The Dividend Valuation Gap: Extracting Alpha from Options-Implied Yields

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Introduction

Dividend yield is among the most widely utilized signals in equity valuation, yet its backward-looking construction limits its ability to capture what markets expect companies to pay in the future. We propose a forward-looking alternative — the implied dividend gap — defined as the spread between the options market's risk-neutral assessment of near-term dividend yields and the trailing realized dividend yield. We demonstrate that this signal predicts the cross-section of stock returns with economically meaningful magnitude, surviving industry neutralization, and standard factor adjustment across a sample spanning March 2018 to January 2026.

The trailing realized yield captures D/P but provides no direct information about future dividend growth. Options markets embed the market's risk-neutral assessment of near-term dividend growth in a manner that is distinct from and incremental to what realized yields convey. Stocks where the options market prices in dividends below recent realized payouts — Low Gap stocks — carry unresolved forward-looking dividend cut risk that commands a return premium. Stocks where options prices imply growth well above recent realized payouts — High Gap stocks — have already capitalized that growth expectation into current prices, compressing prospective returns. Sorting stocks on this gap generates a long/short spread of 54 basis points per month, or approximately 6.5% annualized; that remains intact after controlling sector exposures and standard systematic risk factors. A Fama-French six-factor regression of the industry-neutral long/short portfolio confirms that this return is not compensation for exposure to standard systematic risks — the strategy generates an annualized alpha of 3.94% with near-zero and statistically insignificant loadings on market, size, value, profitability, and momentum factors, indicating that the implied dividend gap captures a dimension of expected return that is largely orthogonal to established risk premia.

Three complementary channels drive and sustain this return differential. First, Low Gap stocks carry genuine dividend cut risk flagged by the options market before it appears in realized payouts — investors earn a premium for bearing this forward-looking uncertainty. Second, High Gap stocks suffer from growth expectations already reflected in elevated prices. Third, the differential persists because structural limits to arbitrage prevent convergence — shorting High Gap stocks requires manufacturing dividend payments to share lenders; income-focused ETFs systematically overweight precisely the

stocks that populate the High Gap decile. In the next section, we briefly cover the relevant dividend literature.

Background

Our work connects to the dividend strip literature of Van Binsbergen, Brandt, and Koijen (2012), Van Binsbergen and Koijen (2017), and Cejnek and Randl (2020), which uses derivatives-implied dividends to document that dividend risk is separately priced from standard market exposure. This literature establishes, at the index and country level, that the term structure of equity dividend claims is downward sloping, and that dividend risk factors predict returns internationally. We extend the use of option-implied dividend information to the cross-section of individual stocks, constructing a firm-level signal — the Implied Dividend Gap — that exploits the wedge between option-implied and trailing realized dividend yields. While the index-level literature isolates dividend risk by maturity, we isolate it by the cross-sectional disagreement between options and equity markets at the firm level, and document that this signal predicts returns after controlling for standard factor exposures.

Our contribution is to bring this aggregate-level insight into the firm cross-section, using options-implied dividend yields to construct a stock-level measure of the gap between market dividend expectations and realized payouts, and showing that this gap predicts returns in the cross-section.

The first channel is grounded in the dividend risk premium literature. Low Gap stocks are those where the options market prices in future dividends below the level of recent realized payouts — the implied yield falls short of the trailing realized yield, signaling that the market expects near-term dividend growth to be below trend or potentially negative. For these stocks, the options market provides a forward-looking signal of elevated dividend-cut risk: the distribution of future payouts is shifted downward and, critically, carries greater exposure to bad aggregate states in which dividend reductions cluster. Option prices embed this risk in implied yields, and prospective return r is bid up to compensate holders for bearing systematic dividend-cut risk. Investors in Low Gap stocks earn this premium in expectation: most of the time, the feared deterioration fails to fully materialize, and realized returns exceed those of stocks where the options market signals stable or growing payouts. The higher subsequent returns are the equilibrium compensation for taking the other side of the market's pessimism about future cash flows. The higher subsequent returns earned by Low Gap stocks are compensation for bearing this forward-looking dividend cut risk.

