TRIVARIATE RESEARCH

THE KEY INGREDIENTS OF A SUCCESSFUL M&A DEAL

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OUTLINE AND CONCLUSIONS

Today's research on M&A is broken into three sections:

1) **Summary statistics:** Data on the M&A landscape, including by style, substance, size, transaction size, type of deal (public / private, non-US vs. US), and transaction type (cash, stock, combination). See Slide 3 for key summary points.
2) **Post-announcement results:** How did the acquirers trade immediately after the deal announcement and what acquirer and deal attributes were associated with strong or poor results. See Slide 9 for key summary points.
3) **3-Year Results:** How did the acquirers trade for the three-years after the deal announcement and what acquirer and deal attributes were associated with strong or poor results. See Slide 15 for key summary points.

CONCLUSIONS:

On average over the last 25-years, acquirers have performed poorly, with **GROWTH** companies performing the worst, lagging their industry-averages by 12% over the subsequent three years. Acquirers engaging in all-stock deals perform worse than those that do all-cash deals. Performance of acquirers that buy non-US public companies is inferior to those buying US entities. Private deals are better than public deals. Expensive companies shouldn't do deals. Avoiding targets with low net margins and those that don't have extremely high forecasted revenue growth will increase the chance of success. Acquirers that are cheap, not growth, and using all cash to buy a private company appear to have the most attributes of a successful acquisition. Recent deal announcements and the key attributes are shown on Slide 20.

SUMMARY DESCRIPTIVE STATISTICS OF M&A THE LAST 25 YEARS

Background: There has been some recent pick-up in M&A, but, without a doubt, a smaller surge than many market observers forecasted following the "Red Sweep" last November. Hence, we looked at all M&A for the last 25 years for US companies, small-cap or larger, that did a deal of at least 10% of the market capitalization, where they acquired more than 50% of the target. **Our study is comprised of 3,008 announced deals.** The median transaction size of the M&A we evaluated was about 25% of the market cap. of the acquirer, across the market cap. spectrum. Of the announced deals we studied, 91% ultimately closed.

Size, style, substance: Among the acquirers we analyzed, 56% were small-caps, 29% mid-caps, and 15% mega-/large-caps. About one-third of the acquirers were growth stocks, one-third value, and one-third in the middle ground we call neither. The acquirers were also evenly distributed across substance quartile, with between 20% and 30% in each of high-, and mid-, low-, and junk quality.

Public / private, domestic / foreign: 56% of all the transactions we analyzed were a US public company buying another public company, and 44% were a US public company buying a private company. Among the US companies that bought public companies, 80% of the targets were US, and 20% were foreign public equities.

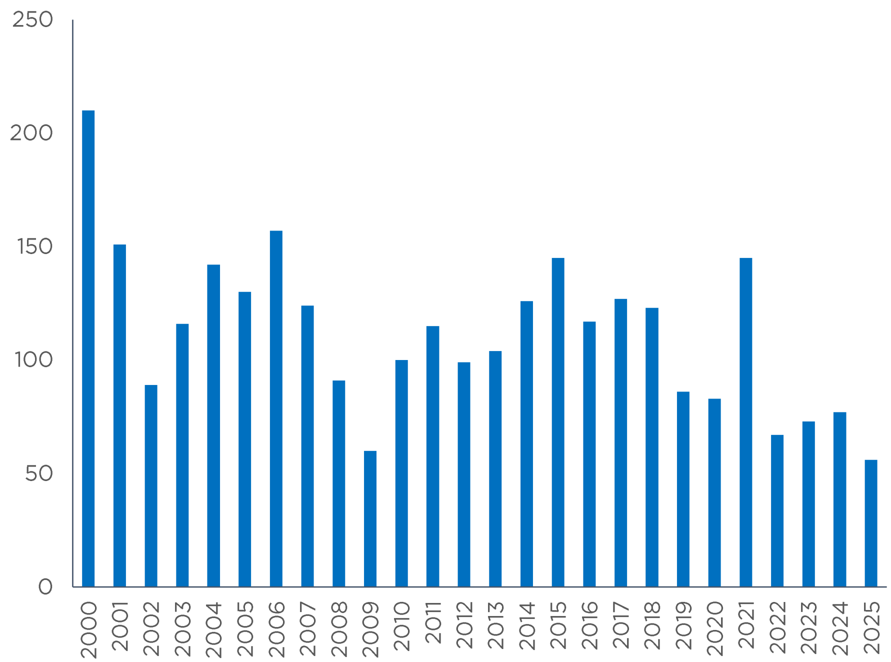
Sector: Financials and Real Estate are the sectors that have engaged in the highest number of deals in the last 25 years, followed by Technology and Industrials. Communication Services and Utilities have the fewest number of deals.

Transaction type and size: 45% of deals were cash only, 31% were offered through a combination of stock and cash, and 24% were stock only. Interestingly, the median all-stock deal appeared to be much larger (46% of the acquirer's market cap.) vs. the median all-cash deal (20% of the acquirer's market cap).

WE ANALYZED OVER 3000 DEALS, 56% WERE SMALL CAPS

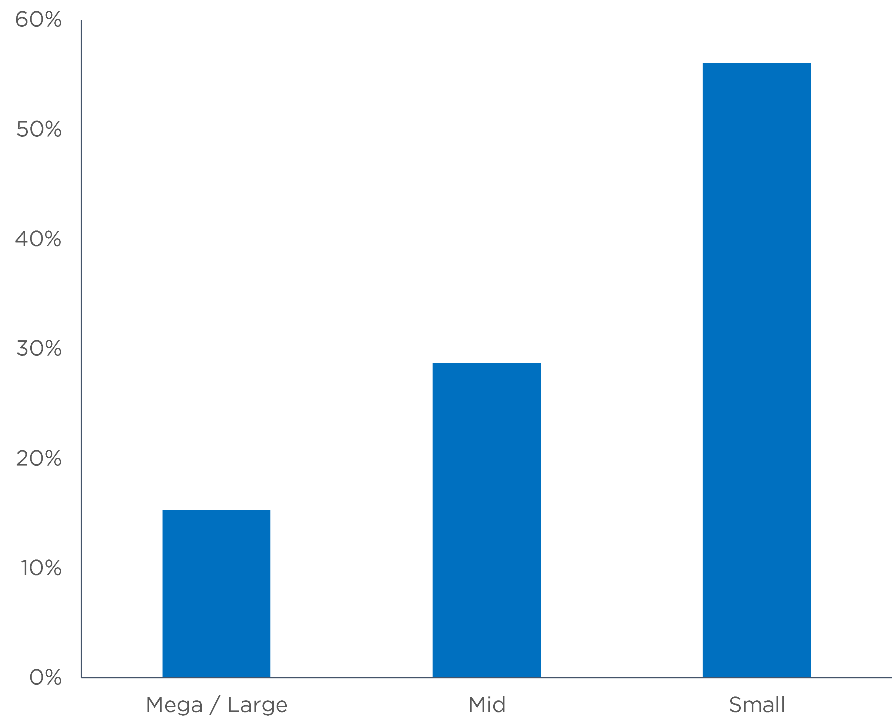
We looked at all M&A for the last 25 years for US companies, small-cap or larger, that did a deal of at least 10% of their market capitalization, where they acquired more than 50% of the target. <u>Our study comprises 3,008 announced deals. Activity was weak in Q1, but has started to pick up since April.</u> Among the acquirers we analyzed, 56% were small-caps, 29% mid-caps, and 15% mega-/large-caps (right).

Number of Acquisition Offers by Year
Offers from Public US Equities, Top 2000
Transaction Size >10% of Acquirer Market Capitalization
2000 to 2025 YTD



Source: Trivariate Research

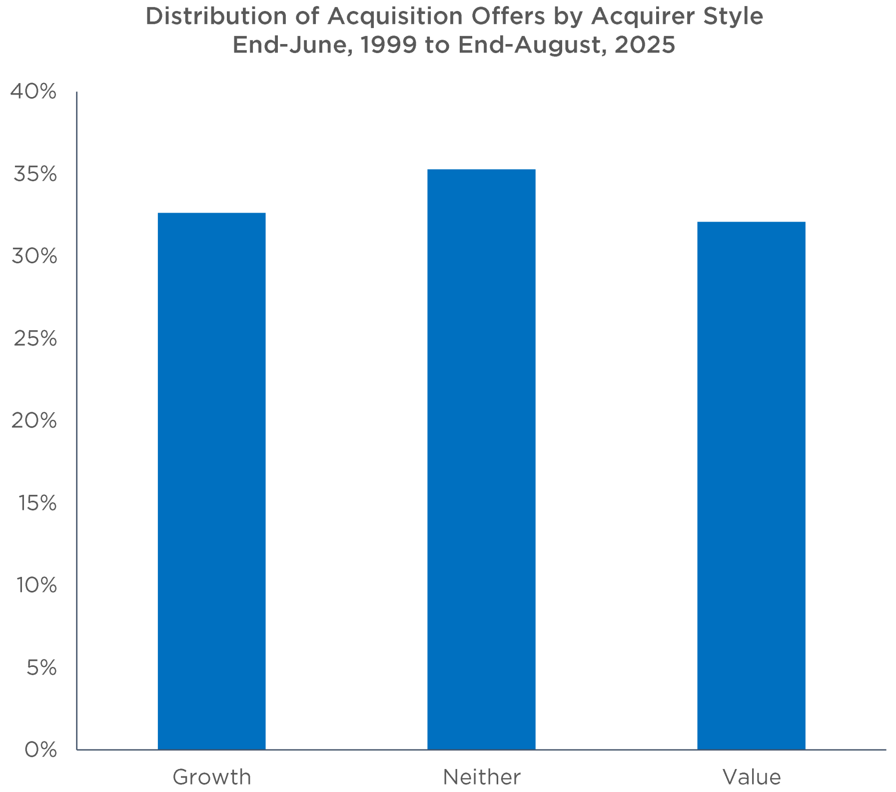
Distribution of Acquisition Offers by Acquirer Market Cap.
End-June, 1999 to End-August, 2025



