2	4.0	4.2	5.2	4.2	3.3	5.9	4.8	4.5	5.3
Ratio	1.6x	1.4x	1.2x	1.5x	1.5x	1.8x	1.5x	1.0x	1.3x	1.2x	1.0x
Income-Equity (No MLPs) Dividend Coverage Ratio	1.3x	1.3x	1.3x	1.5x	1.9x	2.3x	2.1x	2.0x	2.8x	2.3x	2.3x
Income-Equity (No MLPs) Net Debt/EBITDA***	2.6x	2.6x	2.2x	2.1x	1.4x	1.9x	1.9x	1.2x	1.8x	1.6x	2.1x
Income-Equity (No MLPs) P/E Ratio Trailing	17.2	16.5	18.2	18.0	12.9	13.5	16.8	14.0	13.8	14.6	15.3
S&P 500 P/E Trailing	18.4	18.8	20.5	21.7	16.5	21.6	27.6	24.1	18.6	21.9	24.7
Premium/Discount	-6%	-12%	-12%	-17%	-22%	-38%	-39%	-42%	-26%	-33%	-38%

As of December 31, 2024. Sources: Bloomberg; S&P; Miller/Howard Research & Analysis. The data above are based on representative accounts in our Income-Equity portfolios both with and without MLPs and are subject to change. Median P/E ratio trailing is published for our Income-Equity portfolios.
* Projected Dividend Growth—Miller/Howard Portfolio Team's 3-year annualized projected dividend growth based on data from various sources, adjusted to reflect our view of future economic and market conditions. There is no assurance projections will be realized.

** Bloomberg Dividend per Share 3-year forward estimates.
*** Excludes financials.
Dividend yields shown for Miller/Howard portfolios exclude cash.
All data are as of year-end, unless otherwise noted.
Common stocks do not assure dividend payments. Dividends are paid only when declared by an issuer's board of directors, and the amount of any dividend may vary over time. Dividend yield is one component of performance and should not be the only consideration for investment. See definitions and full disclosure on last page.

ENGAGEMENT

2023-2024 ESG REPORT: Integration and Active Ownership

We engage with companies on a variety of environmental, social, and governance issues. Read our 2023-2024 ESG Report: Integration and Active Ownership for a list of companies and examples of our impact.

ENVIRONMENTAL MANAGEMENT

More disclosure on environmental management, including policies, practices, and metrics, as well as a responsible strategy to manage risks and impacts

SOCIAL

Improved and/or transparent management of human rights, human capital, workforce and related issues

GOVERNANCE

- *Action supporting increased board diversity and/or human capital management improvements*
- *Disclosure of lobbying/political spending policies and actions*
- *Policy requiring an independent chairperson*
- *Clarity around if and how climate-related assumptions and risks appear in the financial statements*
- *Letters explaining our opposition to management's proxy proposals (ie, nomination of directors)*

DEFINITIONS: High-Yield Stocks reflects a basket of the total returns for deciles 7, 8, & 9 as provided by Fama/French (value-weighted). **Inflation** is the year-over-year change of the Consumer Price Index for All Urban Consumers (CPI Index). **Baa Corp Bond** returns are calculated by Damodaran using Moody's Seasoned Baa Corporate Bond Yield (BAA), retrieved from FRED. **60%/40% Portfolios** are rebalanced annually. **Price-Earnings Ratio (P/E)**—The ratio of a company's share price to its earnings per share. The ratio is used as a valuation tool and can help determine whether a company is overvalued or undervalued. **EBITDA** = earnings before interest, taxes, depreciation, and amortization. **MLP** = Master Limited Partnership. **S&P 500 Index®** widely regarded as the best single gauge of large-cap US equities and serves as the foundation for a wide range of investment products. The Index includes 500 leading companies and captures approximately 80% coverage of available market capitalization. **Russell 1000 Index®** measures the performance of the large-cap segment of the US equity universe. It is a subset of the Russell 3000 Index® and includes approximately 1,000 of the largest securities based on a combination of their market cap and current index membership. The Russell 1000 Index® represents approximately 92% of market capitalization of the US market. **Russell 1000 Value Index** offers investors access to the broad value segment of US equity value universe and is constructed to provide a comprehensive and unbiased barometer of the broad value market.

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Email compliance@mhinvest.com / Call (845) 679-9166

To receive a list of all recommendations for the previous year, please email compliance@mhinvest.com.

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