

Systematic BuyBack

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Cash Flow Crew

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Executive Summary



Strategy

Investing in companies with a high buyback yield, that generate positive free cash flow, allow you to find undervalued securities in the market.



Performance

Over the last 10 years, this strategy has slightly underperformed with the S&P 500, with a total return of 304% compared to the S&P at 315%. The Sharpe ratio was lower for this strategy in every backtesting period.



Recommendation

Cash Flow Crew is recommending TO NOT BUY this strategy, which would invest in 15 stocks, with a FCF weighted total of \$50,000.

Strategy Rational

Article Title: [The Rise of Buyback.pdf](#) & [Stock Repurchases and Long-Term Investor Returns A .pdf](#)

Key Takeaways:

- Citi bank projects 2025 total U.S. buybacks to break \$1T (11%).
 - Shift in corporate behavior.
- Positive free cash flow > funding though debt.
- Low-growth prefer dividends. High-growth prefer buybacks.
- Signaling theory.

Table 3. Risk and Return Characteristics of PKW and S&P 500 for Different Holding Periods

| Holding period | PKW Annual Return (%) (Standard deviation) | PKW Coefficient of Variation | S&P 500 Annual Return (%) (Standard deviation) | S&P 500 Coefficient of Variation |
|--------------------------|---|------------------------------------|---|--|
| 18 years (2007- 2024) | 10.05 (15.92) | 1.58 | 7.58 (17.52) | 2.31 |
| 10 years (2015- 2024) | 10.48 (15.92) | 1.52 | 9.70 (15.85) | 1.63 |
| 5 years (2020- 2024) | 12.17 (15.66) | 1.29 | 9.79 (19.35) | 1.98 |

Strategy Design

Description

- **Simple Explanation** - Our strategy is to invest in companies with a high buyback yield, that generate positive free cash flow and are decreasing their debt.

Origin

- **How You Identified** - Our strategy originated from two articles, "The Rise of Buybacks" and Stock Repurchases and Long-Term Investor Returns." These two articles claim that companies that have positive cash flows and use their free cash flows to buy back shares of their stock align their interest to the shareholders and as a result outperform the market.

Goal

- **State Hypothesis** - Find a systematic way to generate a list of companies, rebalanced quarterly, that will outperform the S&P500.

Parameters

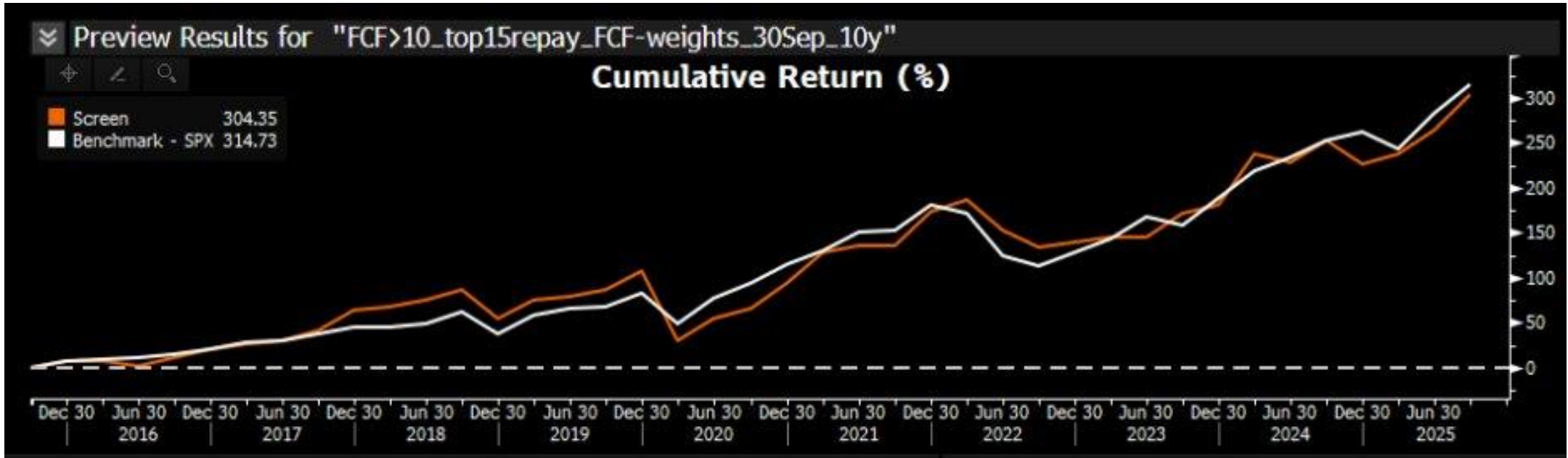
- **Establish Backtesting Rules** - Buyback yield greater than or equal to 4%, Current free cash flow yield >0, Top 50 rank (3-month average volume), Top 30 (current free cash flow yield) Top 15 (repayment ratio).