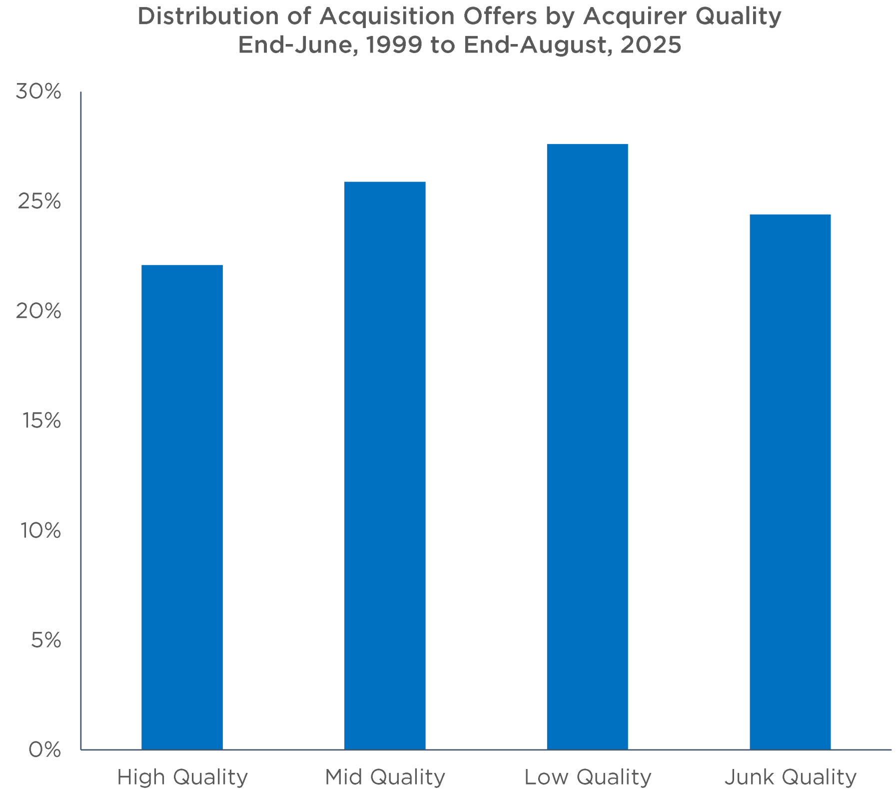
Source: Trivariate Research

ACQUIRERS WERE EVENLY DISTRIBUTED BY STYLE AND SUBSTANCE

Among the deals we analyzed, about one-third of the acquirers were growth stocks, one-third value, and one-third in the middle ground we call neither (left). The acquirers were also evenly distributed across substance quartile, with between 20% and 30% in high-, mid-, low-, and junk quality (right).



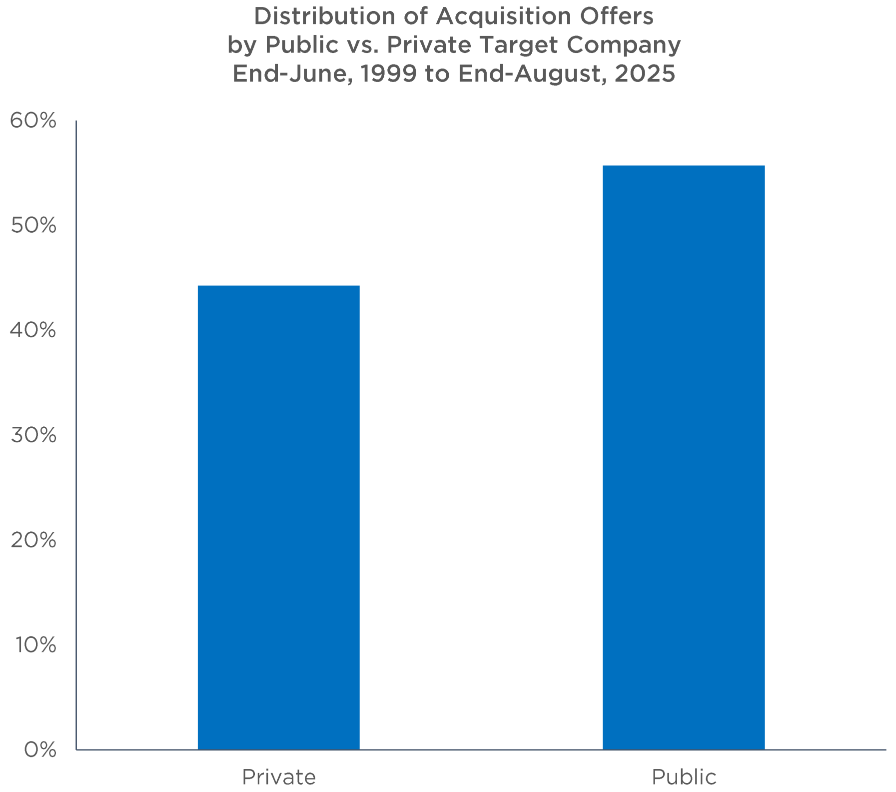
Source: Trivariate Research



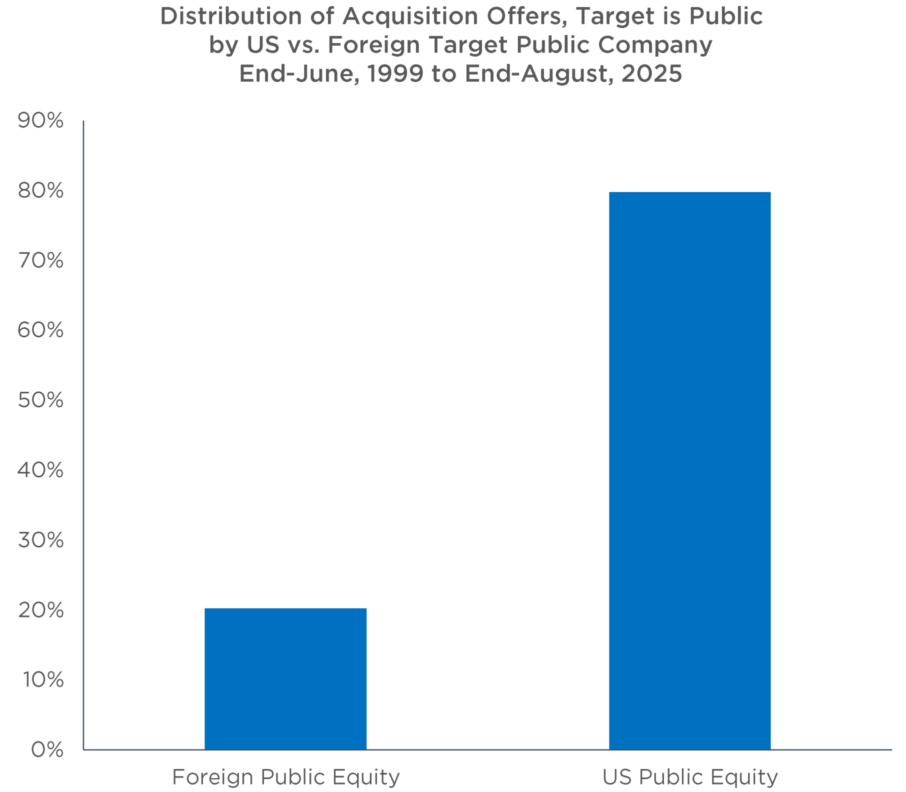
Source: Trivariate Research

NEARLY ½ OF DEALS ARE PRIVATE, 80% OF THE PUBLICS ARE US

Of the deals we analyzed, 56% were a US public company buying another public company, and 44% were a US public company buying a private company (left). Among the US companies that bought public companies, 80% of the targets were US, and 20% were foreign public equities (right).