The second channel operates through the opposite end of the gap distribution and explains the underperformance of High Gap stocks. High Gap stocks are those where the options market prices in future dividends are above the level of recent realized payouts — the implied yield exceeds the trailing realized yield, signaling that the market expects near-term dividend growth above trend. A large positive gap, therefore, corresponds to a high market-implied growth rate. This elevated expected growth is already capitalized into the current stock price P through prior appreciation — investors have bid up the stock in anticipation of higher future dividends.

The third channel explains why the return differential between High and Low Gap stocks persists rather than being arbitraged away and draws the limits to arbitrage literature. High Gap stocks face a structural configuration where institutional demand is persistent and strong, while short-side supply is constrained by mechanism-specific frictions, creating a one-sided market that maintains prices above the level justified by average dividend growth expectations. The implied yield remains structurally higher than the realized yield for these stocks because pensions, insurance companies, and dividend-growth ETFs face mandate-driven demand for stable, growing cash flow streams, and bid prices up to pay a premium for stocks with high expected dividend growth rates. This persistent institutional bid compresses the realized yield relative to the forward path priced in options, sustaining the wedge between implied and realized yields and holding equity valuations above the level the average dividend trajectory would justify.

In the next section, we outline the methodology for extracting implied dividends and portfolio formation.

Methodology

Implied dividend estimations are extracted from IvyDB DividendView. Our universe consists of optionable, dividend-paying, single-name securities ranging from March 2018 - Jan 2026. DividendView takes a more robust approach compared to the typical put–call parity solution to infer dividends. U.S. single name stocks are American style, which allow for early exercise. The optionality embedded in this feature distorts the simple parity relationship: the observed call and put prices no longer reflect a single, unique implied dividend. Naively applying European parity can therefore underestimate or overestimate dividends, especially for near-the-money options, securities with high yields, and high-interest rate environments.

We follow the approach by Kragt (2017) which matches call and put option price pairs by strike and solve the following quadratic minimization problem:

$$\min \left[(C - \text{tree}(S, K, x, r, T, t_d, y))^2 + (P - \text{tree}(S, K, x, r, T, t_d, y))^2 \right]$$

Which solves implied volatility(x) and dividend yield(y) simultaneously. The values extracted from options represent risk-neutral dividends, which can be expressed as:

$$PV\ (D_{t+n}) = D_t \cdot e^{n[g(t) - \theta(t) - r(t)]}$$

Where D represents the current nominal dividend, g is the growth rate, theta is the risk premium, and r is the discount rate. Next, we scale $PV(D_{t+n})$ by $e^{(r_t)}$ with the associated risk-free from each maturity, generating a future value of the dividend.

For each option price, a volatility and estimated component are solved simultaneously using CRR trees to account for early exercise. To reduce noise, we then pass our estimates through a data filtering process as follows:

- Implied dividends are calculated for options expiring greater than 60 days.
- Only OTM call/ITM put pairs are considered
- Each maturity requires at least 5 matched pairs of strikes.
- Options with bids less than 10 cents are removed.
- Regular dividend distributions are only considered.

Following implementation of these filters, we take the median value from a maximum of 10 strikes for each maturity. This set of steps results in a cumulative dividend yield per option expiration. Implied yields can be noisy. For our analysis, we apply a multivariate kalman filter across projected exdate term structure generating smoothed yields. Implied yields are then interpolated to 90-days between sequential exdates. This is done in order to adjust for dividend timing across the calendar and maintain a consistent cross-section of annualized yields.

Next, we calculate trailing dividend yield by using the cumulative sum of the previous 4 quarters dividend, scaled by current stock price. Our portfolio sorting metric is then calculated as:

Dividend gap = Implied Yield - Realized Yield

Our universe of securities is designed to include:

- Single name Dividend Payers
- Optionable
- Market Cap in top 80th percentile in sorting month*
- Stocks with valid implied dividend

In Chart 1 and Chart 2, below represents the realized trailing yield and 90-Day implied yield for SLM Corp and IBP corp. In the case of SLM, implied yields are structurally priced above realized yields throughout the sample. This indicates higher future implied growth rates for SLM or an institutional demand for dividend cash flow. For IBP, we observe structurally lower implied dividends compared to realized yields, indicative of risk-neutral discounting of future dividend payments.

