

STRICTLY CONFIDENTIAL AND NOT FOR DISTRIBUTION

TRIVARIATE RESEARCH

BUYBACKS – THE STORY IS DRAMATICALLY CHANGING

ADAM S. PARKER, Ph.D., FOUNDER

adam@trivariateresearch.com
646-734-7070

CHANG GE, ANALYST

chang@trivariateresearch.com
614-397-0038

MAXWELL ARNOLD, ANALYST

maxwell@trivariateresearch.com
347-514-1234

RYAN MCGOVERN, DIR. OF RESEARCH SALES

ryan@trivariateresearch.com
973-271-8017

COLIN COONEY, HEAD OF SALES

colin@trivariateresearch.com
617-910-7934

RESEARCH SUMMARY AND CONCLUSIONS

Market repurchases dominate: 86% of buybacks are open-market programs, typically authorizing about 6% of shares to be repurchased over one-to-three years. Fixed-price (2%), Negotiated (6%), and Accelerated Share Repurchases (ASRs) (5%) are far less common. The median ASR is over 10% of total shares outstanding.

Program type matters: ASRs skew toward large-cap firms and spark the strongest one-day reactions, while fixed-price buybacks deliver the best long-term returns.

Management teams should consider non-traditional buyback strategies.

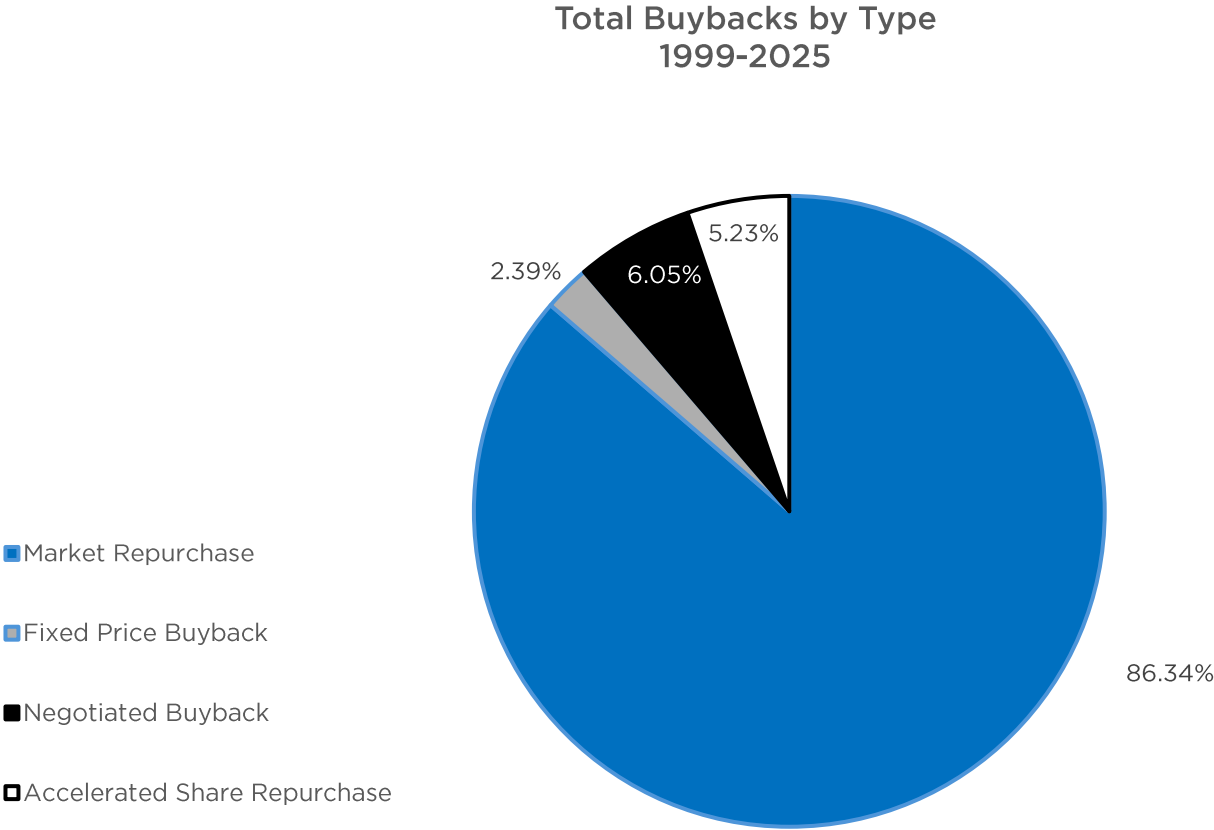
Momentum and size influence outcomes: The composition of companies that announce buybacks has dramatically shifted in the last three years, with the average company that announces a buyback in 2025 having outperformed their industry group by 12.1% over the last year. Prior to this change, companies announced share repurchase plans after underperformance.

Junk stocks and those with no-dividend firms: Lower-quality companies announcing big buybacks outperform high-quality peers over three years. Non-dividend payers outperform dividend payers by roughly 8% vs. 2% in subsequent relative returns. **Our view is that companies with a dividend that think their stock is quite cheap should do an ASR or announce a much larger total authorization for a regular buyback to drive performance.**

Buybacks work better post-covid: Once a mediocre use of capital, buybacks have generated strong excess returns since 2020. Success varies by industry—Household Durables, Construction, Capital Markets, and Metals lead; REITS and Chemicals lag.

