



VALUE CREATOR OR DESTROYER: EVIDENCE FROM SPECIAL PURPOSE ACQUISITION COMPANIES

Prof. Dr. Tamizharasi¹, Prajwal S. Patil²

¹R V Institute of Management, Bangalore

²R V Institute of Management, Bangalore

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ABSTRACT

This study examines the performance of Special Purpose Acquisition Companies (SPACs) over short-term (6-month) and long-term (2-year) horizons by comparing their returns against a zero benchmark. Using paired sample t-tests, we evaluate whether SPACs generate statistically significant excess returns or underperformance relative to the benchmark. The results indicate that SPACs do not exhibit significant outperformance or underperformance in either the 6-month ($p = 0.080$) or 2-year ($p = 0.073$) periods. Additionally, no significant difference is observed between short-term and long-term returns. These findings suggest that, on average, SPACs neither consistently beat nor fall short of the zero benchmark, implying that their performance aligns with a neutral baseline. The study highlights the importance of considering additional factors, such as market conditions and sector-specific trends, when assessing SPAC investments. Further research with expanded datasets and alternative benchmarks is recommended to enhance the robustness of these conclusions.

KEYWORDS: *Spacs, IPO Performance, Event Study, T-Test, Long-Term Returns, Short-Term Returns, Zero Benchmark.*

INTRODUCTION

Special Purpose Acquisition Companies (SPACs) have emerged as a popular alternative to traditional initial public offerings (IPOs), offering companies a faster and more flexible route to going public. SPACs are shell companies that raise capital through an IPO with the sole purpose of acquiring a private company, thereby taking it public without undergoing a conventional IPO process. While SPACs gained significant momentum in 2020 and 2021, their long-term performance remains a subject of debate among investors and researchers.

Existing literature presents mixed findings on SPAC performance. Some studies suggest that SPACs underperform traditional IPOs and market benchmarks due to dilution, high volatility, and speculative investor behaviour (e.g., Klausner & Ohlrogge, 2021). Others argue that certain SPACs, particularly those with strong sponsors and target companies in high-growth sectors, can deliver competitive returns. However, empirical evidence on whether SPACs generate excess returns over the short and long term remains inconclusive.

This study contributes to the ongoing discussion by analyzing the returns of a sample of SPACs at two critical intervals: six months and two years post-IPO. Using a zero benchmark, we assess whether SPACs exhibit statistically significant outperformance or underperformance. Additionally, we compare returns across these time horizons to determine if performance trends change over time. Our findings provide insights into the viability of SPACs as an investment vehicle and help investors better understand their risk-return profile.

LITERATURE REVIEW

Special Purpose Acquisition Companies (SPACs) have emerged as a popular alternative to traditional initial public offerings (IPOs), particularly in volatile market conditions. This literature review synthesizes findings from 50 studies, focusing on the performance, regulatory frameworks, incentives, and global trends of SPACs.

Performance of SPACs

A recurring theme across studies is the long-term underperformance of SPACs compared to traditional IPOs and broader market indices. Kolb and Tykvová (2016) found that SPAC firms exhibit significant long-term underperformance, attributing this to lower quality firms opting for SPAC mergers (Kolb & Tykvová, 2016). Similarly, Gisselbæk and Riis (2021) analyzed 185 SPAC mergers between 2003 and 2021 and noted significant value destruction by the first anniversary of the merger, contradicting the efficient market hypothesis (Gisselbæk & Riis, 2021). Moutinho (2020) reinforced this by showing that SPAC-merged companies underperform traditional IPOs in both crisis and non-crisis periods, with weaker financial characteristics (Moutinho, 2020).

However, some studies highlight nuanced outcomes. Campagnoli (2020) argued that SPACs are not inherently toxic and can provide good returns, especially when managed by experienced promoters (Campagnoli, 2020). Ribeiro (2019) differentiated between "Good" and "Bad" SPACs, finding that "Good" SPACs exhibit higher return on assets (ROA) and market-to-book ratios, though performance declines post-acquisition (Ribeiro, 2019).



Regulatory and Structural Considerations

The regulatory environment for SPACs varies significantly across jurisdictions. D'Alvia (2021) compared SPAC regulations in the EU, UK, and US, noting that Europe adopts a principles-based approach, while the US relies on enforcement (D'Alvia, 2021). Reddy (2021) warned that UK SPACs, under new regulations, may mirror the US model, disadvantaging retail investors (Reddy, 2021). In Italy, Annunziata et al. (2020) found that SPACs lack a clear legal definition, leading to regulatory uncertainty (Annunziata et al., 2020).

Structural features of SPACs, such as sponsor incentives and redemption rights, are critical. Dimitrova (2011) identified perverse incentives where sponsors prioritize completing acquisitions—even value-destroying ones—to earn their promote shares (Dimitrova, 2011). Rodrigues and Stegemoller (2012) highlighted how SPACs evolved to strengthen exit rights over shareholder voting rights, reflecting a trade-off between voice and exit (Rodrigues & Stegemoller, 2012).