Chart 1:

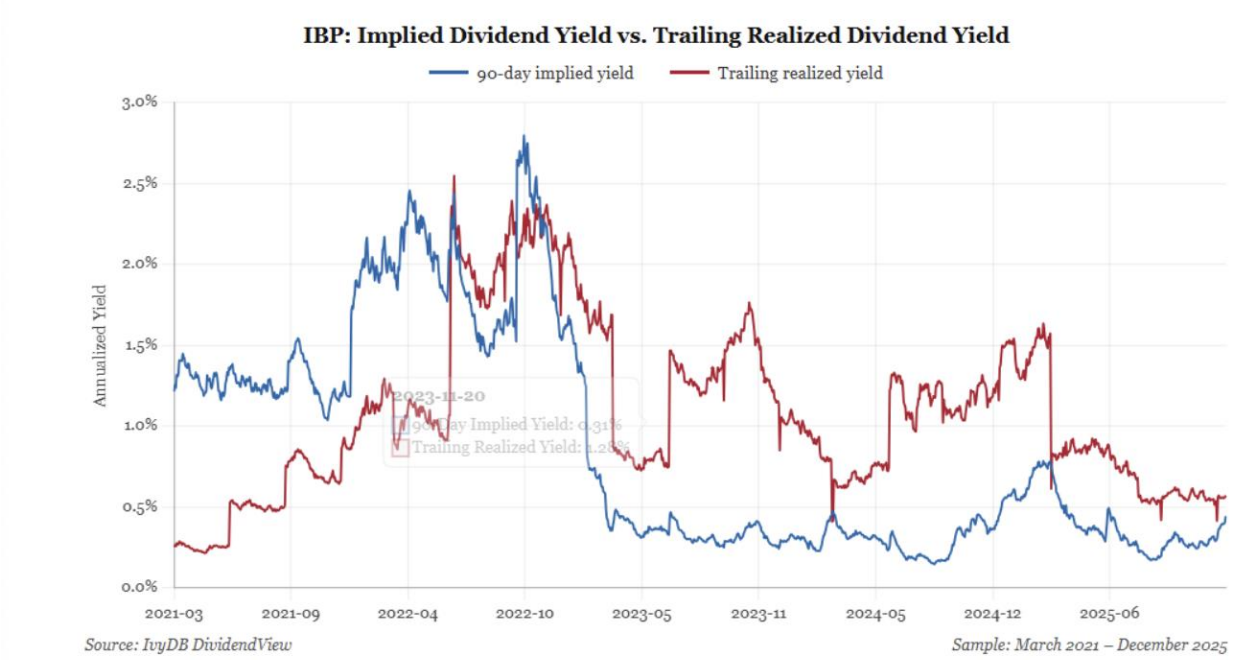


Chart 2:

Factor Performance

Table 1 presents the decile sort on implied dividend gap reveals a pronounced return spread between the extreme portfolios. The Low Gap portfolio earns an average monthly return of 1.39%, compared to 0.85% for the High Gap portfolio, representing a spread of 54 basis points per month — approximately 6.5% annualized. This spread is economically meaningful and forms the basis of the long/short strategy, which goes long stocks where the options market prices in relatively low future yields trailing realized dividends, and short stocks where the implied dividend yield materially exceeds recent realized yields.

The return pattern across the intermediate deciles is not strictly monotonic, with returns dipping modestly in P2–P3 before rising gradually toward the Low Gap tail. This suggests the signal's predictive content is concentrated in the extreme deciles rather than distributed evenly across the cross-section — a pattern that is common in options-based signals. Notably, P9 and P10 together drive much of the portfolio's return premium, consistent with the interpretation that the Low Gap signal is capturing a distinct group of stocks where the options market is systematically underpricing future dividend growth relative to recent history.