MOST BUYBACKS ARE BASIC MARKET REPURCHASES

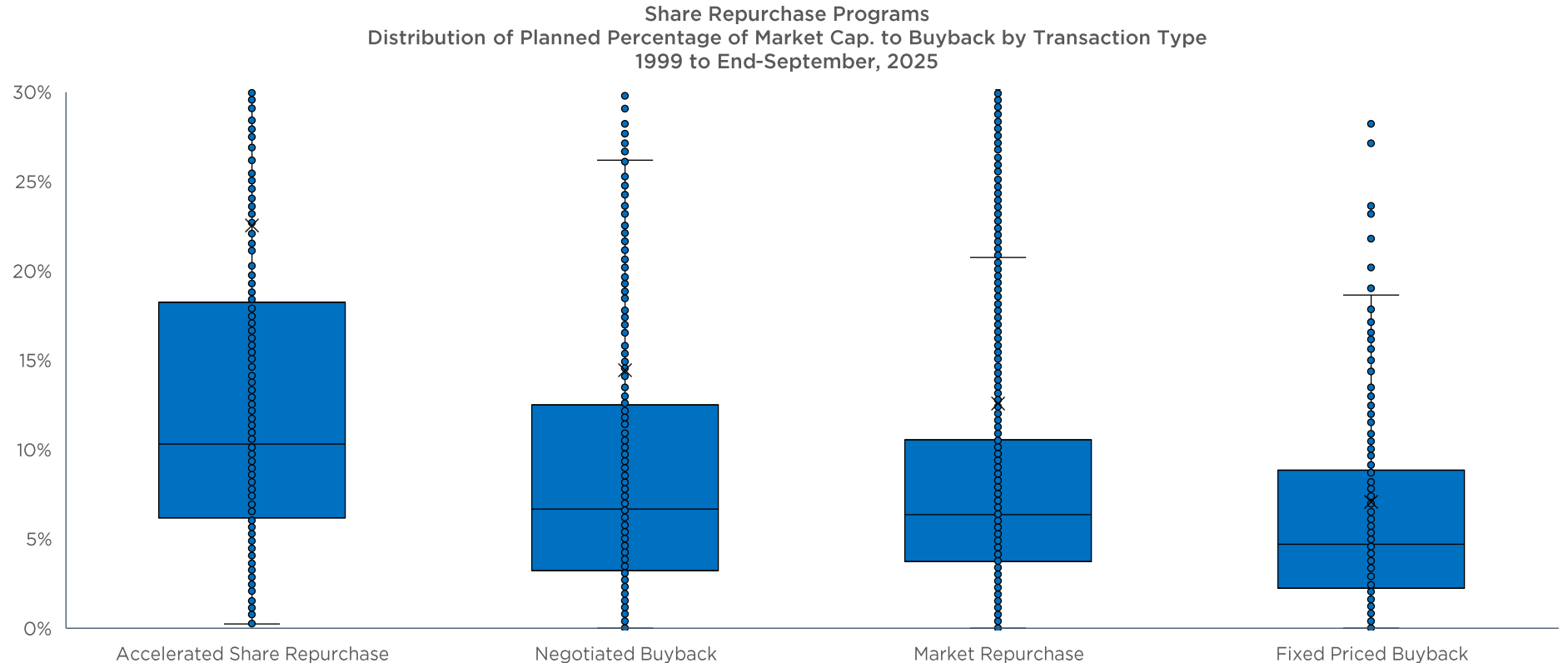
We examined stock repurchases and divided them into four distinct categories. This includes the most common, market repurchases, which are 86% of the total observations we analyzed. Fixed price buybacks were 2.4%, negotiated buybacks were 6%, and accelerated share repurchases 5.2%. In total, our sample size was over 17,000 observations.



Source: Trivariate Research

THE MEDIAN OPEN MARKET REPURCHASE PLAN IS 6.3%

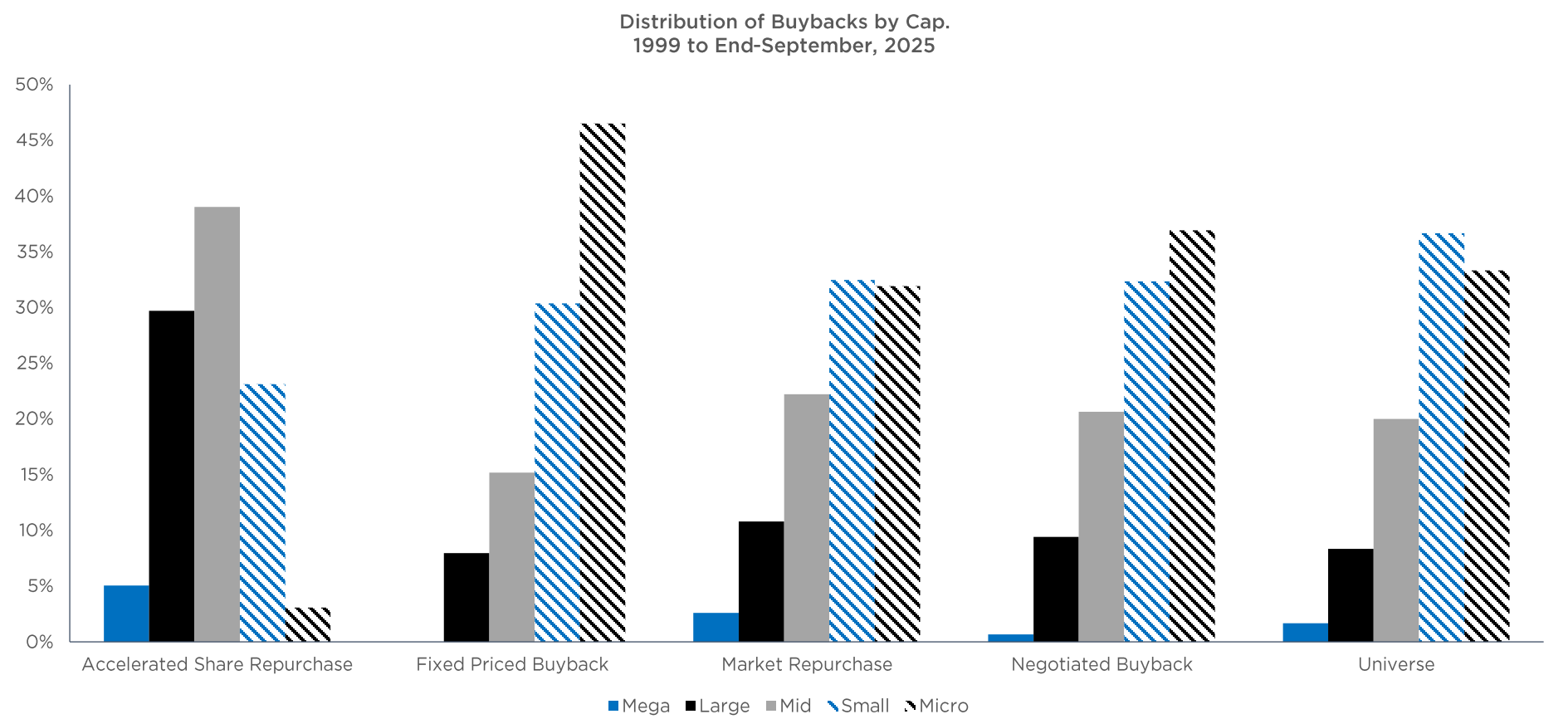
Accelerated share repurchase programs are large, with the median program aiming to buy back over 10% of shares. Negotiated buybacks and market repurchases are similar sizes, with the median being 6.7% and 6.3%, respectively. Fixed price buybacks are the smallest with a median of 4.7% and a lower interquartile range. Importantly, we analyze the market repurchases from the point of board authorization. Hence, these percentages reflect the repurchase amount for the buyback plan, which could take place over 1-3 years for an open market repurchase plan, while ASRs typically are done over a short duration, like days or weeks.



