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"On Mergers, Acquisitions and Liquidation Using Specified Purpose Acquisition Companies (SPACs)"

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On Mergers, Acquisitions and Liquidation Using Specified Purpose Acquisition Companies (SPACs)

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Abstract

A Specified Purpose Acquisition Company (SPAC) is formed to purchase operating businesses within a priori determined time period. SPACs existed in U.S capital markets since the 1920s. Their corporate structure has recently become debated in the legal and financial literatures, especially their structural response to regulations by the Security and Exchange Commission (SEC) in the late 1990s. SPACs were traded on American Stock Exchange and Overt the Counter Bulletin Board. Since 2008, SPACs are listed on New York Stock Exchange and National Association of Securities Dealers Automated Quotations. This paper examines the determinants of the execution of mergers by SPACs.

On Mergers, Acquisitions and Liquidation Using Specified Purpose Acquisition Companies (SPACs)

1. Introduction

Although Specified Purpose Acquisition Companies (SPACs) have been in existence in different forms in U.S capital markets since the early 1920s,[1] their corporate structure has only recently become intensely debated. A major trigger for the increased interest in SPACs their structural response to regulation by the Security and Exchange Commission (SEC) of the speculative blank check market in the late 1990s.[2] In August 2003, a midsize investment bank EarlyBirdCapital underwrote successful initial public offering (IPO) for Millstream Acquisition Corporation, complying with all blank check market regulations. The event triggered intense activity in capital markets, with SPACs representing 23% of IPOs in 2007 and 34% in 2008 (Ritter 2008).[3]

A few papers in the legal literature explained the characteristics of recent SPACs.[4] In the financial literature Jog and Sun (2007) and Boyer and Baigent (2008) were the first to offer more intense research on SPACs. This paper documents changes in the corporate design of SPACs and explain their evolution. Additionally, the paper examines the impact of SPAC stakeholders on the success of merger. None of these issues are fully explained in the current literature on SPACs.

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[1] "The American "investment" trusts functioned as blind speculative pools, administered in many cases by men of reputation and ability who were carried away by the universal madness. These new "creations" played a double role in intensifying the speculative orgy, for they were themselves both active speculators and active media of speculation." Graham and Dodd (1934).

[2] Blank check is a company that issues penny stock in order to finance its involvement in establishing a business in which principal operations have not yet commenced. In the late 1990s, the Security and Exchange Commission revoked licenses of more than 10 blank check market promoters which lead to a complete ceasing of their market.

[3] Renaissance Capital confirms this percentage for 2007 and reports that SPACs were 35% of IPO activity in 2008 http://www.renaissancecapital.com/IPOHome/Press/IPOPricings.aspx

[4] Hale (2007), Heyman (2007), Reimer (2007), Sjostrom (2007).

Jog and Sun (2007) examine characteristics of SPACs and refer to the SEC's definition of blank check companies as "a development stage company that has no specific business plan, or purpose, or has indicated its business plan is to engage in a merger or acquisition with an unidentified company, other entity, or person." A SPAC is created to pool funds in order to finance a merger or acquisition opportunity within a set time frame. The merger opportunity usually has yet to be identified.[5]

A SPAC is a clean shell company[6] that acquires public status through the unit IPO and is specifically formed to purchase one or more operating businesses over a certain amount of time, usually two years. Proceeds raised through the IPO are placed in escrow accounts with a credible financial institution and are kept there until the SPAC founders close a deal with potential targets. If an appropriate target is not found within the two-year period after the IPO, the SPAC is liquidated and funds from the escrow accounts are returned to investors. Units issued by SPACs are immediately tradable, while trading with warrants and shares starts after the date by which underwriters exercise overallotment rights.[7] On average, trading of warrants and common shares starts four weeks after the IPO. SPACs used to be traded on American Stock Exchange (AMEX) and Overt the Counter (OTC) Bulletin Board. However, since 2008, SPAC shares are listed on New York Stock Exchange (NYSE) and National Association of Securities Dealers Automated Quotations (NASDAQ). Three groups of stakeholders have primary incentive in the success of SPACs and the execution of a merger as the final outcome, namely: SPAC founders, underwriters and investors.

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[5] *http://www.sec.gov/answers/blankcheck.htm* .

[6] A shell company is a company that now or <u>at any previous time</u> been an issuer, that has: (A) No or nominal operations; and (B) Either:
(1) No or nominal assets;
(2) Assets consisting solely of cash and cash equivalents; or
(3) Assets consisting of any amount of cash and cash equivalents and nominal other assets.
http://www.rule144solution.com/ShellCompany.asp .

[7] The sale of shares by the underwriters in excess of those initially available.

Within a short period of time, many studies on SPACs were conducted.[8] Due to the increase in the volume and occurrence of SPACs in capital markets, Lewellen (2009) called for the recognition of SPACs as a new class of financial asset. However, concurrently with Lewellen's suggestion, the market for SPACs almost ceased, with only one SPAC conducting an IPO in 2009. It took more than a year for SPACs to reappear. In May 2010, 57th Street Acquisition Company went public as a blank check SPAC company, this time having vastly redesigned its corporate structure.

The paper proceeds as follows: section two discusses literature on SPACS, section three presents the data; section four explains institutional characteristics of SPACs in the period 2003 until 2012; section five reports the empirical tests; and section six concludes.

2. Literature review

The current literature on SPACs analyzes various aspects such as the institutional structure, the incentives of major stakeholders, the performance of issued securities and the factors determining successful mergers executed by SPACs. Studies on the institutional structure and design of SPAC securities refer to Schultz (1993), Chemmanur and Fulghieri (1997) and Garner and Marshal (2007).

Schultz (1993) models why companies use units, that is a bundle of common stock and warrants, during the initial public offering and why they commit to issue more stocks at a future date at the exercise price of the warrant. He finds that the major obstacles are their small size, low earnings and low value of assets. Additionally, he sees units as the solution for the agency-cost problem resulting from the free cash flow awarded to managers at the time of the IPO.

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[8] Berger (2008), Hale (2007), Lewellen (2009), Floros and Travis (2011).

Chemmanur and Fulghieri (1997) maintain that unit IPOs solve information asymmetry problems and, enable companies that are considered risky by outsiders to signal their true value.

Garner and Marshal (2007) empirically test the predictions of Schultz (1993) and Chemmanur and Fulghieri (1997). They find that risky firms assign a higher proportion of firm value to the warrants at the time of the IPO and increase the underpricing.

Boyer and Baigent (2007) and Jog and Sun (2007) confirm the prediction from the baseline papers: SPACs' initial public offerings are relatively small in size, averaging less than $100 million. They also report that SPACs have a very low value of assets and earnings. Contrary to Garner and Marshal (2007), both Boyer and Baigent (2008) and Jog and Sun (2007) find that SPAC units do not experience any significant underpricing.[9] Chakraborty et al. (2011) provide a potential theoretical explanation for the lack of the underpricing of unit IPOs. They find the optimal ratio of stocks and warrants in a unit.

Jog and Sun (2007) and Thompson (2011) examine the incentives of the three major stakeholders of SPACs: founders, underwriters and investors. Jog and Sun report that for their sample of SPACs covering the period from 2003 to 2006, managers of successful SPACs earned, on average, 19 times their initial investment. Hale (2007) and Thompson (2011) report that, on average, underwriters receive compensation of around 7% of gross proceeds obtained at the offering. Lewellen (2009) and Thompson (2011) report that part of the underwriters' compensation is deferred until consummation of the merger.

For its investors, SPACs are essentially a risk-free note plus a call option where the maturity of the note is usually two years.[10] The expiration date of the option represents the end of

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[9] The finding that SPACs do not experience any underpricing is confirmed also in Lewellen (2009), Thompson (2010), Lakicevic and Vulanovic (2011) and Ignatyeva et al. (2012) using a larger sample of SPACs both in the U.S and European markets.

[10] In the early years of SPACs a unit would consist of two warrants and one share.

the pre-specified deal period where the option's strike price is equal to the expected per-share trust amount at the expiration date. The performance of SPAC securities are examined in studies that mostly focus on the performance of common shares and do not perceive SPACs as a risk-free debt plus a call option.[11]

Jog and Sun (2007) report negative overall performance of around 22% to the investors holding common stock of SPACs. Similarly, Lewellen (2009) report a negative 2% monthly return. Tran (2010) focuses on post-merger announcement returns and reports a 1.7% monthly return to investors after the announcement date. Lakicevic and Vulanovic (2013), in addition to the analysis of SPAC common shares, analyze post-announcement returns of SPAC unit warrants. They report negative share performance after the announcement for common stock but positive returns for holders of units and warrants.

