

SPACs – A Primer from Global Economics Group and Some Potential Economic Examinations of SPACs and Investment Returns

1) Introduction

A special purpose acquisition company (“SPAC”) raises money through an initial public offering (“SPAC IPO”) and is a publicly held investment vehicle originated with the sole purpose to bring a privately held target company public through a reverse merger. SPACs were all the rage in 2020. And until very recently they didn’t seem to be letting up in 2021.¹ Nearly \$84 billion was raised by 248 SPAC IPOs in 2020 and in 2021 another 607 SPACs were announced, raising a total of \$161 billion, according to data from SPACanalytics.com.² We offer some thoughts on SPACs below, including some analysis of the economic returns to SPAC sponsors and other SPAC investors.

2) Pro’s & Con’s: vs. Traditional IPOs

The recent proliferation of SPACs is explained by a few perceived advantages of SPACs versus traditional IPOs. A key argument in favor of SPACs is that they tend to provide higher valuations for the targets and avoid some of the “money left on the table” (i.e., price uncertainty and potential underpricing) in traditional IPOs. If Company A goes public in a traditional IPO and issues 10 million shares of stock at \$50 and its new public stock closes at \$100 at the end of trading on Day 1, then Company A can be said to have left \$500,000,000 “on the table.” For example, DoorDash went public via a traditional IPO on December 9, 2020, raising a total of \$3.37 billion, priced at \$102 per share with 33 million shares outstanding;³ however, shares closed that day at \$189.51. DoorDash’s first-day 86% pop meant that DoorDash and its bankers potentially left more than \$2.8 billion on the table.⁴

One important reason for the lower valuation in the traditional IPO setting is the underwriting investment bankers’ conflict of interest. On one hand bankers are serving the going-public entity, which benefits from a higher valuation. On the other hand, the bankers are often serving investors buying shares of the going-public entity, who profit from the pop in price after the shares start publicly trading. Investment bankers tend to have ongoing relationships with the new investors, as opposed to a transactional relationship with the going-public entity.

When a private Company A (“target”) goes public via a SPAC, private Company A merges or combines with a SPAC (“acquirer”), which is already a public blank check company.⁵ An advantage in this setting is that the target company negotiates a fixed price for the merger with

¹ <https://insight.factset.com/continued-strong-third-quarter-u.s.-ipo-activity-pushes-2021-to-new-highs>

² <https://www.spacanalytics.com/>

³ <https://www.sec.gov/Archives/edgar/data/1792789/000119312520313884/d752207d424b4.htm>

⁴ In a traditional IPO, the average first day return is approximately 20%. See <https://site.warrington.ufl.edu/ritter/files/IPOs-Underpricing.pdf>

⁵ The SEC classifies a SPAC as a “type of blank check company” that is “created specifically to pool funds in order to finance a merger or acquisition opportunity with a set timeframe. The opportunity usually has yet to be identified.” (See, <https://www.investor.gov/introduction-investing/investing-basics/glossary/blank-check-company>; and <https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-bulletins/what-you>).

only one party—the SPAC.⁶ This price certainty is underscored by an agreed upfront fixed price. Another perceived advantage for companies that go public via SPAC is the allowance of SPACs to disclose financial projections in its SEC filings—unlike an SEC Form S/1 for a traditional IPO, which prohibits companies from including financial forecasts.⁷ Disclosed financial projections may allow investors to form more accurate estimates of company value based on standard financial valuation approaches.