Source: Trivariate Research

ASRS SKEW TOWARDS LARGE CAPS, LITTLE DIFFERENCE IN OTHERS

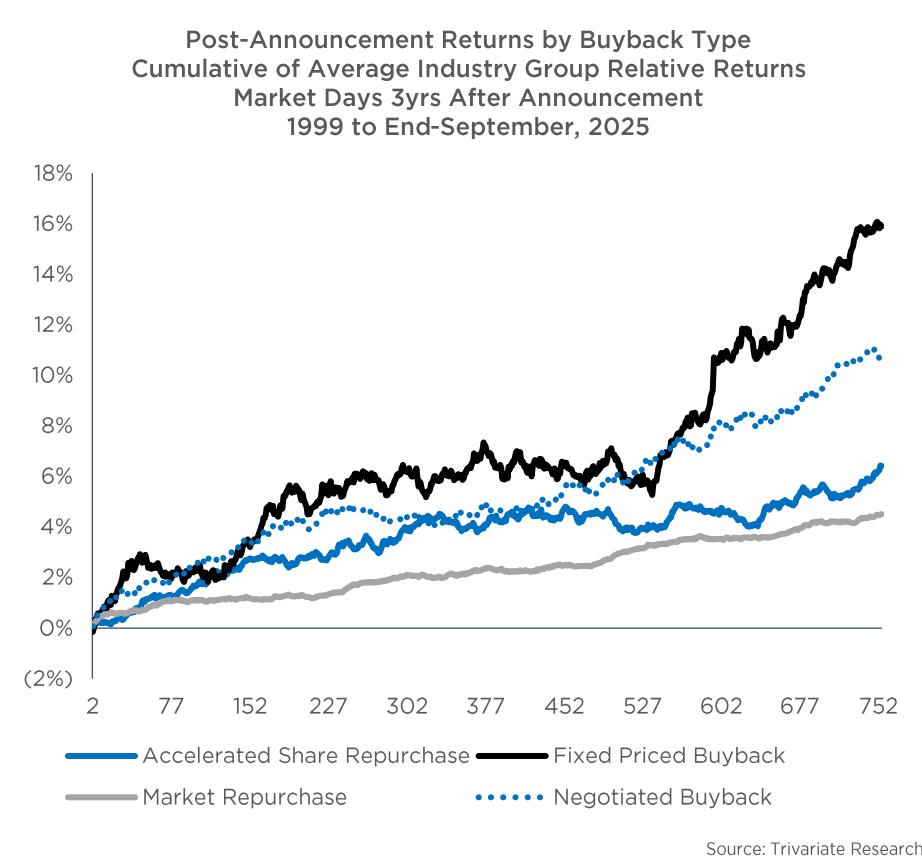
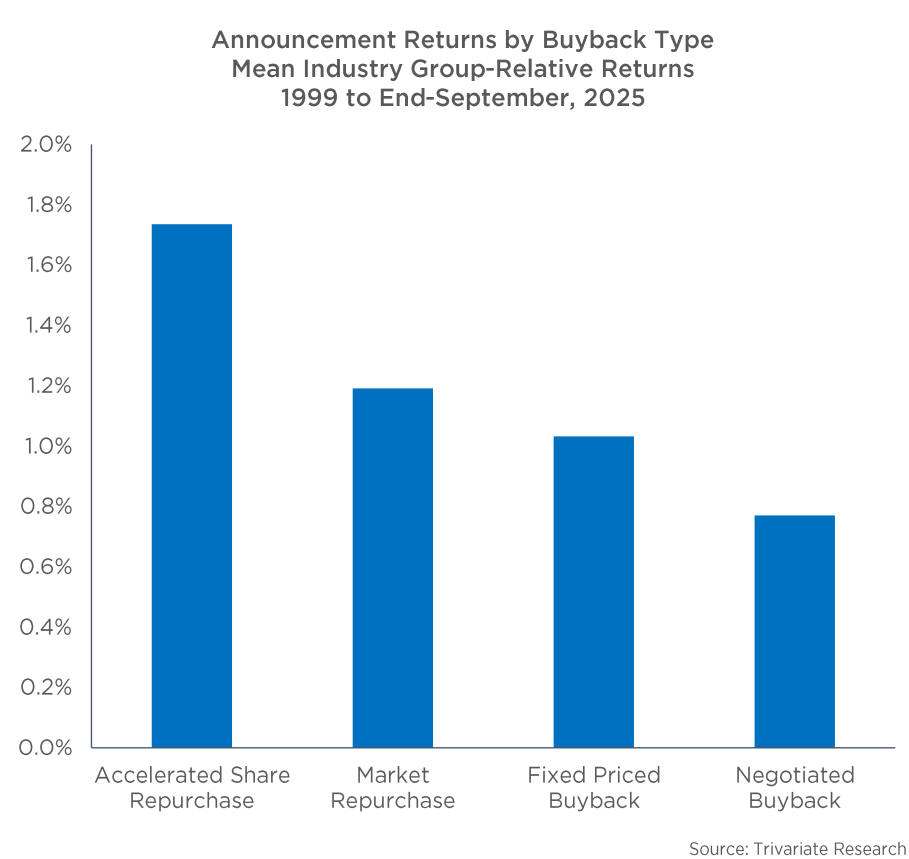
We show the type of buyback by the size of company. Accelerated share repurchase (ASR) programs skew towards mega-/large- and mid-cap. companies vs. the universe average (bars on the right) with relatively few micro-caps participating. Fixed price buybacks are usually done by micro and small cap companies, with no mega caps. in our sample. Market repurchases and negotiated buybacks have a similar cap distribution as you would expect from random chance sampling of our stock universe (right cluster of bars).



