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# 2024 Fortuna Advisors Buyback ROI Report

The Top Buyback Value Creators from 2019 – 2023

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## ABOUT FORTUNA ADVISORS

Fortuna Advisors collaborates with leaders to transform decision-making throughout their business to achieve exceptional results. Our management playbook delivers measurable outcomes through:

1. **Better Insights:** See the truth about where value is created or destroyed.
2. **Better Decisions:** Drive faster, better and enduring results.
3. **Better Behaviors:** Align incentives and processes to drive execution.

We serve as a catalyst to create a culture of ownership, where everyone from the board to management and employees embraces a long-term investor perspective to unlock the organization's full value creation potential.

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# Why We Measure Buyback ROI

Every year Berkshire Hathaway's annual letter offers financial wisdom to interested investors, journalists and corporate practitioners. In recent years the letter has also provided an update on the company's buyback program, with insight into its leaders' philosophy on the distributions. One quote, in particular, caught the attention of the media last year:

*When you are told that all repurchases are harmful to shareholders or to the country, or particularly beneficial to CEOs, you are listening to either an economic illiterate or a silver-tongued demagogue (characters that are not mutually exclusive).*

While many were quick to highlight this statement defending the role of share repurchases in our economy, what they missed was the more nuanced comments that preceded it:

*The math isn't complicated: When the share count goes down, your interest in our many businesses goes up. Every small bit helps **if repurchases are made at value-accretive prices. Just as surely, when a company overpays for repurchases, the continuing shareholders lose. At such times, gains flow only to the selling shareholders and to the friendly, but expensive, investment banker who recommended the foolish purchases.***

Buffett and Munger's thoughtful approach to buybacks is at the core of our mission at Fortuna Advisors to help companies achieve higher total shareholder return (TSR) by developing new ways to measure and motivate success. To this end, in 2011 we developed "Buyback ROI" to compare share repurchases to other capital uses, such as capital expenditures and acquisitions.

It is a straightforward concept: when a company repurchases shares and its subsequent TSR is positive, it produces positive Buyback ROI. In other words, the company has earned a return on its investment in its own shares by retiring them before

the market cap increase, which is concentrated in fewer shares.

Following a massive recovery in 2021 as COVID-related restrictions eased, in 2022 concerns grew around rising inflation and interest rates. The resulting drop in stock market indices led to the lowest Buyback ROI we've seen since we started tracking the metric in 2012. A year later, markets have roared back, with the S&P 500 returning 26.2% during 2023. Despite these gains, Buyback ROI remains around all-time lows, implying substantial opportunity costs and value left on the table for remaining shareholders in companies that repurchase stock.

When management achieves a Buyback ROI that exceeds the company's TSR, we refer to this as "Buyback Effectiveness." Achieving positive Buyback Effectiveness requires buying back more when your share price is below its long-term trendline, which results in repurchasing more shares per dollar of buybacks. While our 2022 report analyzing the five years ending in 2021 showed the best Buyback Effectiveness since we began running the data, last year's report brought a five-year low in the measure. And, unfortunately, this year's report shows a new all-time low in Buyback Effectiveness, suggesting companies may be getting worse at timing their buybacks.

Improving Buyback ROI and Buyback Effectiveness should be the goal of every share repurchase program. Management teams that achieve strong results in these metrics can be said to have demonstrated good stewardship of investor capital, and are not just providing an artificial boost to EPS performance by reducing the share count.

For over a decade, Fortuna Advisors has advocated for a proactive, value-based approach to share buybacks, starting with the introduction of "Buyback ROI" in our 2011 study. Since then, we have published our Buyback ROI ranking for the S&P 500's largest share repurchasers. The purpose of our Buyback ROI Reports has been twofold: (1) to show the staggering amounts of capital that have been deployed in repurchases; and (2) to demonstrate how value can be created through share repurchase programs.

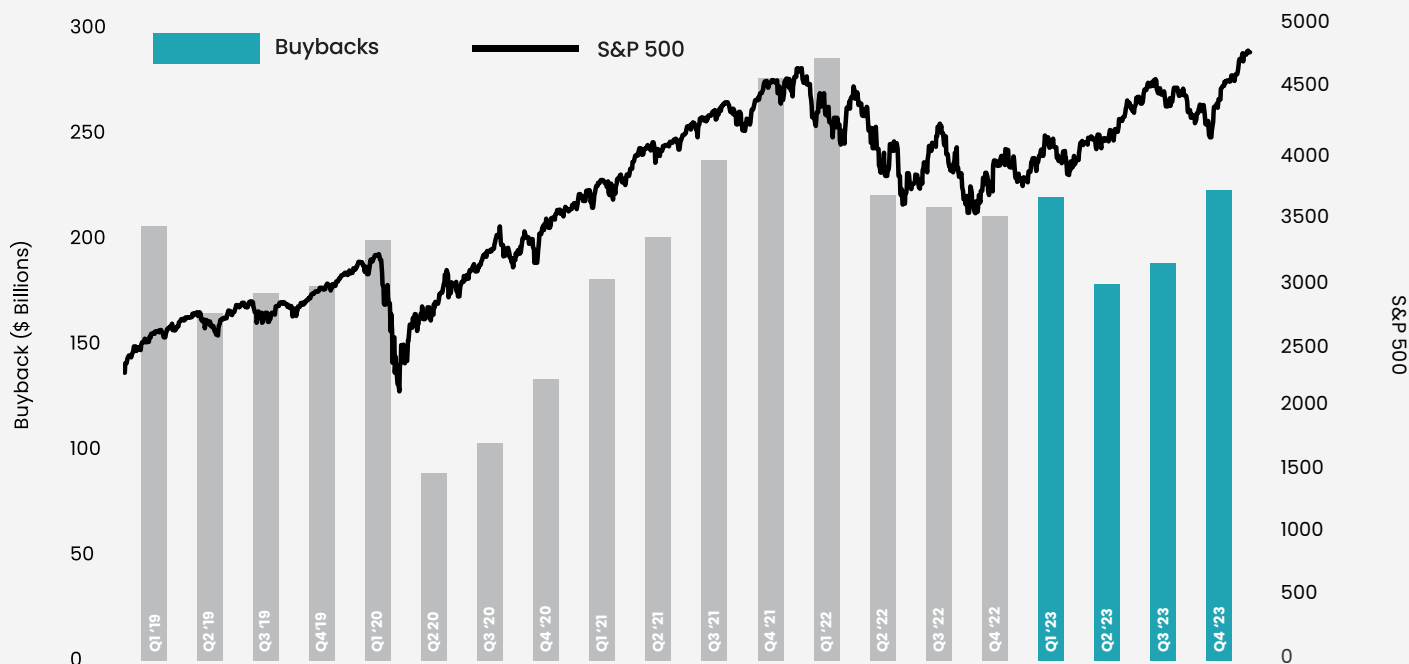
# Repurchases down after a Record Year

After back-to-back record-breaking years, buyback volume retreated substantially in 2023. Buybacks for the S&P 500<sup>1</sup> were \$800 billion, with a year-over-year decrease of 13%. Despite the recent pullback, S&P 500 companies bought back a whopping \$3.8 trillion in stock over the five years ending in 2023.

Q1 and Q4 saw substantially higher volume with gross buybacks tallying \$216 billion and \$221 billion, respectively, versus just \$177 billion and \$186 billion in Q2 and Q3. It's possible that the March 2023 banking crisis caused this mid-year lull, as it may have led many companies to temporarily pull back on repurchases until

financial stability was assured later in the year.

FIGURE 1 | Quarterly Buybacks 2019 – 2023  
Buyback Volume Cools after a Record Year



<sup>1</sup>References to S&P 500 reflect the index as constituted on December 31, 2023.

# Trends in Capital Deployment

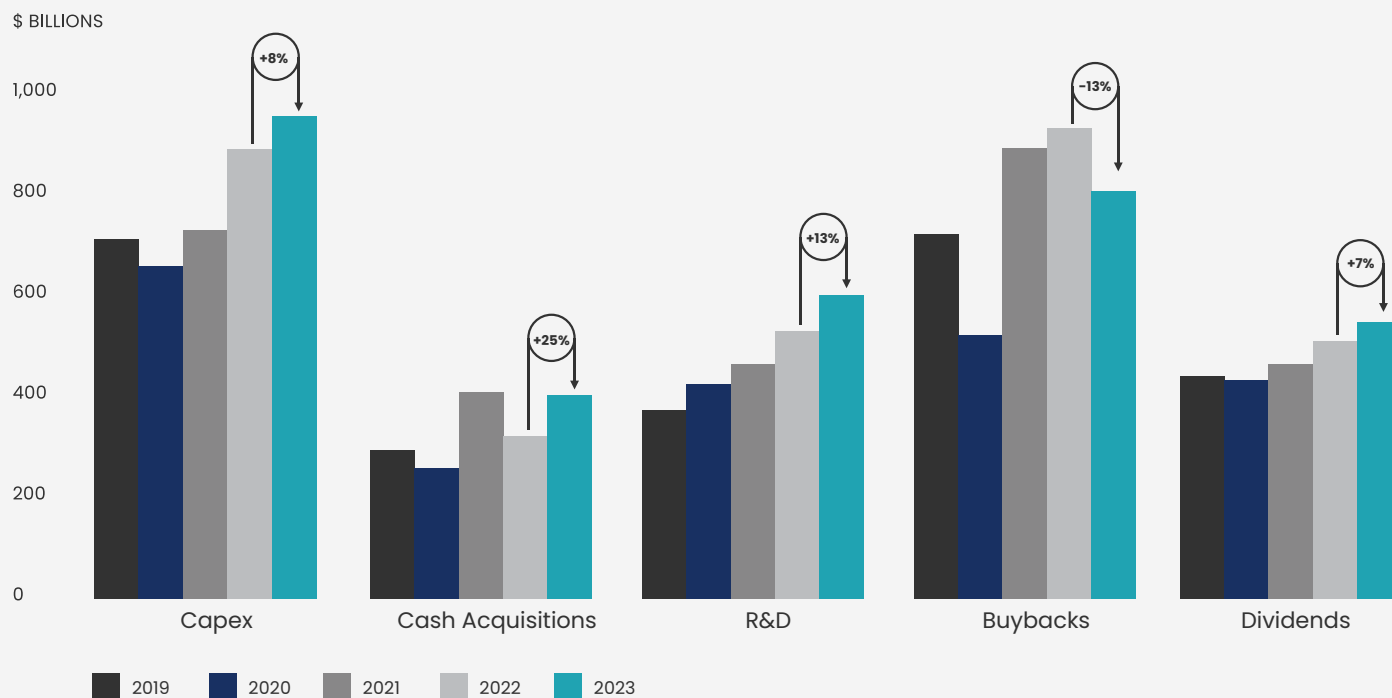
As buybacks decreased in 2023, the S&P 500 put their capital to work driving an 8% increase in capex, for a total of \$947 billion. The upswing in 2023 followed a more significant rise in 2022, which was likely fueled by investment in nearshoring and new supply chains to address snags that cropped up after the COVID pandemic.