An additional reported advantage of SPACs is that they can provide a faster path to the public markets versus a traditional IPO (e.g., 4-6 months vs 18 months, respectively).⁸ The speed at which a target can go public via a SPAC is due to the SPAC’s already public status and to a larger extent: the skill of the SPAC sponsor.⁹ The target can effectively go public without making arrangements with underwriters, conducting roadshows, or preparing a prospectus.¹⁰ Circumventing the foregoing allows the acquirer and the target to focus on executing the transaction, which requires due diligence and preliminary tender offer documents, registration statement preparation, and finally the merger proxy statements. Nonetheless, SPACs still may need to conduct roadshows to keep investors interested in the target and negotiate with potentially many parties to close PIPE financing,¹¹ which could mean fluctuating deal terms and renegotiating contracts—all of which could delay the de-SPACing process. Therefore, while it is difficult to accurately compare the total time it takes to go public through a SPAC merger and a traditional IPO, the de-SPACing process at its most efficient should be quicker than a traditional IPO.

⁶ <https://www.bakerbotts.com/thought-leadership/publications/2020/july/a-surge-of-spacs-in-a-turbulent-economic-climate>. Additionally, the SPAC share price may adjust to reflect equity characteristics of the target company, thus providing more price certainty before the target and the SPAC officially complete their business combination (see, “SPAC Metamorphosis,” *Barclays*, November 2, 2020).

⁷ See, e.g., Klausner and Ohlrogge, *A Sober Look at SPACs*, Stanford Law School, Working Paper Series, Paper No. 559 available at <https://ssrn.com/abstract=3720919>.

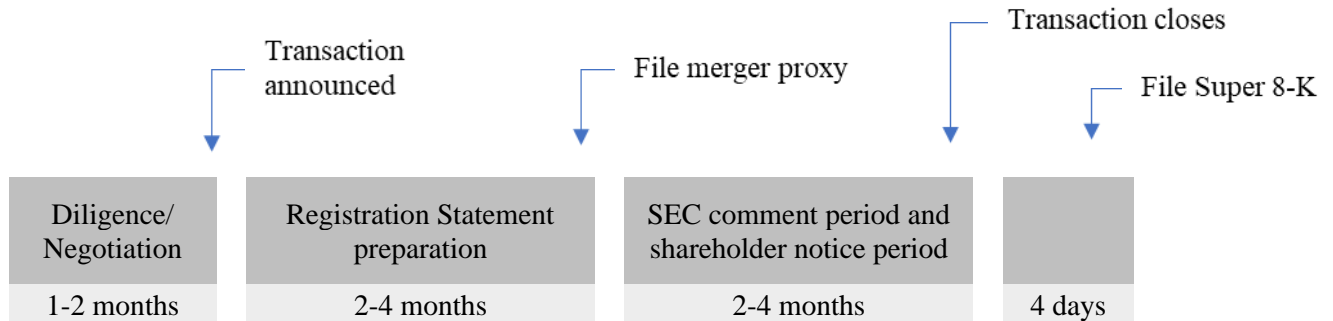
⁸ “SPAC Metamorphosis,” *Barclays*, November 2, 2020.

⁹ See “SPAC Metamorphosis,” *Barclays*, November 2, 2020: (“Investors in the SPAC IPO are essentially investing based on the capability of the SPAC sponsors (usually seasoned executives with industry expertise who often partner with financial backers) to execute on an acquisition.”); and Dimitrova, Lora, “Perverse Incentives of Special Purpose Acquisition Companies, the “Poor Man’s Private Equity Funds,” *Journal of Accounting and Economics*, vol. 63, 2017, pp. 99-120: (“[a] SPAC is formed by a group of people who are usually experts in a given industry and have demonstrated a track record of success and a proprietary edge in the areas of private equity and mergers and acquisition”).

¹⁰ Dimitrova, Lora, “Perverse Incentives of Special Purpose Acquisition Companies, the “Poor Man’s Private Equity Funds,” *Journal of Accounting and Economics*, vol. 63, 2017, pp. 99-120; and <https://dart.deloitte.com/USDART/ov-resource/70bc19ee-01c6-11eb-90e3-f323486578a5.pdf>

¹¹ See Klausner and Ohlrogge, *A Sober Look at SPACs*, Stanford Law School, Working Paper Series, Paper No. 559 available at <https://ssrn.com/abstract=3720919>