Source: Trivariate Research

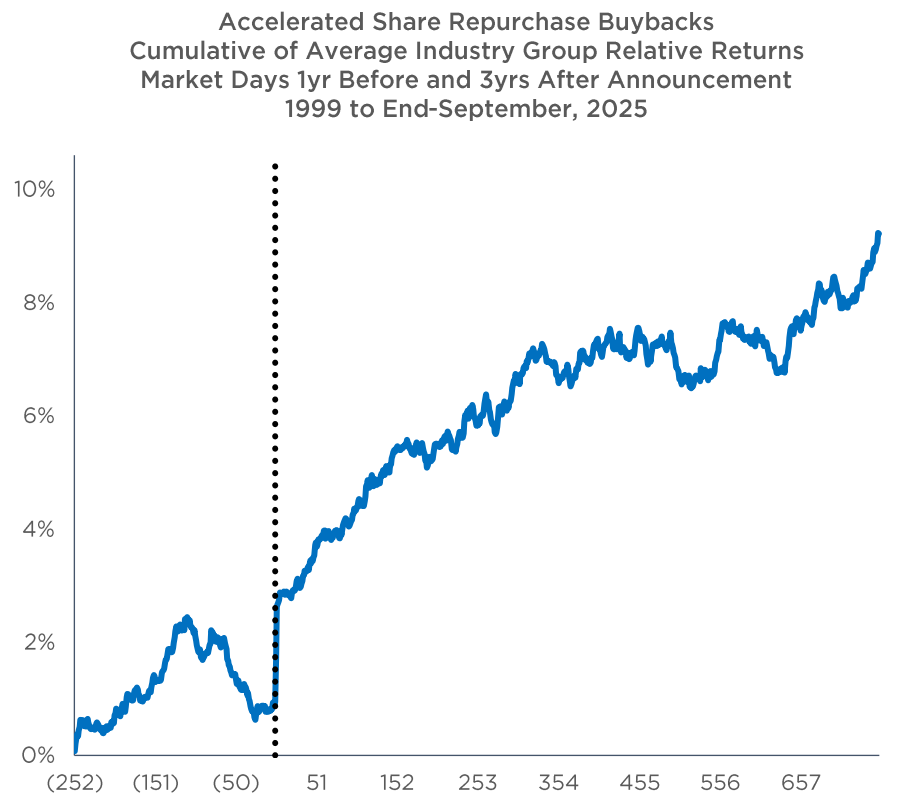
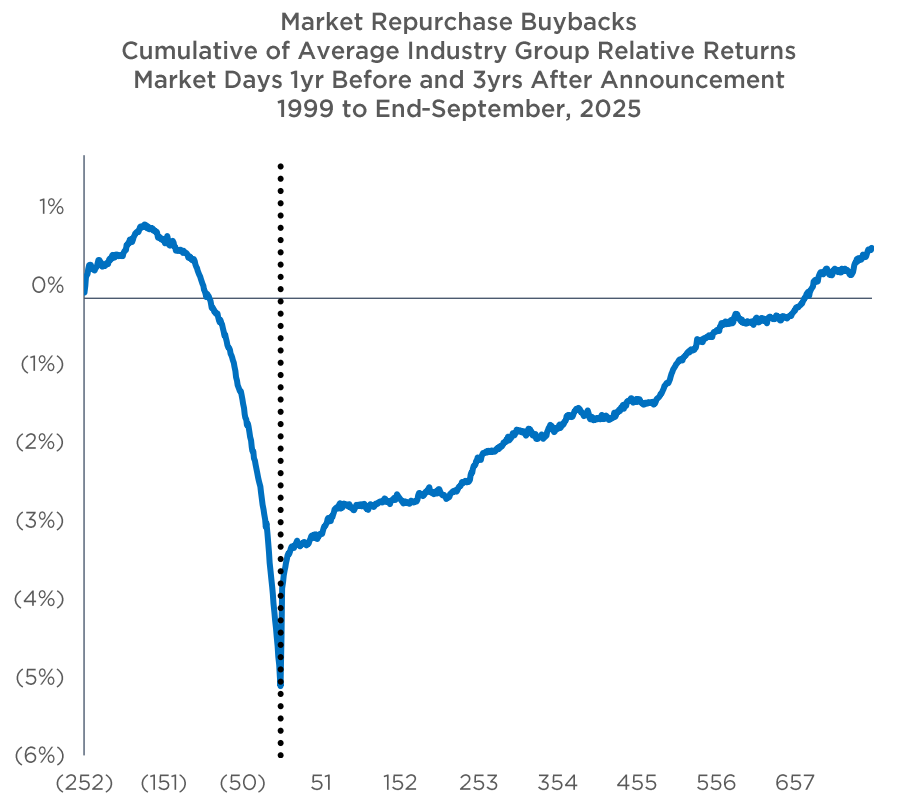
THE TYPE OF BUYBACK IMPACTS THE MARKET REACTION

We evaluated the performance of each stock relative to its industry average following the announcement of a buyback. Accelerated share repurchase plans see the largest 1-day market reaction to the announcement, followed by vanilla market repurchases, fixed price buybacks, and negotiated buybacks (left). In the 1-3 years after announcement, all three special buyback types outperform a typical market repurchase plan, with fixed price buybacks having the largest return, albeit with a lower sample size than the other types (right). Management teams should consider non-traditional buyback strategies.



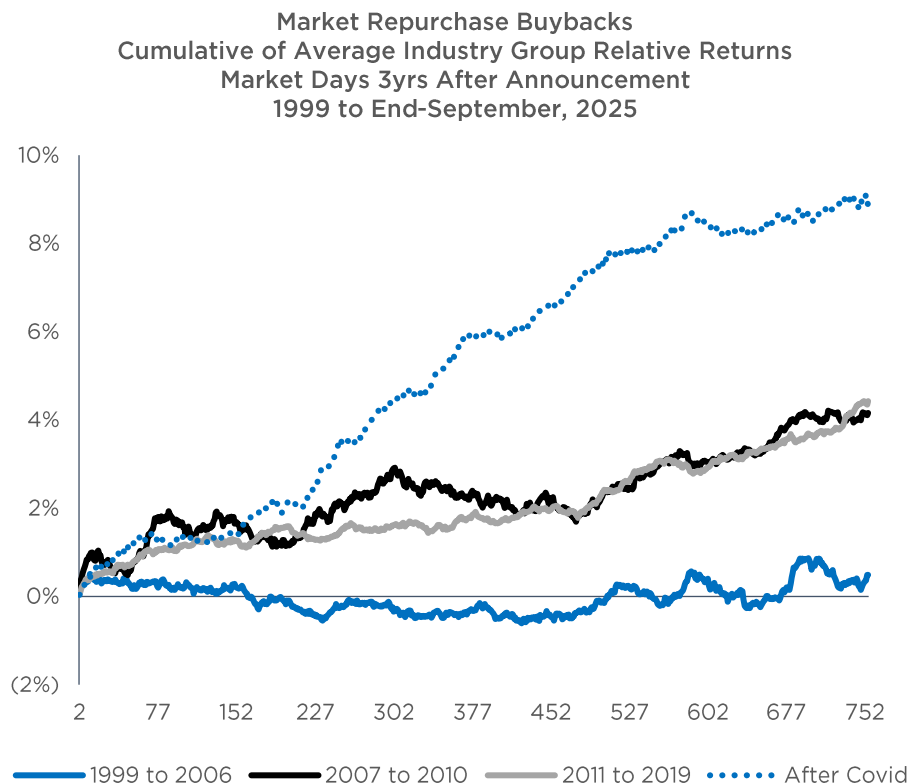
BUYBACKS AND ASRS HAVE VERY DIFFERENT RETURN PROFILES

Historically, companies sharply underperform their industry group average leading up to the announcement of an open market repurchase plan (left). Accelerated share repurchase plans do not underperform prior to the announcement. In both cases, there is still room for the stocks to go after the initial pop on the announcement (right).