The volatility profile across deciles follows a U-shape, with both the High Gap (23.3%) and Low Gap (25.8%) portfolios exhibiting higher volatility than the middle deciles, which reach a minimum near

P5–P6 at approximately 20%. This pattern is informative for two reasons. First, it is inconsistent with the hypothesis that the strategy simply repackages a low-volatility tilt — if that were the case, volatility would decline monotonically from the short to the long leg. Instead, both extreme portfolios carry above-average risk, suggesting the gap signal is capturing something distinct from defensive equity characteristics. Second, the slightly elevated volatility of the Low Gap portfolio relative to the High Gap portfolio is consistent with the interpretation that these stocks carry genuine fundamental uncertainty around dividend sustainability — the options market is pricing in lower dividends than recent history precisely because cash flow visibility is limited, which naturally coincides with higher realized volatility.

Taken together, the results suggest that the dividend gap contains cross-sectional information about future returns that is not simply a reflection of risk differences between stable and volatile dividend payers.

Table 1:

Monthly Returns of Decile Portfolios Sorted on Implied Dividend Gap

Decile Portfolio	Avg Monthly Return	Volatility
High Gap (P1)	**0.85%**	**23.30%**
P2	**0.90%**	21.64%
P3	**0.81%**	20.98%
P4	1.04%	20.30%
P5	0.99%	20.20%
P6	1.07%	19.98%
P7	1.05%	21.00%
P8	0.97%	21.84%
P9	**1.17%**	22.83%
Low Gap (P10)	**1.39%**	**25.80%**
Low – High (L/S)	*0.54%*	—

Notes: Implied Dividend Gap is calculated as the difference between 90-day implied yield and 12-month trailing realized dividend yield. Portfolios formed monthly by single sort on gap into deciles. Returns are equal weighted.

Next, we analyze the historical performance of the Long/Short strategy against the SPX benchmark. Chart 3 presents the performance of equal-weighted decile portfolios sorted on the implied dividend gap. The Low Gap portfolio delivers a total return of 173.6% (13.9% CAGR) over the sample period,

compared to 79.6% (7.9% CAGR) for the High Gap portfolio. SPX total return of 159.2%. The long/short portfolio generates a Sharpe ratio of 0.56 and Sortino ratio of 0.89 with annualized volatility of 9.9%.

Chart 3:

	Total Return	CAGR	Ann. Vol	Sharpe	Sortino	Max DD
High Div Gap	79.6%	7.9%	23.3%	0.32	0.39	-47.8%
Low Div Gap	173.6%	13.9%	25.8%	0.50	0.65	-45.9%
Long/Short	53.8%	5.7%	9.9%	0.56	0.89	-14.3%
SPX	159.2%	13.1%	19.6%	0.63	0.75	-33.9%

