

How often do opening gaps in US stocks fill?

Evidence from 207 US stocks and ETFs, November 2022 to September 2026, measured minute by minute.

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DATA	UNIVERSE	BARS	SESSIONS
15 Nov 2022 – 30 Sep 2026	207 stocks and ETFs	1-minute, regular hours	196,278

ABSTRACT

When a US stock opens away from the previous close, does it come back the same day? Across 168,014 gapped sessions in 207 stocks and ETFs, 58% reached the previous close before 16:00, and the share fell steadily with the size of the gap, from 87% for gaps under a tenth of a daily ATR to 7% for gaps over one and a half. But price reached a *mirror* level, the same distance on the other side of the open, almost as often. For gaps under half an ATR the difference was +0.8 pts (90% interval -0.3 to +2.0): indistinguishable. Above half an ATR the previous close was reached 2.8 points more often (+0.7 to +5.0). Most small gaps fill because small distances are easily travelled, not because the previous close draws price back. Sized in ATRs rather than percent, fill rates varied between instruments by less than half as much.

KEY FINDINGS

58% of 168,014 gapped sessions reached the previous close the same day. Small gaps mostly did, large ones mostly not.	+0.8 pts more often than a level the same distance the other way, for gaps under half an ATR. Within noise.	6.6 vs 14.9 points of spread in fill rate between instruments, with gaps sized in ATRs against in percent.
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01 Question

"Gaps get filled" is one of the most repeated lines in trading. It is usually stated as a tendency: a stock that opens above yesterday's close will, more often than not, trade back down to it. We ask two narrower questions. How often, and how soon, did US stocks reach the previous close after opening away from it? And did they reach it more often than they reached any other level the same distance away?

The second question is the one that matters. A small gap is a short distance, and stocks travel short distances every day. If a gap fills no more often than price wanders the same distance in the other direction, the previous close is not doing anything special.

02 What we measured

We took every regular session (09:30 to 16:00 New York) for the 154 stocks and 53 ETFs in the SixOne8 US equity catalogue, from 1-minute candles. A session has a gap when its 09:30 open differs from the previous session's 16:00 close. We size each gap in multiples of the stock's 14-day average true range (ATR) as it stood at that close, so a gap on a quiet utility and on a

volatile chip maker are measured against what each normally moves. Sessions whose gap is under 0.05 ATR count as no gap.

A gap *fills* when any 1-minute bar in the session reaches the previous close. For each gapped session we also record the *mirror level*, the same distance from the open on the other side, and whether price reached it. And as a second baseline, we measure how often sessions without a gap travelled the same distance from their open in either direction.