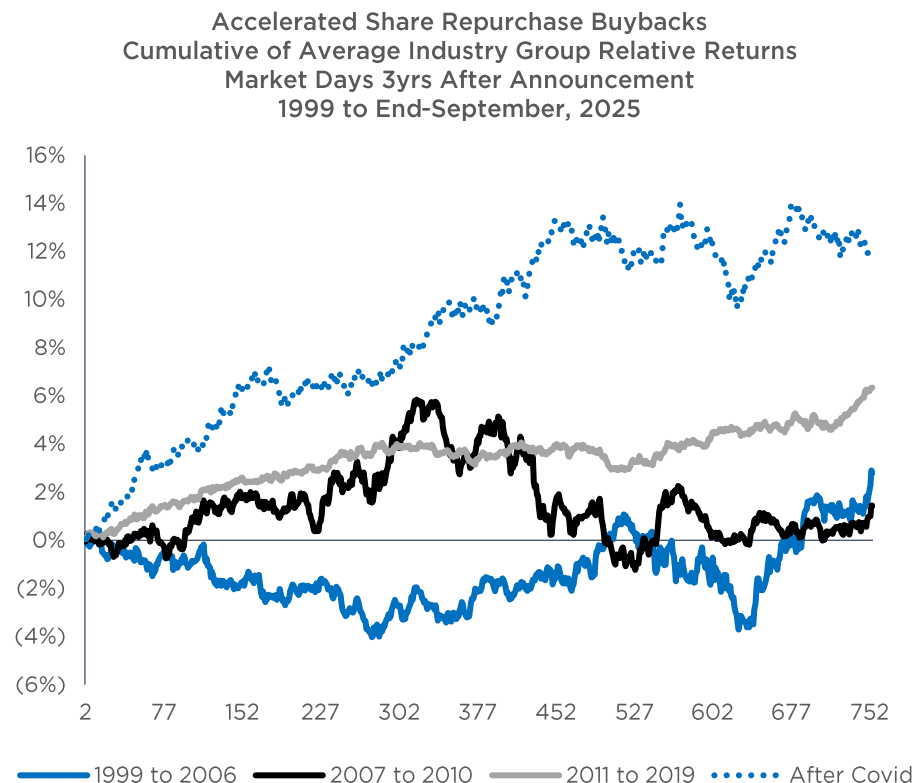


THE STORY IS CHANGING: BUYBACKS ARE BETTER THAN EVER

Over the past five years, open market repurchases, and accelerated share repurchases have proven to be an effective strategy, performing far better than in previous market regimes of the last 25 years. We have written many times for years that buybacks over the long-term weren't an effective strategy for capital deployment, as from 1999-2019 the total cumulative excess return relative to industry average was barely positive (left). But since COVID, the strategy has improved. ASRs have also been a far better strategy since COVID (right).



Source: Trivariate Research

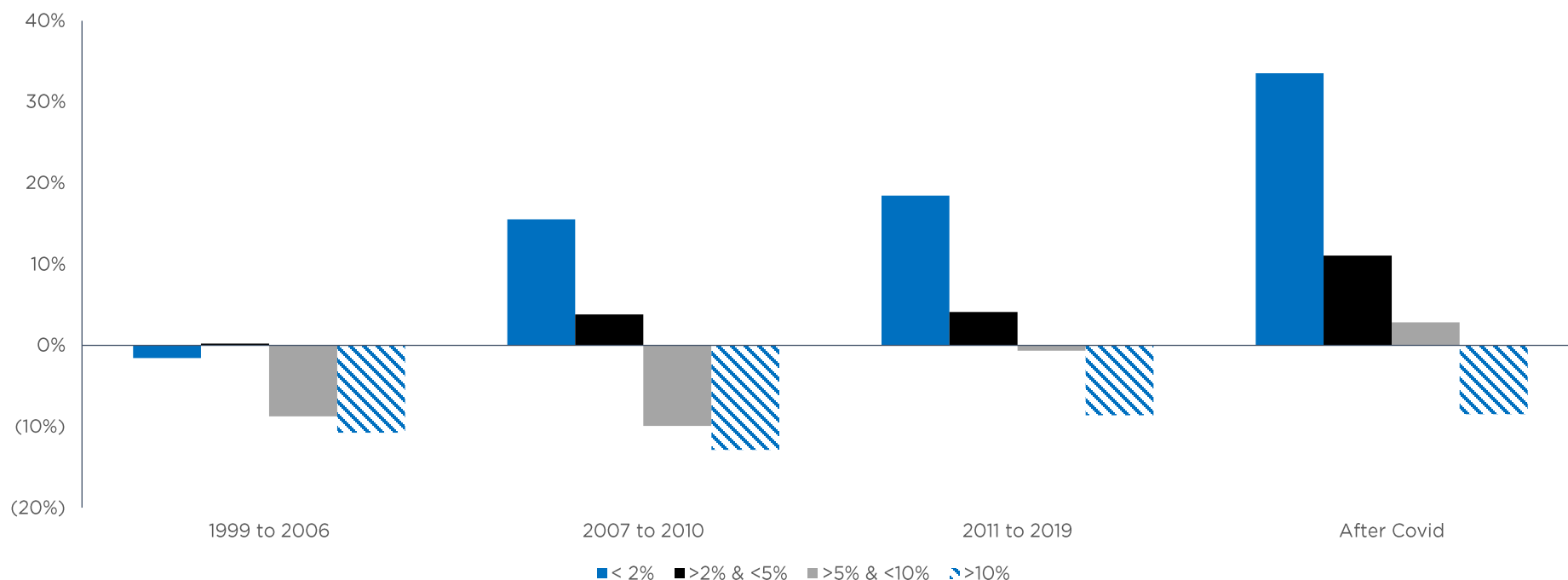


Source: Trivariate Research

PERFORMANCE NOW APPEARS TO LEAD BUYBACK ANNOUNCEMENTS

We looked at whether the amount of the announced buyback and the PRIOR stock performance have changed over time. Stocks that have outperformed their industry average by more than 30% in the previous year tend to authorize small buybacks (less than 2%) of the total, whereas previously those announcing relatively small buybacks did not perform as well prior. However, those announcing large buybacks (more than 10%) of shares have consistently underperformed their industry average over every time frame, including recently. This suggests that firms undertaking large-scale repurchases often underperform steadily, while those initiating modest buybacks have delivered strong results.

Mean 1-Year Industry Group-Relative Return Before Buyback Announcement
By Percentage of Market Cap. Company Plans to Purchase
1999 to End-September, 2025



