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Essays on management quality, IPO characteristics and the success of business combinations

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**ESSAYS ON MANAGEMENT QUALITY, IPO CHARACTERISTICS AND THE SUCCESS
OF BUSINESS COMBINATIONS**

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agriculture and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

In

The Interdepartmental Program in Business Administration

by

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CEO's decision-making was embedded in my way of thinking starting from my childhood because I have a CEO as my father. Rather than becoming a real world business person, I was more interested in how firms work and what kind of decisions CEO make. Even though I chose English Literature as my undergraduate major, I never gave up being a finance researcher as my career. After I accumulate knowledge in finance and economics from Korea University and SUNY-Buffalo, I joined the finance Ph.D. program here at Louisiana State University.

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ABSTRACT

A Special Purpose Acquisition Company (SPAC) is a blank check company with no business operation but management quality. It raises money through unit IPO and put proceeds in a trust account for future business combination. In the post IPO market, the market price would reflect the value of trust account and management quality of profitably acquiring a firm with business operation. Thus, SPACs provide a unique setting to examine the pricing of management quality. Compared with regular IPO firms, SPAC management has more industry experience and the market put a higher value for SPACs with better management experience. SPACs with higher market value for management experience take less time to consummate business combination and have better long-term unit price performance. The results imply that management experience is valuable and has a significant effect on the performance of IPO or business combination. Also, shorter time to deal or better long-term unit price performance during IPO or business combination period leads to better unit return performance or more institutional interest of SPAC business combination. The results are consistent with the merger-driven IPO literature.

CHAPTER 1 INTRODUCTION

A Special Purpose Acquisition Company (SPAC) is a blank check company with no business operation but management quality and reputation. Individuals, who generally possess merger and acquisition experience and who specialize in a specific industry, form a management team and hire an investment bank to underwrite an Initial Public Offering (IPO) to form a shell company. Then, within 18 to 24 months, they identify a reverse merger target as indicated in their prospectus. The IPO proceeds are stored in a trust account and invested in risk-free securities, such as Treasury bills, until the merger deal receives approval. If they receive approval from their shareholders, they use the IPO proceeds to consummate the deal. If they cannot receive approval from their shareholders, then the IPO proceeds goes back to the shareholders. So, the structure of the SPAC IPO itself contains an investor protection device. As we can see from the definition of a SPAC deal, management quality and reputation is the key to the success of the deal.

The role of institutional investors, venture capitalists and underwriters in explaining the IPO pricing mechanism has been widely debated in the literature (Benveniste and Spindt, 1989; Megginson and Weiss, 1991; Carter and Manaster, 1990). However, not much finance literature focuses on the role of a firm's management quality and reputation in explaining the mechanism. Recently, Chemmanur and Paeglis (2005) empirically examine the relationship between the firm's management quality or reputation and IPO characteristics or post-IPO performance. They find that superior management quality and reputation results in larger IPO offer size, attracts more reputable underwriters and institutional investors, reduces underwriting expenses and IPO underpricing and increases post-IPO long-term stock returns and operating performance. Chemmanur and Paeglis (2005) measure management quality and reputation by looking at management team characteristics, education and experience. However, the role of management quality and reputation in explaining IPO pricing mechanisms is limited to the case of the common stock IPO. Investors invest in a common stock IPO not only by looking at management quality and reputation but also by looking at the performance of

the firm's business operation. Common stock IPO underpricing reflects not only the market value of management quality and reputation but also that of the business operation. However, this is not the case for a SPAC. The role of management quality and reputation in explaining IPO characteristics, such as underwriter reputation or offering costs, should be different between common stock IPO and SPAC IPO.

The first objective of this study is to better understand the market value of management quality and reputation and its role in explaining IPO pricing mechanism through SPAC IPO. First, we explain how the market value of management quality and reputation is reflected in SPAC IPO underpricing. Second, we empirically investigate the relationship between SPAC IPO characteristics, including SPAC IPO underpricing, and SPAC management quality and reputation.