Ignatyeva et al. (2012) report performance of 2.5% after the announcement of the merger and attribute it to returns on the risk-free note rather than a signal of the potential quality of the SPAC. Datar et al. (2012), states that the operational performance of SPAC acquired firms are significantly inferior to their industry peers and to contemporaneous IPO firms. They report that after the merger, SPAC acquired companies that are more highly leveraged, smaller in size, have lower investment levels and lower growth opportunities than firms that conduct a conventional IPO. While comparing SPACs performance with a sample of similar IPOs, they report negative returns in the long term for both groups and underperformance of SPACs relative to the peer IPO's. In general, they recommend that investors stay away from SPACs. Rodrigues and Stegemoller (2012) report that SPACs do not exhibit IPO underpricing, with initial returns near

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[11] A major obstacle for the analysis of the complete financial structure of SPAC is the lack of trading data on warrants.

zero and gross spreads similar to traditional IPOs. Howe and O'Brien (2012) indicate that neither managerial nor institutional ownership is associated with the performance of SPAC securities.

Jenkinson and Sousa (2009) study the performance and characteristics of SPACs that successfully conducted a merger and report that half of the deals were value destroyers. Tran (2010) using a sample from 2003 to 2008, reports that SPACs are less likely than other comparable IPOs to execute merger combinations and that SPACs tend to focus on acquisitions of private companies as their primary targets. He also finds that merger success is positively related to the involvement of institutions that want to invest in SPACs -- both pre-merger and post-merger. Lakicevic and Vulanovic (2011) examine the major merger determinants and find a positive impact on SPACs' mergers by underwriters who specialized in the SPAC market, such as EarlyBirdCapital. They also find that a merger is more likely if a larger proportion of the money raised in the IPO is deposited in a trust fund.

SPACs today have a vastly different corporate structure than when they entered capital markets in 2003. The changes are partially attributed to market factors and to the impact of institutional investors (Lewellen (2009), Tran (2010), Vulanovic (2010), Cumming et al. (2012)). Cumming et. al. (2012) find that mergers of SPACs are impacted by the arbitrage behavior of institutions.

Changes are also attributed to the relative underperformance of SPACs' securities post-merger as reported in Jenkinson and Sousa (2009) and Datar et al. (2012). Rodrigues and Stegemoller (2011) examine the changes in voting mechanisms for mergers and report significant changes in the SPAC structure, where recent SPACs require a significantly lower number of shareholders to approve a merger.

Mitchel and Pulvino (2012) recognize the impact of the financial crisis on SPACs, because hedge funds are affected by the withdrawal of capital from their own investors. They also report that, even when some SPACs kept their trust funds in Lehman Brothers accounts, the trusts were unaffected by the crisis and the failure of Lehman Brothers. Mitchel and Pulvino (2012) observe that investors buying shares that trade below net-asset value have an incentive to reject the deal. Some investors are possibly interested only in short-term profits and not necessarily in the success of the SPAC. Vulanovic (2010) finds that hedge funds earn a 33% annual return by selling the warrant after the IPO and waiting for face value payment at liquidation.[12] The returns for leveraged investors are even higher if SPAC managers purchase additional shares before the merger in order to enhance an approval of an acquisition.[13]

The paper proceeds as follows: section two presents the data; section three explains institutional characteristics of SPACs in the period 2003 until 2012; section four reports the empirical tests; and section five concludes.

3. Data

The data are compiled from various sources. The majority of the data on the institutional characteristics of SPACs are from the SEC website and The Electronic Data Gathering, Analysis and Retrieval (EDGAR) database. SPACs are legally obliged to report all issuance activities and any major corporate changes to The Security and Exchange Commission (SEC). Additionally, they are required to update the SEC with financial statements on a regular basis. We hand-collect data on important characteristics of SPACs from their initial registration S-1 forms and update

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[12] The strategy of selling a warrant and waiting for redemption at liquidation date is known as "yield game."

[13] In an attempt to proceed with the merger combination, SPAC promoters in their proxy statements before vote offer this kind of advice "Prior to exercising conversion rights, shareholders should verify the market price of common stock, as they may receive higher proceeds from the sale of their common stock in the public market than from exercising their conversion rights."

the data with information reported before the IPO event in the final prospectuses. The information from the SEC is summarized and represents our initial data. Additionally, we cross check the data with updated public information about SPACs published by Morgan Joseph.[14] In case of discrepancy, we recheck the original filings with the SEC.

We collect data on merger dates and cross-check merger dates reported to the SEC and Morgan Joseph with the reports from major business news providers, such as Yahoo and Bloomberg. Renaissance Capital is used as the source for annual volumes and pricing of the IPOs from 2003 to 2012.[15]

To conduct the tests on merger outcomes for SPACs, we collect data on the Volatility Index (VIX) from the Chicago Board Option Exchange for all dates from August 2003 until August 2012.[16] We collect daily data from August 2003 until August 2012 on the performance of Russell 2000 index from their website.[17] Finally, we collect the daily news-based Economic Policy Uncertainty Index for the whole period under observation.[18]

The sample represents the whole population of SPACs that conducted an IPO between August 2003, when the Millstream Acquisition SPAC conducted an IPO, and August 2012. It includes all 184 SPACs that went public since 2003. We divide the sample into three subgroups based on the timing of the SPAC's IPO. Although it seems that the division is arbitrary, we assert that the division is due to the changes in both the SPAC environment and changes in the structure of SPACs. The first subsample includes the period from August 2003 to December 2006. This subsample covers the period examined in the earliest studies of SPACs by Boyer and

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[14] http://mjta.com/i/SPACMarketUpdate.pdf
[15] http://www.renaissancecapital.com/IPOHome/Press/IPOPricings.aspx
[16] http://www.cboe.com/micro/VIX/vixintro.aspx

[17] http://www.russell.com/indexes/data/fact_sheets/us/russell_2000_index.asp
[18] http://www.policyuncertainty.com/us_daily.html

Baigent (2008) and Jog and Sun (2007). The second subsample includes SPACs that conducted an IPO between January 2007 and December 2008. It is characterized by an increased interest in SPACs by the large financial houses such as Citibank, Merrill Lynch, Bank of America and similar institutions. The third subsample includes SPACs that executed their IPO after January 2009.

4. Characteristics of SPACs

This section presents the institutional characteristics and changes within SPACs from 2003 to 2012. Panel A in Table 1 reports the development of the SPAC market from 2003 until 2012 stratified by the three major outcomes of SPACs: merged, liquidated and seeking acquisition. The second column reports that 184 SPACs successfully executed an IPO. Out of these 184 SPACs, 98 merged within a two-year period. In total, 65 SPACs were liquidated between 2003 and 2012, while 21 SPACs are still in the process of seeking a merger opportunity. Comparing the activity over the three subsamples, both by volume and by percentage, shows that the first sub-period was the most successful for SPACs with 53 (49%) of them being able to conclude the merger.

Panel B of Table 1, reports annual SPAC activity. Judging by the absolute number of mergers by SPACs, the most successful year was 2007. SPACs that executed an IPO in years 2004 and 2005 were also very successful. Comparing SPACs activity relative to overall activity in the market for security issuance find that the most successful year for SPACs is 2008, when they comprised 35% of the total IPO market.

4.1   Population characteristics of SPACs

Characteristics of the SPAC population are reported in Table 2, Panel A. We report information on a range of institutional variables that determine a SPAC at its issuance and help us to understand them better. First, it is necessary to describe SPACs and their dynamic corporate design. Second, it describes relevant information on the determinants that potentially affect the merger success of SPACs. We have complete data on all 184 companies for the following characteristics:

1. The number of founding members of the SPAC and their age;
2. Total compensation charged to SPAC founders
3. The amounts collected at the IPO and deferred until the merger combination;
4. Gross proceeds from the unit IPO;
5. Proceeds deposited in the trust account after the IPO and kept there until the merger or liquidation;
6. The warrant exercise price as determined in the pre-IPO prospectus;
7. The number of warrants issued per unit;
8. The offering price of the unit at the IPO date;
9. The number of underwriters in the syndicate;
10. The quality of the lead underwriter;
11. Classification for market sentiment and
12. The threshold level of investors needed to disapprove a merger, and thus cause liquidation of the SPAC after two years.

SPAC managers or founders are entrepreneurs with different backgrounds who, with an initial investment of $25,000, register the clean shell company and take it to IPO. Thompson (2011) reports in detail the characteristics of SPAC sponsors. Our statistics are similar to those reported there. Although we use almost all SPAC founders' characteristics reported in Thompson (2011) in the later part of our paper, here we focus on two characteristics: (1) the number of SPAC founders and (2) their age. On average, SPACs are founded by 5.91 entrepreneurs, and they are 50.59 years old at the time of filing.