Source: OptionMetrics

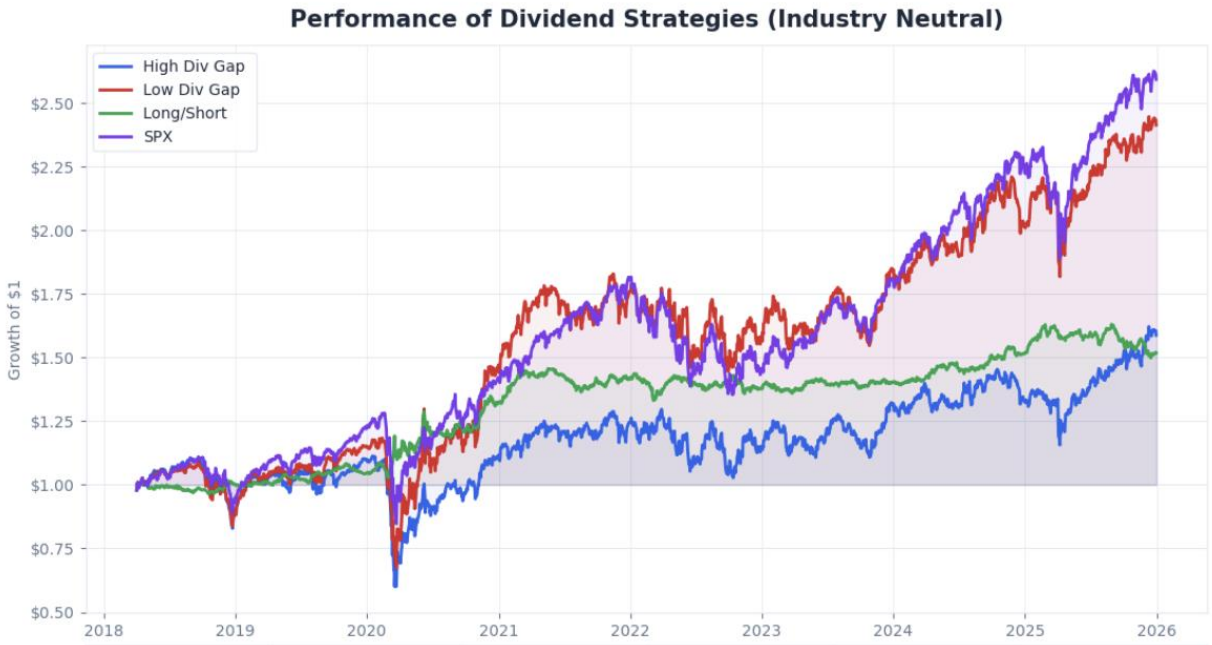
Notes: Returns of Equal weighted and bottom decile portfolios classified by implied dividend gap (implied yield - realized). Rebalanced monthly.

However, a shortfall of equal weighted portfolios, particularly in the dividend universe, is that they may naturally express a sector tilt. We tackle this criticism by focusing on industry neutral long/short portfolios. Industry neutralization is achieved by z-scoring based on dividend gap within industry, then sorting into deciles based on z-score. Chart 4 presents the performance of industry neutral deciles and long-term strategy.

Comparing the two portfolio constructions reveals the meaningful role that sector tilts play in the raw equal-weighted strategy. The equal-weighted Low Gap portfolio delivers a higher total return of 173.6% versus 141.3% under industry neutralization, suggesting that a portion of the raw return premium reflects systematic sector allocation — likely a tilt toward high-yielding cyclicals that naturally dominate the Low Gap universe. The consequence of neutralization is visible in the long/short comparison: despite the modest reduction in raw returns, the industry-neutral L/S achieves a superior Sharpe of 0.71 versus 0.56 for the equal-weighted version, and a dramatically lower maximum drawdown of -8.6% compared to -14.3%. This improvement confirms that the equal-weighted strategy embeds on sector-level noise that inflates volatility. Risk adjusted performance

survives industry neutralization- this reinforces the idea that the gap signal contains genuine firm-level information about future dividend valuation. Next, we examine the factor exposures of the strategy.

Chart 4:



	Total Return	CAGR	Ann. Vol	Sharpe	Sortino	Max DD
High Div Gap	58.8%	6.1%	22.1%	0.27	0.32	-46.1%
Low Div Gap	141.3%	12.0%	23.3%	0.49	0.61	-43.1%
Long/Short	51.8%	5.5%	7.6%	0.71	1.08	-8.6%
SPX	159.2%	13.1%	19.6%	0.63	0.75	-33.9%

Source: OptionMetrics

Notes: Returns of z-scored industry neutral top and bottom decile portfolios classified by implied dividend gap (implied yield - realized). Rebalanced monthly.

Table 2 reports the Fama-French six-factor regression results for the industry-neutral long/short, implied dividend gap portfolio over the April 2018 to December 2025 sample period. The strategy generates an annualized alpha of 3.94% (monthly coefficient 0.3286%, t=1.48), which while below conventional significance thresholds is economically meaningful and consistent in sign across all specifications examined. The low R^2 of 0.104 indicates that the strategy's return generating process is largely orthogonal to standard systematic risk factors. This neutrality is a direct consequence of the industry-neutral long/short construction, which cancels the dominant systematic exposures.