At the same time companies reembraced M&A, especially in technology-related sectors, devoting 25% more cash to acquisitions in 2023, for a total

of \$400 billion. This was in contrast to the precipitous drop in 2022 when valuations fell. As earnings multiples recovered in 2023 from their lows in 2022, more companies were likely to sell businesses, which was also reflected by the improved IPO market in the US, which saw a 42% increase in public offerings in 2023 versus 2022. Perhaps reflecting the AI frenzy that swept markets in 2023, we also saw a noticeable 13% uptick in R&D spending for the year, which totaled \$595 billion.

Dividends, which tend to be stickier than share repurchases, also grew 7%, reflecting increases in cash flow and profit margins over the last few years following COVID, as net income for the S&P 500 in 2021 – 2023 averaged 38% higher than in 2019. While buybacks tend to fluctuate with the market, as shown in *Figure 1*, Dividends are significantly more stable, as shown in *Figure 2*. Note that in 2022, dividends were the least affected, as capex, acquisitions, and buybacks all dropped more substantially.

FIGURE 2 | Capital Deployment Trends: 2019 – 2023  
**Buybacks Drop amid Higher Capex, M&A, and R&D**



# Fortuna Buyback Metrics Explained

Fortuna Advisors developed Buyback ROI and Buyback Effectiveness to enable comparison of a company’s share repurchase activity to its other uses of capital. In general terms, when the value of an acquired asset increases, we say it has earned a positive return on investment. Our thinking behind buybacks is similar—when the implied value of a company’s repurchased shares increases over a period, it has earned a positive Buyback ROI.

**Buyback ROI** is calculated as an annualized internal rate of return (IRR) that accounts for: (1) the cash outflows associated with share repurchases; (2) the estimated cash “inflows” of dividends “avoided”; and (3) an estimated final “inflow” related to the final value of the accumulated shares repurchased.

If a company’s share price starts the year at \$100, pays a dividend of \$1 at the end of each quarter and has a year-end share price of \$110, it would have an initial outflow of \$101 (factoring a 1% excise tax), \$4 of quarterly “inflows,” and a final “inflow” of \$110 at the end of the year—resulting in a Buyback ROI of 13.1%, as shown in *Figure 3*.

While it is easier to achieve a positive Buyback ROI when a company’s TSR is generally increasing, it can also be achieved through effective timing of repurchases.

**Buyback Effectiveness** measures the value attributable to optimizing the timing of repurchases. It is calculated as the compound difference between Buyback ROI and

FIGURE 3  
**Calculation of Buyback ROI**

	Time 0	Q1	Q2	Q3	Q4
<b>Buyback</b>	\$100.00				
<b>Tax</b>	\$1.00				
<b>Dividends</b>		\$1.00	\$1.00	\$1.00	\$1.00
<b>Ending Price</b>					\$110.00
<b>Cash Flows</b>	-\$101.00	\$1.00	\$1.00	\$1.00	\$111.00
<b>Annualized IRR = Buyback ROI</b>					13.1%

the company’s TSR, as shown in *Figure 4*. When Buyback ROI exceeds TSR, a company has executed buybacks when its stock was priced below the long-term trend, on average. When Buyback ROI trails TSR, a company has executed buybacks above this long-term price trend.

If the company had 16% TSR while generating the 13.1% Buyback ROI described above, it would mean it had negative Buyback Effectiveness due to poor timing. Alternatively, if it had 12% TSR with

13.1% Buyback ROI, it would have benefitted from good timing on its buybacks and positive Buyback Effectiveness.

To improve Buyback Effectiveness, companies should have a *real-time perspective* on their intrinsic value per share and how that compares to market price per share—they are rarely the same. With the right toolkit and metrics, company Treasurers can build confidence on the best times to execute buybacks.

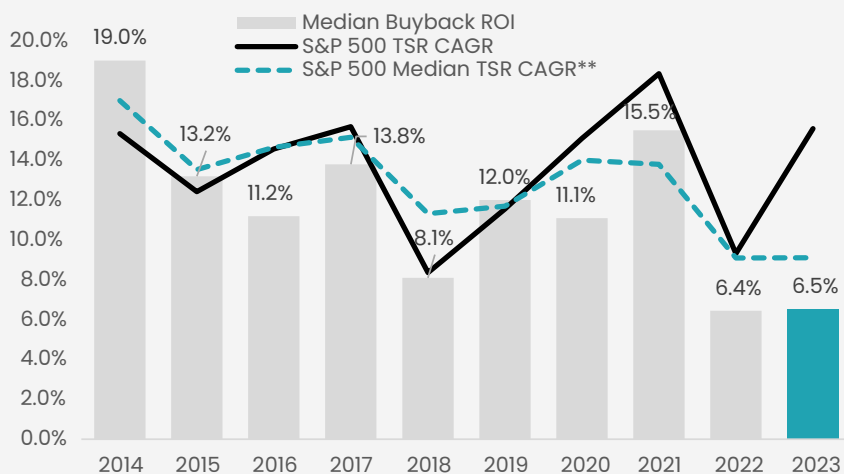
FIGURE 4  
**Calculation of Buyback Effectiveness**

$$\text{Buyback Effectiveness} = \frac{(1 + \text{Buyback ROI})}{(1 + \text{TSR})} - 1$$

# Buyback ROI near Historical Low

Figure 5 shows the trailing five-year median Buyback ROI for the companies in our study over the last ten years. While only 11% of our sample<sup>2</sup> achieved a negative Buyback ROI in the 2022 report, in the 2023 report, this figure expanded to 27%. And in this year's report it increased further to 31%.

FIGURE 5 | Buyback ROI vs Market Returns\*  
Buyback ROI Diverged from S&P 500 Returns in 2023



\*All measures calculated as trailing five-year performance.

\*\*TSR based on average share price for the beginning and ending quarters of each five-year period.

In 2022 Buyback ROI hit an all-time low of 6.4%, down from 15.5% in 2021. This was unsurprising, given the poor market performance for the year. After all, one of the two determinants of Buyback ROI is share price appreciation. But in 2023, with the S&P 500 returning 26.2%, Buyback ROI improved only marginally to 6.5%. To illustrate this unusual situation, we show in Figure 5 the S&P 500<sup>3</sup> total shareholder return (TSR) CAGR<sup>4</sup> over trailing five-year periods, which loosely tracks with median Buyback ROI for the last ten years, excluding 2023.

So what triggered this divergence? The primary cause was the lack of breadth and participation across the index in 2023, with a handful of strong performers accounting for an outsized share of the gains. If you followed US markets last year,

you've heard of the "Magnificent Seven": Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia, and Tesla. To quantify their impact, consider that the total market cap of the S&P 500 grew by an annualized 14.1% over the last five years versus 28.0% for these seven stocks. With the Magnificent Seven excluded from the index, the S&P 500's market cap would have grown only 10.5% annually. Likewise, consider that at the end of 2018 the largest seven companies accounted for 19% of the S&P 500's market cap. At the end of 2023, these stocks accounted for over 28% of the index's market cap.

To quantify the magnitude of the outperformance for the Magnificent Seven as it relates to share repurchases, let's examine aggregate buyback ROI of the

S&P 500 with and without them. Summing the buyback ROI cash flows of all the companies in the S&P 500, effectively treating the index as a single company, we get a buyback ROI of 12.3%. When we exclude the Magnificent Seven, we get a buyback ROI of 8.3%—much closer to the 6.5% median in our report. In other words, the Magnificent Seven contributed 400 basis points to the market's aggregate buyback ROI!

To avoid the distortions caused by outliers—the Magnificent Seven in this case—we prefer to look at median, rather than aggregate or average, Buyback ROI. And to control for volatility in spot prices, we also measure Buyback ROI based on the average dividend-adjusted share price for each quarter in the analysis. Together, these adjustments bring median TSR closer in line with our 2023 median Buyback ROI of 6.5%.

Still, median TSR for 2023 was substantially higher than Buyback ROI in 2023—so what gives? The reality was that, despite nominally high market returns over recent years, Buyback ROI for most companies left a lot to be desired, especially by historical standards. If we were to think of setting Buyback ROI equal to TSR as par for the course, then most companies did not make the cut. The difference in these measures primarily comes down to companies' timing of repurchases, which we discuss in the next section.

<sup>2</sup>Sample includes the 359 largest S&P 500 share repurchasers. We omit companies with less than \$1 billion or 4% of their market capitalization in repurchases.