Parameters

Screening Criteria

| Parameter | Description | Stock Universe |
|----------------------|----------------------------------|----------------|
| Index | S&P 500 | 504 |
| Buyback Yield | Greater than or equal to 4% | 105 |
| Free Cash Flow Yield | Current Free Cash Flow Yield > 0 | 85 |
| Trading Volume | Highest 3 Month Average | Top 50 |
| Free Cash Flow Rank | Higher is better | Top 30 |
| LF Repayment Ratio | Higher is better | Top 15 |

Backtesting Results - Performance



| <u>Period</u> | <u>Return</u> | <u>α*</u> | <u>β*</u> | <u>σ*</u> | <u>Max DD*</u> | <u>Sharpe*</u> |
|-----------------|---------------|-----------|-----------|-----------|----------------|----------------|
| 1yr | 15.83% | 1.66% | 0.86 | 21.75% | -8.40% | 0.61 |
| 1yr SPX | 16.9% | 0 | 1 | 13.33% | -18.9% | 0.90 |
| 10yr | 10.21% | -1.51% | 1.08 | 24.54% | -33.64% | 0.67 |
| 10yr SPX | 11.15% | 0 | 1 | 18.22% | -33.93% | 0.7 |

Backtesting Results - Performance

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Overview Counts Security Analysis

Securities In Rebalance Period << < 09/30/2025 > >>

| | | | Rebalance Period: 09/30/2025 | | | In/Out | |
|----------|----|------------------|------------------------------|-----------|--------|----------|------|
| Ticker | | Short Name | Market Cap | Weight | Return | Previous | Next |
| 1) CNC | US | CENTENE CORP | 17.523625B | 4.450274 | -- | Out | Out |
| 2) COP | US | CONOCOPHILLIPS | 118.137453B | 4.129167 | -- | Out | Out |
| 3) CVX | US | CHEVRON CORP | 317.9398B | 4.037637 | -- | Out | Out |
| 4) EOG | US | EOG RESOURCES | 61.216782B | 4.813036 | -- | In | Out |
| 5) FI | US | FISERV INC | 70.085469B | 4.829473 | -- | Out | Out |
| 6) FOXA | US | FOX CORP - A | 26.771794B | 7.151116 | -- | Out | Out |
| 7) GM | US | GENERAL MOTORS C | 58.048184B | 16.002724 | -- | In | Out |
| 8) GPN | US | GLOBAL PAYMENTS | 20.155798B | 10.275866 | -- | Out | Out |
| 9) KMX | US | CARMAX INC | 6.588937B | 7.019381 | -- | Out | Out |
| 10) LKQ | US | LKQ CORP | 7.857734B | 5.82006 | -- | Out | Out |
| 11) MGM | US | MGM RESORTS INTE | 9.434142B | 8.877273 | -- | Out | Out |
| 12) MPC | US | MARATHON PETROLE | 58.596874B | 4.084617 | -- | In | Out |
| 13) SLB | US | SLB LTD | 51.344616B | 6.839115 | -- | Out | Out |
| 14) TAP | US | MOLSON COORS-B | 8.988929B | 7.129593 | -- | Out | Out |
| 15) TMUS | US | T-MOBILE US INC | 269.402809B | 4.540668 | -- | In | Out |

| Year | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Geo-Avg |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|---------|
| STRAT | -6.01% | 10.81% | 28.98% | -7.07% | 18.39% | 56.89% | 21.16% | -14.62% | 13.55% | -2.95% | 10.21% |
| SPX | -0.69% | 11.24% | 18.42% | -7.01% | 28.71% | 15.29% | 28.79% | -19.95% | 24.73% | 24.01% | 11.15% |