Source: Trivariate Research

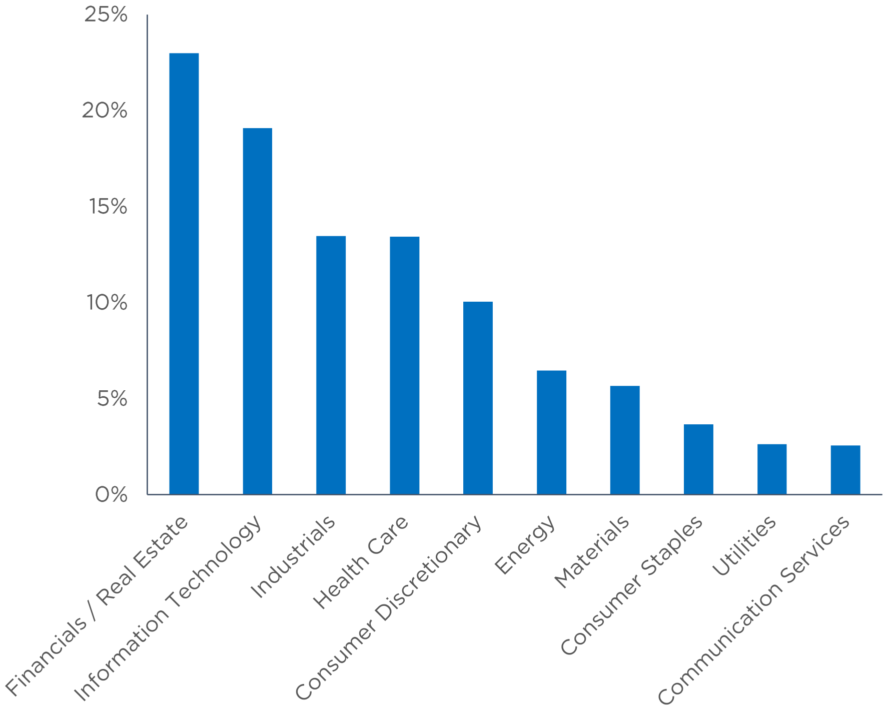


Source: Trivariate Research

FINS / REITS HAVE THE MOST ACTIVITY, 45% OF DEALS ARE ALL CASH

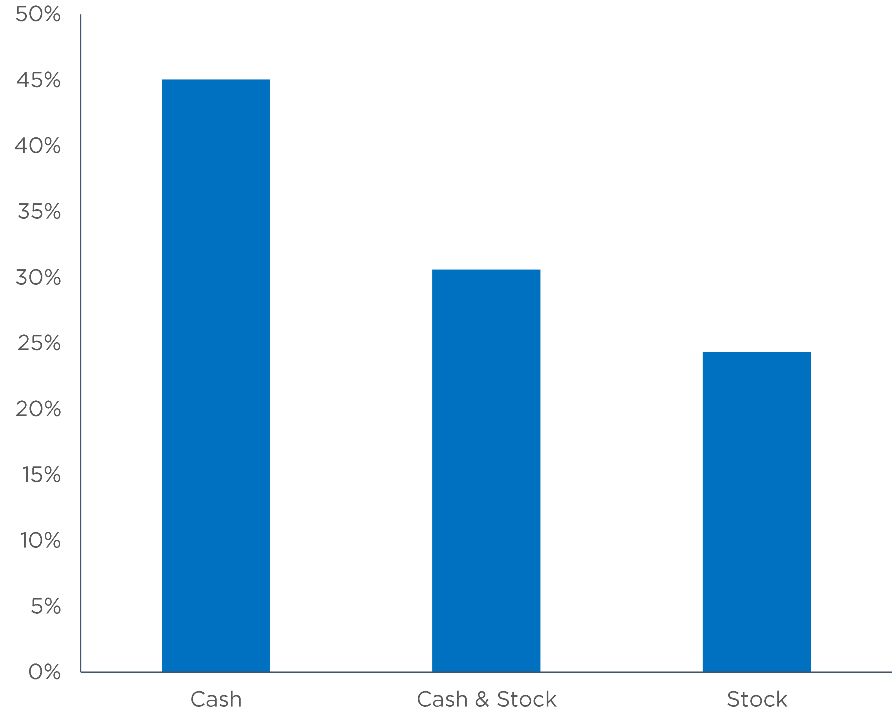
Financials and Real Estate are the sectors that have engaged in the highest number of deals in the last 25 years (left), followed by Technology and Industrials. Communication Services and Utilities have the fewest number of deals. 45% of deals were cash only, 31% were offered through a combination of stock and cash, and 24% were stock only (right).

Distribution of Acquisition Offers by Acquirer Sector
End-June, 1999 to End-August, 2025



Source: Trivariate Research

Distribution of Acquisition Offers by Consideration Type
End-June, 1999 to End-August, 2025

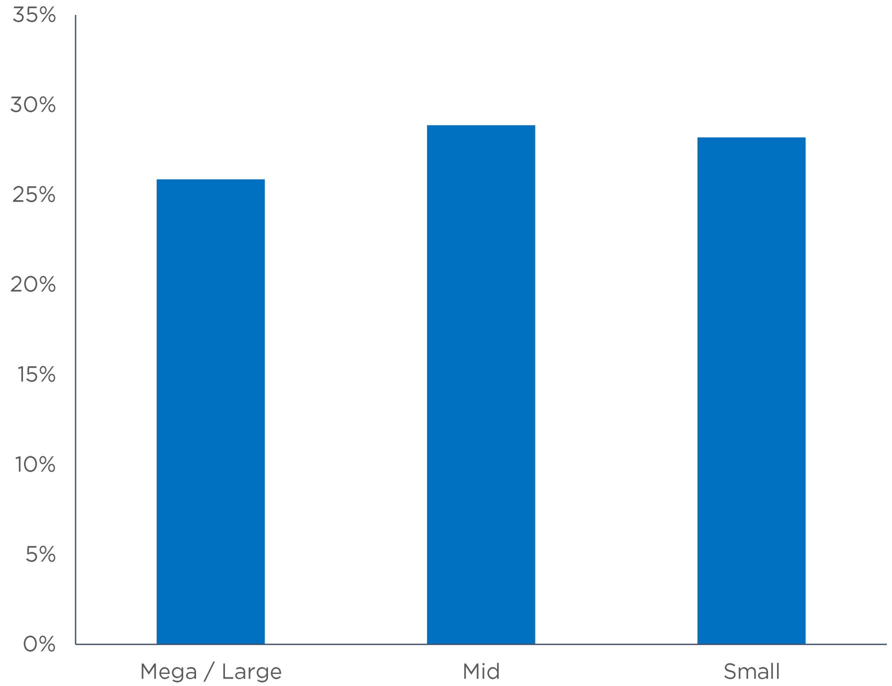


Source: Trivariate Research

THE MEDIAN TRANSACTION IS 25% OF THE ACQUIRER

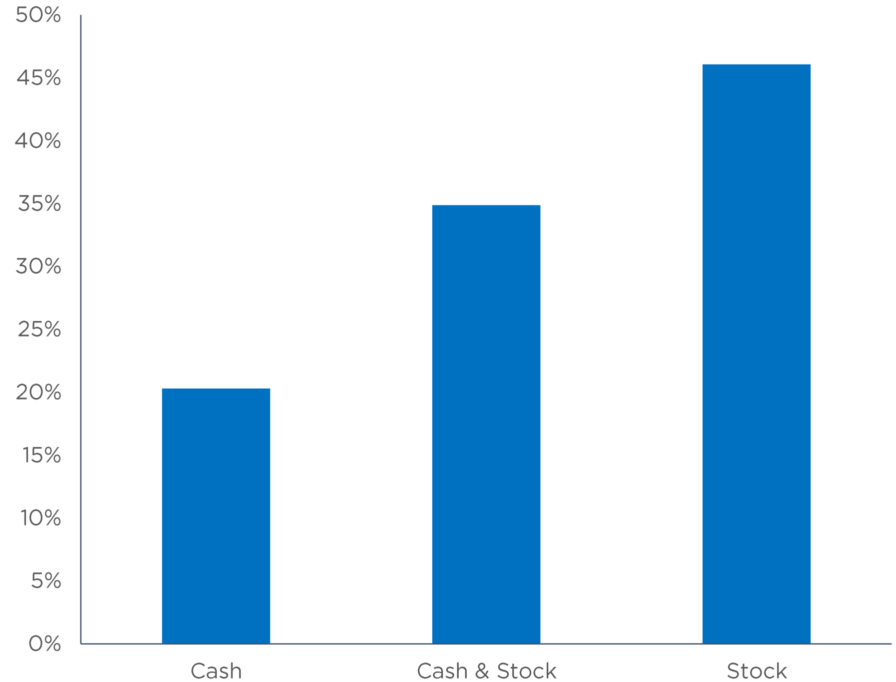
The median transaction size of the M&A we evaluated was about 25% of the market capitalization of the acquirer (left), independent of the acquirer's size. On the right, we show that the median all-stock deal appeared to be much larger (46% of the acquirer's market cap.) vs. the median all-cash deal (20% of the acquirer's market cap).

Median Transaction Size as a % of Acquirer Market Cap.
by Acquirer Market Cap. Bucket
End-June, 1999 to End-August, 2025



Source: Trivariate Research

Median Transaction Size as a % of Acquirer Market Cap.
by Consideration Type
End-June, 1999 to End-August, 2025



Source: Trivariate Research

POST-ANNOUNCEMENT RESULTS

Background: We studied the returns of the acquirers for a **full trading day** post the deal announcement relative to their industry group average. Note: the "deal reaction" is a 1- or 2-day stock return around the given date. If the date happens on a non-trading day, then this is the 1-day return from the previous close to the next close (ex: Friday close to Monday close if date occurs on weekend). If the date happens on a trading day, then this is the 2-day stock return from the close on the trading day before the date to the close on the next trading date after the given date.

Substance and size: Over the past 25 years, **high-quality companies that do acquisitions have the worst initial reaction**, whereas junk stocks buying something tend to perform better. **Only small-caps have a positive average initial reaction to deal announcements**, with mega-/large-cap. acquirers averaging more than 1% post-announcement decline on the first day.

Transaction type: Companies doing all-stock deals have a much worse initial reaction to the announcement, down nearly 1.5% vs. their industries' performance on average, vs. acquisitions done in all cash, which on average perform well. Public companies buying private companies have better performance immediately following an announcement vs. when they buy another public company.