<sup>3</sup>As measured by the SPY ETF, which tracks the S&P 500 index.

<sup>4</sup>Compound annual growth rate.

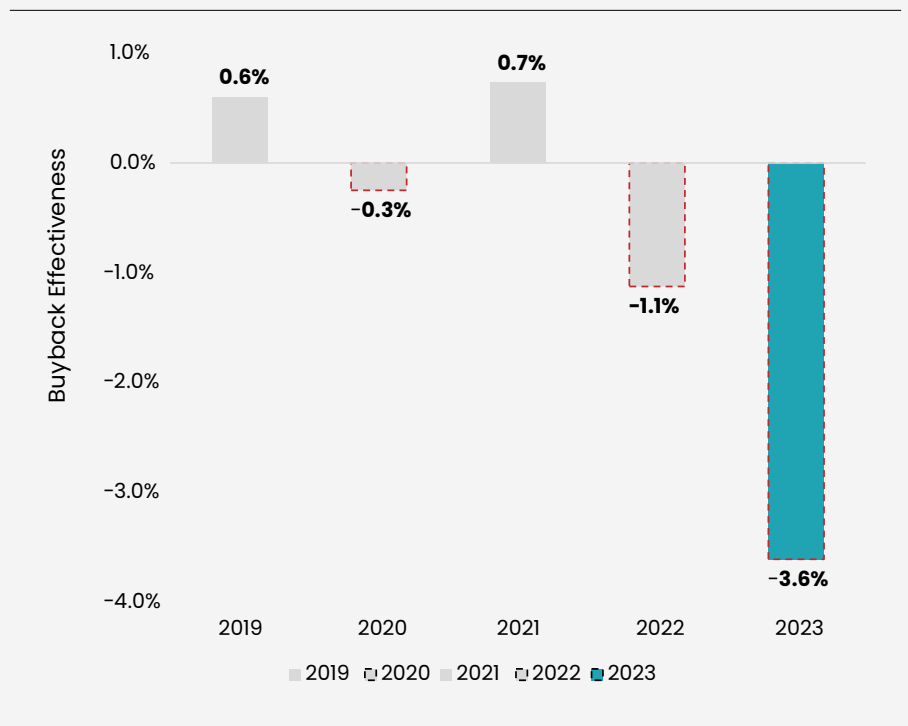
# Buyback Effectiveness Takes a Dive

While the discussion so far has focused on TSR, the other determinant of Buyback ROI is the timing of share repurchases, which we capture in Buyback Effectiveness. Historically, most companies tend to overlook the importance of timing and relative valuation when planning repurchases. Many make the

decision to buy back shares based on excess cash rather than determining whether executing at the current share price is likely to be value-accretive for shareholders. As a result, in nearly every year since our creation of Buyback ROI, median Buyback Effectiveness has been negative.

While, in 2019 and 2021, this trend was bucked, in 2022 we saw a reversion to negative Buyback Effectiveness. And in 2023 we see a precipitous drop to -3.6%, well below the historical average, with 76% of our sample of S&P 500 companies yielding negative Buyback Effectiveness.

FIGURE 6 | BUYBACK EFFECTIVENESS: 2019 – 2023  
**Buyback Effectiveness Dropped Precipitously in 2023**



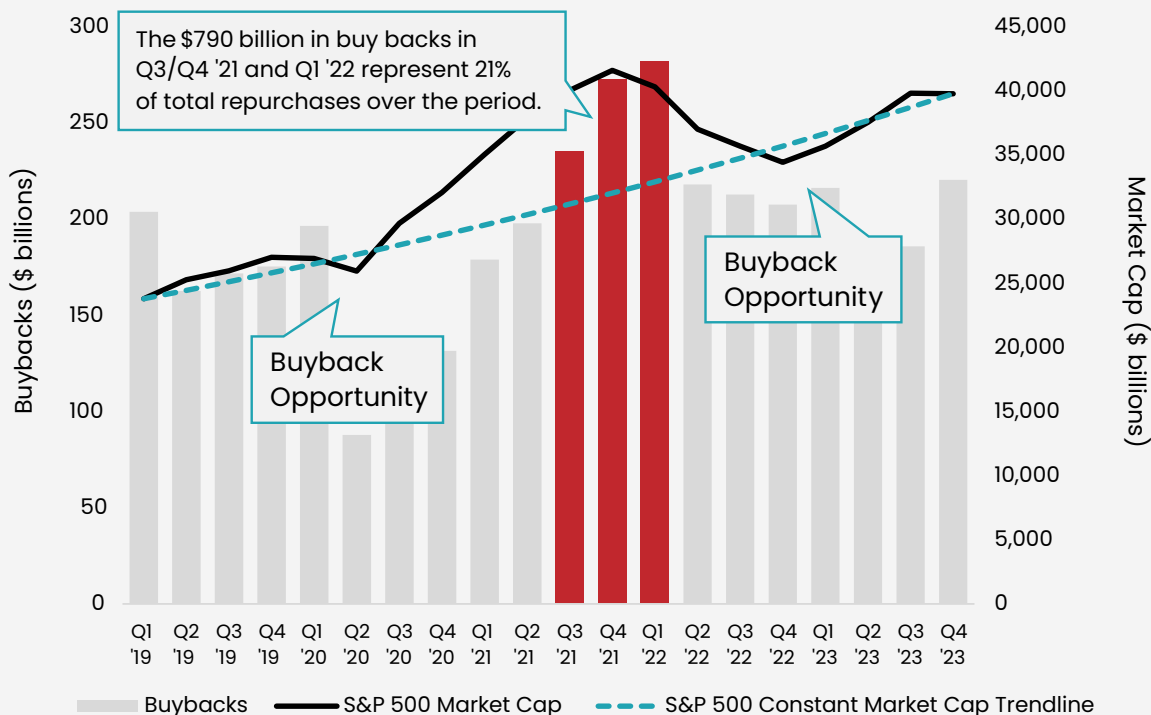


First off, it's important to recognize that the unique share price curve of the period—with markets peaking in late 2021—presented few opportunities to buy back shares below companies'

long-term share price CAGRs, as shown in *Figure 7*. While this figure represents the aggregate buyback opportunities for our S&P 500 sample, individual companies may have had more or fewer

opportunities based on their unique share price trajectories. This partially explains the historically poor Buyback Effectiveness result.

FIGURE 7 | Aggregate S&P 500 Buyback Opportunities  
**S&P 500 Market Cap vs Buybacks**



With that said, it's also true that companies broadly favored repurchases at the worst times to earn a positive return on this capital. Examining *Figure 7*, we can see that the three largest buyback quarters, which represent 21% of repurchases over the last five years, were centered around the five-year peak of the S&P 500 in late 2021 and early 2022. Most of the repurchases during this time would have had a negative contribution to Buyback Effectiveness and Buyback ROI.

The large reduction in buybacks in 2020 is understandable, given the uncertainty around the onset of the COVID-19 pandemic. The market

dip in 2022, however, represented a prime buyback opportunity that most companies did not take advantage of.

Looking at this chart, and indeed when we look at sectors individually, one thing is clear. Overwhelmingly, companies tend to buy back stock at peaks in market valuation. While we know this is driven by peaks in company cash flows, it is also a recipe for shareholder value destruction. As the experts at Berkshire warn in their letter, "Just as surely, when a company overpays for repurchases, the continuing shareholders lose."

While there are many *methodologies* that can be applied to strategic timing of repurchases, consider the following to illustrate the immense value at stake. In a scenario where buybacks for S&P 500 companies were redistributed so that the same amount was repurchased each quarter, 76% would have retired more shares. The median company would have been able to repurchase an additional 5.5% shares, worth an additional \$110 million at the end of the five-year period. On aggregate, these shares would have been worth an additional \$432 billion as of the end of 2023, and \$553 billion as of April 2024.

# Top Buyback ROI and Buyback Effectiveness Companies

Despite the lackluster results for S&P 500 repurchasers as a group, there were many companies that created value for their shareholders through their buyback programs. [Figure 8](#) lists the top ten companies in Buyback ROI over the last five years.

Coming as no surprise to anyone who's followed capital markets this year, NVIDIA took the top

spot, with a Buyback ROI of 74.2%. NVIDIA's 2023 performance was largely fueled by an impressive annualized total shareholder return (TSR)<sup>5</sup> of 57.8% from 2019 – 2023. But their Buyback ROI exceeded their TSR substantially, meaning there was also a contribution from good timing, reflected in their positive Buyback Effectiveness. Notably, NVIDIA also

made the top ten for Buyback Effectiveness, shown in [Figure 9](#), which lists the ten companies with the highest Buyback Effectiveness over the last five years.

FIGURE 8 | Buyback ROI: 2019 – 2023

## Top 10 Buyback ROI Companies

Rank	Company	Buybacks (\$ millions)	Buyback ROI	TSR*	Buyback Effectiveness
1	NVIDIA Corporation	27,227	74.2%	57.8%	10.4%
2	Builders FirstSource, Inc.	6,205	58.1%	60.3%	-1.4%
3	General Electric Company	2,388	54.1%	15.9%	32.9%
4	Jabil Inc.	2,666	46.4%	40.1%	4.4%
5	Eli Lilly and Company	8,400	45.0%	41.5%	2.4%
6	Marathon Petroleum Corporation	23,930	42.5%	21.2%	17.5%
7	Arista Networks, Inc.	1,956	41.9%	29.6%	9.5%
8	Fair Isaac Corporation	3,301	41.1%	38.8%	1.6%
9	Palo Alto Networks, Inc.	855	40.2%	16.6%	20.2%
10	Targa Resources Corp.	3,762	40.0%	33.8%	4.6%
<b>Median of Top 10</b>		3,531	43.7%	36.3%	7.0%
<b>Median of All Ranked Companies</b>		4,008	6.5%	13.6%	-3.5%

\*Note: TSR measured as the starting and ending average quarterly share price.