On average, each unit of the IPO by SPACs raised close to $128 million, totaling around $23.5 billion in IPO proceeds from 2003 to 2012. The smallest SPAC in the sample collected $7.88 million and the largest $1.035 billion. Overall, 96.5% of the money obtained during the IPO process is deposited in trust accounts with financial institutions in good standing. This process of depositing money in the trust account is important since it provides a guarantee that investors in the SPAC would be able to redeem their shares at the pro rata value in case they disagree with a proposed merger combination.

Furthermore, it represents a commitment by SPAC managers to the deal since managers on average invest only $25,000 to form the SPAC and retain 20% of common shares after the IPO. The average price of a unit bundle across the sample is $8.08, with prices fairly standardized at $6, $8 and $10. An average unit consists of 1 common share and 1.3 warrants. Owners of SPAC warrants have the option to exercise them at $6.30 after a successful merger combination. On average, 3.46 underwriters are involved in SPAC IPOs, which is approximately 4 times lower than the number of underwriters in a syndicate for a typical IPO (Corvin and Stultz, 2005). Underwriters across the sample charge SPACs 6.88% of the gross proceeds for their services. On average, 2.3% of gross proceeds, or approximately 33% of underwriters' compensation, is deferred until the SPAC merger outcome.

The threshold level represents the maximum percentage of SPAC shareholders that could redeem their shares before the merger. This constitutes, on average 32.35% of SPAC shareholders. The last institutional characteristic for which we have complete information is the amount of warrants purchased before the IPO by SPAC promoters. On average, they buy 2.44 million warrants as a pre-commitment to the deal.

4.2   Characteristics of SPACs across samples

Comparing the institutional characteristics of SPACs across the sample, we notice changes in their structure over time.[19] The lowest number of SPAC founders, (5.42), was in the first period, while the highest number of SPAC founders, (6.33), was involved in the second period of observation. Their age across samples varies, with the highest occurring in the second period, at 51.50 years.

SPAC size in the second period is 2.5 times and 2.7 times larger than the size in period one and three, respectively. Various factors may account for the difference in SPAC size across periods. We believe that market conditions and the financial crisis had an impact on SPAC size. It was natural that during the period 2003-2006, SPACs were smaller since this was when they were introduced to the capital markets, and they were not listed on major exchanges. The largest SPACs occurred in the second period. This could be the result of increased market interest in the product and the involvement of established financial institutions as underwriters. The data on the number of underwriters in IPO syndicates show a reduction in the number of underwriters in each syndicate over time. This possibly points towards greater specialization of underwriters.

Similarly for the number of underwriters there is a monotonic decrease in total amount of underwriter's compensation paid by SPACs (7.43% vs. 6.94% vs. 4.73%). While total underwriter compensation declines from period to period, the deferred portion of compensation increases from 1.25% of gross proceeds in the first period to 3.29% in second period. While the deferred part of compensation in the third period is in the middle by the amount of gross proceeds, it is the largest in terms of the percentage of compensation deferred out of total compensation (18.55% vs. 47.30% vs. 47.77%). This information leads to the conclusion that

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[19] Appendix B has figures on relevant characteristics and their changes over time.

underwriters were aligning themselves with more merger outcomes in the period after 2006 than before.

Panel B of Table 2 reports that the proceeds deposited in the trust accounts are increasing over time, from 93% in the first to 101% in the third period. However, the threshold level that determines the percentage of investors that could block a merger increases dramatically from the first to the third period (20.47% to 84.24%). The increase in threshold level and change in voting rights is also reported in Rodrigues and Stegemoller (2011). This reported increase in threshold level is the response of SPAC founders to the activism of institutional investors reported in previous studies (Lewellen, 2009, Tran, 2010, Vulanovic, 2010, Cumming et. al., 2012).

The characteristics of a unit as a security changed significantly. From 2003 to 2006, the average unit was packaged as 1 share and 1.62 warrants. In the period between 2009 and 2012 it consisted of 1 share and 0.97 warrants. In addition to the decrease in the number of warrants packaged in one unit over time, SPACs significantly increased the exercise price for warrants from $5.28 in the first to $10.12 in the third period. Although the absolute size of SPACs is the lowest in the third period, the underwriters and managers sell the units at the highest nominal price in the third period, ($7.06 vs. $8.63 vs. $9.57). SPAC founders monotonically increased their commitment to the inside warrant purchases from period to period (0.71 million of warrants vs. 3.40 million vs. 4.73 million) respectively.

5. Merger Determinants and Characteristics

This section examine institutional characteristics of SPACs and answers whether these determinants impact merger outcomes of SPACs

5.1 Institutional Characteristics of SPACs that Merged

The merger is the ultimate reason for the existence of SPACs. Upon merger, all vested parties could experience positive returns. If SPAC founders are not able to execute the merger before the IPO determined date, they are required to return all proceeds kept in the trust accounts to its investors and liquidate.

Table 3 reports the characteristics of SPACs that successfully executed business mergers for the full sample and compares them with those that were that liquidated. This comparison is important because, in our regression, we only use SPACs that merged and liquidated. On average, the SPAC size of merged companies is $130 million, with SPACs from the 2007 to 2008 sub-period being almost 3 times larger than those from 2003 to 2006. As previously mentioned, successful SPACs entering the market in 2003 to 2006 had the lowest IPO proceeds deposited in escrow accounts.

Panel A in Table 3 shows that merged SPACs are smaller in size to those that liquidated, $130.51 million compared with $141.55 million. Merged SPACs also have smaller trust funds deposited in escrow accounts than liquidated ones, 0.95% and 0.97%, respectively. Both the units and warrants of SPACs that merged are priced at a lower value than the liquidated ones. There is no difference between the two groups for the number of underwriters, the threshold level and the number of warrants purchased by SPAC managers before the IPO.

5.2 Merger Determinants

We evaluate whether important corporate determinants of SPACs impact the probability of merger. Thirty seven explanatory variables are used for evaluation and we discuss each of them as well as their expected impact on merger. Twelve of these variables are listed among the

fourteen variables reported in Tables 2 and 3. We exclude total underwriters compensation and underwriters allowance since we use the components that comprise total compensation in our analysis.

The first set of defining characteristics of SPACs centers on SPAC founders. We reported previously the number of founders involved in a SPAC *(Found_number)* and their average age. We expect that both of these variables would impact the probability of merger of the SPAC in a positive way. The more founders involved in a SPAC means that their collective knowledge would be greater and therefore beneficial in properly executing, first, the IPO and, later, in finding a target company to merge with. Following the same logic we hypothesize that the age of founders have a positive impact on merger.

In addition to the above variables, we construct four additional dummy variables that describe founders' characteristics. Looking in the final prospectuses before the IPO, we extract disclosed information on the founders' involvement in blank check issuance prior to 2003 and their involvement in other SPAC and create dummy variable *Found_SPACs*. If the SPAC founders were previously involved in the blank check industry we code the information as 1 for a particular SPAC and 0 otherwise. Our expectation is that previous involvement in the blank check industry by SPAC founders may contribute to the increase in the probability of a merger.

In a similar manner we create three remaining dummy variables: *Found_PEVC*, *Fund_Inst* and *Sadvisor*. The variable *Found_PEVC* discloses the prior involvement of SPAC founders in private equity and venture capital industry. Since SPACs can be considered a financial innovation or a new asset class and, by some, are recognized as venture capital companies, we hypothesize that prior involvement in the private equity and venture capital industry increases the probability of a successful merger. We have the same prediction for

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Fund_Inst, which represents involvement in or backing of an existing institution in the founding of a SPAC. Finally we hypothesize that SPACs are more likely to merge if the founders in the process of merger include special advisors. The variable ***Sadvisor*** represents their involvement.

Underwriters have an important role in the success of SPACs. They work with SPAC founders and structure their IPOs. After the IPO, they are market makers for SPAC securities. Millstream Acquisition Company, the first SPAC to go public in 2003, is considered an invention of its underwriter, the investment bank EarlyBirdCapital. Vulanovic (2010) reports that six underwriters participated in at least 20% of SPAC deals.[20] After the first SPAC successfully went public, EarlyBirdCapital participated in more than forty-five IPOs, either as the lead underwriter or as a member of the underwriting syndicate. Lakicevic and Vulanovic (2011) observe that the involvement of EarlyBirdCapital in the underwriting of a SPAC increased the probability of the merger. For that reason, we create a dummy variable, ***EBCAP,*** that reports the involvement of EarlyBirdCapital as the lead underwriter, as we believe that its participation would positively impact merger outcomes. Following the same logic, we create two more variables to report the involvement of investment banks Morgan Joseph and Citigroup as underwriters and name them ***Mjoseph*** and ***Citi***.