Acquirer's valuation and beta matter: The stocks that are in the cheapest quintile of price-to-forward earnings and announce deals perform more than ½ percent better than acquirers in the most expensive 40%. Acquirers that are high beta also tend to lag.

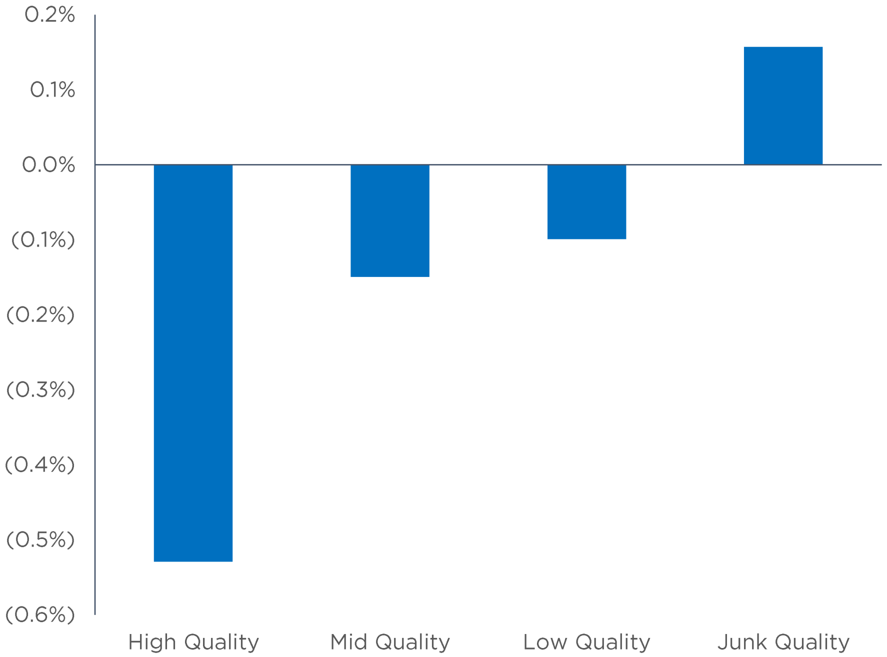
The target's growth and margins don't matter: There is little Day 1 performance differential for acquirers buying targets with high forecasted growth vs. low growth, or high vs. low net margin.

Sector performance: The only sector with a positive relative-to-industry performance for the first full trading day following a deal announcement is Consumer Discretionary. On average, Technology acquirers have the worst first-day reaction.

LARGE-CAP/HIGH-QUALITY ACQUIRERS HAVE WORST DAY 1 REACTION

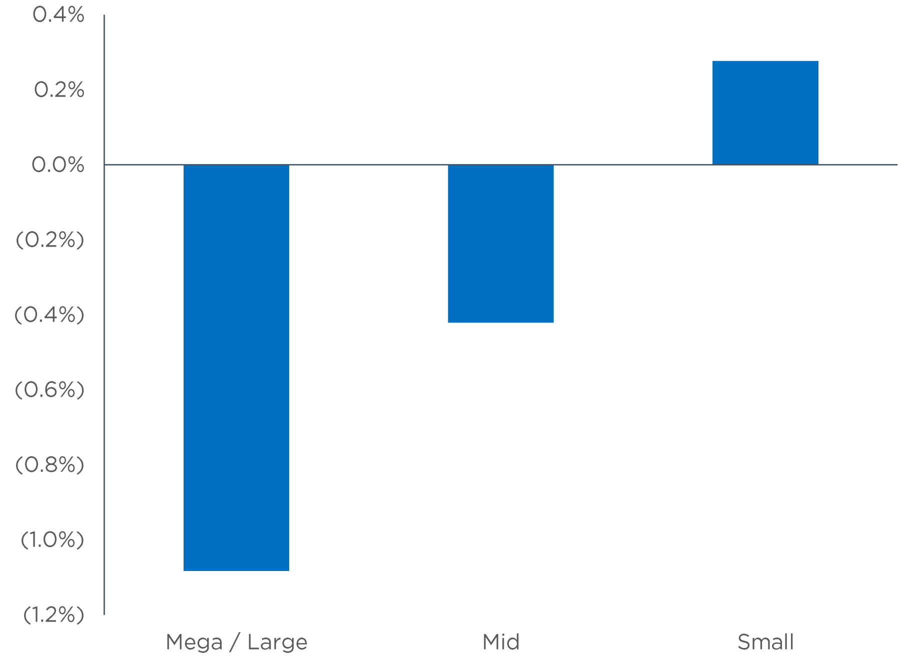
We studied the returns of the acquirers for a full trading day post the deal announcement relative to their industry group averages. Over the past 25 years, high-quality companies that do acquisitions have the worst initial reaction, whereas junk stocks buying something tend to perform better (left). Only small-caps have a positive average initial reaction to deal announcements, with mega-/large-cap. acquirers averaging more than 1% post-announcement retreat on the first day (right).

Market Reaction of Deal Announcement
Mean Industry Group Relative-Returns of Acquirer
By Acquirer Quality
End-June, 1999 to End-August, 2025



Source: Trivariate Research

Market Reaction of Deal Announcement
Mean Industry Group Relative-Returns of Acquirer
By Acquirer Market Cap.
End-June, 1999 to End-August, 2025

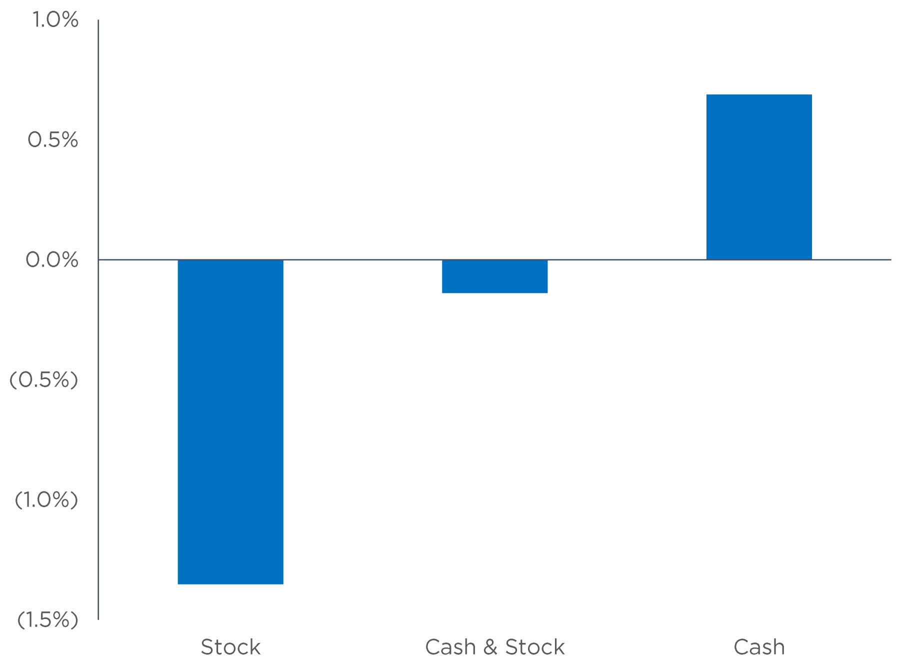


Source: Trivariate Research

USING ALL STOCK TO BUY A PUBLIC COMPANY MEANS A POOR 1ST DAY

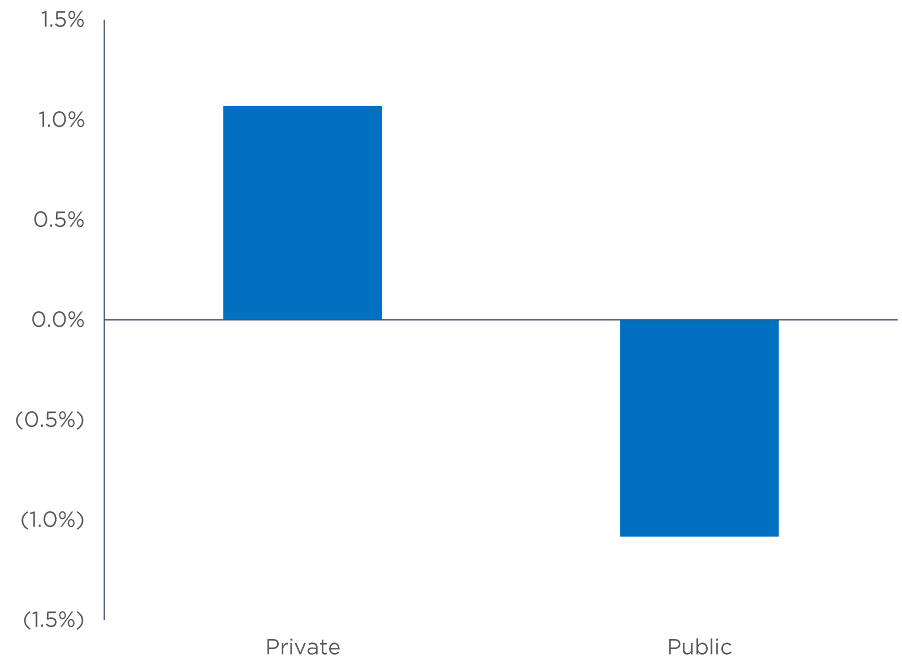
Companies engaging in all-stock deals have a much worse initial reaction to the announcement, down nearly 1.5% vs. their industries' performance on average, vs. acquisitions done in all cash, which on average perform well (left). Importantly, we mentioned in the summary statistics section, the average stock deal is typically larger, which likely conflates the results. Public companies buying private companies (right) have better performance immediately following an announcement (beating their industry average by 1%) vs. when they buy another public company (lagging by 1%).