<sup>5</sup>TSR measured as the starting and ending average quarterly share price.

FIGURE 9 | Buyback Effectiveness: 2019 – 2023

**Top 10 Buyback Effectiveness Companies**

Rank	Company	Buybacks (\$ millions)	Buyback ROI	TSR*	Buyback Effectiveness
1	General Electric Company	2,388	54.1%	15.9%	32.9%
2	Salesforce, Inc.	11,620	37.1%	10.5%	24.1%
3	Targa Resources Corp.	855	40.2%	16.6%	20.2%
4	Marathon Petroleum Corp.	23,930	42.5%	21.2%	17.5%
5	Cardinal Health, Inc.	4,347	33.6%	17.8%	13.4%
6	Halliburton Company	1,250	17.5%	4.6%	12.3%
7	NVIDIA Corporation	4,547	22.5%	10.7%	10.7%
8	Diamondback Energy, Inc.	27,227	74.2%	57.8%	10.4%
9	Arista Networks, Inc.	1,912	36.0%	24.2%	9.5%
10	FedEx Corporation	1,956	41.9%	29.6%	9.5%
<b>Median of Top 10</b>		3,368	38.7%	17.2%	12.9%
<b>Median of All Ranked Companies</b>		4,008	6.5%	13.6%	-3.5%

\*Note: TSR measured as the starting and ending average quarterly share price.

General Electric was another strong performer over the period, which is notable given their five-year annualized TSR of 15.9%, which was well below most of its top ten counterparts. So how did they manage to pull off third place in the Buyback ROI ranking? They timed their repurchases expertly, yielding 32.9% Buyback Effectiveness, which landed them in first for the measure, as shown in [Figure 10](#).

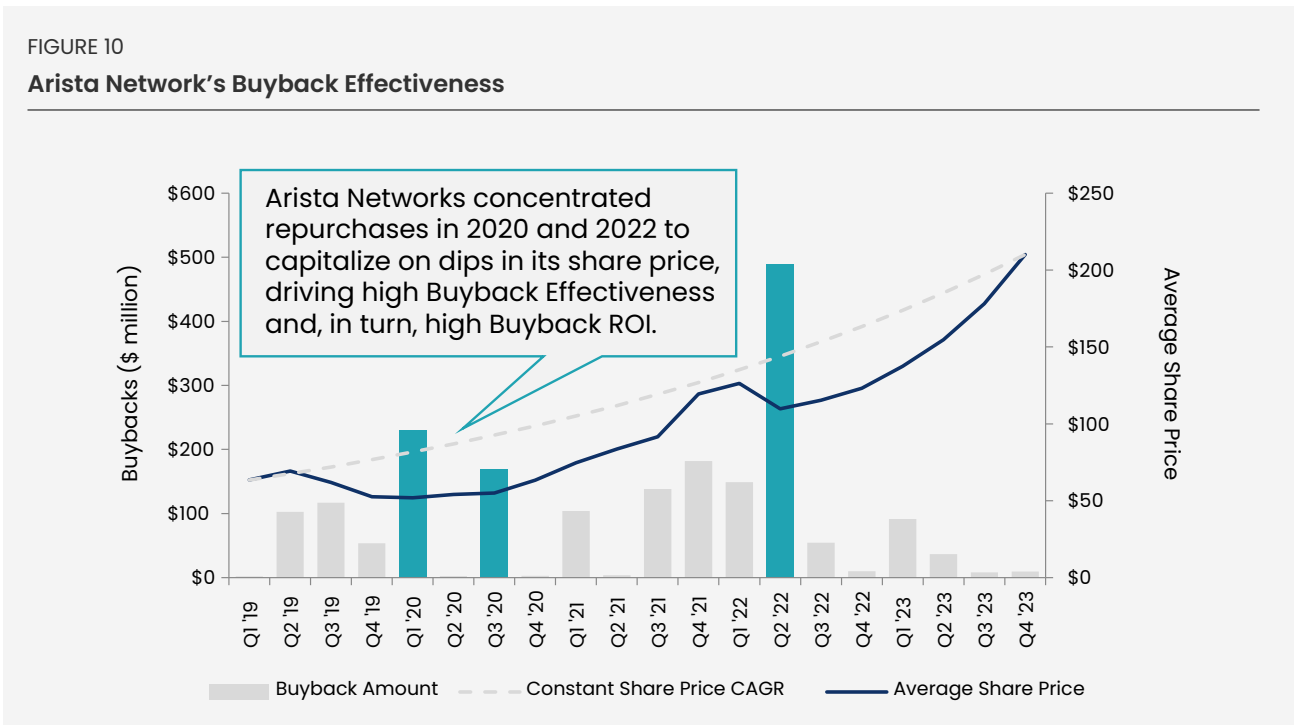
Information Technology was well represented in the Buyback ROI top ten, with half coming from the sector. This was in part a function of the high TSR for technology-related industries, especially given the AI-driven tailwinds in 2023. But Information Technology was also overrepresented in the top ten Buyback Effectiveness ranking, along with the Energy sector, both with four representatives, claiming eight of ten spots together. These

two groups are notably cyclical, high-beta sectors, which means they benefitted from volatility in their share prices, which offered them ample opportunities to repurchase shares at attractive prices, which drives Buyback Effectiveness.

# Case Study: Arista Network’s Exceptional Buyback Timing

Figure 10 shows Arista Network’s quarterly buybacks overlaid on their average share price and constant share price appreciation trendlines. Note the large volume of shares repurchased in Q1 and Q2 of 2020, as well as Q2 of 2022, which together totaled 45% of their total buybacks over the last five years.

In these periods the company’s average share price was below the share price appreciation trendline, and even further below their 2023 ending share price, presenting the best buyback opportunities for Arista Network over the last five years. This repurchasing pattern helped Arista Network place ninth in Buyback Effectiveness at 9.5%, and seventh in Buyback ROI at 41.9% over the last five years—delivering substantial value added for its shareholders.



Importantly, Arista Network’s buyback performance was not about luck or chance. In a company conference presentation in November 2023, then CFO Ita Brennen elaborated on their approach to share repurchases, as follows:

*In Q2, we were very aggressive and active on the buyback because there was an opportunity ... It is our intention to return cash, but we’ll probably remain pretty **opportunistic in terms of when we do that**. And if there is volatility, we’ll try to **leverage the volatility**.*

Like professional investors, Arista Network’s management skillfully capitalized on volatility in their share price by buying back shares at relative lows, to the tremendous benefit of their long-term shareholders. Kudos to Arista Network’s leadership team.

## Buyback ROI by Sector

After placing last in three straight reports, Energy had a stunning turnaround in our 2023 report. The sector's dominance continued in this year's report, with a median Buyback ROI of 15.0% over the last five years, which was 4.3% higher than the next best sector, Information Technology.

Interestingly, Energy had only the fourth highest TSR among sectors. Information Technology, for example, had nearly double the annualized five-year TSR—18.1% versus Energy's 9.8%. Behind Energy's ROI outperformance was its superb Buyback Effectiveness, as it was the only sector with beneficial timing over the five-year period.

Indeed, the intense volatility of energy prices over the last five years presented more opportunities for the sector to repurchase stock at relatively low prices. After a massive COVID-induced demand shock in 2020 when energy prices cratered, supply chain issues surfaced leading to higher prices in 2021 and 2022. Adding to this volatility were geopolitical events in Europe and the Middle East which only served to push prices higher. Companies that repurchased stock in 2020 when Energy stocks were suffering have been handsomely rewarded by the market over subsequent years.

By volume, Information Technology devoted the most capital to buybacks, with just over \$1 trillion spent on share repurchases from 2019 – 2023. While Information Technology has the best TSR over the period, its Buyback ROI was limited by poor Buyback Effectiveness, with many of the sector's buybacks concentrated around share price highs in 2021.

The next highest by volume was financials with \$802 billion, followed by Communication Services, which dropped off substantially with \$487 billion in buybacks. Utilities and Real Estate were notably the only sectors with median negative Buyback ROI.

FIGURE 11 | Buyback ROI by Sector: 2019 – 2023

### Energy atop a Lonely Throne

Rank	Sector	Aggregate Buybacks (\$ millions)	Median		
			Buyback ROI	TSR	Buyback Effectiveness
1	Energy	162,381	15.0%	9.8%	5.9%
2	Information Technology	1,030,940	10.7%	18.1%	-4.1%
3	Industrials	304,513	10.1%	12.4%	-2.2%
4	Financials	802,119	5.3%	8.9%	-3.8%
5	Consumer Discretionary	331,997	5.0%	9.2%	-4.3%
6	Health Care	368,509	4.1%	10.1%	-4.5%
7	Materials	79,847	3.7%	7.7%	-6.0%
8	Communication Services	487,883	2.3%	6.8%	-3.7%
9	Consumer Staples	177,940	0.9%	6.8%	-4.6%
10	Utilities	11,652	-1.2%	3.8%	-2.6%
11	Real Estate	7,411	-2.2%	4.3%	-8.3%

\*Note: TSR measured as the starting and ending average quarterly share price.

\*\*Note: Medians affect the relationship of Buyback ROI, TSR, and Buyback Effectiveness.

To put some familiar names to this sector ranking, we also include [Figure 12](#), which lists the top three Buyback ROI companies in each sector, along with their Buyback ROI results.