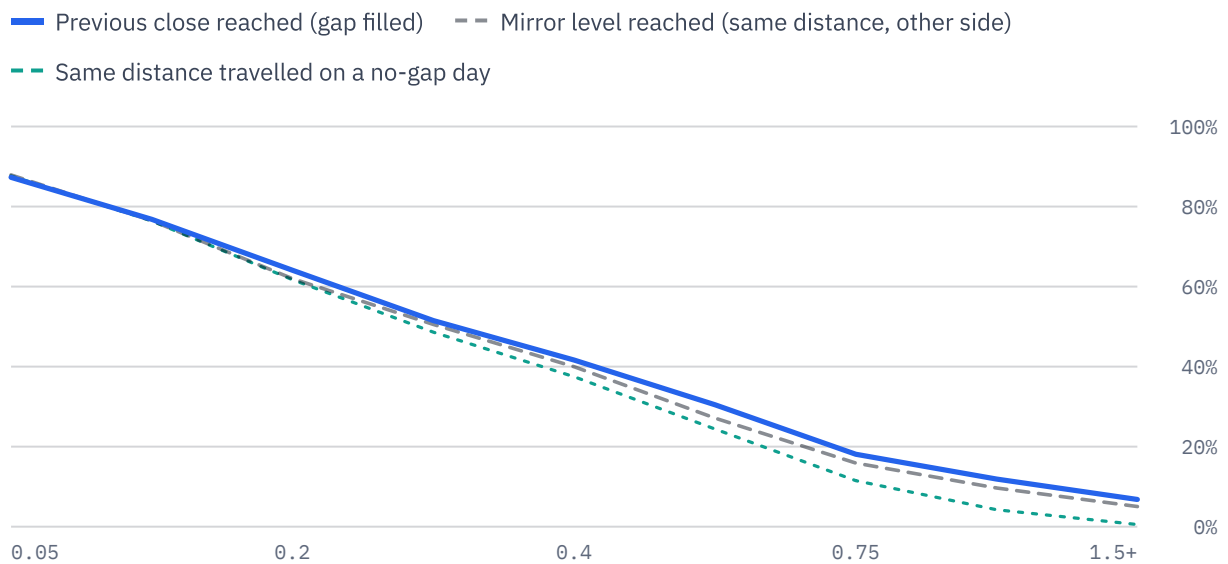
03 How often gaps filled

Of 168,014 gapped sessions, 58% reached the previous close the same day. The median gap was 0.26 ATR, about 0.58% of the price. Figure 1 shows the rate falling smoothly with size: 87% for the smallest band, 64% at 0.2–0.3 ATR, 30% at 0.5–0.75 and 7% above 1.5. There is no size at which gaps stop filling; the likelihood simply thins out.

FIGURE 1

Share of gaps filled the same day, by gap size, against two baselines

168,014 gapped sessions · gap size in daily ATRs (each point is a band)

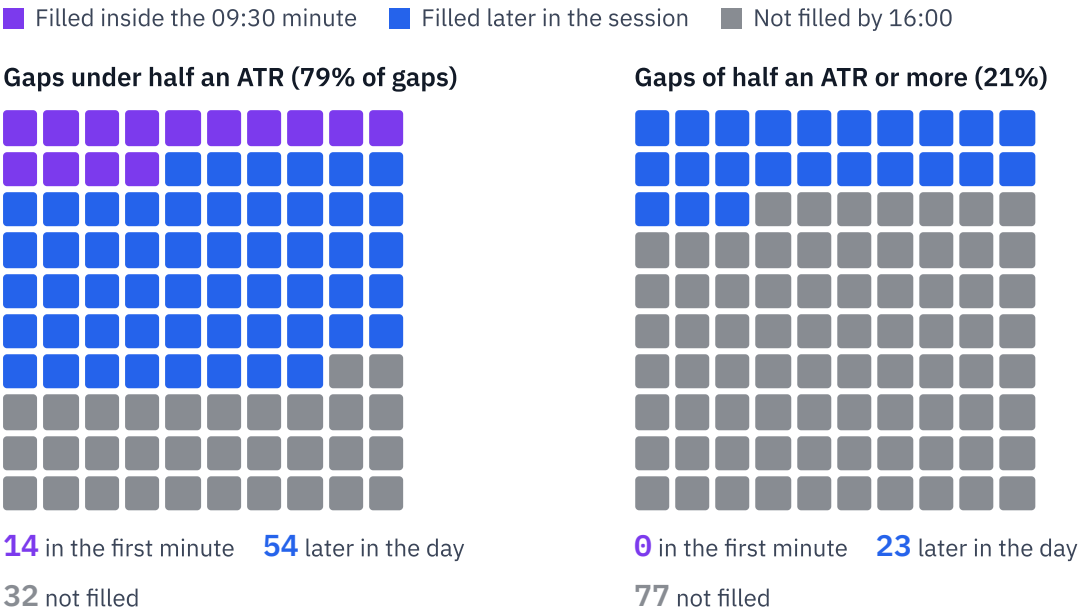


Source: SixOne8 Research, from 1-minute Twelve Data candles stored by SixOne8, regular sessions 15 Nov 2022 – 30 Sep 2026. A gap is the 09:30 open against the previous session's close, in multiples of the 14-day ATR as it stood at that close. The mirror level sits the same distance from the open in the direction of the gap.

FIGURE 2

A hundred gapped sessions, by how the day ended

Every gapped session from November 2022 to September 2026, split at half a daily ATR



Each square is one session in a hundred. The violet squares are fills no rule acting on the first bar's close could have taken: the previous close was reached inside the opening minute.