Market Reaction of Deal Announcement
Mean Industry Group Relative-Returns of Acquirer
By Consideration Type
End-June, 1999 to End-August, 2025



Source: Trivariate Research

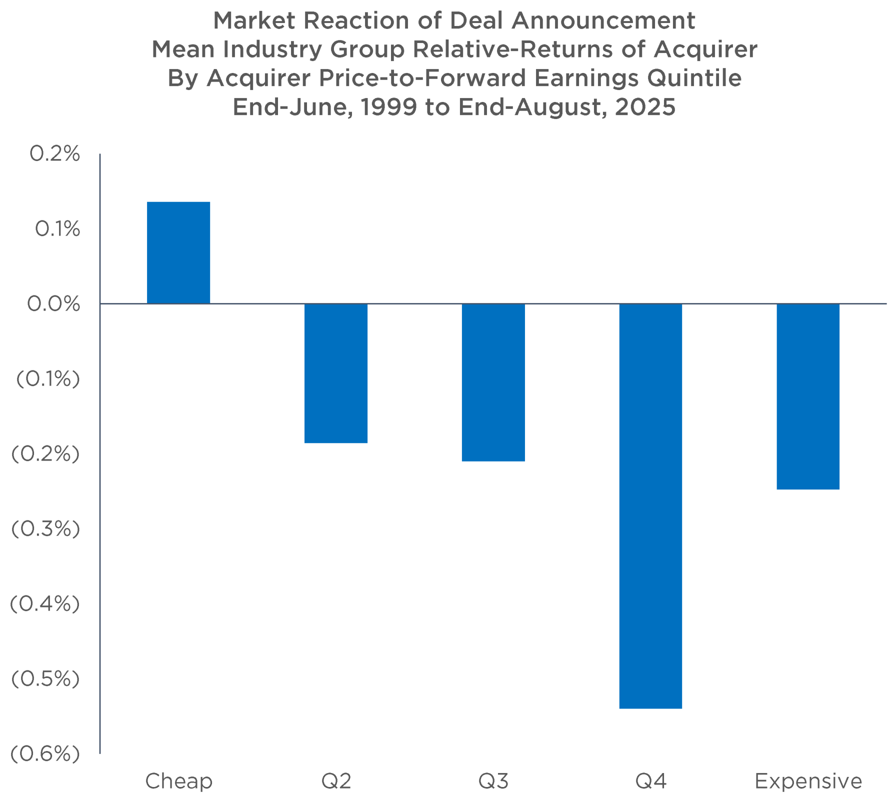
Market Reaction of Deal Announcement
Mean Industry Group Relative-Returns of Acquirer
By Public vs. Private Target Company
End-June, 1999 to End-August, 2025



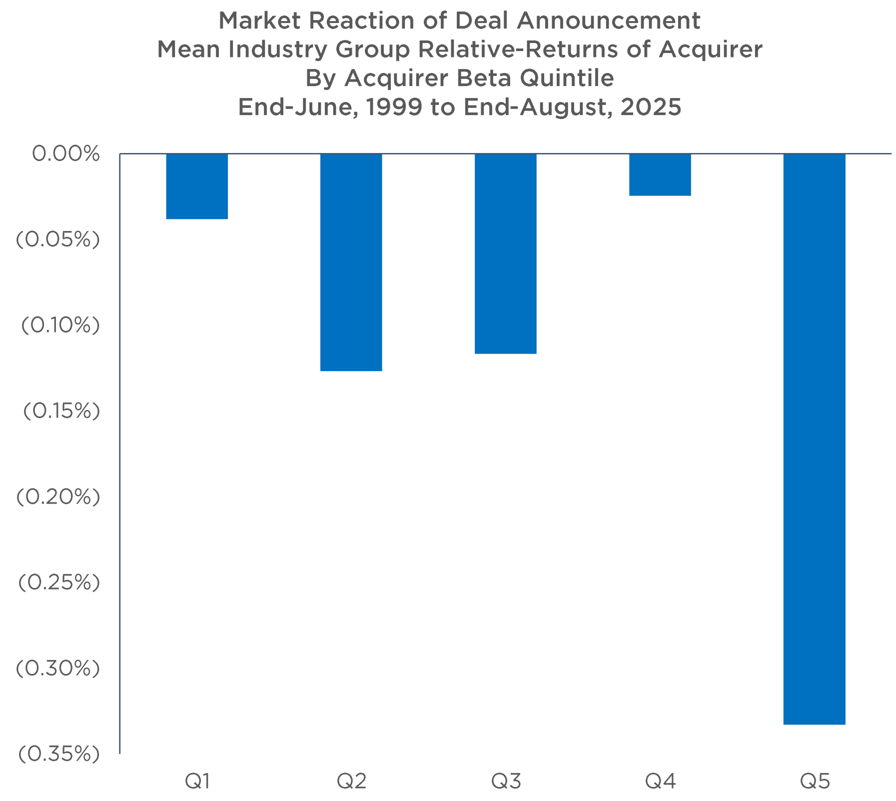
Source: Trivariate Research

CHEAP DEALMAKERS DO BEST, HIGH BETA DO POORLY ON AVERAGE

The acquirer's valuation matters for the initial performance following a deal announcement (left). The stocks that are in the cheapest quintile of price-to-forward earnings and announce deals perform more than 50 bps better than the acquirers in the most expensive 40%. Acquirers that are high beta also tend to lag, though beta doesn't seem to matter unless it is in the highest 20%.



Source: Trivariate Research

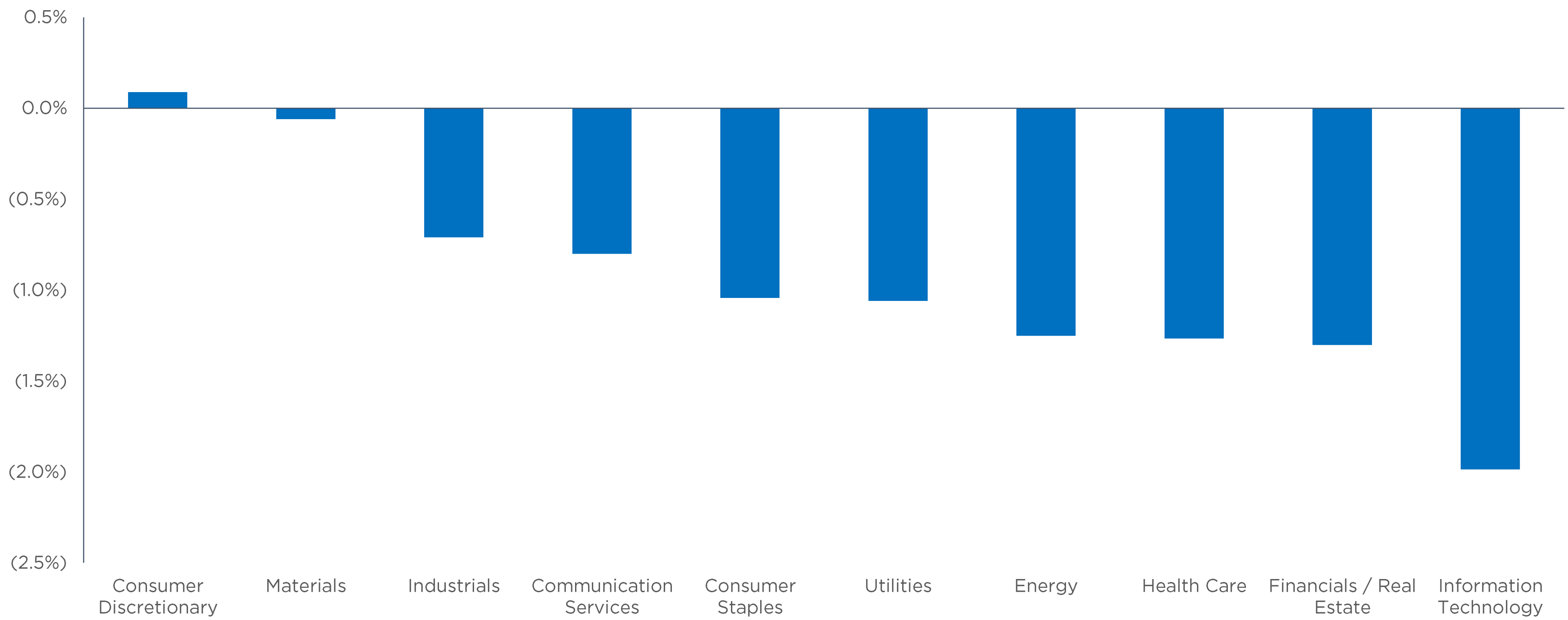


Source: Trivariate Research

DISCRETIONARY ACQUIRERS ARE POSITIVE DAY 1 PERFORMERS

The only sector with a positive relative-to-industry performance for the first full trading day following a deal announcement is Consumer Discretionary. On average, Technology acquirers have the worst first day reaction. Financial, Real Estate, and Healthcare also average a poor Day 1 performance. Materials stocks perform relatively in-line following an acquisition announcement.