FIGURE 12 | Buyback ROI 2019 – 2023

**Top Buyback ROI Companies by Sector****#1 in Sector**

Sector	Company	Buyback ROI
Energy	Marathon Petroleum Corporation	42.5%
Information Technology	NVIDIA Corporation	74.2%
Industrials	Builders FirstSource, Inc.	58.1%
Financials	Arch Capital Group Ltd.	36.0%
Consumer Discretionary	PulteGroup, Inc.	32.3%
Health Care	Eli Lilly and Company	45.0%
Communication Services	Steel Dynamics, Inc.	33.6%
Materials	Meta Platforms, Inc.	17.9%
Consumer Staples	Bunge Global SA	22.4%
Utilities	NRG Energy, Inc.	7.5%
Real Estate	Host Hotels & Resorts, Inc.	2.5%

**#2 in Sector**

Sector	Company	Buyback ROI
Energy	Targa Resources Corp.	40.2%
Information Technology	Jabil Inc.	46.4%
Industrials	General Electric Company	54.1%
Financials	Ameriprise Financial, Inc.	23.3%
Consumer Discretionary	D.R. Horton, Inc.	25.0%
Health Care	McKesson Corporation	35.0%
Communication Services	Nucor Corporation	24.1%
Materials	Alphabet Inc.	15.6%
Consumer Staples	Costco Wholesale Corporation	19.3%
Utilities	Sempra	6.3%
Real Estate	CBRE Group, Inc.	-1.5%

**#3 in Sector**

Sector	Company	Buyback ROI
Energy	ConocoPhillips	23.5%
Information Technology	Arista Networks, Inc.	41.9%
Industrials	United Rentals, Inc.	35.4%
Financials	Aflac Incorporated	20.5%
Consumer Discretionary	O'Reilly Automotive, Inc.	24.5%
Health Care	Cardinal Health, Inc.	33.6%
Communication Services	Linde plc	19.3%
Materials	T-Mobile US, Inc.	12.0%
Consumer Staples	Monster Beverage Corporation	13.8%
Utilities	Evergy, Inc.	0.0%
Real Estate	Essex Property Trust, Inc.	-2.9%

# The Important Role of Buybacks

Companies generally repurchase shares for three reasons. The first is to efficiently return capital to shareholders willing to sell their ownership in a company in part or in whole and redeploy the capital elsewhere. Such repurchases have the effect of reducing the number of shares outstanding, which concentrates future value creation (or destruction) for remaining shareholders.

Alternatively, companies also repurchase shares in the public market to offset newly issued shares awarded to employees as equity-based compensation. This form of repurchase is intended to reduce the net new shares issued and avoid dilution to existing shareholders that wish to retain their existing level of ownership in a company. In both cases, such repurchases are recorded in companies' cash flow statements as a purchase of common stock under financing activities.

A third form of repurchase occurs when an employee's equity-based compensation vests and is therefore treated as taxable income. To meet the company's obligation to withhold tax on taxable income, companies may net-share settle the equity-based compensation awarded to the employee. In effect, they are "repurchasing" shares that had been awarded to the employee, which results in reducing the company's diluted number of shares outstanding. This payment of the tax obligations related to

equity-based compensation is also recorded as a financing activity on the cashflow statement. For the purposes of our study, we do not distinguish between these three forms of repurchase activity.

Regardless of form, we continue to believe repurchases have a rightful place in the capital markets. The role of these markets is to move capital from where there is excess supply to where there is an unmet need for it. Investors and companies are thought of as the two sides of that market, but the investors themselves must first gather the capital that they will then allocate to companies.

This capital can come from places like insurance companies, pension funds, endowments, or family offices that have capital today, but no use for it until some future event. Capital can also come from investors' prior investments. When an investment has succeeded and produced a return in excess of what can be profitably redeployed within a company, buybacks serve as an efficient method to distribute such excess return through the capital markets to other companies with better growth prospects. Further, we believe restrictions on buybacks would, at best, result in higher dividends, and at worst, slow innovation and breed corporate complacency, as companies have less pressure to be efficient with their capital.

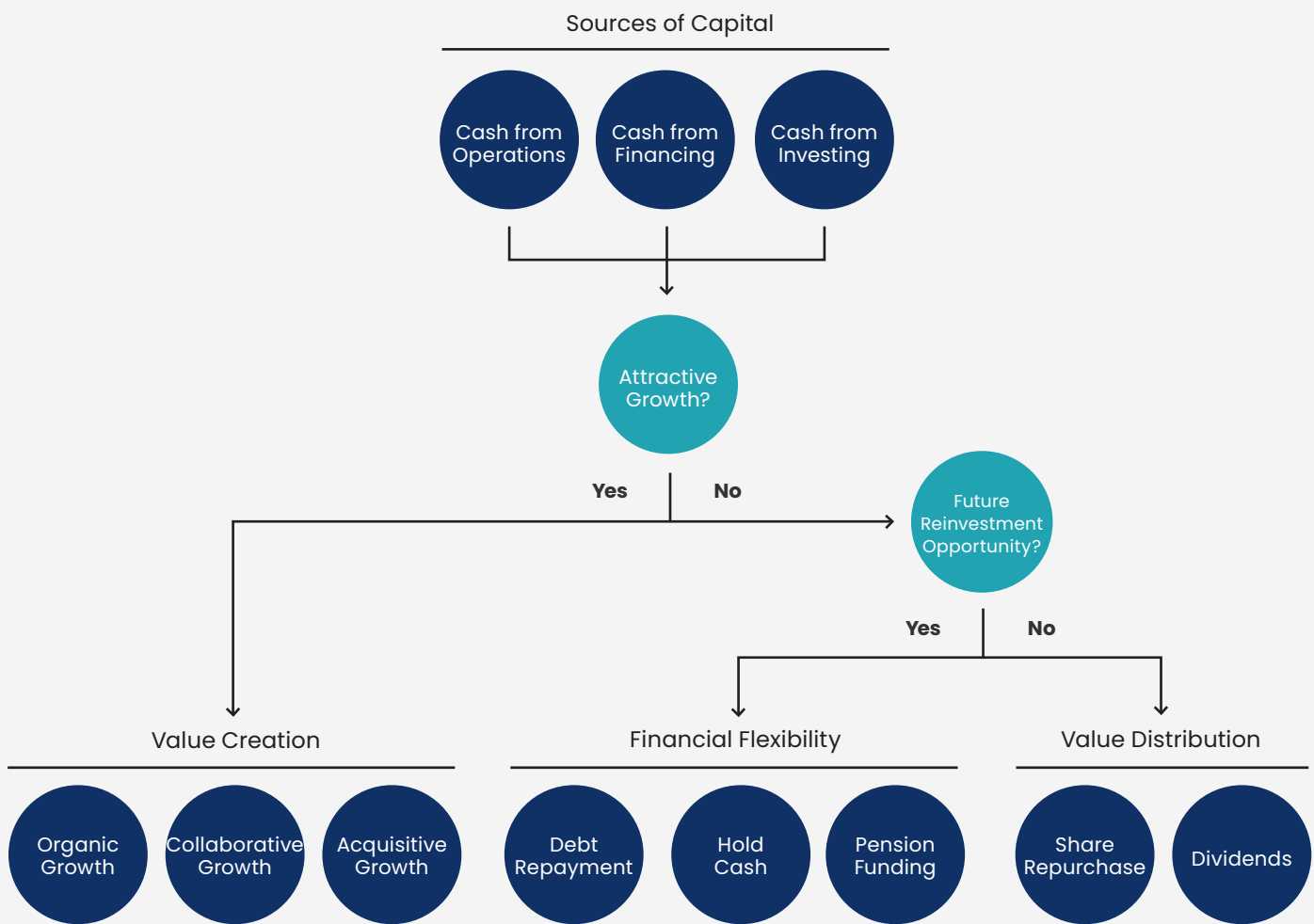
The importance of developing a thoughtful buyback policy took the forefront in 2020. Many companies

that bought back billions in stock from 2016 to 2019 had to raise capital to maintain solvency. Opponents of buybacks pointed out that had these companies been more temperate with buybacks in prior years, not only could they have had the financial flexibility to weather the pandemic better in 2020, they would have also been poised to pursue more opportunistic investment. While some headlines in 2020 may have cast a shadow over the practice, we believe this should not diminish the important role buybacks play in recycling, and better allocating, capital across markets.

Companies have three primary options when considering how to deploy capital: value creation, financial flexibility, or value distribution. Companies should first consider value-creating growth opportunities that exceed their cost of capital. These can include organic growth, acquisition, or collaborative growth. If no attractive opportunities for growth exist, companies should consider the optimal level of financial flexibility—let 2020 be a reminder of that. Once value creation and financial flexibility are fully evaluated and funded, the last option should be distribution of capital back to shareholders either through dividends or buybacks. *Figure 13* provides a general view on how management should think about these various capital allocation opportunities.

FIGURE 13

Hierarchy of Capital Allocation Choices



With that said, when a company decides to distribute capital to investors through buybacks, they should do so systematically, applying the same discipline as with any other investment to ensure they are optimizing the “return” they earn. The best way to do this is to compare a company’s intrinsic value per share to the market value per share and repurchase shares when management believes, based on objective analysis, that their shares are undervalued. Such valuation signals can be

used to indicate when shares are likely undervalued—a good time to execute a repurchase; or when shares are likely overvalued—an excellent time to use those shares as acquisition currency. With these signals in mind, Fortuna has developed a value-inspired buyback execution methodology, or “*VIBE*,” which helps companies understand their buyback prospects at any point in time.



# The Debate Over Buybacks

The debate about whether or not a company should use its capital to buy back stock can be intense. Broad statements in favor or against buybacks lack nuance and the simple recognition that both sides have a similar goal in mind—that the earnings and cashflow of a business be put to good use. The difference comes in how the two sides believe that goal is most likely to be achieved.