Among the factor loadings, only the conservative investment factor CMA loads with marginal significance (β=0.347, t=1.79), suggesting a modest tilt toward firms with conservative asset growth in the long leg relative to the short leg.

The absence of significant market, size, value, profitability, and momentum exposures addresses several potential alternative explanations for the strategy's performance. The near-zero market beta

(β=-0.027, t=-0.67) confirms the long/short construction successfully neutralizes directional equity exposure. The insignificant SMB loading (β=0.100, t=1.02) resolves the small-cap concentration concern present in the raw portfolio prior to industry neutralization, while the insignificant RMW loading (β=-0.049, t=-0.42) rules out the strategy being a quality premium in disguise, along with insignificant HML ruling out hidden value premium. Taken together, the factor structure supports the interpretation that the implied dividend gap captures a source of return distinct from established risk premia.

Table 2:

Factor Regression on Industry Neutral Long/Short Dividend Gap Portfolio

Dependent variable: Monthly returns of industry-neutral long/short implied dividend gap portfolio

Factor	Coef.	t-stat	p-value	[2.5%	97.5%]	
Alpha	0.3286%	1.48	0.1393	-0.0011	0.0076	
Mkt-RF	-0.0268	-0.67	0.5026	-0.1053	0.0516	
SMB	0.1003	1.02	0.3081	-0.0926	0.2933	
HML	-0.1616	-1.07	0.2862	-0.4585	0.1354	
RMW	-0.0486	-0.42	0.6762	-0.2769	0.1796	
CMA	0.3470	1.79	0.0737	-0.0332	0.7272	*
MOM	-0.0651	-1.01	0.3109	-0.1909	0.0608	

*** p<0.01 ** p<0.05 * p<0.10

Notes: R^2 = 0.1043 | Adj. R^2 = 0.0419 | Alpha (ann.) = 3.94% | N = 93 | HAC Newey-West (lags=3). Fama-French factors sourced from Kenneth R. French Data Library. Sample: April 2018 – December 2025.

Just Yield in Disguise?

A potential criticism of the implied dividend gap signal is that it simply repackages dividend yield as a valuation measure — that is; low gap stocks mechanically tend to have higher yields and are therefore "cheap" by conventional metrics. To address this, we control for yield level through a dependent double sort. Stocks are first divided into terciles based on trailing realized yield, and then within each yield tercile, sorted into decile portfolios on the implied dividend gap. Table 3 reports results for the extreme gap portfolios (P1 and P10) within each yield tercile, revealing a yield-conditional pattern that is consistent with both dividend risk premium theory and demand-driven overpricing channels.

Within the high yield tercile, the spread between low gap and high gap portfolios is 0.790% monthly — the largest across all yield groups — with the high yield, high gap portfolio generating the weakest risk-adjusted returns in the entire matrix (Sharpe 0.303). A high yield stock with a large positive implied

dividend gap is one where the options market prices future dividends above current realized payouts. This combination is consistent with overvaluation - mature, high-payout firms face a fundamental tradeoff between current distributions and reinvestment capacity, making the joint pricing of high yield and high growth expectations a valuation contradiction that predicts subsequent underperformance. The negative subsequent returns observed in this cell are therefore interpretable as the correction of overoptimistic dividend growth expectations.

The overpricing interpretation is further supported by two demand-side channels that operate with particular force in high yield names. First, yield-mandated institutional investors — including defined benefit pension funds screening on minimum yield thresholds and dividend ETFs weighting constituents by indicated yield — concentrate their holdings disproportionately in high yield equities, creating persistent non-fundamental buying pressure that inflates prices above fundamental dividend value. The mechanical consequence is an elevated implied dividend: as institutional demand bids up the stock price, the residual implied dividend extracted from options prices rises commensurately, generating a positive gap that reflects demand inflation rather than genuine growth expectations. Second, options market participants hedging dividend-linked structured products and convertible bond exposures create systematic flow in single stock options on high yield names, further distorting implied dividends above realized payouts. The convergence of these demand channels in the high yield, high gap cell — where both the equity market and options market simultaneously signal overvaluation relative to realized dividends — produces the most severe subsequent underperformance in the cross-section.