Market Reaction of Deal Announcement
Mean Industry Group Relative-Returns of Acquirer
By Sector of Target Company
End-June, 1999 to End-August, 2025

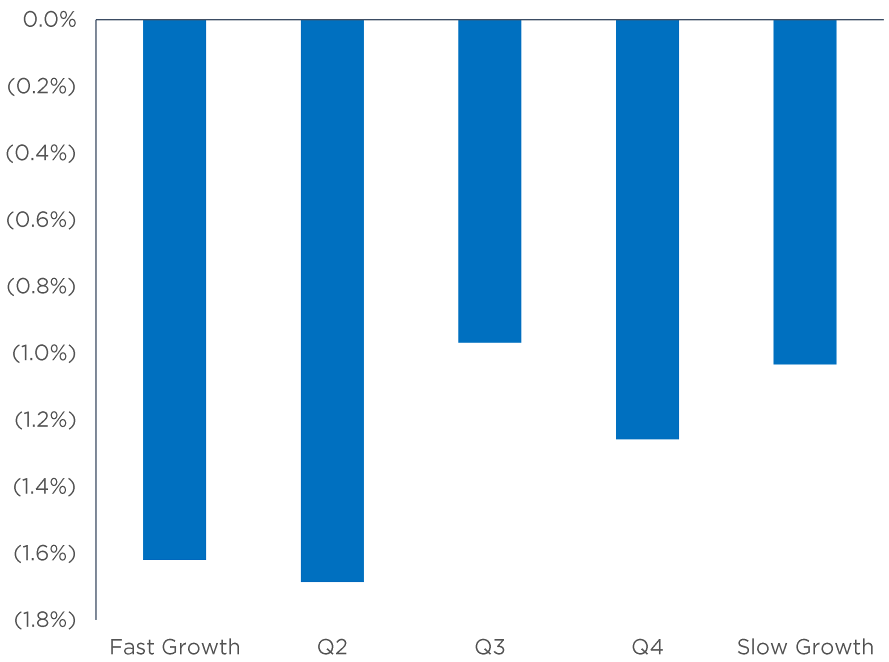


Source: Trivariate Research

REVENUE GROWTH AND MARGINS DON'T SEEM TO INITIALLY MATTER

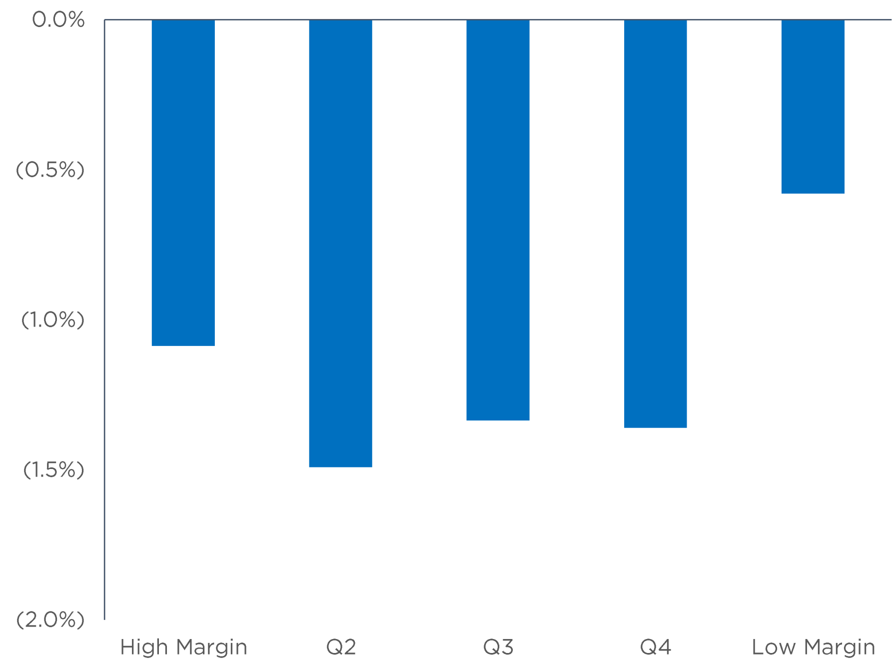
We broke the forecasted revenue growth of the targets into quintiles to investigate whether forecasted growth was associated with the initial market reaction of the acquirer. The answer is, not really, or maybe on the margin targets with higher growth cause a slightly ***worse*** reaction (left). This likely is because investors think they overpaid for the growth. The net margins don't seem to matter much, meaning acquirers buying high margin companies are treated in the following day's performance about the same as acquirers buying low margin businesses.

Market Reaction of Deal Announcement
Mean Industry Group Relative-Returns of Acquirer
By Target Company Forecast Revenue Growth Quintile
End-June, 1999 to End-August, 2025



Source: Trivariate Research

Market Reaction of Deal Announcement
Mean Industry Group Relative-Returns of Acquirer
By Target Company Net Margin Quintile
End-June, 1999 to End-August, 2025



Source: Trivariate Research

THREE-YEAR RESULTS

In aggregate, doing a deal isn't a good idea: The average acquirer lags its industry group by almost 6% over the subsequent three years following a deal. Clearly, the performance of growth companies executing deals is much worse than value, or the middle ground (neither). In fact, the average growth company that does an acquisition lags its industry-group's performance by 12% over the next 3 years.

The transaction type matters: The average acquirer doing an all-stock deal lags its industry group average by 11% over the next three years. Buying a foreign company on average results in inferior **performance versus buying a US company,** likely from less-than-expected cost synergies.

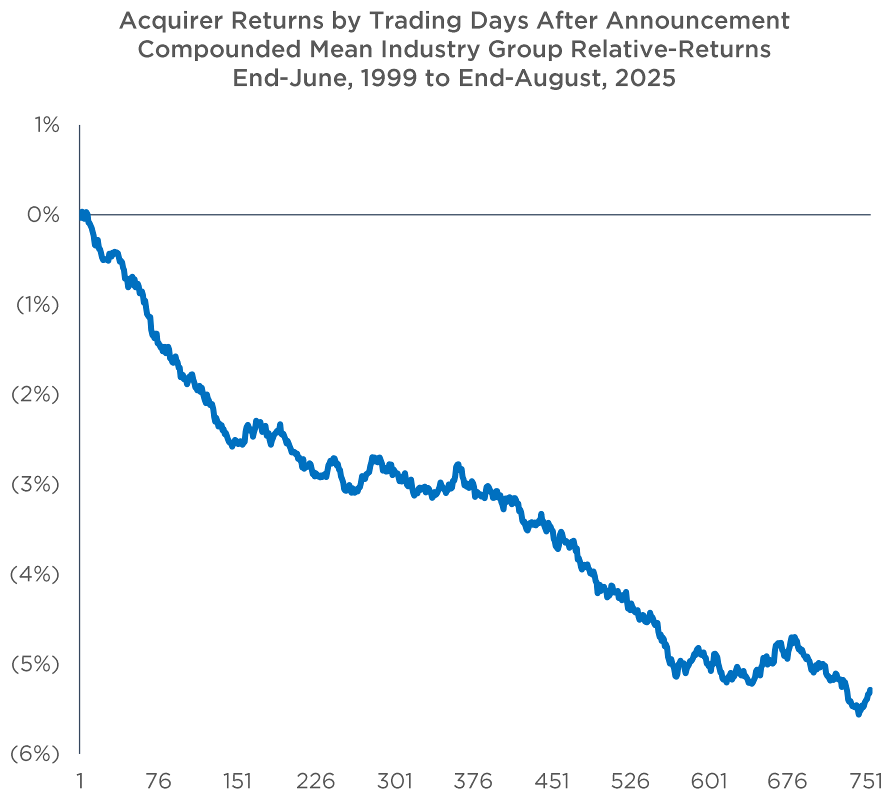
Expensive companies shouldn't do deals: Companies that are in the most expensive quintile of EV-to-forecasted sales and do a deal on average lag their industry groups by 10% over the next three years. Valuation doesn't seem to be a differentiator for the acquirer unless the company is in the most expensive quintile. **The target's valuation does seem to matter more.** Acquisitions of targets in the cheapest quintile perform in-line with their industries over the next three years, whereas those in the most expensive quintile lag by 10% on average.

Low net margins and high forecasted growth of targets are negatives for acquirer: We analyzed the profitability and forecasted revenue growth of the companies receiving the tender offer to see if that had an impact on the subsequent stock performance of the acquirer. The performance of acquirers buying companies in the lowest net margin quintile was on average poor, lagging the acquirer's industry-average by 12% over the next three years. Avoiding very fast growers was also prudent, though this is highly correlated to price.