Many in the anti-buyback camp believe the optimal allocation of capital, for the good of the company and all its stakeholders, is achieved by companies committing to strengthening their own balance sheets, increasing their employees' wages, and continually striving for growth. These are all choices a company has for allocating its capital internally, so an anti-buyback philosophy is implicitly an argument that company managers are good allocators of capital—that their reinvestments within the company will lead to incremental value creation for the firm's employees, stakeholders, and shareholders.

If investors were confident companies could do this effectively, the debate would favor leaving capital at the original company to compound in value through effective reinvestment. For example, a long-term Amazon investor has done much better from the company reinvesting in its business than if Amazon had repurchased that stock along the way, forcing the investor to find a new use for the capital.

But buyback proponents believe examples like Amazon are rare, and that professional investors tend to be better capital allocators than company managers thanks to their dedicated skill sets and to the sharper edge of their results-oriented environment. Professional investors can also more efficiently re-allocate capital within a sector, or from one sector to another, to support overall economic growth through secular shifts in the way value is created.

The question, then, is not really whether buybacks are "good" or "bad," but whether corporate managers are good or bad at allocating the



**The real question is not whether buybacks are “good” or “bad,” but whether corporate managers are good or bad at allocating capital.**

capital entrusted to them by their investors, and whether and when they should return that capital. The answer to this question varies by industry and by management team. Indeed, a large part of Fortuna's practice is helping our corporate clients become better investors of their own capital.

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For those with a strong view either way on this debate, we would like to understand your perspectives. Please feel free to email us at [info@fortuna-advisors.com](mailto:info@fortuna-advisors.com) to share your views or suggest a call for a discussion.

## Concluding Remarks

Thank you for your time and interest in our analysis and commentary on this important subject. This report aims to help companies evaluate and make the most of their own buyback prospects and performance. We hope that, as attitudes about buybacks evolve, companies will continue to embrace careful and comprehensive planning for buybacks, as they would with any substantial capital outlay. Better-informed buyback programs can lead the way to more value creation for all stakeholders, and to a better overall allocation of resources across the economy.

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# Full List: 2024 Fortuna Advisors Buyback ROI Ranking

Rank	Company Name	Total Buybacks (\$ millions)	Buyback ROI	Buyback Effectiveness	Rank	Company Name	Total Buybacks (\$ millions)	Buyback ROI	Buyback Effectiveness
1	NVIDIA Corporation	27,227	74.2%	10.4%	61	ServiceNow, Inc.	2,955	17.5%	-8.8%
2	Builders FirstSource, Inc.	6,205	58.1%	-1.4%	62	Halliburton Company	1,250	17.5%	12.3%
3	General Electric Company	2,388	54.1%	32.9%	63	UnitedHealth Group Incorporated	29,750	17.4%	0.5%
4	Jabil Inc.	2,666	46.4%	4.4%	64	Pioneer Natural Resources Company	3,486	17.2%	2.7%
5	Eli Lilly and Company	8,400	45.0%	2.4%	65	Adobe Inc.	23,647	17.0%	-1.7%
6	Marathon Petroleum Corporation	23,930	42.5%	17.5%	66	Lululemon Athletica Inc.	2,168	17.0%	-7.4%
7	Arista Networks, Inc.	1,956	41.9%	9.5%	67	Booking Holdings Inc.	26,651	17.0%	5.2%
8	Fair Isaac Corporation	3,301	41.1%	1.6%	68	Marsh & McLennan Companies, Inc.	5,412	16.9%	-2.8%
9	Targa Resources Corp.	855	40.2%	20.2%	69	Intuit Inc.	9,049	16.8%	-4.6%
10	Palo Alto Networks, Inc.	3,762	40.0%	4.6%	70	Ingersoll Rand Inc.	1,282	16.7%	-5.0%
11	Broadcom Inc.	21,098	39.1%	1.8%	71	The TJX Companies, Inc.	8,689	16.2%	2.2%
12	Salesforce, Inc.	11,620	37.1%	24.1%	72	W. R. Berkley Corporation	1,118	16.2%	-1.1%
13	Synopsys, Inc.	4,386	36.4%	-3.9%	73	Fortinet, Inc.	6,104	16.2%	-10.2%
14	Arch Capital Group Ltd.	1,912	36.0%	9.5%	74	Republic Services, Inc.	1,216	16.2%	-1.7%
15	Cadence Design Systems, Inc.	3,616	36.0%	-4.8%	75	Snap-on Incorporated	1,337	16.2%	1.6%
16	United Rentals, Inc.	3,328	35.4%	2.8%	76	Intuitive Surgical, Inc.	4,332	15.9%	3.5%
17	KLA Corporation	8,846	35.2%	-5.7%	77	Amphenol Corporation	3,053	15.8%	-0.7%
18	McKesson Corporation	12,448	35.0%	3.3%	78	Devon Energy Corporation	4,445	15.8%	1.6%
19	Cardinal Health, Inc.	4,347	33.6%	13.4%	79	Alphabet Inc.	220,619	15.6%	-3.6%
20	Steel Dynamics, Inc.	4,769	33.6%	5.0%	80	MSCI Inc.	3,171	15.4%	-10.5%
21	PulteGroup, Inc.	3,480	32.3%	2.1%	81	EOG Resources, Inc.	1,238	15.4%	7.4%
22	ON Semiconductor Corporation	1,266	31.7%	-2.7%	82	Hilton Worldwide Holdings Inc.	6,019	15.3%	-2.3%
23	Old Dominion Freight Line, Inc.	2,872	30.6%	-3.6%	83	FedEx Corporation	4,960	15.2%	9.2%
24	Eaton Corporation plc	3,284	29.2%	1.4%	84	Berkshire Hathaway Inc.	73,642	15.1%	3.5%
25	Howmet Aerospace Inc.	2,202	28.6%	1.9%	85	CDW Corporation	3,141	15.1%	-5.0%
26	W.W. Grainger, Inc.	3,568	28.0%	4.2%	86	Raymond James Financial, Inc.	1,997	15.1%	-0.8%
27	Gartner, Inc.	3,681	27.4%	4.0%	87	Marriott International, Inc.	9,467	15.0%	1.9%
28	Lam Research Corporation	13,482	27.1%	-8.4%	88	Westinghouse Air Brake Techn	1,412	14.7%	8.2%
29	Apple Inc.	429,455	27.0%	-3.6%	89	NVR, Inc.	5,190	14.6%	-5.4%
30	D.R. Horton, Inc.	4,523	25.0%	-3.1%	90	Phillips 66	7,620	14.6%	5.4%
31	Molina Healthcare, Inc.	1,356	24.6%	2.2%	91	AbbVie Inc.	6,000	14.5%	-1.2%
32	O'Reilly Automotive, Inc.	12,429	24.5%	1.5%	92	General Dynamics Corporation	3,509	14.4%	4.9%
33	Cencora, Inc.	3,187	24.1%	3.8%	93	Regeneron Pharmaceuticals, Inc.	15,134	14.3%	-2.8%
34	Nucor Corporation	8,161	24.1%	-0.6%	94	Marathon Oil Corporation	5,468	14.2%	4.7%
35	Chipotle Mexican Grill, Inc.	2,441	23.7%	-8.9%	95	Tractor Supply Company	3,049	14.1%	-4.6%
36	Parker-Hannifin Corporation	1,625	23.6%	0.6%	96	FactSet Research Systems Inc.	875	14.1%	-2.0%
37	ConocoPhillips	22,692	23.5%	6.9%	97	Monster Beverage Corporation	2,747	13.8%	-0.6%
38	Ameriprise Financial, Inc.	9,519	23.3%	-1.2%	98	The Cigna Group	23,662	13.2%	4.8%
39	AutoZone, Inc.	15,363	22.8%	-2.9%	99	Northrop Grumman Corporation	8,210	12.9%	-0.1%
40	Diamondback Energy, Inc.	4,547	22.5%	10.7%	100	American International Group, Inc.	9,542	12.8%	1.6%
41	Microsoft Corporation	123,511	22.5%	-4.7%	101	J.B. Hunt Transport Services, Inc.	1,120	12.7%	-0.1%
42	Bunge Global SA	1,014	22.4%	6.7%	102	Rockwell Automation, Inc.	2,011	12.7%	-0.3%
43	Trane Technologies plc	3,970	21.7%	-3.1%	103	Elevance Health, Inc.	11,799	12.5%	0.1%
44	Applied Materials, Inc.	16,043	21.7%	-10.1%	104	Accenture plc	18,160	12.4%	-3.9%
45	Cintas Corporation	3,775	21.6%	-3.4%	105	NXP Semiconductors N.V.	8,692	12.2%	-8.3%
46	Vertex Pharmaceuticals Incorporated	3,318	21.5%	4.5%	106	T-Mobile US, Inc.	37,061	12.0%	-4.4%
47	Lennar Corporation	4,497	20.8%	-3.8%	107	Moody's Corporation	4,139	11.9%	-6.2%
48	Aflac Incorporated	10,667	20.5%	4.4%	108	Illinois Tool Works Inc.	6,456	11.9%	-3.2%
49	Motorola Solutions, Inc.	3,096	20.3%	-0.8%	109	Chubb Limited	12,300	11.9%	-1.3%
50	Blackstone Inc.	3,247	19.9%	-9.1%	110	Schlumberger Limited	1,285	11.7%	6.4%
51	Oracle Corporation	79,984	19.9%	0.0%	111	A. O. Smith Corporation	1,437	11.4%	-0.5%
52	Caterpillar Inc.	17,077	19.6%	1.7%	112	Jacobs Solutions Inc.	2,066	11.3%	-2.9%
53	Linde plc	18,853	19.3%	-2.0%	113	Amgen Inc.	22,523	11.3%	1.0%
54	Costco Wholesale Corporation	3,786	19.3%	-3.2%	114	Aon plc	13,458	11.2%	-4.6%
55	Packaging Corporation of America	820	19.2%	3.8%	115	Textron Inc.	3,005	11.0%	3.9%
56	Cboe Global Markets, Inc.	826	18.5%	5.7%	116	Expeditors International of Was	4,282	11.0%	-1.2%
57	Verisk Analytics, Inc.	5,101	18.4%	2.1%	117	Microchip Technology Incorporated	2,321	10.9%	-7.6%
58	West Pharmaceutical Services, Inc.	1,030	18.2%	-7.0%	118	Valero Energy Corporation	11,001	10.8%	-1.7%
59	Meta Platforms, Inc.	124,764	17.9%	0.3%	119	NetApp, Inc.	4,677	10.8%	5.1%
60	Baker Hughes Company	1,800	17.7%	7.6%	120	Micron Technology, Inc.	5,295	10.6%	-3.6%