Conversely, the high yield, low gap portfolio generates the strongest returns within the high yield universe (Sharpe 0.567), consistent with stocks where the options market signals dividend deterioration relative to elevated trailing payouts and equity prices have repriced to compensate holders for bearing the cut risk. The wedge between implied and realized yields in this portfolio reflects genuine forward-looking concern about payout sustainability rather than institutional bidding for growth, and the resulting price discount embeds a risk premium that investors earn on average as compensation for taking the other side of the market's dividend pessimism.

The signal reversal observed in the low yield tercile — where high gap stocks modestly outperform low gap stocks — is consistent with a distinct mechanism: in low yield names, a positive implied dividend gap reflects the options market's forward-looking identification of dividend growth trajectories before they appear in realized payouts.

Table 3:

Double-Sorted Portfolio Returns: Dividend Yield × Implied Dividend Gap

Portfolios formed by dependent double sort: yield tercile first, implied dividend gap decile (D1/D10) within yield tercile. Equal-weighted monthly returns. Sample: April 2018 – December 2025.

Implied Dividend Gap	High Yield			Mid Yield			Low Yield		
	RET.	VOL.	SR	RET.	VOL.	SR	RET.	VOL.	SR
High Implied Gap (D10)	0.63%	25.0%	0.303	0.43%	23.2%	0.222	1.33%	24.5%	0.653
Low Implied Gap (D1)	1.42%	30.1%	0.567	1.32%	24.0%	0.658	1.16%	23.2%	0.601
Spread (Low – High Gap)	0.79%	—	0.264	0.89%	—	0.436	-0.17%	—	-0.052

Notes: Portfolios formed monthly by dependent double sort. Stocks sorted first into yield terciles, then within each tercile into implied dividend gap deciles. High Gap = D10, Low Gap = D1. Ret. = avg. monthly return. Vol. = annualized std. dev. SR = Sharpe ratio (annualized by $\sqrt{12}$). Equal-weighted, monthly rebalancing. Source: OptionMetrics IvyDB.

Conclusion

This paper introduces the implied dividend gap — the spread between options-implied and trailing realized dividend yields — as a forward-looking cross-sectional return predictor. Using a sample of optionable, dividend-paying U.S. equities from March 2018 to January 2026, we demonstrate that sorting stocks on this signal generates a long/short spread of 54 basis points per month, or approximately 6.5% annualized, that survives industry neutralization and produces an annualized alpha of 3.94% against the Fama-French six-factor model with near-zero exposure to established systematic risk factors.

The economic mechanism is grounded in the dividend risk premium literature. The options market provides a risk-neutral forward-looking estimate of dividend growth that trailing realized yields cannot capture. Low Gap stocks — where the options market prices in below-trend dividends — carry genuine forward-looking dividend cut risk that commands a return premium before the deterioration appears in realized payouts. High Gap stocks — where implied dividends exceed realized yields — have already capitalized growth expectations into current prices, mechanically compressing prospective returns. The persistence of this differential reflects structural limits to arbitrage: shorting High Gap stocks requires manufacturing dividend payments to share lenders, while yield-mandate institutional investors provide persistent non-fundamental buying pressure in exactly the stocks that populate the High Gap decile.

The dependent double sort on realized yield confirms that the signal is not dividend yield repackaged — the gap retains meaningful predictive power within each yield tercile, with the strongest spread concentrated in high yield names where the combination of elevated current income and above-trend implied growth. The factor spanning tests further confirm that the implied dividend gap is not a dressed-up value, quality, or momentum premium but rather a distinct dimension of dividend valuation that existing factor models fail to capture.

The implied dividend gap provides forward-looking information about future equity returns that is both economically meaningful and largely orthogonal to standard dividend valuation measures and established systematic risk factors — offering practitioners and researchers a new lens through which to assess dividend-based return expectations in the cross-section.

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