Lakicevic and Vulanovic (2013) report that underwriters typically charge a fee of 7% of gross proceeds, but on average defer half of the fee, or 3.4% of gross proceeds, until the merger is completed. This behavior aligns the incentives of underwriters with the SPAC founders with respect to the success of a merger. Corvin and Stultz (2005) find that the single strongest determinant of whether an underwriter is included in a syndicate is participation in recent

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[20] Midsize investment banks Maxim Group, Ladenburg Thalmann, Early Bird Capital, Legend Merchant, Gunn Allen Financial and I-bankers were the members of underwriting syndicate each for more than 20% of SPACs. Morgan Joseph and Citibank were lead underwriters in approximately 16 and 18 SPACs respectively.

syndicates led by the same book manager. They argue that the stronger the relationship between issuers and underwriters, the more active role the syndicate members will play in selling IPOs, determining IPO value, or providing aftermarket services.

Pichler and Wilhelm (2001) observe similar behavior when syndicate members are required to provide an effort that is difficult to observe. Four underwriter-related variables are used in our tests.

The first underwriter related variable is the percentage of gross proceeds (*UNDgrosspr*) that they collect at the time of the IPO. We expect that a decrease in underwriters' compensation would be beneficial for SPAC merger outcomes.

The second is the amount of deferred compensation *(Udef)* as a percentage of gross proceeds. We hypothesize that the increase in the deferred part of compensation leads to an increase in the probability of a merger. This is because underwriters commit to collect this compensation conditional on merger outcome.

The third variable is the number of underwriters in the syndicate *(Undn)*. We do not have clear prediction on how the number of underwriters would affect merger outcomes. On one hand the involvement of more underwriters means easier distribution of the shares at the IPO and more diverse investors which could be helpful for SPAC, on the other hand having less underwriters makes easier for a SPAC to get more of their attention.

The fourth variable that defines underwriters and potentially impacts merger outcomes is the quality of the lead underwriter in the SPAC **(Und_Q)**. We construct this underwriter's quality variable as a dummy, a value of 1 is assigned if the underwriter is a lesser known investment bank that participated in the SPAC market since the beginning, such as EarlyBirdCapital, Morgan Joseph, Maxim Group, Gun Allen etc. The value of 0 is assigned to

the SPAC if the lead underwriter is a well-known financial institution such as Citigroup, Bank of America, Meryl Lynch, Lazard and similar. We expect that the involvement of lesser-known underwriters, who were more deeply involved in the SPAC underwriting, has a positive impact on merger.

Until the introduction of tender offer by 57th Street Acquisition Company in 2010, the majority of shareholders had to support merger in the meeting. In order to proceed with a merger, it was necessary that only a certain number of shareholders could redeem their shares before the merger, in addition to securing approval by the majority of shareholders, SPAC managers and underwriters. In the first sub-period for all SPACs, the threshold was 20% of shareholders. This threshold rule was an important incentive for hedge funds and institutional investors to participate in the SPAC by playing a "yield game" and by focusing on short-term returns.[21] Appendix B depicts the changes in threshold level over time and shows relatively large increases. It is hypothesized that a higher threshold improves the probability of a merger.

Two important variables describe the commitment of SPAC promoters to the deal. One variable is the amount of proceeds in the trust fund. The second is the number of warrants that SPAC promoters buy and deposit before the IPO into a trust account (***Proceedsintrust***). SPAC promoters with initial investments of $25,000 purchase approximately 20% equity in a SPAC at the IPO. As a result of these characteristics, every new SPAC investor experiences significant dilution. Miller (2008) reports of "warrant overhang" and explains how it leads to a high dilution. He proposes that, in the future, SPACs decrease the number of warrants in a unit. Lakicevic and Vulanovic (2013) report approximately 30% dilution if no conversion rights are exercised. If the conversion threshold goes up to 20%, the dilution increases to more than 40%.

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[21] It is well known attempt by Goldman Sachs in 2008 to create a "Super SPAC" that would focus on long term investors and offer them only ½ of a warrant in a unit. Super SPAC has not materialized but underwriters and SPAC founder increased the threshold number at the time.

The dilution effect is lowered when managers purchase warrants. We expect this variable to have a positive impact on the merger outcomes. The fact that these purchased warrants are deposited in the trust in addition to original IPO proceeds, we hypothesize that increase in the trust is also increasing probability of merger.

The size of a SPAC *(Grossproceeds)* is another determinant that potentially explains the success of a merger. Our summary statistics showed that size varies from period to period and most likely corresponds with the state of the financial market. We do not have a clear expectation on the effect of the size of the SPAC. Although it seems that SPACs with close to a 100% cash entity should benefit from its size, it is unknown what the demand is. Following the same reasoning, we do not have a clear expectation about the impact of a unit IPO price on the merger.

Given the dilution effects and warrant overhang, it is expected that the decrease in the number of warrants per unit *(Warrantsperunit)* would be beneficial for a SPAC. We are uncertain of what effect the exercise price of warrants could have.

To account for the dynamic financial markets and environment surrounding SPACs' limited life after the IPO, we use variables widely discussed in finance and economics literature that potentially capture these changes and may impact merger outcomes. The variables are denoted: ***IPO_Hot***; ***VIX***, ***Russel_2000***, ***Russel_Ann***, ***Ecindex Confid_Exp*** and ***AnnDays_IPO***. We create a dummy variable for the state of the IPO market (***IPO_Hot)***, coding it 1 for the years when the IPO activity is above the average and 0 otherwise. By definition, SPACs and other companies are competitors in the IPO market. Higher interest in other companies limits the ability of SPACs to raise capital. But it is possible that investor demand increases during "hot"

years, which is enough to both increase the interest in SPACs and other companies. Therefore, we do not have a clear expectation for this variable on SPAC mergers.

To account for the dynamics of financial markets as a predictive variable, we use the Volatility Index (*VIX*), which was created by the Chicago Board Option Exchange. SPACs, by their structure, keep all the proceeds in the trust account with credible financial institutions and are therefore prone to the immediate negative consequences of changes in the market. Given the behavior of investors when volatility is observed in the markets, the increase in volatility may lead to a higher willingness of investors to invest in a SPAC and potentially higher interest for successful merger outcome.

We intentionally use *Russel_2000* and *Russel_Ann* to capture the state of the market for small stocks with similar size to SPACs. Following the approach employed in the SPAC literature, we use the Russel 2000 index as a benchmark, as in Boyer and Baigent (2007) and Jog and Sun (2007). The variable *Russel_2000* is created by inputting the daily values of the Russel 2000 index for the dates that SPACs conducted their IPO, and *Russel_Ann* is created by inputting values of the Russel 2000 index for the days when SPACs announced that they found a company to merge with.

To gauge market sentiment, in addition to the above market variables, we use the Economic Policy Uncertainty Index, recording each date of a SPAC IPO and the date of the merger announcement and call the variables *Ecindex* and *Confid_Exp,* respectively. The Economic Policy Uncertainty Index is constructed by weighting sentiment in newspaper reporting on economic activities in the U.S in Baker et. al. (2012). We do not have clear expectations of the impact of these two variables on the merger outcome.

The final variable in this group is the ***AnnDays_IPO.*** This variable measures the time between the IPO and the announcement date. The longer the time between the IPO and the announcement day, the shorter is the period for the SPAC to conduct the merger in the allowed timeframe. Thus, we expect a negative impact of this variable on merger outcomes.

Finally, we construct a set of variables that define the nature of the SPAC and their merger focus. Variable ***Doubleunit*** is a dummy with a value of 1 if two types of units are issued at the IPO. The rest of our dummy variables define the focus of SPAC in general, by geographic location or a particular industry. Almost a third of SPACs in their final prospectuses before the IPO do not express any particular industry, market or country where they seek to find a target to merge. We create variable ***Focus*** and code it as 1 if SPACs outline their focus toward industry, market or country. The ability to outline the focus of their merger may increase the chances to execute an IPO.

We create four variables based on geographic focus of SPACs for the four most frequently targeted countries outside the U.S. They are ***China, Israel, Greece and India***. In a similar fashion we create variables with the focus on either private equity (***PEtarget***) or health sector (***HCtarg***) in the U.S. For both of these, we expect positive impacts on the merger probability.

Finally, to account for the fact that a few SPACs in the sample, as measured by size, are outliers, we create a dummy variable ***Sizedummy***.