Rank	Company Name	Total Buybacks (\$ millions)	Buyback ROI	Buyback Effectiveness	Rank	Company Name	Total Buybacks (\$ millions)	Buyback ROI	Buyback Effectiveness
121	Deere & Company	16,618	10.6%	-9.8%	181	Gen Digital Inc.	2,775	6.4%	-5.8%
122	Coterra Energy Inc.	2,344	10.5%	3.4%	182	Expedia Group, Inc.	4,077	6.4%	5.6%
123	Merck & Co., Inc.	8,247	10.4%	-0.8%	183	IDEXX Laboratories, Inc.	2,188	6.4%	-9.9%
124	Automatic Data Processing, Inc.	6,385	10.4%	-2.2%	184	Ulta Beauty, Inc.	4,116	6.3%	-2.3%
125	Loews Corporation	4,688	10.4%	2.6%	185	Sempra	1,444	6.3%	-1.6%
126	Exxon Mobil Corporation	34,057	10.3%	-1.2%	186	Union Pacific Corporation	23,787	6.2%	-4.0%
127	Darden Restaurants, Inc.	2,345	10.2%	0.2%	187	The Home Depot, Inc.	37,212	6.1%	-7.2%
128	The Goldman Sachs Group, Inc.	27,259	10.2%	-2.7%	188	Hewlett Packard Enterprise Company	2,939	6.0%	0.8%
129	Advanced Micro Devices, Inc.	7,603	10.2%	-21.5%	189	Teradyne, Inc.	2,462	5.7%	-14.3%
130	Mastercard Incorporated	35,333	10.1%	-4.9%	190	Assurant, Inc.	2,224	5.7%	-6.0%
131	Seagate Technology Holdings plc	5,978	10.0%	-6.2%	191	Robert Half Inc.	1,299	5.7%	-1.8%
132	Avery Dennison Corporation	1,151	10.0%	-5.7%	192	Chevron Corporation	28,607	5.5%	-4.3%
133	The Kroger Co.	4,483	9.8%	-1.3%	193	American Express Company	20,518	5.4%	-4.7%
134	Waste Management, Inc.	4,967	9.7%	-4.8%	194	Prudential Financial, Inc.	8,000	5.2%	-0.7%
135	International Business Machine	3,063	9.7%	-0.2%	195	QUALCOMM Incorporated	15,829	5.2%	-11.2%
136	BlackRock, Inc.	9,421	9.7%	-3.9%	196	CSX Corporation	15,339	5.1%	-2.8%
137	Walmart Inc.	30,828	9.6%	-2.5%	197	Yum! Brands, Inc.	3,895	5.0%	-3.5%
138	APA Corporation	2,599	9.5%	6.9%	198	LKQ Corporation	2,062	5.0%	-6.6%
139	LyondellBasell Industries N.V.	4,850	9.3%	2.5%	199	Huntington Ingalls Industries, Inc.	644	5.0%	1.3%
140	CF Industries Holdings, Inc.	3,006	9.3%	-4.1%	200	DaVita Inc.	6,615	4.8%	-2.6%
141	Humana Inc.	6,638	9.3%	-0.7%	201	Starbucks Corporation	13,625	4.7%	-6.0%
142	McDonald's Corporation	13,680	9.2%	-2.0%	202	Electronic Arts Inc.	6,613	4.6%	-3.1%
143	Visa Inc.	51,010	9.1%	-3.5%	203	Thermo Fisher Scientific Inc.	11,108	4.5%	-9.8%
144	DexCom, Inc.	1,246	9.1%	-13.6%	204	Wynn Resorts, Limited	492	4.5%	7.6%
145	Globe Life Inc.	2,286	9.1%	0.9%	205	IQVIA Holdings Inc.	3,966	4.3%	-6.2%
146	The Hartford Financial Services	5,059	8.8%	-4.2%	206	Omnicom Group Inc.	2,542	4.2%	-0.8%
147	Mondelez International, Inc.	8,544	8.7%	-3.3%	207	Ford Motor Company	1,056	4.1%	-4.7%
148	Ross Stores, Inc.	4,218	8.5%	0.8%	208	Church & Dwight Co., Inc.	1,350	4.0%	-4.6%
149	Dover Corporation	993	8.4%	-4.3%	209	Agilent Technologies, Inc.	3,881	3.9%	-8.0%
150	HCA Healthcare, Inc.	20,498	8.4%	-4.9%	210	Celanese Corporation	2,388	3.9%	-4.1%
151	PepsiCo, Inc.	8,155	8.3%	-2.5%	211	Hologic, Inc.	2,936	3.6%	-6.8%
152	JPMorgan Chase & Co.	61,912	8.3%	-2.1%	212	Juniper Networks, Inc.	2,092	3.6%	1.1%
153	Emerson Electric Co.	4,867	8.2%	-0.8%	213	Cisco Systems, Inc.	34,258	3.6%	-1.7%
154	Principal Financial Group, Inc.	3,961	8.2%	-3.8%	214	DuPont de Nemours, Inc.	1,158	3.6%	3.6%
155	Akamai Technologies, Inc.	2,725	8.2%	-2.4%	215	Comcast Corporation	30,329	3.5%	-2.0%
156	Lowe's Companies, Inc.	42,558	8.1%	-8.5%	216	Johnson & Johnson	20,929	3.4%	-1.3%
157	Gilead Sciences, Inc.	6,274	8.1%	1.6%	217	Nasdaq, Inc.	2,558	3.3%	-10.1%
158	Analog Devices, Inc.	9,457	8.0%	-8.3%	218	Waters Corporation	4,011	3.3%	-4.2%
159	Cummins Inc.	3,715	8.0%	-4.4%	219	Willis Towers Watson Public Lir	4,947	3.2%	-6.8%
160	Texas Instruments Incorporated	9,948	8.0%	-4.4%	220	Honeywell International Inc.	19,409	3.1%	-4.5%
161	HP Inc.	15,938	8.0%	0.8%	221	Quest Diagnostics Incorporated	4,669	2.9%	-5.8%
162	Morgan Stanley	36,968	7.9%	-7.3%	222	Constellation Brands, Inc.	3,444	2.9%	-2.2%
163	Johnson Controls International plc	11,250	7.8%	-4.1%	223	MGM Resorts International	8,206	2.8%	-5.8%
164	The Hershey Company	1,937	7.6%	-6.1%	224	The Coca-Cola Company	5,040	2.7%	-3.8%
165	Lockheed Martin Corporation	20,202	7.6%	-2.9%	225	Regions Financial Corporation	2,168	2.6%	-1.9%
166	Ralph Lauren Corporation	2,113	7.6%	4.3%	226	Host Hotels & Resorts, Inc.	838	2.5%	1.4%
167	S&P Global Inc.	18,115	7.6%	-9.0%	227	Domino's Pizza, Inc.	2,923	2.3%	-5.6%
168	MetLife, Inc.	14,168	7.5%	-3.8%	228	BorgWarner Inc.	533	2.3%	-0.6%
169	NRG Energy, Inc.	3,495	7.5%	1.0%	229	ANSYS, Inc.	1,095	2.3%	-10.1%
170	Masco Corporation	3,900	7.3%	-6.8%	230	Laboratory Corporation of Ame	4,130	2.3%	-6.9%
171	The Travelers Companies, Inc.	7,503	7.3%	-1.8%	231	Colgate-Palmolive Company	6,434	1.9%	-4.1%
172	Leidos Holdings, Inc.	1,621	7.3%	-4.3%	232	Cognizant Technology Solutior	7,125	1.7%	0.4%
173	The Sherwin-Williams Company	8,293	7.0%	-7.6%	233	Amazon.com, Inc.	6,000	1.6%	-8.5%
174	The Allstate Corporation	8,531	6.9%	-3.2%	234	Pool Corporation	1,015	1.5%	-15.2%
175	Zoetis Inc.	4,384	6.8%	-7.3%	235	VeriSign, Inc.	4,232	1.4%	-5.0%
176	Fiserv, Inc.	12,387	6.8%	-2.6%	236	The Bank of New York Mellon Cr	11,735	1.3%	-0.6%
177	Intercontinental Exchange, Inc.	3,949	6.8%	-2.6%	237	Altria Group, Inc.	5,345	1.3%	0.3%
178	The Procter & Gamble Company	41,273	6.8%	-5.9%	238	Netflix, Inc.	6,870	1.1%	-6.2%
179	Genuine Parts Company	988	6.6%	-2.9%	239	Becton, Dickinson and Company	1,750	1.0%	-1.6%
180	TE Connectivity Ltd.	4,759	6.5%	-5.6%	240	State Street Corporation	8,697	1.0%	-1.7%