Figure 1



Source: Deloitte

Before the recent SPAC IPO boom witnessed in 2020, SPACs were seen as a route for more complex businesses to gain access to the public markets. The same is true today. These businesses could be either 1) in development stage with no revenue or profits, 2) under heightened legal or regulatory scrutiny, 3) in hard-to-define industries with few public comparable firms, or 4) facing a complicated tax situation.¹² The SPAC IPO boom has moved up the timeline for companies to seek public funds. For example, Tesla went public in 2010 via a traditional IPO with a 3-year revenue CAGR of over 1,000%;¹³ conversely, Nikola was founded in 2015 and went public in 2020 via a SPAC combination with no realized sales in its operating history.¹⁴ The recent SPAC craze has propelled targets to seek public funds in lieu of late-stage venture capital money.¹⁵ However, substituting retail investors for venture capital funding might leave Main Street with an unwanted bill, as evidenced by some of the SPAC return statistics.

As discussed above, the benefit from increased price certainty a target receives via a SPAC merger should in theory leave less “money on the table” than exhibited in a traditional IPO. In a sense, a smaller IPO pop should suggest a cheaper going-public process. In a traditional IPO, underwriters’ fees can range from 5-7% of the IPO proceeds. Similarly, with a SPAC IPO, underwriters’ fees can range from 5-5.5% of the IPO proceeds, of which typically 2% is an upfront fee and 3.5% is a deferred fee contingent on a successful de-SPAC. However, underwriting fees are not the only component in the total costs of going public. As discussed above, the initial “pop” following a traditional IPO could be considered a cost. The historical average for a first-day “pop” is approximately 20%.¹⁶ Conservatively, the cost of going public in a traditional IPO can be considered the 20% missed opportunity plus the 7% underwriters’ fee, for a total cost of 27% of gross IPO proceeds.

¹² See Klausner and Ohlrogge, A Sober Look at SPACs, Stanford Law School, Working Paper Series, Paper No. 559 available at <https://ssrn.com/abstract=3720919>.

¹³ https://www.sec.gov/Archives/edgar/data/1318605/000119312510149105/d424b4.htm#toc51863_11

¹⁴ https://www.sec.gov/Archives/edgar/data/1731289/000110465920033164/tm2012695d1_ex99-1.htm

¹⁵ <https://news.crunchbase.com/news/as-spacs-hunt-targets-they-could-disrupt-vc-world/>

¹⁶ Ritter, *supra* note 4.

Similar to a traditional IPO, underwriting fees are not the only cost of a SPAC merger. The total costs of a SPAC merger have been estimated at 50.4% of gross IPO proceeds, consisting of the sponsor's unfunded "promote," dilution from warrants and/or rights, and underwriting fees.¹⁷ Taken together, the costs associated with a SPAC merger can far outweigh those of a traditional IPO; however, the target companies bear very little of the dilution costs. Instead, much of those costs are absorbed by SPAC shareholders in the form of negative returns post-merger.

To examine dilution impacts, let's consider a hypothetical SPAC that raises \$600 million by selling 60 million shares publicly at \$10.00 per share. That SPAC then grants its sponsors additional shares equal to 25% of the total shares sold publicly ("sponsor's promote"); this is the typical amount shared with sponsors to compensate them for the skill and expertise they bring to the search for a target. This SPAC would have 15 million shares designated to the sponsor, meaning it has \$8.00 per share of cash in the trust.¹⁸ In addition to the sponsor's promote, SPAC shareholders are allowed to redeem their shares prior to a business combination for the IPO price plus interest while retaining warrants that can be used to acquire post-merger shares, further diluting public SPAC shareholders.

Using the hypothetical \$600 million SPAC above, suppose 50 percent of SPAC public shareholders redeem immediately prior to a business combination. This leaves the SPAC with \$300 million in its trust account and 45 million in fully-diluted shares outstanding. Therefore, SPAC shareholders would see a decrease from \$10.00 per share to \$6.67 per share following the merger.¹⁹ Moreover, *Klausner and Ohlrogge* point out that redemption rates are unknown until the merger is complete; therefore, the final negotiated deal between the SPAC and target depends not only on the redemption rate but also the share exchange ratio at which investors ultimately value the target.