Figure 2 lays the same sessions out as a hundred squares. For gaps under half an ATR, 68% reached the previous close, and 21% of those fills came inside the first minute. For larger gaps, 77% never got there.

The blue line in Figure 1 barely separates from the grey one. For every band up to half an ATR, the mirror level was reached about as often as the previous close. Table 1 gives the difference and its interval for each band.

TABLE 1 · Gaps and fills by gap size

Gap (ATR)	Sessions	Median gap	Filled	In first minute	Mirror reached	Fill – mirror	90% interval
0.05–0.1	23,941	0.17%	87%	39%	88%	–0.6	–1.2 to 0.0
0.1–0.2	41,675	0.34%	77%	18%	76%	+0.3	–0.7 to +1.3
0.2–0.3	30,935	0.57%	64%	5%	62%	+2.1	+0.6 to +3.7
0.3–0.4	21,924	0.81%	52%	2%	51%	+1.0	–1.0 to +3.1
0.4–0.5	14,845	1.02%	42%	1%	40%	+1.7	–0.8 to +4.1
0.5–0.75	19,038	1.36%	30%	0%	27%	+3.3	+0.9 to +5.6
0.75–1.0	7,544	1.89%	18%	0%	16%	+2.2	–0.6 to +5.1
1.0–1.5	4,988	2.48%	12%	0%	10%	+2.2	–0.5 to +5.2
1.5+	3,124	4.92%	7%	1%	5%	+1.8	+0.1 to +3.6
All gaps	168,014	0.58%	58%	11%	57%	+1.2	+0.1 to +2.4

Filled: the previous close was reached at any minute of the session, including the 09:30 minute. Fill – mirror in percentage points; the interval resamples whole trading days (1,000 resamples), because gaps cluster on market-wide news days. Highlighted where the interval excludes zero.

04 Is the previous close special?

Pooling all gaps under half an ATR (133,320 sessions), the previous close was reached 67.7% of the time and the mirror level 66.8%: a difference of +0.8 pts, with a 90% interval of –0.3 to +2.0 points. For these gaps, which are four in five of all gaps, the previous close behaved like any other level at that distance.

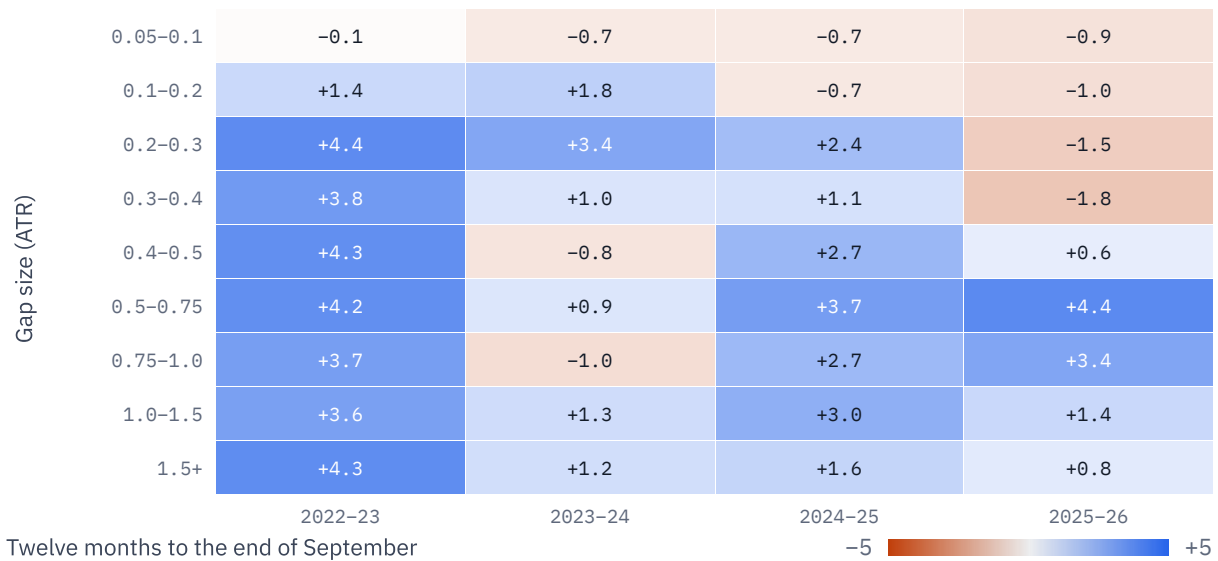
Larger gaps are different, modestly. Above half an ATR (34,694 sessions) the previous close was reached 23.0% of the time against 20.2% for the mirror, +2.8 pts (+0.7 to +5.0). Large gaps partly retrace more often than they extend by the same amount. The effect is a few points on a base of one in four. Figure 3 shows it in nearly every year for these larger gaps, while for smaller gaps a difference appeared in the first year and had faded or reversed by the last.