We use logistic regression to determine the impact of SPAC characteristics on mergers. The sample includes 163 companies with complete data points on all thirty seven possible merger determinants. We exclude from the population of 184 SPACs the 21 SPACs with unresolved corporate status at the time of the final observation. We include seven SPACs that executed their IPO by issuing units with dual class shares, contrary to Cumming et. al. (2012). The reason for their inclusion is that the gross proceeds raised by a second class of shares are negligible in comparison to the size of the IPO, and that all other characteristics of these 7 SPACs are identical to the rest of the SPACs. Our observed variable is "merged" and is coded as 1 if the SPAC successfully merged and 0 otherwise. The results are reported in Table 4.

The logistic regression procedure eliminates two independent variables form our sample that perfectly predict merger outcomes, namely *PEtarget* and *Sizedummy*. This leaves us with thirty five characteristics that potentially impact merger outcomes. We discuss variables with statistically significant impact on the probability of merger outcome for SPACs.

The number of SPAC founders *(Found_number)* positively impacts the probability of the merger outcomes. This confirms our expectation.

VIX also showed a positive impact on the merger outcome. It seems that investors consider SPAC as a substitute for financial assets that underperform in volatile markets. *Russel_2000* has a slightly negative impact.

SPACs that focus on *China* are more likely to execute merger combination. The same is true for SPACs that have an outlined focus in their prospectus. In agreement with previous findings, the involvement of EarlyBirdCapital *(Ebcap)* in the SPAC IPO process significantly

increases the likelihood of the merger. Finally, the further the announcement date is from the IPO date the lower the chance of the SPAC to successfully conduct the merger transaction. None of the remaining variables have a statistically significant impact on the merger outcomes.

To confirm our results we run modified OLS with dependent dummy variable and we obtain similar coefficients.

6. Conclusions

We describe changes in the SPAC structure over time and document that in a relatively short time-frame they significantly redesigned their corporate structure by adjusting their size, the amount of the IPO proceeds deposited in the escrow accounts, the number of the warrants purchased upfront by its founders and the percentage of deferred compensation awarded to the underwriters. All these changes are attempts by SPAC stakeholders to increase the likelihood of merger outcomes. When we test for the impact of these defining characteristics on the merger outcomes, only some of them show a statistically significant impact on merger. As a policy suggestion, it pays off to have the IPO underwritten by EarlyBirdCapital, have a stated focus in the prospectus and that the focus be on China. Additionally, it is worthwhile to have a larger team when a SPAC enters the market and to find the merger target as soon as possible.

This paper adds to the existing literature on SPACs by further examining the major determinants of SPAC mergers. Yet, additional empirical investigation may be called for.

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Table 1

Sample Statistics

The table presents summary statistics for the sample period from August 2003 to June 2012. All Specified Purpose Acquisition Companies (SPACs) that conducted The Initial Public Offering in that period are classified into four subgroups depending on their corporate status on January 1st 2012. From the left to the right we report the number of SPACs that: completed the Initial Public Offering, the number of companies that completed merger, the number of companies that were liquidated and the number of companies that are seeking merger.

Panel A:

	IPO	Merged	% Merged	Liquidated	% Liquidated	Seeking	% Seeking
2003 - 2006	78	53	67.9%	25	32.1%	0	0.0%
2007 - 2008	83	43	51.8%	40	48.2%	0	0.0%
2009 - 2012	23	2	8.7%	0	0.0%	21	91.3%
Total	184	98	53.3%	65	35.3%	21	11.4%

Panel B:

Year	SPAC IPO's	Merger completed	Liquidated	Seeking merger	IPO market volume	SPACs as % of IPO's
2003	1	1	0	0	68	0.014
2004	12	10	2	0	216	0.053
2005	28	24	4	0	192	0.127
2006	37	18	19	0	196	0.159
2007	66	32	34	0	213	0.237
2008	17	11	6	0	31	0.354
2009	1	1	0	0	63	0.016
2010	7	1	0	6	154	0.043
2011	15	0	0	15	125	0.107
Total	184	98	65	21	1258	0.128

Table 2: Major Characteristics of SPACs for full sample and three subsamples

Variable	All SPACs				
	Obs	Mean	Std. D	Min	Max
Panel A: Full Sample					
Found_number	184	5.91	1.86	2.00	13.00
Found_age	184	50.69	6.90	4.00	63.75
UNDgrosspr	184	4.18	1.71	1.00	9.00
Undall	184	0.40	0.76	0.00	3.00
Udeff	184	2.30	1.53	0.00	5.40
UTOT	184	6.88	1.42	2.25	10.00
Undn	184	3.47	1.78	1.00	10.00
Thres	184	32.35	20.87	20.00	94.40
WI	184	2.44	2.81	0.00	15.60
Grossproceds	184	127.83	150.76	7.88	1035.00
Proceeds in trust	184	0.97	0.05	0.85	1.03
Warrant Strike Prc	184	6.30	1.90	3.00	12.00
Warrants per unit	184	1.30	0.47	0.50	2.00
Unit offer price	184	8.08	1.60	6.00	10.10

	Period 2003-2006				Period 2006-2008					Period 2009-2012				
Panel B: Subsamples	Mean	Std. D	Min	Max	Obs	Mean	Std. D	Min	Max	Obs	Mean	Std. D	Min	Max
Found_number	78	5.42	1.64	2.00	10.00	84	6.33	1.99	2.00	13.00	21	6.05	1.80	3.00	9.00
Found_age	78	49.72	7.90	4.00	63.50	84	51.50	5.57	37.00	63.75	21	51.11	7.71	31.33	63.50
UNDgrosspr	78	5.42	1.79	1.00	9.00	84	3.49	0.81	1.50	5.00	21	2.47	0.52	2.00	3.50
Undall	78	0.76	0.96	0.00	3.00	84	0.16	0.42	0.00	2.00	21	0.00	0.00	0.00	0.00
Udeff	78	1.25	1.38	0.00	5.40	84	3.29	0.93	0.00	5.00	21	2.26	1.41	0.00	4.50
UTOT	78	7.43	1.50	4.00	10.00	84	6.94	0.66	3.00	9.00	21	4.73	1.11	2.25	7.00
Undn	78	3.85	1.99	1.00	10.00	84	3.27	1.62	1.00	9.00	21	2.76	1.26	1.00	5.00
Thres	78	20.48	2.64	20.00	40.00	84	29.75	8.27	20.00	81.00	21	84.23	10.84	50.00	94.40
WI	78	0.71	1.23	0.00	5.50	84	3.50	3.15	0.00	15.60	21	4.59	1.90	1.50	8.00
Grossproceds	78	76.47	74.89	7.88	528.00	84	190.14	192.77	28.75	1035.00	21	72.83	46.16	18.98	189.93
Proceeds in trust	78	0.93	0.05	0.85	1.03	84	0.99	0.01	0.95	1.03	21	1.01	0.01	1.00	1.03
Warrant Strike Prc	78	5.29	0.70	3.00	8.00	84	6.26	1.14	4.50	11.50	21	10.00	2.49	5.00	12.00
Warrants per unit	78	1.63	0.49	1.00	2.00	84	1.08	0.29	0.50	2.00	21	0.98	0.11	0.50	1.00
Unit offer price	78	7.06	1.41	6.00	10.10	84	8.64	1.25	6.00	10.00	21	9.52	1.25	6.00	10.00

Table 3: Major   Characteristics of SPACs: Merged vs. Liquidated and Merged for three subsamples