3) Analyzing Redemption Rates and Post-Merger Returns of SPACs

To better understand the dilutive effects redemptions can have on the SPAC shares held through the merger transactions, we reviewed 115 SPACs that had de-SPAC transactions which closed between February 2018 and February 2021. Of these transactions, the value-weighted average redemption rate was 36.0%.²⁰ The equal-weighted average redemption rate was 46.5% and the median redemption rate was 53.0%. This means that on average just under half of shares listed in SPAC IPOs are redeemed prior to the close of the de-SPAC transaction.²¹

We calculate whether there is any correlation between the redemption rate and the 90-day and 180-day returns in excess of the S&P 1500 for these SPACs following its de-SPAC. In other words is there a relationship between the percentage of shares that are redeemed prior to the de-SPAC and the stock market 3-month and 6-month returns following the de-SPAC? Do SPACs

¹⁷ Klausner and Ohlrogge, *A Sober Look at SPACs*, Stanford Law School, Working Paper Series, Paper No. 559 available at <https://ssrn.com/abstract=3720919>.

¹⁸ \$600 million / (60 million public shares + 15 million sponsor shares) = \$8.00

¹⁹ \$300 million / (30 million public shares + 15 million sponsor shares) = \$6.67

²⁰ Weighted by total proceeds held in the Trust at IPO. In total there were 123 SPACs that closed during this time period. Eight SPACs without redemption data were excluded from the analysis.

²¹ Redemption data pulled from Super 8-K. Source: SPACInsider.

perform better when SPAC IPO shareholders stick around and don't redeem their shares? Ultimately, are SPAC investors able to predict subsequent returns, as evidenced by their redemption behavior?

The correlation between SPAC redemption percentage and 90-day and 180-day returns for the sample of SPACs we examined was -45% and -48%, respectively. This indicates a negative relationship between the SPAC redemption percentage and post-merger SPAC 90-day and 180-day returns or SPACs, with lower redemption rates tending to perform better than SPACs with higher redemption rates. Thus, on average, SPAC investors appear to be more likely to redeem their shares in advance of poorly-performing merger transactions.

The following tables report summary characteristics, performance returns, and averages by value held in a SPAC's trust account for these same 115 SPACs following their de-SPAC transactions.

Figure 2

Characteristics	SPAC Size
Minimum	\$40,365,000
First Quartile	\$143,750,000
Average	\$261,881,084
Median	\$230,000,000
Third Quartile	\$327,500,000
Maximum	\$1,100,000,000

Figure 3

	90-day Return Net of Market	180-day Return Net of Market
Median	-0.77%	-15.21%
Average	16.82%	-6.99%
Weighted Average (by \$ Size of SPAC)	24.48%	3.11%

We measured post-merger returns as the change in value from the SPAC's redemption price to the market price of the publicly traded post-merger shares. The redemption price is the value shareholders could have received back in hand had they elected to not proceed with the merger – typically this is the IPO price of the SPAC plus interest earned on the cash as it was held in the trust awaiting a merger.

Figure 3 documents that the typical SPAC in the three-years from February 2018 to February 2021 returned -0.77% relative to the S&P 1500 in the 90 days following the merger. The post-merger stock returns extended their losses to the market in the following 90-days, declining another 14% and reaching a total underperformance of -15.21%, at the median.

Of the SPACs analyzed, those with the highest redemption rates tended to fair worse than SPACs with relatively low redemption rates. This is consistent with the proposition that when redemption rates are high, SPACs are contributing less cash to the target and face far higher dilution costs. At six months following the merger, SPACs with redemption rates higher than 75% of the original IPO shares underperformed the market by 35.58%. Alternatively, those SPACs with low redemption rates (less than or equal to 25%) actually outperformed the market by 22.05%.