The no-gap baseline (the teal line in Figure 1) sits close to both for small gaps and below them for large ones. That comparison flatters the gap for a reason unrelated to the previous close: days that open with a large gap are more volatile days, so price travels further on them in every direction. The mirror level shares the session's volatility, which makes it the fairer baseline.

FIGURE 3

Fill rate minus mirror rate, by gap size and year

Percentage points · positive means the previous close was reached more often than the mirror level



2022-23 starts on 15 November 2022, the first session with a full 14-day ATR. Gaps of half an ATR and more were reached more often than their mirror in 15 of 16 cells; for smaller gaps the difference was largest in the first year and had faded or reversed by the last.

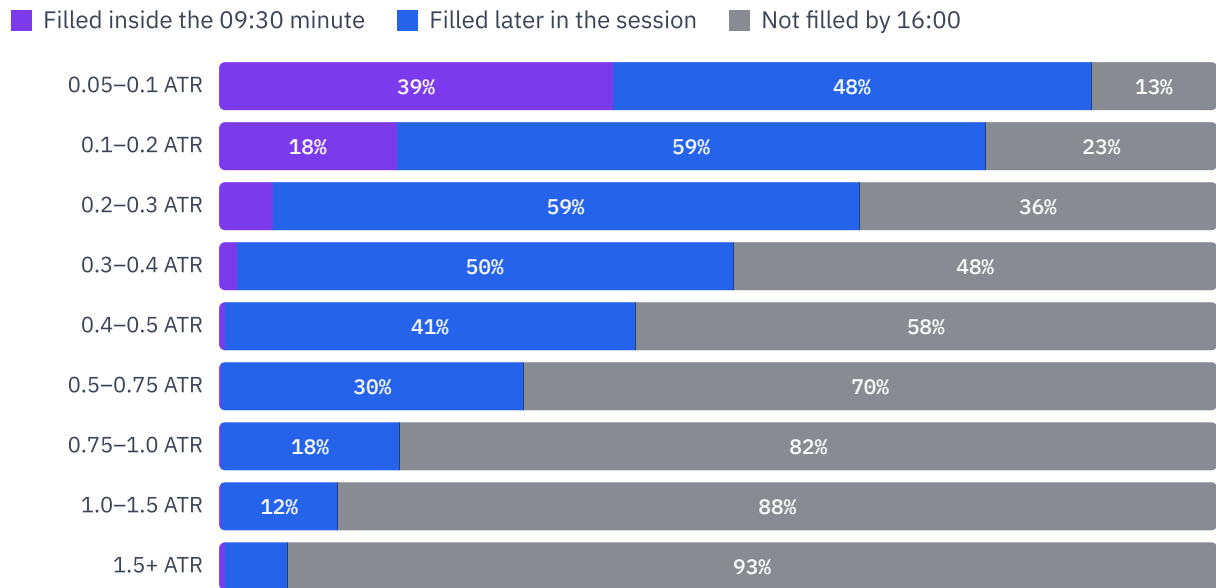
05 When fills happened

Small gaps filled fast. Of the gaps under 0.1 ATR, 39% reached the previous close inside the 09:30 minute itself, and across all gaps 19% of fills came in that first minute. A rule that decides at the close of the first bar and fills at 09:31 never sees those (Figure 4). Figure 5 follows the rest through the day: the median fill came 14 minutes after the open for gaps of 0.2-0.3 ATR and 74 minutes for 0.5-0.75.