Rank	Company Name	Total Buybacks (\$ millions)	Buyback ROI	Buyback Effectiveness	Rank	Company Name	Total Buybacks (\$ millions)	Buyback ROI	Buyback Effectiveness
241	Universal Health Services, Inc.	3,578	0.8%	-1.1%	301	General Mills, Inc.	3,887	-6.3%	-16.7%
242	Kellanova	930	0.4%	-0.4%	302	Conagra Brands, Inc.	548	-6.4%	-6.8%
243	NIKE, Inc.	17,149	0.2%	-7.7%	303	T. Rowe Price Group, Inc.	4,328	-6.6%	-10.3%
244	Fifth Third Bancorp	3,456	0.2%	-4.7%	304	Zions Bancorporation, National	2,231	-6.8%	-5.0%
245	Jack Henry & Associates, Inc.	804	0.2%	-2.4%	305	M&T Bank Corporation	4,118	-6.9%	-5.4%
246	Kimberly-Clark Corporation	2,225	0.1%	-4.8%	306	Delta Air Lines, Inc.	2,371	-7.0%	0.0%
247	Archer-Daniels-Midland Company	4,406	0.1%	-11.0%	307	Comerica Incorporated	2,385	-7.3%	-1.0%
248	Evergy, Inc.	1,629	0.0%	-0.8%	308	AT&T Inc.	9,192	-7.4%	-6.3%
249	Cincinnati Financial Corporation	949	-0.1%	-7.7%	309	Trimble Inc.	1,030	-7.4%	-12.1%
250	Wells Fargo & Company	61,434	-0.2%	0.3%	310	SBA Communications Corporation	2,641	-7.5%	-13.9%
251	Franklin Resources, Inc.	1,355	-0.3%	-0.3%	311	Citigroup Inc.	29,476	-7.7%	-4.3%
252	Aptiv PLC	1,056	-0.4%	-4.0%	312	RTX Corporation	18,162	-8.2%	-11.7%
253	Mettler-Toledo International Inc.	4,550	-0.5%	-12.1%	313	Edwards Lifesciences Corporation	4,008	-8.2%	-13.8%
254	Dollar Tree, Inc.	2,869	-0.6%	-7.0%	314	Best Buy Co., Inc.	6,171	-8.5%	-12.8%
255	Sysco Corporation	2,327	-0.6%	-3.6%	315	Keurig Dr Pepper Inc.	1,316	-8.5%	-14.0%
256	Corpay, Inc.	4,993	-0.7%	-5.3%	316	Global Payments Inc.	7,115	-8.7%	-10.0%
257	Discover Financial Services	8,673	-0.8%	-8.6%	317	Capital One Financial Corporation	12,210	-9.0%	-14.5%
258	Corning Incorporated	1,765	-0.9%	-1.6%	318	KeyCorp	2,330	-9.4%	-6.5%
259	Allegion plc	969	-0.9%	-6.3%	319	CarMax, Inc.	2,024	-9.7%	-10.0%
260	Autodesk, Inc.	4,779	-0.9%	-9.8%	320	Medtronic plc	5,826	-9.9%	-8.5%
261	L3Harris Technologies, Inc.	10,779	-1.0%	-7.0%	321	Charter Communications, Inc.	47,013	-10.1%	-14.7%
262	Henry Schein, Inc.	1,834	-1.1%	-2.3%	322	The Boeing Company	3,586	-10.6%	-2.2%
263	The Interpublic Group of Comp	840	-1.2%	-10.2%	323	Ball Corporation	2,463	-11.3%	-13.9%
264	Norfolk Southern Corporation	10,664	-1.3%	-7.8%	324	Target Corporation	12,787	-11.5%	-21.2%
265	Keysight Technologies, Inc.	3,107	-1.3%	-16.2%	325	Align Technology, Inc.	2,096	-11.8%	-10.7%
266	United Parcel Service, Inc.	7,485	-1.4%	-10.6%	326	Dominion Energy, Inc.	3,080	-12.8%	-7.8%
267	Occidental Petroleum Corporation	5,157	-1.4%	-1.1%	327	Southwest Airlines Co.	2,451	-14.6%	-2.3%
268	Freeport-McMoRan Inc.	1,986	-1.5%	-22.7%	328	FMC Corporation	1,073	-14.7%	-13.2%
269	CBRE Group, Inc.	3,290	-1.5%	-13.2%	329	The Mosaic Company	2,982	-14.8%	-17.0%
270	The PNC Financial Services Groi	10,663	-1.8%	-5.5%	330	Paycom Software, Inc.	623	-15.2%	-23.3%
271	Bank of America Corporation	69,944	-2.1%	-5.8%	331	United Airlines Holdings, Inc.	1,998	-15.6%	-0.8%
272	The Charles Schwab Corporation	8,457	-2.1%	-8.1%	332	Hasbro, Inc.	307	-15.6%	-7.9%
273	Synchrony Financial	11,911	-2.2%	-7.8%	333	3M Company	5,471	-16.0%	-6.6%
274	eBay Inc.	22,653	-2.3%	-10.1%	334	Zebra Technologies Corporation	1,120	-16.1%	-21.2%
275	PPL Corporation	1,004	-2.5%	-3.6%	335	CVS Health Corporation	6,418	-16.2%	-17.8%
276	Newmont Corporation	1,584	-2.6%	-9.1%	336	Walgreens Boots Alliance, Inc.	5,372	-16.3%	2.8%
277	Biogen Inc.	15,097	-2.8%	2.4%	337	Whirlpool Corporation	2,213	-16.8%	-20.2%
278	Essex Property Trust, Inc.	642	-2.9%	-3.5%	338	Tyson Foods, Inc.	1,512	-17.1%	-16.0%
279	F5, Inc.	1,758	-3.2%	-2.2%	339	Dollar General Corporation	8,964	-17.3%	-19.9%
280	Centene Corporation	5,718	-3.4%	-4.8%	340	American Airlines Group Inc.	1,288	-17.8%	0.5%
281	Skyworks Solutions, Inc.	2,528	-3.5%	-9.7%	341	Enphase Energy, Inc.	1,164	-18.1%	-55.4%
282	Abbott Laboratories	8,442	-3.5%	-11.6%	342	Baxter International Inc.	2,402	-18.6%	-9.0%
283	Huntington Bancshares Incorporated	1,215	-3.6%	-3.6%	343	Bath & Body Works, Inc.	3,548	-18.7%	-25.3%
284	Northern Trust Corporation	2,051	-3.7%	-2.0%	344	Truist Financial Corporation	1,866	-19.1%	-15.5%
285	Pfizer Inc.	10,865	-3.8%	-1.3%	345	Bio-Rad Laboratories, Inc.	895	-19.3%	-21.8%
286	Intel Corporation	31,515	-3.8%	-3.7%	346	Etsy, Inc.	2,112	-19.7%	-26.2%
287	Invesco Ltd.	1,010	-4.1%	-2.5%	347	Norwegian Cruise Line Holdings Ltd.	451	-21.0%	-1.4%
288	C.H. Robinson Worldwide, Inc.	2,706	-4.3%	-5.3%	348	The Estée Lauder Companies Inc.	4,668	-21.4%	-21.8%
289	Bristol-Myers Squibb Company	28,289	-4.7%	-7.3%	349	General Motors Company	13,615	-21.5%	-21.0%
290	Citizens Financial Group, Inc.	2,930	-4.7%	-4.4%	350	Warner Bros. Discovery, Inc.	1,602	-21.8%	-3.8%
291	Tapestry, Inc.	2,849	-4.8%	-2.3%	351	Mohawk Industries, Inc.	1,505	-22.8%	-16.0%
292	Las Vegas Sands Corp.	1,262	-4.9%	-4.0%	352	Paramount Global	439	-23.6%	-2.1%
293	The Clorox Company	1,602	-5.0%	-4.7%	353	Fidelity National Information Se	4,838	-26.5%	-17.9%
294	Consolidated Edison, Inc.	1,000	-5.2%	-11.0%	354	Stanley Black & Decker, Inc.	2,412	-27.0%	-23.6%
295	The J. M. Smucker Company	1,701	-5.3%	-10.0%	355	Generac Holdings Inc.	855	-28.1%	-37.7%
296	Qorvo, Inc.	3,807	-5.5%	-12.1%	356	Rewity, Inc.	556	-28.8%	-30.8%
297	U.S. Bancorp	7,883	-5.6%	-2.8%	357	Illumina, Inc.	1,838	-29.4%	-14.0%
298	International Paper Company	2,918	-5.7%	-6.6%	358	PayPal Holdings, Inc.	18,274	-30.4%	-25.0%
299	Eastman Chemical Company	2,575	-5.8%	-9.0%	359	Moderna, Inc.	5,340	-40.9%	-57.3%
300	WestRock Company	818	-5.9%	-6.2%					

Managements know the key to creating value from buybacks is to concentrate repurchases when share prices are low. Unfortunately for all stakeholders, more than half of S&P 500 repurchasers bought back more shares when their prices were above the trend, from 2019–2023.

VIBE is a fact-based platform that provides managements with real-time signals to help override natural biases, limited information, and human error to better inform the timing of share repurchases.

Buyback programs can and should be sources of immense value for many companies. VIBE can help them harness it.

## VIBE signals:

### 1 PERFORMANCE & VALUATION

Based on the company and its peers, indicates the likelihood of a desirable Buyback ROI.

### 2 CONSENSUS VS. PRICE

Based on the dividend yield and an expected share price CAGR, derived from consensus EPS growth.

### 3 RCE-IMPLIED PREMIUM

Based on Fortuna Advisors' Residual Cash Earnings (RCE) measure of intrinsic share value.

### 4 VIBE SIMULATIONS

Based on 1000+ simulations that incorporate growth, margins, and asset intensity.

*If you would like to learn more about how Fortuna Advisors can improve your buyback program, or would like a summary of your company's Buyback ROI performance, please reach out to us.*

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