Figure 4

Redemption Rate	Average 90-day Return Net of Market	Average 180-day Return Net of Market
0% - 25%	56.21%	22.05%
25% - 50%	31.63%	12.61%
50% - 75%	-12.66%	-28.85%
75% - 100%	-19.78%	-35.58%

While redemption rates are not known until immediately prior to the merger, the original size of the IPO (at least historically) might be a proxy for the quality of the SPAC sponsors. SPACs whose sponsors have extensive experience or credibility in their markets could lead to better deals that result in lower redemption rates or have the skill to overcome dilution from redemptions. In any event, Figure 5 below documents that SPACs that fall in the quartile with the largest IPO size (greater than \$327.5 million) outperform the S&P 1500 in the first six months following the merger by 27.76% compared with the smallest SPACs (less than or equal to \$143.75 million in IPO size) that underperform the market by -34.44%.

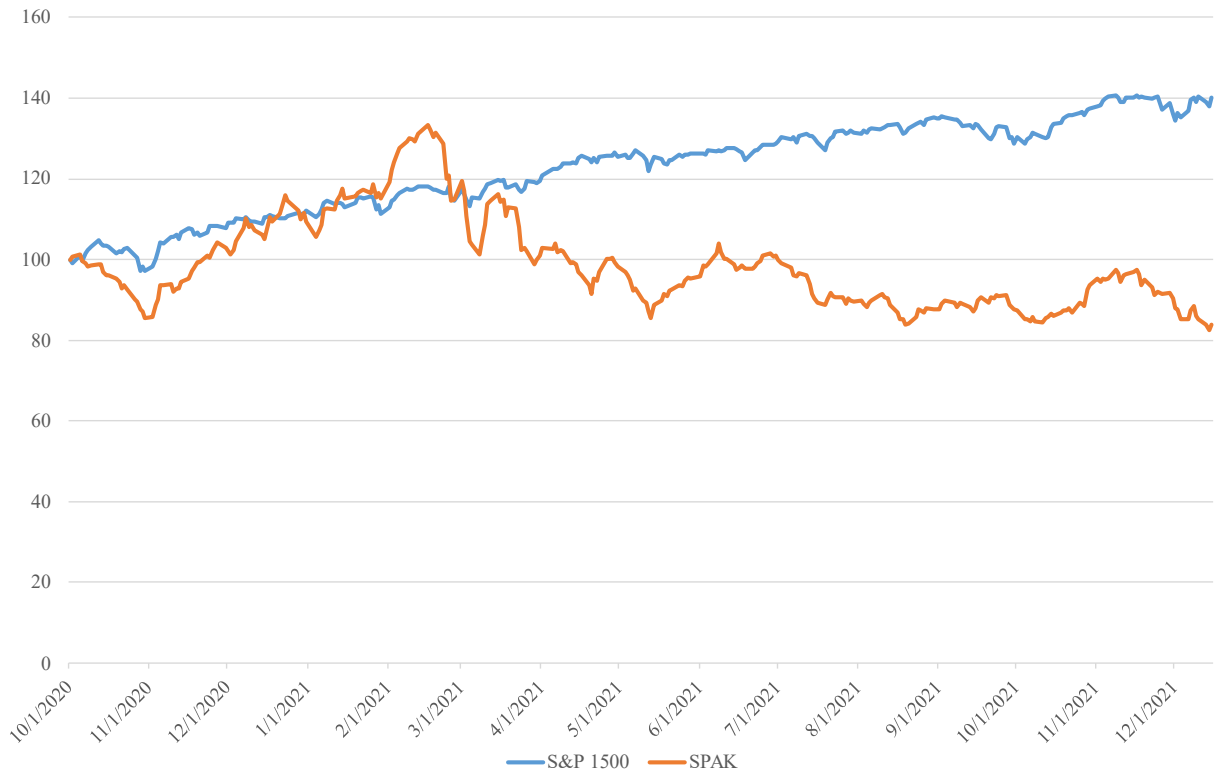
Figure 5

Size of SPAC IPO by Quartile	Average 90-day Return Net of Market	Average 180-day Return Net of Market
< \$143.75M	-12.78%	-34.44%
\$143.75M to \$230.00M	20.06%	-7.94%
\$230.00M to \$327.50M	20.64%	-10.73%
> \$327.50M	42.72%	27.76%