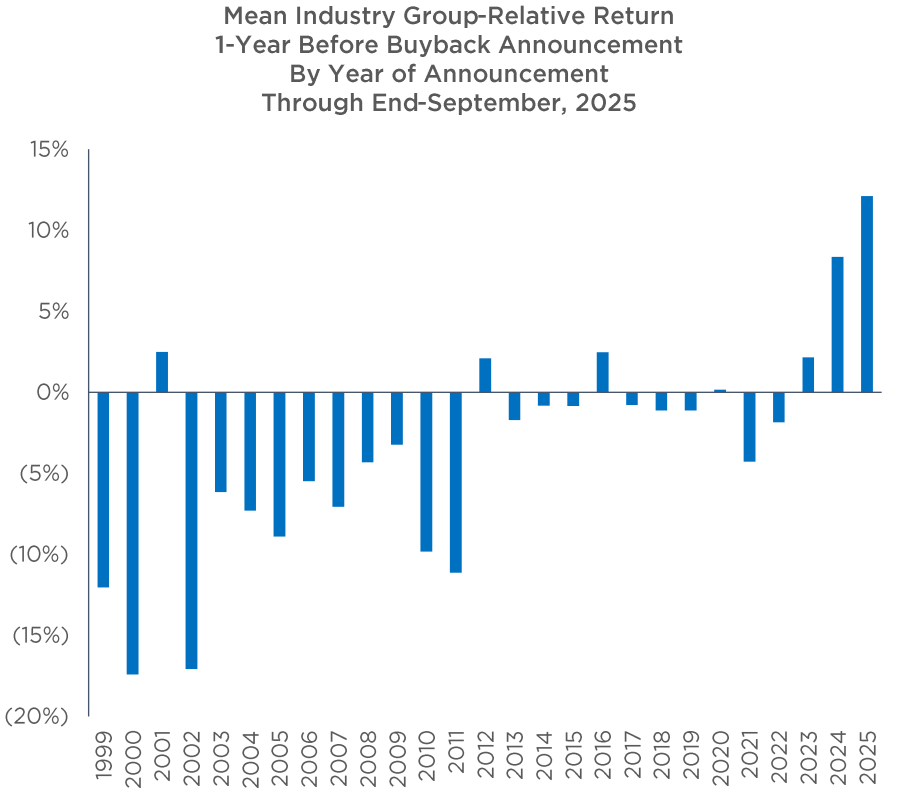
Source: Trivariate Research

MOMENTUM PLAYS A ROLE IN BUYBACKS - AND TIMES ARE CHANGING

We dimensioned the average 1-year industry group relative return following buyback announcements by prior 1-year momentum and percentage of shares to be repurchased. Companies in the bottom quintile of momentum (underperforming their industry group by at least 38.7%) that announced a buyback < 2% of the shares outstanding performed best (left). This cohort likely reflects companies that are buying back stock opportunistically. As the percentage that they buy back increases, the trailing momentum matters less. The composition of companies that announce buybacks has dramatically shifted in the last three years, with the average company that announces a buyback in 2025 having outperformed their industry group by 12.1% over the last year (right). Prior to this change, companies announced share repurchase plans after underperformance.

Mean 1-Year Industry Group-Relative Return By Trailing 1-Year Momentum Quintile And Percentage of Market Cap. Company Plans to Purchase 1999 to End-September, 2025				
1yr Momentum Quintile	< 2%	>2% & <5%	>5% & <10%	>10%
Q1	(0.7%)	4.2%	4.0%	6.9%
Q2	2.5%	2.1%	1.8%	5.2%
Q3	0.7%	2.2%	3.5%	9.2%
Q4	(0.5%)	(0.0%)	2.2%	2.8%
Q5	14.7%	(0.5%)	5.6%	9.5%

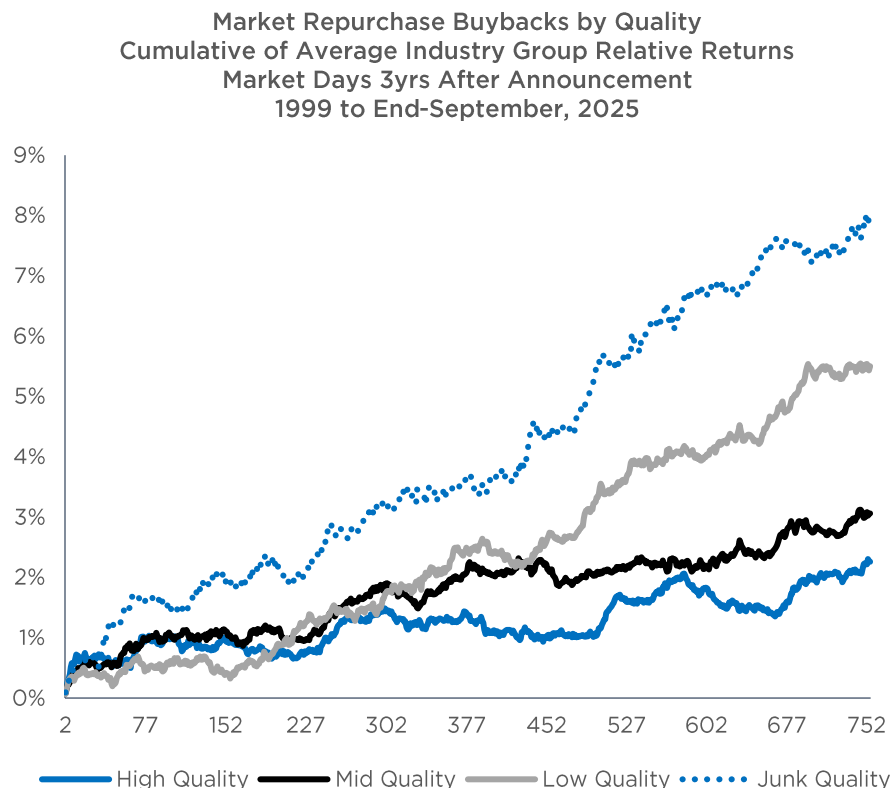
Source: Trivariate Research



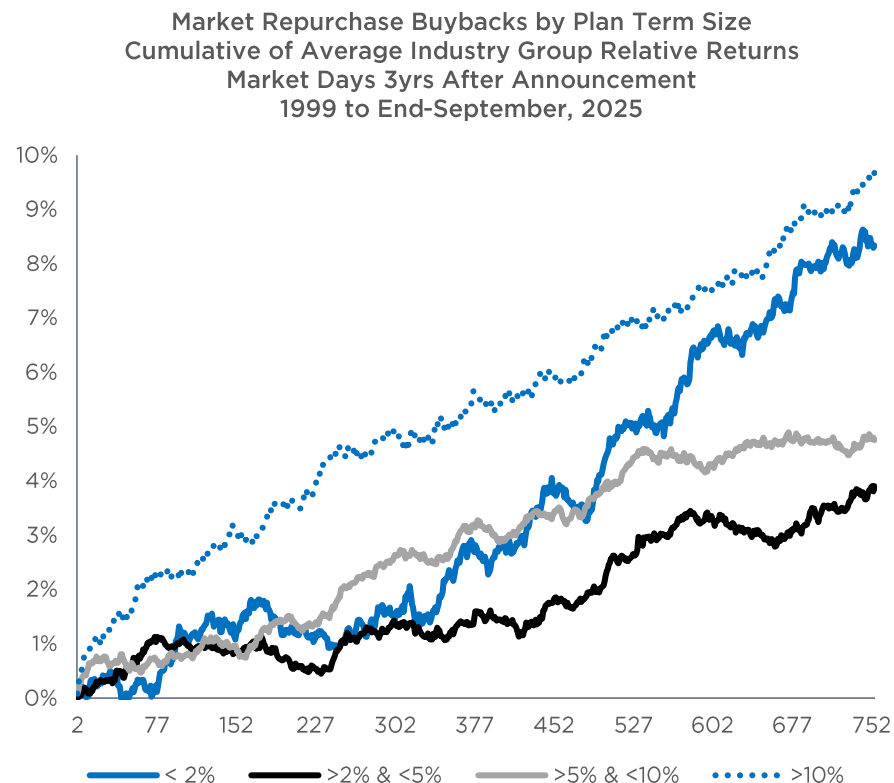
Source: Trivariate Research

JUNK BEATS QUALITY, LARGE BUYBACKS HAVE OUTSIZED RETURNS

Junk stocks that announce a buyback outperform high quality stocks after the initial announcement (left). We break returns by the percentage of market cap that a company plans to repurchase. There is little difference between returns for buyback plans for less than 10% of the outstanding shares, as other variables have a larger weight for returns (right). However, those that plan to buyback at least 10% of shares outperform consistently for the next 3 years. While big announcements don't have particularly strong previous momentum, on average they consistently outperform following the announcements.