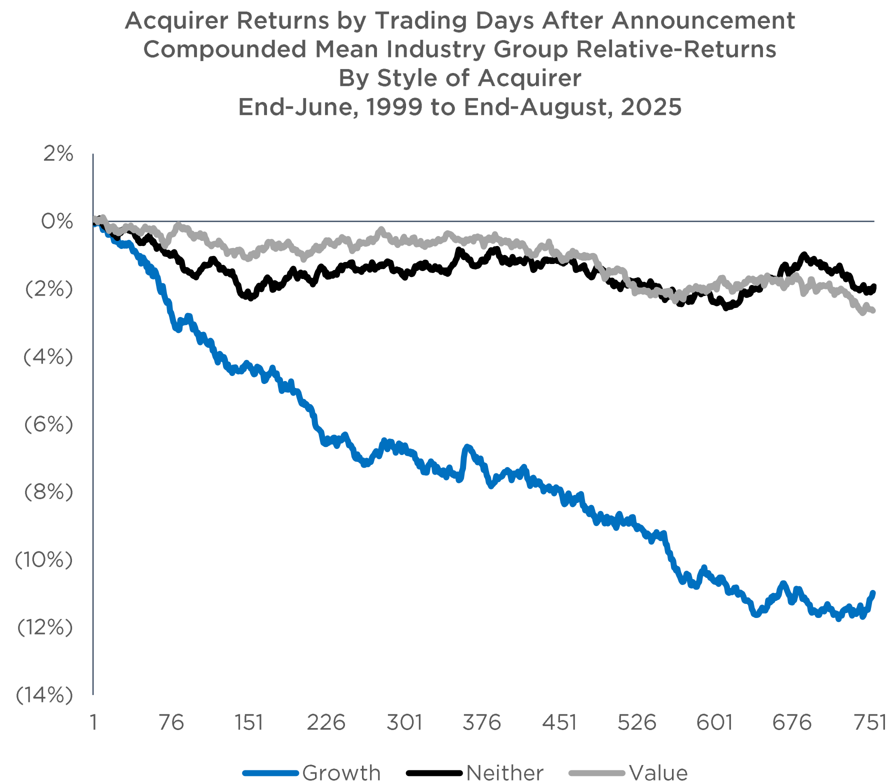
Slide 20 shows the most recent deals and their key attributes. Acquirer performance has been generally better than the long-term averages recently!

GROWTH COMPANIES SHOULD THINK HARD ABOUT DOING M&A

In aggregate, doing a deal isn't a good idea. The average acquirer lags its industry group by 6% over the subsequent three years following a deal (left). Clearly, the performance of growth companies doing deals is much worse than value, or the middle ground, "neither" (right). In fact, the average growth company that does an acquisition lags its industry-group's performance by 12% over the next three years.



Source: Trivariate Research

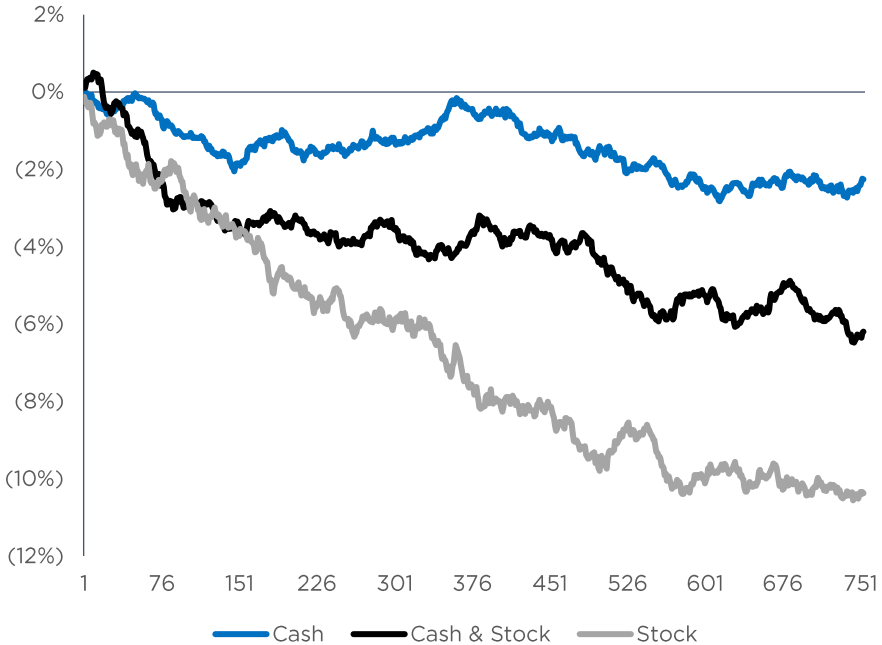


Source: Trivariate Research

AN ALL-STOCK DEAL OF A FOREIGN PUBLIC COMPANY? NO THANKS

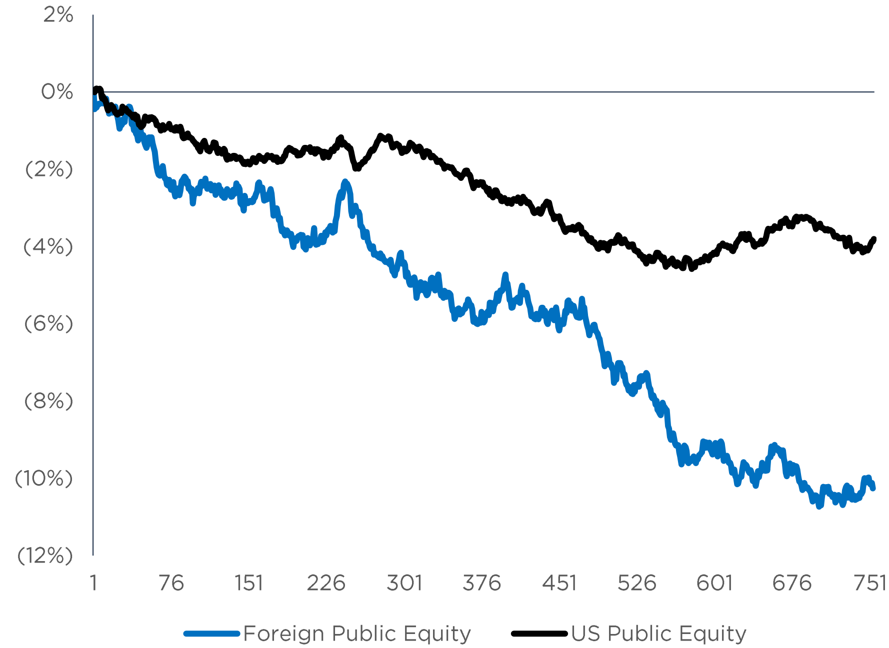
There is no question that the performance of companies doing all-cash deals is way better than those doing all-stock deals (left). The average acquirer doing an all-stock deal lags its industry group average by 11% over the next three years. Buying a foreign public company on average results in inferior performance versus buying a US company (right), likely due to a realization of less cost and revenue synergies.

Acquirer Returns by Trading Days After Announcement
Compounded Mean Industry Group Relative-Returns
By Consideration Type
End-June, 1999 to End-August, 2025



Source: Trivariate Research

Acquirer Returns by Trading Days After Announcement
Compounded Mean Industry Group Relative-Returns
By Foreign vs. US Public Target Company
End-June, 1999 to End-August, 2025

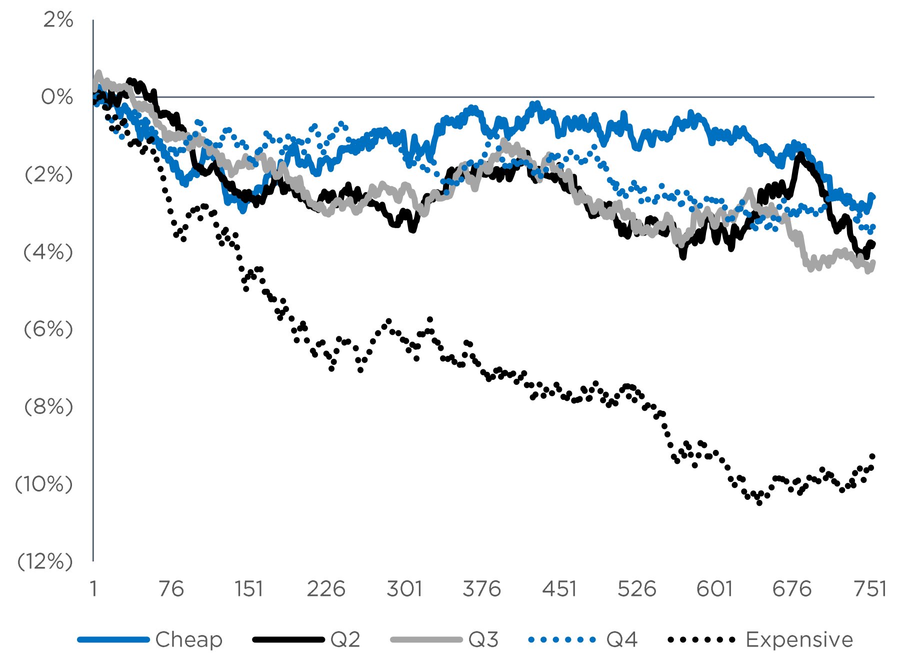


Source: Trivariate Research

EXPENSIVE COMPANIES SHOULDN'T BUY EXPENSIVE COMPANIES

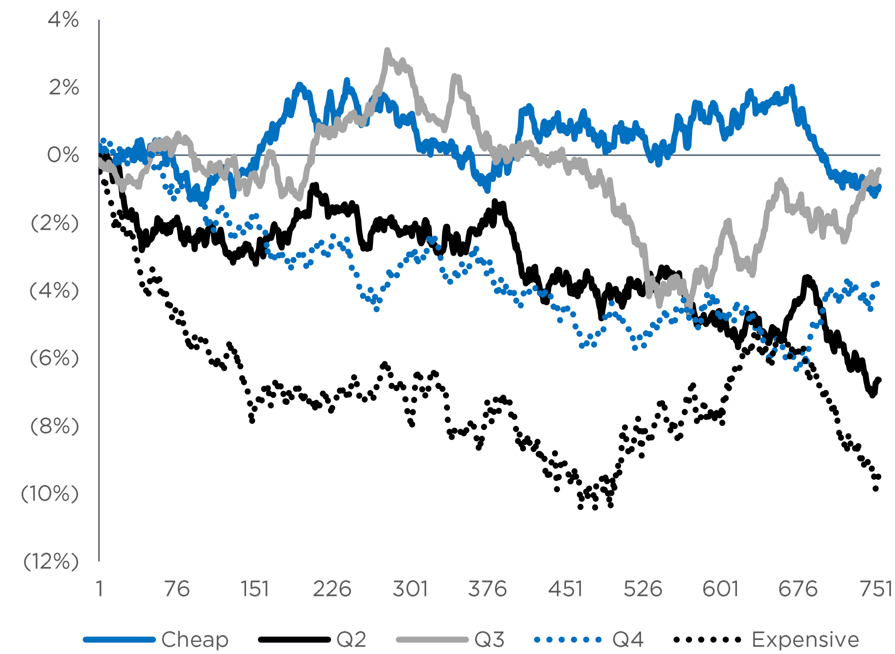
Companies that are in the most expensive quintile of EV-to-forecasted sales and do a deal on average lag their industry group by 10% over the next three years. Valuation doesn't seem to be a differentiator for the acquirer unless the company is in the most expensive quintile (left). The target's valuation does seem to matter more. Acquisitions of targets in the cheapest quintile perform in-line with their industries over the next three years, whereas those in the most expensive quintile lag by 10% on average (right).