In addition to investing in SPACs directly, investment managers have begun to take advantage of the hot SPAC market by creating ETFs that track the market-wide pre-merger and post-merger returns. This enables investors to buy a wide swath of SPACs through one investment. The first SPAC ETF was offered on September 30, 2020 and is called the Defiance Next Gen SPAC Derived ETF (ticker: SPAK). As of September 30, 2021, this ETF had net assets of \$41.85 million and 315 SPAC holdings. Figure 6 below compares this ETF's returns to that of the S&P 1500 from inception through December 15, 2021.

Figure 6

S&P 1500 vs. SPAK ETF
October 1, 2020 to December 15, 2021



From October 1, 2020 to December 15, 2021 the S&P 1500 (not including dividends) returned approximately 40% while the Defiance SPAC ETF returned approximately -20%. This further demonstrates the negative returns documented in the earlier tables for all but the largest SPACs.

The flipside of these negative returns earned by SPAC investors following de-SPACs are the positive returns that are earned by SPAC IPO investors who redeem prior to merger. *Klausner and Ohlrogge* found in their 2019-2020 SPAC cohort, the average risk-free return to SPAC IPO investors who redeemed their shares was 11.6%. The positive returns to these shareholders come in the form of the redemption price they received prior to the de-SPAC plus the market value of warrants and rights they acquired in the SPAC IPO and held at the time of the de-SPAC.

4) Conclusion

As the two-year merger window closes for the wave of SPACs that IPO'd during 2020 and 2021, we will continue to be watching for performance implications. The combination of limited targets to take public and strong incentives for the SPAC sponsors to get a deal done could lead to riskier bets and lower returns. If that is the case, keep an eye on class action lawsuits filed against SPAC

originators. We have already seen an uptick in cases filed over the past year. According to the *D&O Diary*, as of December 19, 2021 29 SPAC-related securities cases had been filed in 2021 - up from 7 SPAC-related securities cases in 2020.²²

In addition to these private lawsuits, the SEC and Chairman Gary Gensler have turned their attention to SPACs, wondering if the structure provides the same type of protection for investors as traditional IPOs.²³ Speaking at the Healthy Markets Association Conference in December 2021, Chairman Gensler indicated that he would like to see rules in place requiring SPACs to provide more information about fees, anticipated dilution, and conflicts that exist during all stages of the SPAC process; and he asked staff to investigate ways in which investors could access this information at the time they are deciding to invest.²⁴

2022 promises to be an interesting year for SPACs and financial markets in general. We will continue to add to our performance dataset of SPACs as more de-SPACs occur and will look for policy impacts on investor performance.

Matthew Cain
Senior Fellow, Berkeley Center for Law and Business
mdcain@outlook.com

Peter Hickey
Principal, Global Economics Group
phickey@globaleconomicsgroup.com

Matthew Kennedy
Senior Associate, Global Economics Group
mkennedy@globaleconomicsgroup.com

Scott Walster
Principal, Global Economics Group
swalster@globaleconomicsgroup.com

²² <https://www.dandodiary.com/2021/12/articles/uncategorized/spac-related-securities-suit-filed-against-space-gear-company/>

²³ <https://www.wsj.com/articles/secs-gary-gensler-seeks-to-level-playing-field-between-spacs-traditional-ipos-11639063202>

²⁴ <https://www.sec.gov/news/speech/gensler-healthy-markets-association-conference-120921>