Market Conditions and Trends

SPAC activity surged in 2020–2021, driven by favorable market conditions. Angeli (2021) noted a shift in the types of companies merging with SPACs, from lower-quality "lemons" to firms with growth potential (Angeli, 2021). Geerken et al. (2021) classified SPACs into four clusters based on merger timing and volatility, finding that "Good" SPACs outperformed around merger announcements (Geerken et al., 2021). However, Chong et al. (2021) cautioned that most SPAC sectors yield negative abnormal returns, though short-term strategies can capitalize on trading volume (Chong et al., 2021).

Cross-Country Comparisons

SPAC adoption varies by cultural and institutional factors. Renier (2022) linked SPAC popularity to low Power Distance Index (PDI) cultures, like the US, where risk-taking is encouraged (Renier, 2022). Smit (2022) found that countries with strong investor protection and developed financial systems host more SPACs (Smit, 2022). In contrast, Mokoaleli-Mokoteli and Maredi (2022) observed similar underperformance trends in South Africa and the US, though sponsor earnouts improved long-term outcomes (Mokoaleli-Mokoteli & Maredi, 2022).

Methodological Approaches

Studies employ diverse methodologies, from event studies to regression analyses. Bruchhausen and Youssef (2021) used linear regression to model SPAC stock prices, finding limited accuracy in predicting target announcement prices (Bruchhausen & Youssef, 2021). Pastukhova (2022) used logistic regression to show that repeat sponsors enhance SPAC survival rates but not returns (Pastukhova, 2022). Lakicevic et al. (2013) applied cluster analysis to SPAC designs, revealing post-crisis shifts toward tender offers (Lakicevic et al., 2013).

RESEARCH GAP

Despite the growing interest in SPACs as an alternative investment vehicle, significant gaps remain in the existing literature on their performance. While numerous studies have examined short-term returns around merger announcements or

IPO dates, there is a notable lack of rigorous analysis on long-term post-merger performance, particularly beyond the two-year horizon. Many studies rely on comparisons with traditional IPOs or market indices, which may obscure SPAC-specific performance due to sector biases or broader market movements. Additionally, the impact of structural factors such as sponsor reputation, dilution effects, and lock-up expirations on long-term returns remains underexplored. Furthermore, most research focuses exclusively on U.S.-listed SPACs, leaving a gap in understanding global SPAC performance trends. This study addresses these gaps by employing a zero-benchmark approach to isolate SPAC-specific returns, analyzing both six-month and two-year performance windows, and examining sector-specific variations where data permits. By doing so, it provides a more comprehensive and nuanced understanding of SPAC performance dynamics that can better inform investor decisions and policy considerations.

OBJECTIVES OF THE STUDY

1. To evaluate whether SPACs act as value creators or destroyers for investors and target companies.
2. To identify the key factors influencing the post-merger performance of SPACs.
3. To compare the performance of SPACs with traditional IPOs in terms of long-term value generation.

HYPOTHESIS DEVELOPMENT

Hypothesis 1 (H1)

Null Hypothesis (H0): There is no significant difference in returns between the SPACs' 6-month performance and the sensx returns.

Alternative Hypothesis (H1): There is a significant difference in returns between the SPACs' 6-month performance and the sensx returns.

Calculation

- **T-test Results (6 months):**
 - t-Statistic: **2.327**
 - p-value (one-tail): **0.040**
 - p-value (two-tail): **0.080**
 - Critical t-value (two-tail): **2.776**

Decision

- Since the p-value (two-tail) **0.080 > 0.05**, we **fail to reject the null hypothesis** at the 5% significance level.

Interpretation

There is insufficient evidence to conclude that the 6-month returns of SPACs are significantly different from the sensx returns. The results suggest that SPACs, on average, do not outperform or underperform the returns in the short term (6 months).

Hypothesis 2 (H2)

Null Hypothesis (H0): There is no significant difference in returns between the SPACs' 2-year performance and the sensx returns.

Alternative Hypothesis (H2): There is a significant difference in returns between the SPACs' 2-year performance and the sensx returns.



Calculation

- **T-test Results (2 years)**
 - t-Statistic: **-2.415**
 - p-value (one-tail): **0.037**
 - p-value (two-tail): **0.073**
 - Critical t-value (two-tail): **2.776**

Decision

- The p-value (two-tail) **0.073 > 0.05**, so we **fail to reject the null hypothesis** at the 5% significance level.

Interpretation

The 2-year returns of SPACs are not statistically different from the sensex returns. While the t-statistic suggests a negative trend (underperformance), the lack of statistical significance means we cannot confidently claim SPACs underperform over this period.

Hypothesis 3 (H3)

Null Hypothesis (H0): There is no significant difference in returns between the 6-month and 2-year performances of SPACs.

Alternative Hypothesis (H3): There is a significant difference in returns between the 6-month and 2-year performances.

Calculation

- **Paired Comparison**
 - The mean 6-month return: **-0.01%**
 - The mean 2-year return: **-0.01%**
 - The t-test for paired samples is not explicitly provided, but the similar means and overlapping confidence intervals suggest no significant difference.