Variable	All Merged SPACs					All Liquidated SPACs				
	Obs	Mean	Std. D	Min	Max	Obs	Mean	Std. D	Min	Max
Panel A: Full Sample										
Found_number	98	5.85	1.97	2.00	13.00	65	5.95	1.74	2.00	10.00
Found_age	98	49.78	7.38	4.00	63.75	65	51.93	5.65	38.25	63.20
UNDgrosspr	98	4.57	1.86	1.00	9.00	65	4.15	1.35	1.50	8.00
Undall	98	0.58	0.91	0.00	3.00	65	0.25	0.52	0.00	2.00
Udeff	98	2.08	1.67	0.00	5.40	65	2.63	1.29	0.00	5.00
UTOT	98	7.23	1.30	3.00	10.00	65	7.04	1.05	3.00	10.00
Undn	98	3.56	1.82	1.00	10.00	65	3.55	1.84	1.00	9.00
Thres	98	25.79	10.63	20.00	88.00	65	25.49	6.42	20.00	40.00
WI	98	2.11	2.61	0.00	12.00	65	2.26	3.05	0.00	15.60
Grossproceds	98	130.51	159.09	7.88	1035.00	65	141.55	157.39	18.98	920.00
Proceeds in trust	98	0.95	0.05	0.85	1.03	65	0.97	0.03	0.85	1.02
Warrant Strike Prc	98	5.77	1.26	3.00	11.50	65	5.92	0.98	4.50	8.00
Warrants per unit	98	1.37	0.49	0.50	2.00	65	1.29	0.46	1.00	2.00
Unit offer price	98	7.74	1.57	6.00	10.10	65	8.13	1.50	6.00	10.10

|	Period 2003 - 2006					Period 2007 - 2008					Period 2009 - 2012				
Panel B: Subsamples	Obs	Mean	Std. D	Min	Max	Obs	Mean	Std. D	Min	Max	Obs	Mean	Std. D	Min	Max
Found_number	53	5.45	1.66	3.00	10.00	43	6.42	2.18	2.00	13.00	2	4.00	1.4142	3.00	5.00
Found_age	53	49.05	8.66	4.00	63.50	43	50.98	5.20	40.00	63.75	2	43.00	8.49	37.00	49.00
UNDgrosspr	53	5.60	1.90	1.00	9.00	43	3.40	0.76	1.50	5.00	2	2.45	0.78	1.90	3.00
Undall	53	0.92	1.04	0.00	3.00	43	0.19	0.49	0.00	2.00	2	0.00	0.00	0.00	0.00
Udeff	53	1.03	1.40	0.00	5.40	43	3.36	0.91	1.00	4.50	2	2.55	2.05	1.10	4.00
UTOT	53	7.54	1.57	4.00	10.00	43	6.95	0.47	6.00	8.00	2	5.00	2.83	3.00	7.00
Undn	53	3.75	2.04	1.00	10.00	43	3.30	1.54	2.00	9.00	2	4.00	1.41	3.00	5.00
Thres	53	20.00	0.00	20.00	20.00	43	30.19	5.84	20.00	40.00	2	84.50	4.95	81.00	88.00
WI	53	0.81	1.42	0.00	5.50	43	3.64	2.94	0.00	12.00	2	3.65	0.07	3.60	3.70
Grossproceds	53	76.13	84.43	7.88	528.00	43	201.51	200.97	33.12	1035.00	2	45.28	13.13	36.00	54.56
Proceeds in trust	53	0.92	0.05	0.85	1.03	43	0.98	0.01	0.95	1.00	2	1.02	0.02	1.00	1.03
Warrant Strike Prc	53	5.26	0.70	3.00	8.00	43	6.12	1.03	5.00	7.50	2	11.50	0.00	11.50	11.50
Warrants per unit	53	1.62	0.49	1.00	2.00	43	1.08	0.31	0.50	2.00	2	1.00	0.00	1.00	1.00
Unit offer price	53	6.95	1.35	6.00	10.10	43	8.60	1.28	6.00	10.00	2	10.00	0.00	10.00	10.00

Table 4: Regression results

Results of logistic regression are reported. The dependent variable is **merged** which takes value of 1 if SPAC merged and 0 if liquidated. All 163 SPACs analyzed have all information on characteristics below.

Variables	*Dependent variable: Merged Logit*					*Dependent variable: Merged OLS*			
	Coef.	Sig	td. Err.	z	P>z	Coef.	SigStd. Err	t	P>t
Found_number	0.32427	**	0.161	2.02	0.04	0.03745	0.023	1.66	0.10
Found_age	-0.05057		0.036	-1.39	0.16	-0.00633	0.006	-1.09	0.28
UNDgrosspr	0.04318		0.564	0.08	0.94	0.01264	0.079	0.16	0.87
Udef	0.15313		0.647	0.24	0.81	0.03347	0.087	0.39	0.70
UTOT	-0.23772		0.509	-0.47	0.64	-0.03655	0.073	-0.5	0.62
Undn	-0.11563		0.152	-0.76	0.45	-0.01759	0.022	-0.82	0.42
Thres	-0.0189		0.046	-0.41	0.68	-0.00043	0.007	-0.06	0.95
WI	0.20121		0.158	1.28	0.20	0.03402	0.024	1.4	0.16
Grossproceeds	7.90E-07		0.000	0.32	0.75	0.00000	0.000	0.27	0.78
Proceedsintrust	0.75533		13.557	0.06	0.96	-0.02002	2.019	-0.01	0.99
WarrantStrikeprice	-0.38933		0.567	-0.69	0.49	-0.04373	0.087	-0.5	0.62
Warrantsperunit	-0.93648		1.245	-0.75	0.45	-0.12105	0.188	-0.64	0.52
Unitofferprice	0.12127		0.688	0.18	0.86	-0.00344	0.105	-0.03	0.97
IPO_Hot	1.39207		1.236	1.13	0.26	0.16027	0.184	0.87	0.39
Und_Q	0.93088		0.736	1.26	0.21	0.17544	0.106	1.66	0.10
VIX	0.20525	*	0.107	1.92	0.06	0.02065	0.015	1.4	0.16
Ecindex	-0.02627		0.029	-0.92	0.36	-0.00288	0.004	-0.68	0.50
Russel_2000	-0.00708	**	0.003	-2.54	0.01	-0.00089	0.000	-2.31	0.02
China	1.70599	**	0.781	2.19	0.03	0.13663	0.115	1.19	0.24
Israel	-2.98954		1.890	-1.58	0.11	-0.33380	0.247	-1.35	0.18
Greece	-0.33651		1.290	-0.26	0.79	-0.04137	0.184	-0.22	0.82
India	0.76114		1.363	0.56	0.58	0.00768	0.198	0.04	0.97
Doubleunit	-0.46016		2.928	-0.16	0.88	-0.11264	0.429	-0.26	0.79
Focus	1.58907	**	0.645	2.47	0.01	0.20238	0.095	2.13	0.04
PEtarget	-1.16252		0.960	-1.21	0.23	-0.21031	0.134	-1.57	0.12
HCtarg	-0.11892		0.573	-0.21	0.84	-0.03092	0.083	-0.37	0.71
Found_SPACs	1.12695		0.663	1.7	0.09	0.11274	0.090	1.25	0.21
Found_inst	-0.09643		0.673	-0.14	0.89	-0.03379	0.102	-0.33	0.74
Sadvisor	-0.66078		0.606	-1.09	0.28	-0.04036	0.085	-0.48	0.63
Ebcap	3.07864	***	1.028	3	0.00	0.33158	0.133	2.5	0.01
AnnDays_IPO	-0.00951	***	0.002	-4.35	0.00	-0.00100	0.000	-4.11	0.00
Confid_Exp	-0.00247		0.014	-0.18	0.86	-0.00065	0.002	-0.33	0.75
Russel_Ann	-0.00212		0.001	-1.44	0.15	-0.00015	0.000	-0.71	0.48
Mjoseph	0.73477		0.835	0.88	0.38	0.09002	0.131	0.69	0.49
Citi	1.07467		0.857	1.25	0.21	0.15664	0.136	1.15	0.25
Constant	20.8668		14.076	1.48	0.14	3.10335	2.122	1.46	0.15

Number of obs	=	163			Number of obs	=	163	
LR chi2(35)	=	89.49			F(35, 127)	=	2.49	
Prob > chi2	=	0			Prob > F	=	1E-04	
Pseudo R2	=	0.408			R-squared	=	0.407	
					Adj R-squared	=	0.243	
					Root MSE	=	0.427	

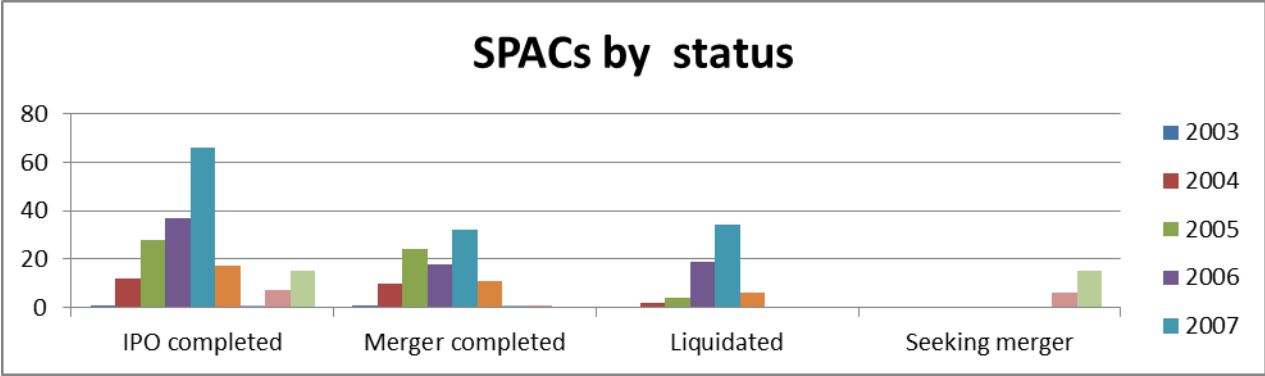**Appendix A: Figures on SPAC activity from Table 1**