FIGURE 4

How each size of gap ended the day

Share of sessions in each band of gap size, in ATRs

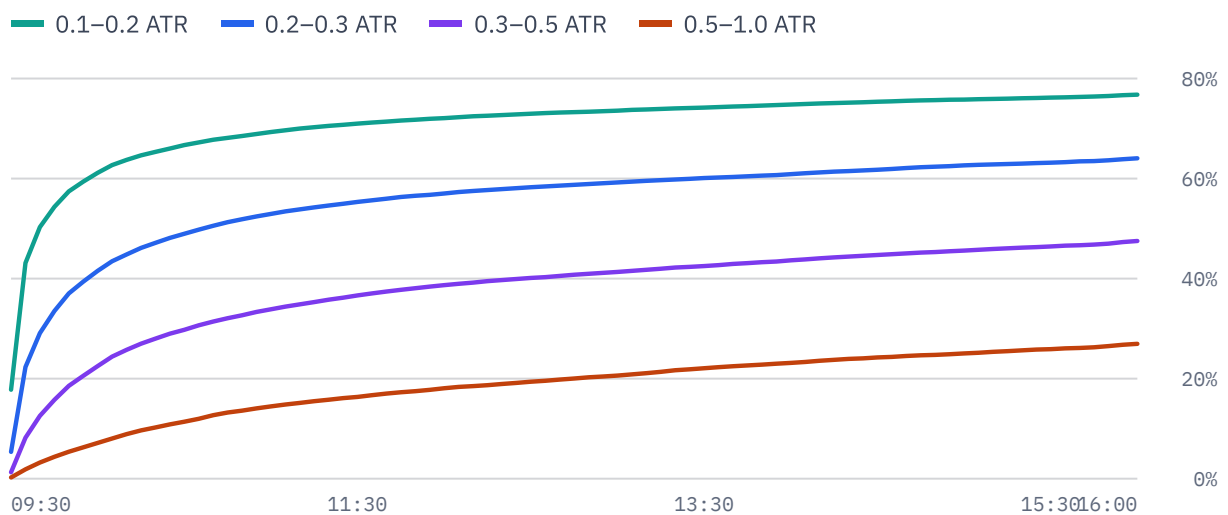


Read across a row for one size of gap. The violet first-minute fills all but vanish above 0.3 ATR; from there on, the question is only whether the rest of the day gets there.

FIGURE 5

When gaps filled: cumulative share of sessions filled, by time of day

New York time · each line is one band of gap sizes



The first point of each line is the share filled inside the 09:30 minute itself. A fill is the first 1-minute bar whose range reaches the previous close.

Each line flattens as the day goes on. A gap still open at midday had a small chance of filling by the close, whatever its size.