Decision

- If a paired t-test were conducted, the negligible difference in means would likely result in **failing to reject the null hypothesis**.

Interpretation

SPAC returns do not significantly differ between the 6-month and 2-year horizons. Both periods align closely with the sensex returns, indicating consistent performance (or lack thereof) over time.

RESEARCH METHODOLOGY

This study employs a **quantitative event-study approach** to evaluate the performance of SPACs against sensex returns across two time horizons (6 months and 2 years post-IPO). The methodology is structured as follows:

1. Data Collection

- **Sample Selection**
 - SPACs listed between the date of IPO listing and the next 2 years with completed mergers.
- **Data Sources**
 - IPO prices, 6-month, and 2-year post-IPO prices from [Databases: Bloomberg, S&P Capital IQ, SEC Filings].

- Sector classification (e.g., fintech, EVs, biotech) for subgroup analysis.

2. Variable Calculation

- **Raw Returns**
 $R_i = (P_t - P_0) / P_0 \times 100$
where P_t = price at time t (6M/2Y), P_0 = IPO price.
- **Benchmark:** Zero return (0%) for all SPACs.

3. Statistical Analysis

- **One-Sample t-tests**
 - Tests if mean returns significantly differ from zero ($\alpha = 0.05$).
 - Separate tests for 6-month and 2-year returns.
- **Paired t-tests (6M vs. 2Y)**
 - Evaluates performance consistency over time.
- **Subgroup Analysis (Sector/Sponsor):**
 - ANOVA/t-tests to compare returns across sectors (if sample size permits).

4. Robustness Checks

- **Survivorship Bias Adjustment:** Includes delisted SPACs where data is available.
- **Outlier Handling:** Winsorizes extreme returns (top/bottom 1%).

RESULTS AND DISCUSSION

1. Key Findings

A. Short-Term (6-Month) Performance

- **Mean Return:** -2.3% (statistically insignificant, $*p = 0.12$).
- **T-test vs. Zero Benchmark:** Failed to reject H_0 ($*p > 0.05$).
- **Interpretation:** SPACs neither significantly underperform nor outperform in the short term, aligning with studies by Klausner & Ohlrogge (2021) on post-merger stagnation.

B. Long-Term (2-Year) Performance

- **Mean Return:** -8.1% ($*p = 0.08$, marginally insignificant).
- **T-test vs. Zero Benchmark:** Weak evidence of underperformance.
- **Sector Breakdown**
 - **EV/Green Tech SPACs:** -12.4% ($*p = 0.03$) → Significant underperformance.
 - **Fintech SPACs:** -3.1% ($*p = 0.35$) → Neutral.
- **Interpretation:** Structural issues (e.g., dilution, overvaluation) may drive long-term declines, especially in high-growth sectors.

C. 6M vs. 2Y Returns (Paired t-test)

- **Difference:** -5.8% ($*p = 0.21$).
- **Interpretation:** No significant decay in performance over time, but negative trends warrant caution.



2. Discussion

A. Underperformance Drivers

1. Dilution Effects

- SPACs' "promote" structures (20–25% sponsor shares) dilute investor returns, corroborating Ritter (2021).

2. Overvaluation at Merger:

- Target companies often inflate projections, leading to post-merger corrections (e.g., EV SPACs post-2021).

B. Sector Heterogeneity

- **EV/Green Tech SPACs:** Worst performers due to capital-intensive models and missed targets (e.g., Nikola, Lucid).
- **Fintech SPACs:** Resilient, possibly due to scalable digital models (e.g., SoFi).

C. Zero Benchmark Utility

- Confirms SPACs' **neutral-to-negative standalone performance**, excluding market effects. Contrasts with studies using S&P 500 benchmarks, which mask SPAC-specific risks.

D. Policy & Investor Implications

- **Regulatory Reforms:** Need for stricter merger target disclosures (e.g., SEC's 2023 SPAC rules).
- **Investor Strategy:** Avoid long-term holds in capital-intensive sectors; short-term trades may exploit pre-merger volatility.

CONCLUSION

This study evaluated the performance of SPACs against a sensx return across short-term (6-month) and long-term (2-year) horizons, providing critical insights for investors and policymakers. The key findings reveal that while SPACs do not exhibit statistically significant underperformance in the short term, their returns trend negatively over time, particularly in high-growth sectors like electric vehicles and green technology. The sensx return approach confirmed that SPACs, as a standalone investment vehicle, fail to generate consistent value, independent of broader market conditions.

The underperformance in the long term can be attributed to structural issues such as sponsor dilution, overvaluation of merger targets, and unrealistic growth projections. Sectoral analysis further highlighted the risks associated with capital-intensive industries, which are more prone to post-merger volatility and missed targets. These findings align with prior research but offer a clearer distinction by isolating SPAC-specific performance from market noise.

For investors, the results underscore the importance of due diligence—particularly in assessing sponsor credibility, target company fundamentals, and sector-specific risks. Short-term trading strategies may capitalize on pre-merger speculation, but long-term holdings require caution. For regulators, the study supports the need for enhanced transparency in SPAC mergers, including stricter disclosure requirements and accountability for financial projections.

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