Acquirer Returns by Trading Days After Announcement
Compounded Mean Industry Group Relative-Returns
By Acquirer EV-to-Forecast Sales Quintile
End-June, 1999 to End-August, 2025



Source: Trivariate Research

Acquirer Returns by Trading Days After Announcement
Compounded Mean Industry Group Relative-Returns
By Target EV-to-Forecast Sales Quintile
End-June, 1999 to End-August, 2025

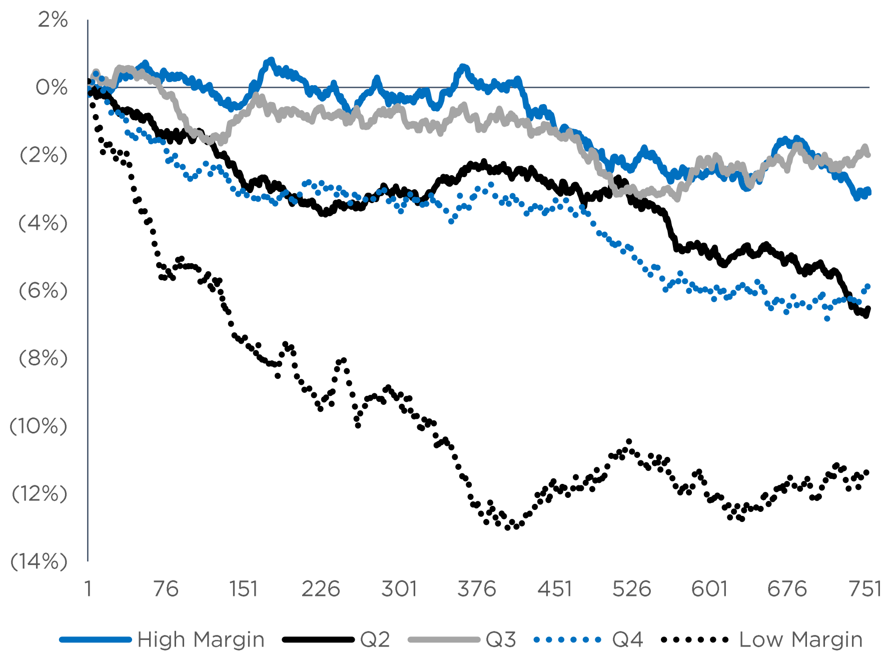


Source: Trivariate Research

AVOID TARGETS WITH LOW MARGINS OR HIGH FORECASTED GROWTH

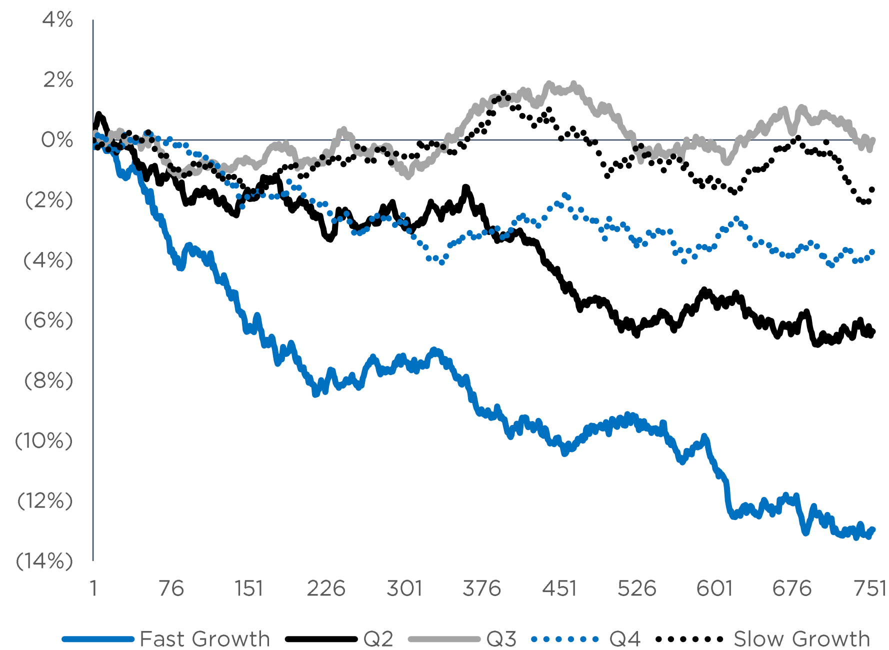
We also analyzed the profitability and forecasted revenue growth of the companies receiving tender offers to see if that had an impact on the subsequent stock performance of the acquirer. Performance of acquirers buying companies in the lowest net margin quintile was on average poor, lagging the acquirer's industry-average by 12% over the next three years (left). Avoiding very fast growers was also prudent (right), though this is highly correlated to the result that acquirers should avoid companies in the highest quintile of EV-to-forecasted sales.

Acquirer Returns by Trading Days After Announcement
Compounded Mean Industry Group Relative-Returns
By Acquirer Net Margin Quintile
End-June, 1999 to End-August, 2025



Source: Trivariate Research

Acquirer Returns by Trading Days After Announcement
Compounded Mean Industry Group Relative-Returns
By Acquirer Forecast Revenue Growth Quintile
End-June, 1999 to End-August, 2025



Source: Trivariate Research

THE MOST RECENT M&A PERFORMANCE HAS BEEN STRONGER

Below is a screen of the most recent M&A announcements. Performance for acquirers has actually been better than long-term averages over the last few months.

Recently Announced M&A Transaction Offerings of Public US Equities
As of End-August, 2025

Announcement Date	Acquirer Ticker	Acquirer Company	Target Company	Transaction Size	Acquirer Style	Consideration Type	Net Margin Quintile	Return Since Announced
08/25/2025	MNKD	MannKind Corporation	scPharmaceuticals Inc.	0.41	Growth	Cash & Stock	Q2	12.4%
08/25/2025	CRGY	Crescent Energy Comp.	Vital Energy, Inc.	3.15	Value	Stock	Q5	0.8%
08/19/2025	NXST	Nexstar Media Group	TEGNA Inc.	6.83	Value	Cash	Q1	0.1%
08/19/2025	TOWN	TowneBank	Dogwood State Bank	0.49	Neither	Stock	Q4	1.5%
08/19/2025	BKH	Black Hills Corporation	NorthWestern Energy Group, Inc.	6.87	Value	Stock	Q3	(0.6%)
08/12/2025	DGNX	Diginex Limited	LKA IDRRA cyber security Ltd	0.31	Growth	Cash & Stock		18.0%
08/10/2025	WU	Western Union Comp.	Money Express, Inc.	0.50	Value	Cash	Q2	7.8%
08/06/2025	MBC	MasterBrand, Inc.	American Woodmark Corporation	1.38	Value	Stock	Q4	9.3%
08/04/2025	HNI	HNI Corporation	Steelcase Inc.	2.86	Neither	Cash & Stock	Q3	(4.1%)
07/31/2025	WT	WisdomTree, Inc.	Ceres Partners LLC	0.50	Neither	Cash	Q3	6.2%
07/29/2025	UNP	Union Pacific Corp.	Norfolk Southern Corporation	89.48	Neither	Cash & Stock	Q1	(1.0%)
07/24/2025	PNFP	Pinnacle Financial Part.	Synovus Financial Corp.	9.14	Growth	Stock	Q2	(1.4%)
07/23/2025	WAY	Waystar Holding Corp.	Iodine Software, LLC	1.24	Growth	Cash & Stock	Q3	3.0%
07/18/2025	BFC	Bank First Corporation	Centre 1 Bancorp, Inc.	0.17	Neither	Stock	Q1	2.7%
07/07/2025	RGLD	Royal Gold, Inc.	Sandstorm Gold Ltd.	3.72	Growth	Stock	Q1	5.8%
07/01/2025	PKG	Packaging Corp. of America	Greif Containerboard Solutions	1.80	Neither	Cash	Q2	11.8%
06/30/2025	ONTO	Onto Innovation Inc.	Semilab USA LLC	0.54	Growth	Cash & Stock	Q1	6.5%

Source: Trivariate Research

DISCLOSURES

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