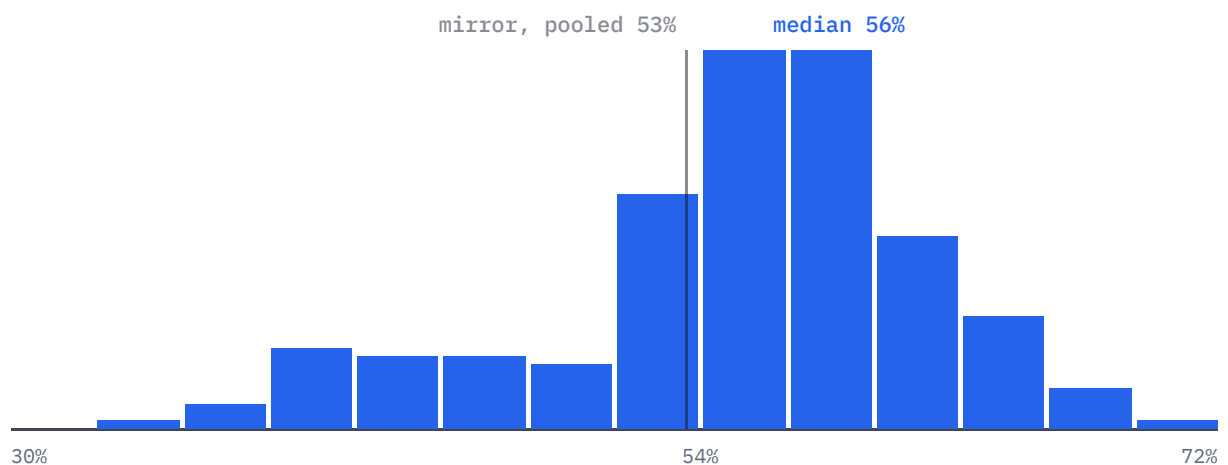
06 Sizing a gap: ATRs or percent

A 1% gap is routine for a volatile stock and rare for an index fund. Measured in percent, the same gap size means very different things on different instruments, so fill rates spread widely between them. Measured in ATRs, they cluster. Figure 6 shows the fill rate for gaps of 0.2–0.5 ATR on each instrument: most sit within a few points of the median, 56%.

FIGURE 6

Fill rate for gaps of 0.2–0.5 ATR, one bar per range of instruments

207 stocks and ETFs with at least 30 such gaps · share filled the same day



Measured in ATRs, most instruments sit within a few points of one another; the spread that remains is what Table 2 compares with percentage-sized gaps.

Table 2 puts a number on it. Across four bands of matched size, the spread of fill rates between instruments averaged 6.6 points with ATR sizing and 14.9 points with percentage sizing. If you write a gap condition, size it in ATRs.

TABLE 2 · How much fill rates differ between instruments: gaps sized in ATRs or in percent

ATR band	Pooled fill	Spread across instruments	Matching % band	Pooled fill	Spread across instruments
0.1–0.2	77%	4.5 pts	0.20–0.44%	73%	13.9 pts
0.2–0.3	64%	6.0 pts	0.44–0.70%	62%	16.8 pts
0.3–0.5	48%	7.3 pts	0.70–1.31%	49%	16.0 pts
0.5–1.0	27%	8.7 pts	1.31–3.11%	35%	13.0 pts

Spread: the standard deviation of the fill rate across instruments with at least 30 gaps in the band. Each percentage band is cut at the same quantiles of all gaps as the ATR band beside it, so both hold the same share of sessions.

07 Stocks, ETFs and direction

ETFs filled less often than single stocks at the same ATR distance, and the gap widened with size: 26% against 33% at 0.5–0.75 ATR. Gaps up and gaps down filled at close to the same rate in every band. About half of the sessions that filled went on to close beyond the previous close, giving the whole gap back by 16:00.

TABLE 3 · Stocks against ETFs, gaps up against gaps down

Gap	Stocks	ETFs	Gaps up	Gaps down	Closed beyond
0.2–0.3 ATR	65%	60%	63%	65%	32%
0.5–0.75 ATR	33%	26%	31%	30%	15%
1.0–1.5 ATR	16%	7%	13%	11%	6%

Share filled the same day. Closed beyond: the session closed on the far side of the previous close, so the whole gap was given back by 16:00.

08 The path before a fill

For sessions that filled after the first minute, the median move away from the previous close before the fill was about 0.12 ATR, whatever the size of the gap. The tail grows with size: one in ten of the 1.0–1.5 ATR gaps that filled first moved 0.58 ATR the other way (Figure 7). This