Source: Trivariate Research

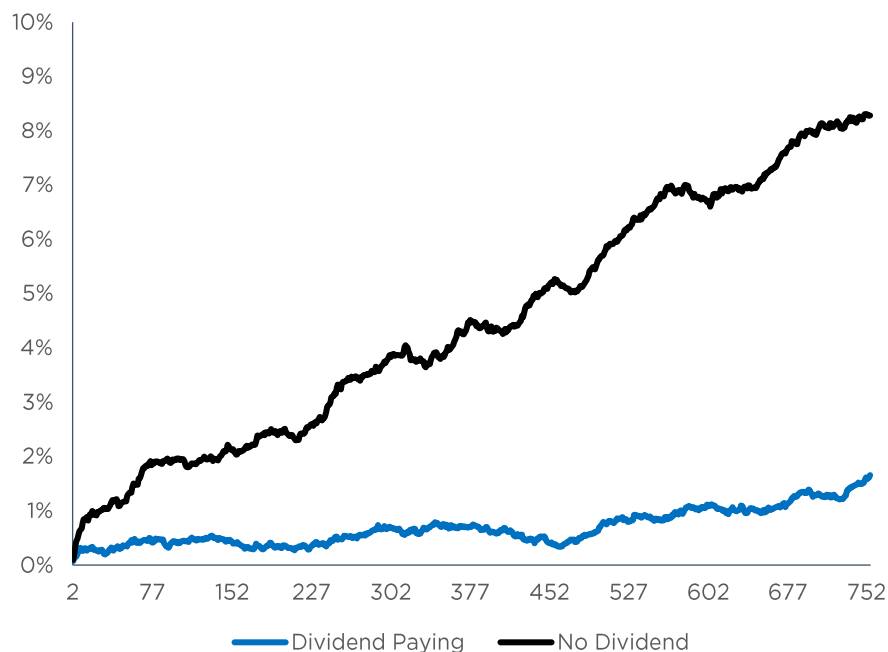


Source: Trivariate Research

COMPANIES WITHOUT A DIVIDEND FAR OUTPERFORM

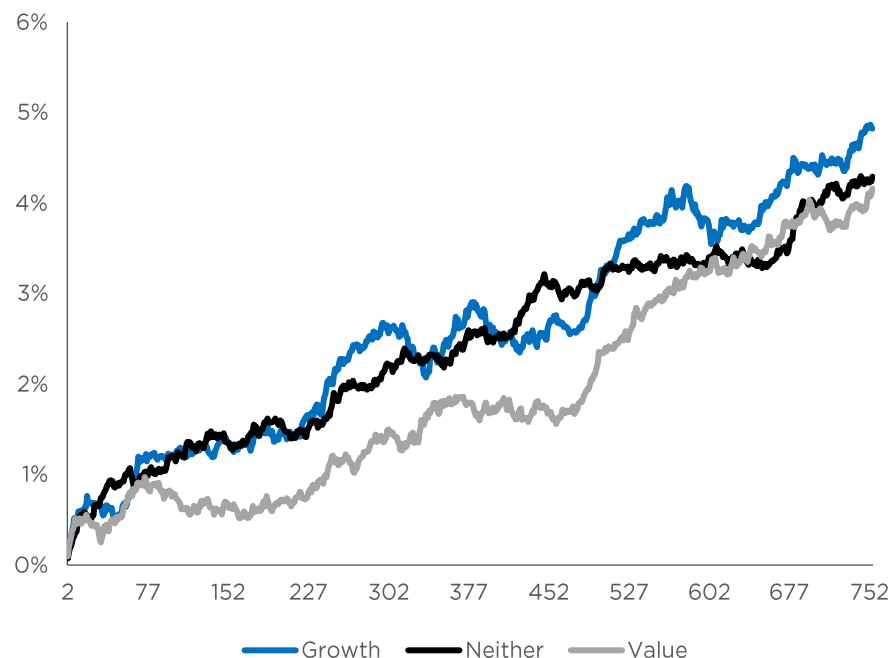
Companies that announce a stock repurchase plan and do not pay a dividend go on to outperform their industry group by an average of 8.3% over the next 3 years, compared to 1.6% for those that pay a dividend (left). Our view is that companies with a dividend that think their stock is quite cheap should do an ASR or announce a much larger total authorization for a regular buyback to drive performance. This difference in returns cannot be explained by growth vs. value, as value stocks that announce a buyback only slightly underperform growth stocks (right).

Market Repurchase Buybacks by Dividend Paying
Cumulative of Average Industry Group Relative Returns
Market Days 3yrs After Announcement
1999 to End-September, 2025



Source: Trivariate Research

Market Repurchase Buybacks by Style
Cumulative of Average Industry Group Relative Returns
Market Days 3yrs After Announcement
1999 to End-September, 2025



Source: Trivariate Research

BUYBACK EFFICACY VARIES BY INDUSTRY

Buyback efficacy has varied across industries. The industries where buybacks have the most success include Household Durables, Construction & Engineering, Capital Markets, and Metals & Mining. The worst industries include REITs, Chemicals, IT Services, and Leisure Products. It makes sense to us that in more cyclical businesses well-timed buybacks can be effective. We have less of a “prior” on why they are particularly ineffective in Chemicals.