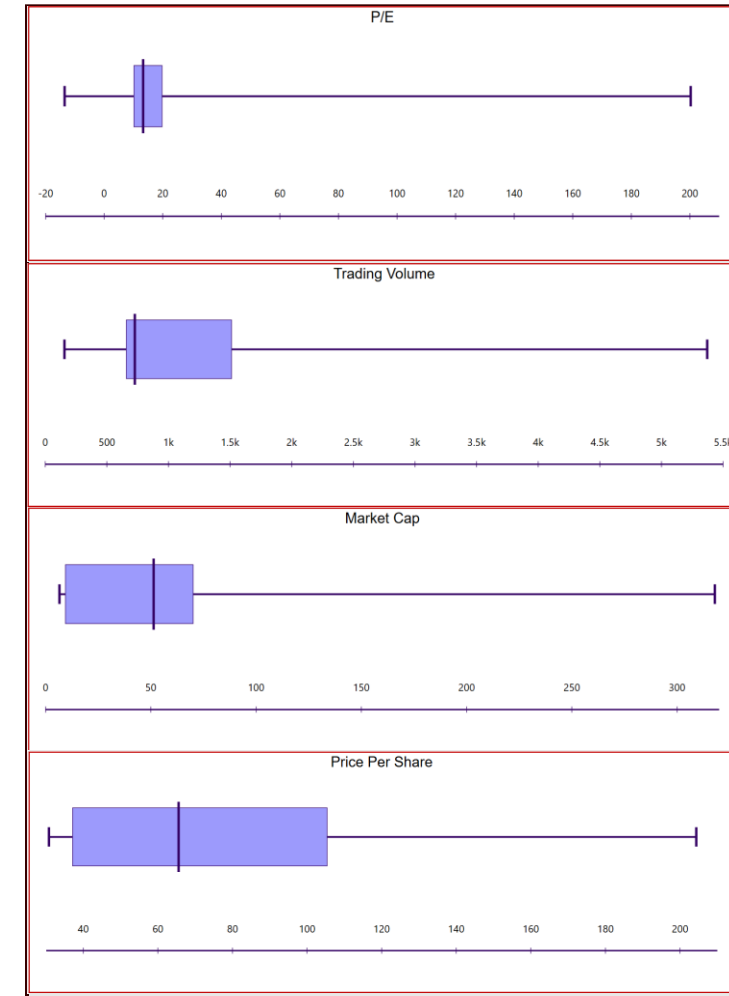
Backtesting Results – Stock Characteristics

| 10-Year Analysis | Market Cap | P/E Ratio | Trade Vol (Mo.) | PPS |
|------------------|------------|-----------|-----------------|--------|
| Mean | 73.47 | 25.4 | 1,379 | 98.6 |
| Min | 6.59 | -13.5 | 156 | 30.5 |
| 25% | 13.48 | 10.8 | 676 | 35.3 |
| Median | 51.34 | 13.3 | 727 | 45.3 |
| 75% | 65.65 | 19.0 | 156 | 187.6 |
| Max | 317.94 | 200.3 | 5,371 | 239.38 |

*Mkt Cap – \$ in Billions

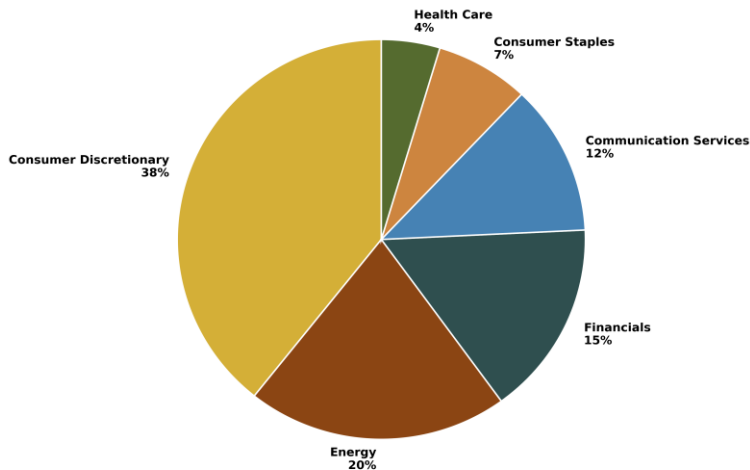
*Trade Volume in thousands

The strategy invests in the S&P 500, weighted based on FCF yield.