SPAC outcomes by year
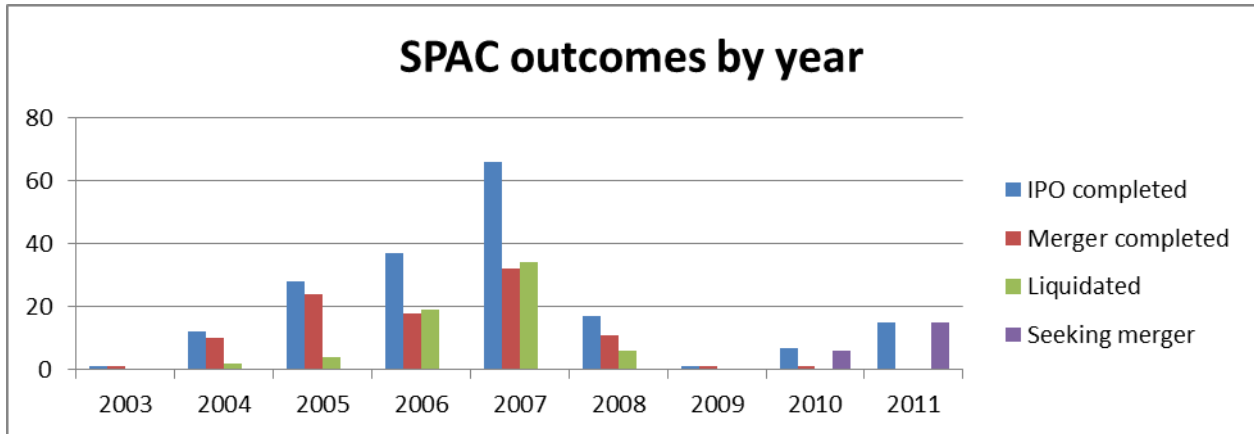
SPAC outcomes by subsample period
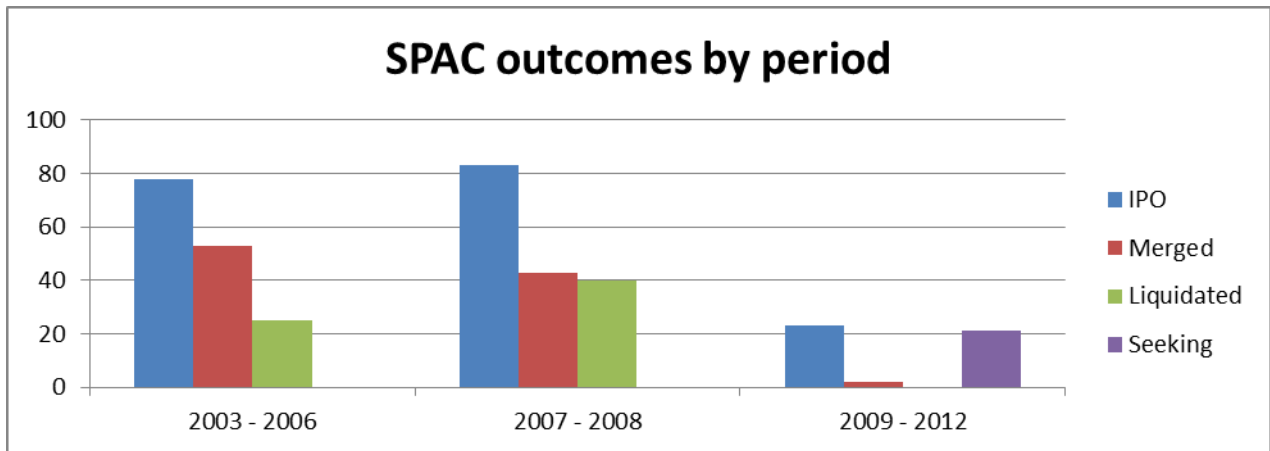
SPAC changes of status year by year

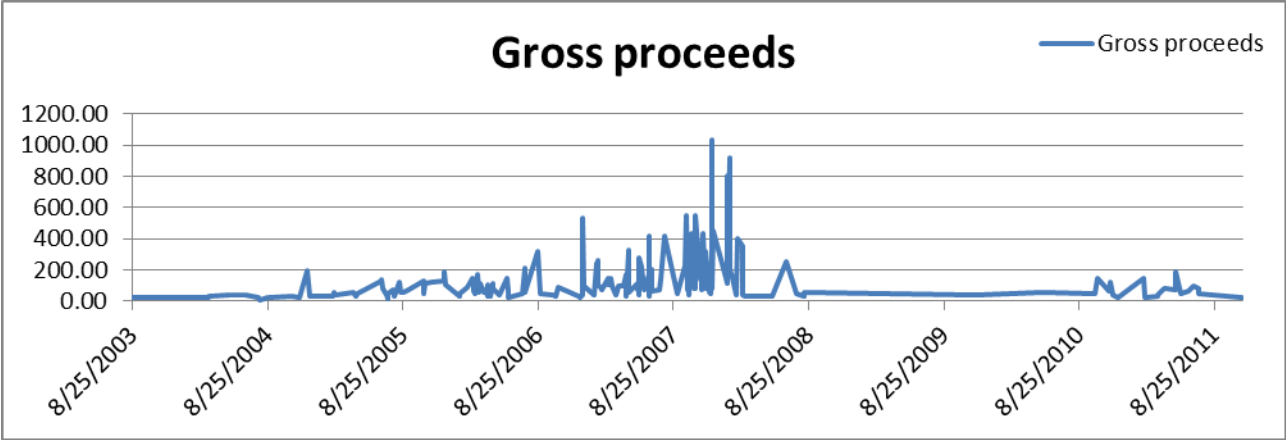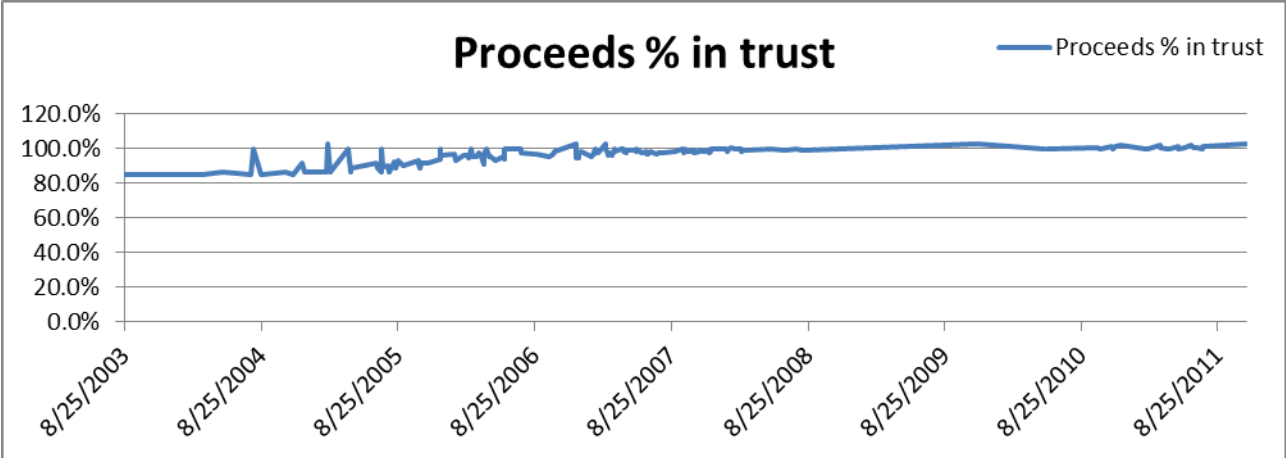**SPACs by status**