1-Year Industry Group Relative Returns by Industry After Buyback Announcement
1999 to End-September, 2025

Industry	Mean Return	Median Return	Sample Size	T-Statistic	Largest 3 Companies
Household Durables	12.6%	3.4%	166	3.26	DHI, GRMN, LEN
Construction & Engineering	24.8%	5.6%	76	3.14	PWR, EME, FIX
Capital Markets	8.8%	7.0%	247	3.11	MS, GS, BLK
Metals & Mining	25.8%	16.6%	62	3.03	SCCO, NEM, AEM
Electronic Equipment, Instruments & Components	8.0%	0.2%	174	2.67	APH, GLW, TEL
Oil, Gas & Consumable Fuels	10.4%	2.3%	198	2.21	XOM, CVX, COP
Ground Transportation	11.1%	2.8%	58	2.00	UBER, UNP, NSC
Household Products	7.2%	8.1%	32	1.80	PG, CL, KMB
Commercial Services & Supplies	9.1%	7.6%	83	1.78	WM, CTAS, RSG
Life Sciences Tools & Services	8.5%	(1.2%)	70	1.52	TMO, DHR, A
Machinery	(1.6%)	(6.3%)	198	(0.65)	CAT, DE, PH
Energy Equipment & Services	(4.6%)	(12.8%)	79	(0.78)	SLB, BKR, HAL
Diversified Telecommunication Services	(6.6%)	(9.6%)	31	(0.94)	T, VZ, ASTS
Containers & Packaging	(5.7%)	(12.1%)	41	(1.27)	IP, SW, PKG
Textiles, Apparel & Luxury Goods	(8.4%)	(12.5%)	68	(1.78)	NKE, TPR, LULU
Banks	(1.9%)	(4.3%)	1104	(2.78)	JPM, BAC, WFC
Leisure Products	(17.8%)	(20.2%)	40	(3.12)	HAS, MAT, GOLF
IT Services	(10.1%)	(18.9%)	147	(3.40)	IBM, SHOP, ACN
Chemicals	(14.5%)	(20.7%)	120	(4.84)	LIN, SHW, ECL
Mortgage Real Estate Investment Trusts (REITs)	(15.9%)	(14.9%)	62	(5.20)	NLY, AGNC, STWD

RECENT BUYBACK ANNOUNCEMENTS THAT SCREEN WELL

Below we show recent buyback announcements from companies that do not have a dividend and are in industries where buybacks have outperformed in the last 25 years.

Recently Announced Buyback Programs, Companies with No Dividend in Industries Where Buybacks Work
End-September, 2025

Ticker	Company	Industry	Market Cap. (US \$Bn.)	Announcement Date	1-Year Industry- Relative Return	Quintile of Industry- Relative Return	Planned % of Mkt. Cap. to Buyback
CPRX	Catalyst Pharmaceuticals, Inc.	Biotechnology	2.41	10/1/2025	45%	Q1	8.3%
TGTX	TG Therapeutics, Inc.	Biotechnology	4.28	9/3/2025	409%	Q1	2.3%
POST	Post Holdings, Inc.	Food Products	6.15	8/29/2025	33%	Q1	8.3%
ROIV	Roivant Sciences Ltd.	Biotechnology	7.75	8/11/2025	246%	Q1	6.4%
NVR	NVR, Inc.	Household Durables	21.77	8/11/2025	65%	Q1	3.3%
UBER	Uber Technologies, Inc.	Ground Transportation	183.50	8/6/2025	233%	Q1	10.7%
GEO	The GEO Group, Inc.	Commercial Services & Supplies	3.59	8/6/2025	238%	Q1	8.4%
MYRG	MYR Group Inc.	Construction & Engineering	2.82	7/30/2025	33%	Q1	2.4%
UTHR	United Therapeutics Corporation	Biotechnology	12.96	7/30/2025	22%	Q2	7.5%
HAYW	Hayward Holdings, Inc.	Building Products	2.98	7/30/2025	(32%)	Q4	13.9%
TDY	Teledyne Technologies Incorporated	Electronic Equip., Instr. & Comp.	24.01	7/23/2025	(16%)	Q3	7.7%
ENVX	Enovix Corporation	Electrical Equipment	1.99	7/2/2025	(23%)	Q4	3.1%
SMCI	Super Micro Computer, Inc.	Tech. Hardware, Storage & Per.	23.88	6/23/2025	505%	Q1	0.7%
CDNA	CareDx, Inc	Biotechnology	0.95	6/3/2025	(11%)	Q3	5.3%
PFGC	Performance Food Group Company	Consumer Staples Dist. & Retail	12.60	5/28/2025	41%	Q1	3.7%
CDE	Coeur Mining, Inc.	Metals & Mining	3.55	5/27/2025	151%	Q1	1.5%
MIR	Mirion Technologies, Inc.	Electronic Equip., Instr. & Comp.	3.26	5/23/2025	99%	Q1	0.8%
CVCO	Cavco Industries, Inc.	Household Durables	3.96	5/22/2025	123%	Q1	3.6%
DFIN	Donnelley Financial Solutions, Inc.	Capital Markets	1.33	5/19/2025	40%	Q1	9.8%
VRTX	Vertex Pharmaceuticals Incorporated	Biotechnology	130.98	5/19/2025	67%	Q1	3.6%

DISCLOSURES

Disclaimer

This presentation is confidential and may not be reproduced or distributed without the express prior written permission of Trivariate Research LP and its affiliates (collectively, “Trivariate”).

The information contained herein reflects the opinions and projections of Trivariate as the date of publication, which are subject to change without notice at any time subsequent to the date of issue. Trivariate does not represent that any opinion or projection expressed herein will be realized. All information provided is for informational and research purposes only and should not be deemed as investment advice or a recommendation to purchase or sell any specific portfolio investment, security or other asset. While the information presented herein is believed to be reliable, no representation or warranty is made concerning the accuracy of any data or other information presented. Information obtained by Trivariate from third party sources in connection with the preparation of this presentation has not been independently verified by Trivariate. Additional information regarding Trivariate is available on request.

Any projections, forecasts, targets or other estimates presented herein constitute “forward-looking statements” that can be identified by the use of forward-looking terminology such as “may,” “will,” “should,” “could,” “would,” “predicts,” “potential,” “forecasted,” “continue,” “expects,” “anticipates,” “future,” “intends,” “plans,” “believes,” “estimates,” or the negatives thereof or other variations thereon or comparable terminology. Furthermore, any projections, targets, forecasts or other estimates in this presentation are “forward-looking statements” and are based upon certain assumptions that may change. Due to various risks and uncertainties, actual events or results or the actual performance of the funds may differ materially from those reflected or contemplated in such forward-looking statements. Moreover, actual events are difficult to predict and often depend upon factors that are beyond the control of the Trivariate. Nothing herein shall under any circumstances create an implication that the information contained herein is correct as of any time after the earlier of the relevant date specified herein or the date of this presentation. In addition, unless the context otherwise requires, the words “include,” “includes,” “including” and other words of similar import are meant to be illustrative rather than restrictive. Forward-looking statements and discussions of the business environment included herein (e.g., With respect to financial markets, business opportunities, demand, investment pipeline and other conditions) are subject to the ongoing novel coronavirus outbreak (“COVID” or “COVID-19”). The full impact of COVID-19 is particularly uncertain and difficult to predict, therefore such forward-looking statements do not reflect its ultimate potential.

This shall not constitute an offer to sell or the solicitation of an offer to buy any interests in any fund, product or account that is or may in the future be advised or managed by, Trivariate or any of its affiliates.

All data sourced from S&P Global, Bloomberg, or our Trivariate estimates. All forward-looking-statements reflect the opinion of Trivariate.