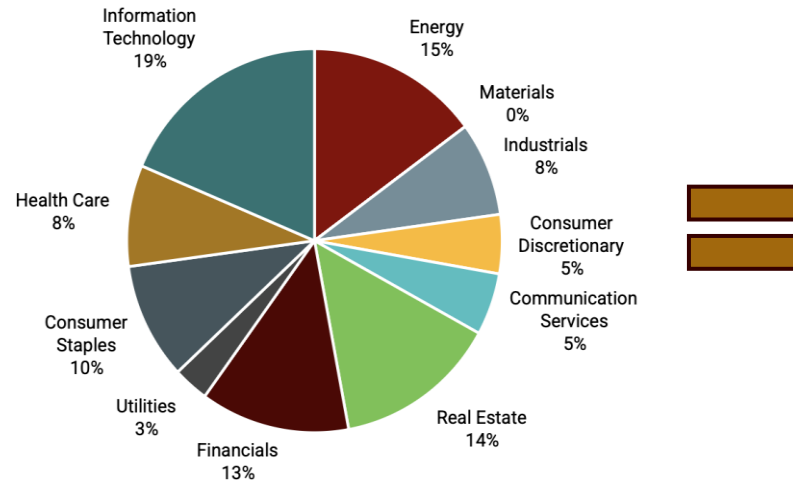


Effect on the Portfolio

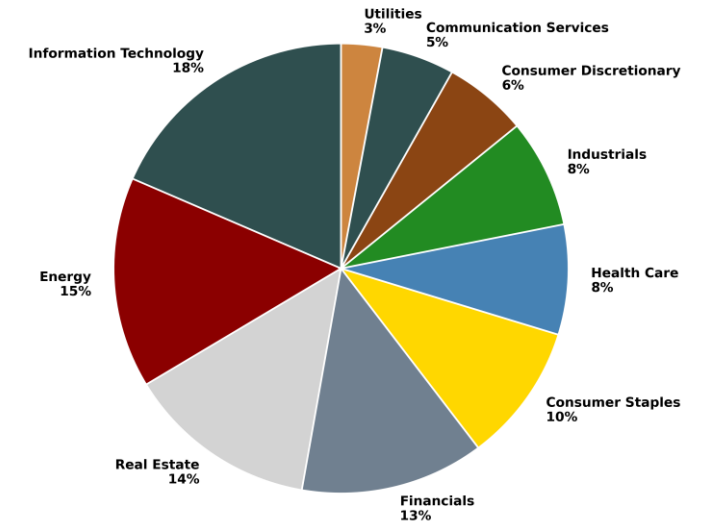
NEW Strategy Sector Breakdown



Before- Sector Allocations



After- Sector Allocations



| <u>Portfolio</u> | Exp. Return | St. Dev* | Beta* | Sharpe Ratio* | Idio. Risk* | Info. Ratio* |
|------------------|--------------------|-----------------|--------------|----------------------|--------------------|---------------------|
| Existing | 2.24% | 6.78% | 0.79 | -0.40 | 8.47% | -3.62 |
| Adjusted | 2.69% | 7.17% | 0.8 | -0.31 | 8.57% | -3.47 |

Risks

While investing in companies with strong free cash flow and active buybacks supports capital discipline and shareholder returns, it seems like it would work, but risks remain. Using excess cash for repurchases rather than new projects can signal limited growth opportunities and weaken long-term value creation. As the company is choosing to buy back shares rather than investing in projects with a positive NPV.

| <u>Risk Category</u> | Specific Risks | Mitigations |
|-------------------------------|--|---|
| Model & Research | Buyback effectiveness may weaken if firms use repurchases to mask slowing growth, or don't see value projects. | focused criteria (buybacks + positive FCF); So, we know companies aren't using debt to buy back shares. |
| Data & Assumptions | Assumption, only targeting companies with a positive free cash flow yield is going to favor more mature companies. | Only looking at positive free cash flow and not setting a high demand on free cash flow. |
| Portfolio | Sector concentration in industries favoring buybacks; underperformance during contractions or economic downturns. | Diversify across sectors; set exposure caps; monitor and rebalance periodically. |

Summary & Recommendation

Strategy Merits



Performance

Over the last 10 years, our strategy has performed similarly to the S&P 500 but just slightly worse.



Risk

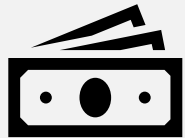
Share buybacks could be a sign that the company doesn't have any positive NPV projects.



Effects on Portfolio

Sector concentration in industries favoring buybacks; underperformance during periods of economic contractions and economic downturns.

Action Plan • Recommendation: Yes or No



Cash Flow Crew is recommending not to buy into this strategy. But we will track this strategy and see if we would have made money in this strategy, so we know if we made the right decision.