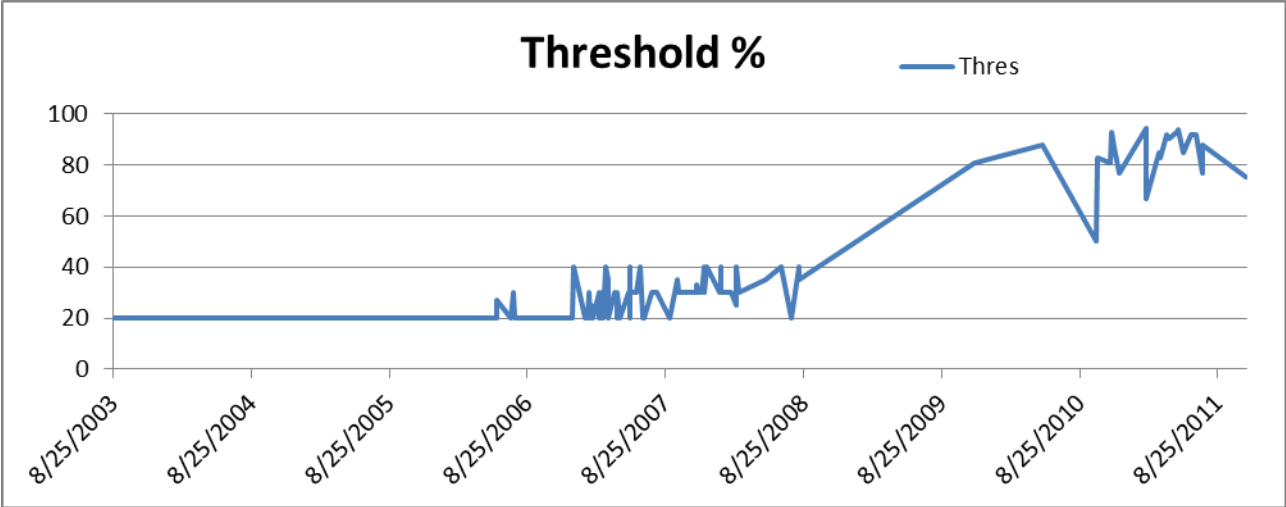**Appendix B: Figures presenting changes in institutional characteristics of SPACs over time**

A: Gross proceeds over time

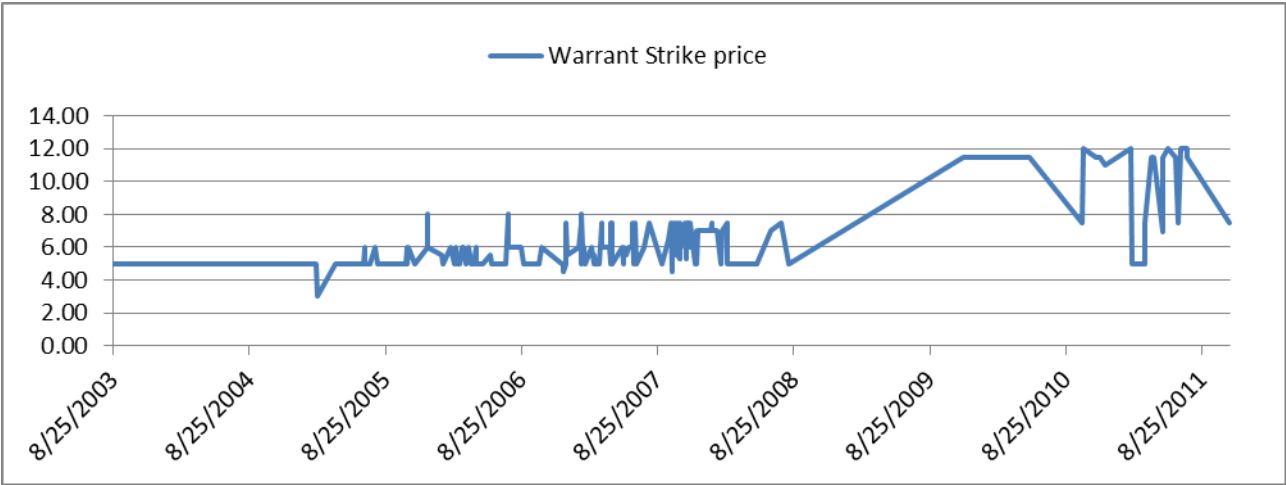**Gross proceeds**
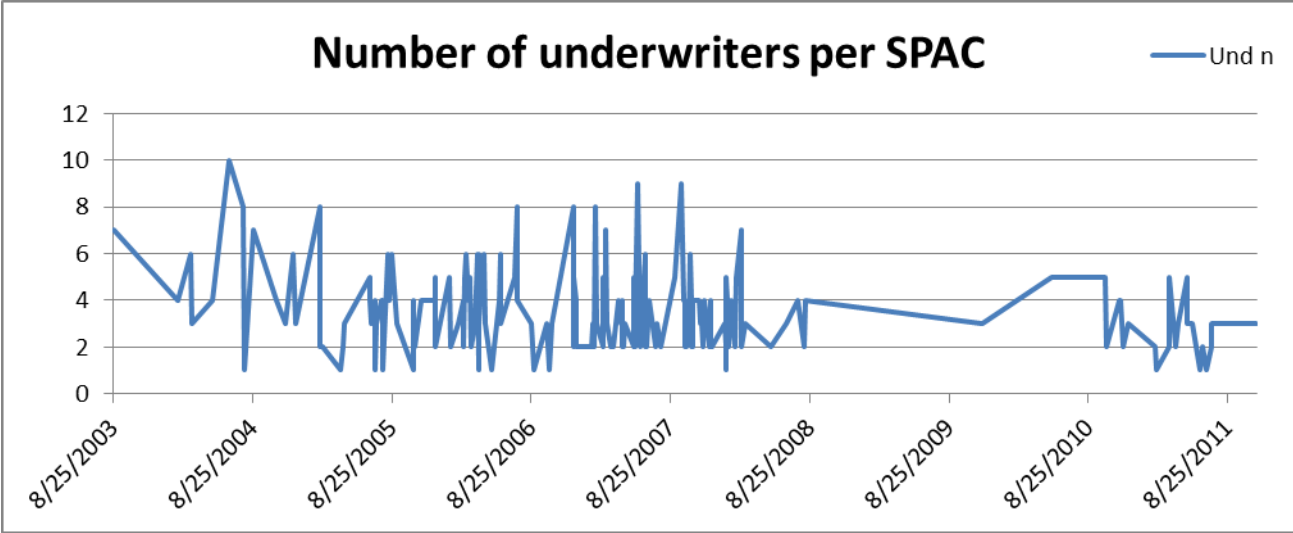
B: Percent of IPO proceeds deposited in the Trust over time

Proceeds % in trust

C. Threshold percentage of investors allowed to redeem shares

Threshold %

D. Exercise price of warrants

Warrant Strike price

E. Number of underwriters involved in SPAC

35

Number of underwriters per SPAC

F. Changes in the price of unit at the IPO over time

Unit offer price
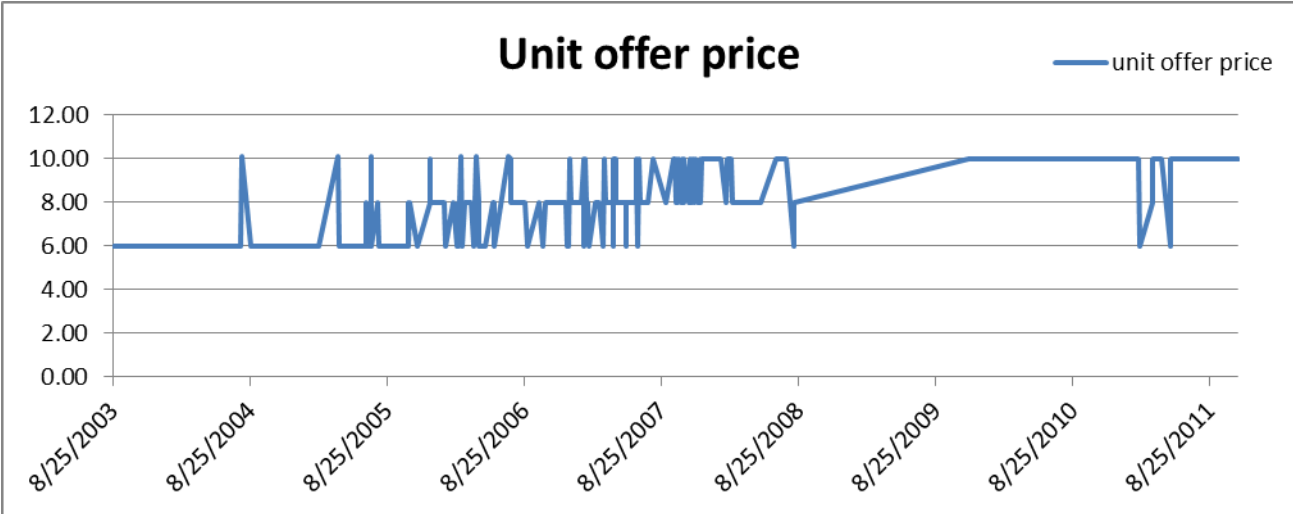
G. Number of warrants purchased by SPAC founders over time

WI