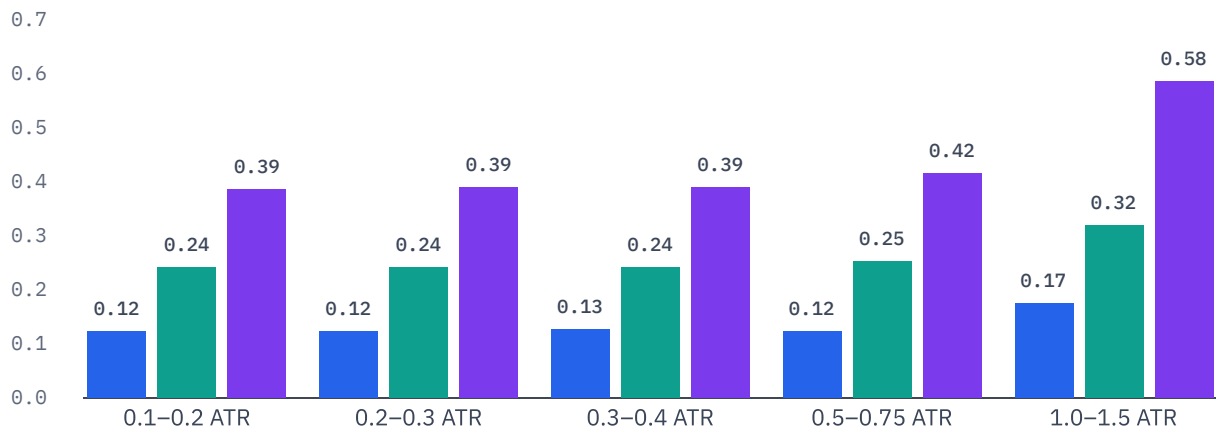
describes the path; it does not make a gap a trade. A rule that waits for a fill takes the moves against it too, and on most large gaps the fill never comes.

FIGURE 7

How far price moved away before a later fill

Sessions filled after the first minute · furthest move against a return to the previous close, in ATRs

■ Median ■ 75th percentile ■ 90th percentile



Measured from the 09:30 open to the furthest price reached before the minute of the fill, on the side away from the previous close.

09 Methodology

Every figure in this paper comes from the definitions below. Where we made a choice, we state it.

DATA

1-minute candles from Twelve Data, stored by SixOne8, regular sessions only (09:30-16:00 New York). Prices are split-adjusted, not dividend-adjusted.

UNIVERSE

All 207 US stocks and ETFs in the SixOne8 catalogue: 154 stocks and 53 ETFs. No instrument was removed after the fact; instruments listed during the window enter when they have 14 sessions.

WINDOW	Sessions from 15 November 2022, the first with a complete 14-day ATR, to 30 September 2026: 196,278 sessions on 971 trading days.
GAP	09:30 open minus the previous session's last close, divided by the 14-day ATR (Wilder's smoothing, the same ATR SixOne8 computes) at that close. Under 0.05 ATR counts as no gap.
FILL	The first 1-minute bar whose high (gap down) or low (gap up) reaches the previous close.
MIRROR	The level at the same distance from the open in the direction of the gap.
NO-GAP BASELINE	For sessions without a gap, the share that travelled at least a given number of ATRs from the open, either way, evaluated at each gapped session's own gap size and averaged.
INTERVALS	90% intervals from 1,000 bootstrap resamples of whole trading days, since gaps across stocks share the same news days.
EXCLUDED	1,220 sessions with fewer than 180 minutes (early closes and data gaps), 1,476 with no 09:30 minute, 142 after a break in the stored history, and 1 with an implausible price.

$$\text{Gap (ATR)} = | \text{Open}(09:30) - \text{Close}(\text{previous session}) | \div \text{ATR}_{14}(\text{previous session}) \quad (1)$$

10 Limitations

Four years is a short window for stocks and covers one broad market regime. We do not separate earnings or news gaps from the rest, and many of the largest gaps are earnings. Dividend days open lower by the dividend and are counted as small gaps down. A fill is

measured from 1-minute highs and lows, so a level touched for a moment counts the same as one traded through.

Above all, a fill rate is not a profit. The share of gaps that filled says nothing about what a rule fading them would have earned after the moves against it, the gaps that never filled, and costs. That is a separate test, and it is the one to run before relying on any of this.

11 Test it yourself

COMING TO SIXONE8

US stocks are coming to SixOne8

We measured this on the US stock history we have been collecting ahead of launch. When stocks arrive you will be able to test your own gap ideas on them, with the 1-minute fills and the costs used throughout SixOne8.

1. Add stocks to a watchlist alongside the forex, metals and crypto markets you already follow.
2. Build the rule you want to test and backtest it on each market, after costs.
3. Compare it with how often the same move happens anyway, as this paper does.

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SixOne8 Research (2026). How often do opening gaps in US stocks fill? Research Paper No. 1, September 2026.

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