A substantial number of papers document the evidence of possible links between IPO activity and business combinations in terms of motivation of IPO (Schultz and Zaman, 2001; Brau and Fawcett, 2006) or timing of IPO (Brau and Fawcett, 2006). More specifically, a private bidder considering a stock merger could decide to go public to reduce asymmetric information (Hansen, 1987; Fishman, 1989; Eckbo, Giammarino and Heinkel, 1990). Recently, Lyandres, Zhdanov and Hsieh (2008) theoretically predict the increasing IPO activity before business combination reduces valuation uncertainty. Also, they predict that the time between the IPO and the business combination is expected to be increasing in the degree of valuation uncertainty. Finally, their model implies that an IPO could be a way of raising cash to facilitate future business combinations. Celikyurt, Sevilir and Shivdasani (2008) argue that IPOs facilitate acquisitions by mitigating valuation uncertainty of the firm.

The second objective of this study is to better understand the relationship among IPO characteristics (including management quality and reputation), the success of business combination and institutional interest. First, we empirically investigate the relationship between management quality and reputation or IPO underpricing and the success characteristics of SPAC business

combinations. Second, we look at the relationship among such characteristics, abnormal returns around business combinations and institutional interest.

Our main findings are as follows. Compared with regular IPO firms, SPAC management has more experience and the market puts a higher value for SPACs with better management experience through IPO underpricing. Also, higher management experience leads to higher offer size and lower offering expenses excluding underwriter spread. SPACs with higher market value for management experience take less time to consummate business combinations. SPAC IPO underpricing leads to higher long-term stock return performance from SPAC business combination announcement until consummation. There are positive cross-sectional relationships among time-to-deal, long-term unit price performance and abnormal returns around SPAC business combination announcement or consummation. Specifically, shorter time-to-deal and better long-term unit price performance leads to higher abnormal returns around SPAC business combination consummation. Also, better long-term unit price performance attracts more institutional interest.

The contributions of this study are as follows. First, it contributes to the IPO literature in the sense that management experience is valuable through underpricing and related to IPO characteristics and the success of business combination. Second, it links the IPO underpricing to the success of business combination which is consistent with the firm quality signaling theory of IPO underpricing. Finally, it links post-IPO unit price performance or time to deal to the stock return performance or institutional interest of SPAC business combination. The result is consistent with merger-driven IPO literature.

CHAPTER 2 THE MARKET VALUE OF MANAGEMENT QUALITY: IMPLICATION WITHIN SPAC IPO PRICING SETTING

We introduce the new implication of the market value of management quality in the following manner.

$$MV_{mgt,i} + PTA_i = Cprice_i$$

where $MV_{mgt,i}$ is the market value of management quality for each SPAC i , $Cprice_i$ is the first day unit closing price for each SPAC i , PTA_i is the proceeds per unit in trust account for each SPAC i . Given no business operations, the market value of SPAC consists of the proceeds in trust account and the market value of management quality. So, the difference between the first day unit price and the per unit proceeds in the trust account gives us the market value of management quality per unit. Since the market value of management quality is measurable as part of the first day unit closing price, we expect the positive relationship between management quality and SPAC IPO underpricing because underpricing increases with the first day unit closing price given unit offer price.

CHAPTER 3 HYPOTHESIS DEVELOPMENT

3.1 Management Quality and Reputation vs. SPAC IPO Characteristics

The IPO underpricing puzzle is widely debated in the finance literature. There are numerous explanations for IPO underpricing and two conflicting explanations exist with different assumptions about the asymmetric information. The initial explanation is beginning with Rock (1986). His asymmetric information model assumes that some investors are better informed about the true value of the shares on offer than are the investing public, issuing firms or underwriters. Informed investors keep crowding out uninformed in the primary market but still their participation is expected because informed investors cannot take up all the shares offered. So, uninformed investors should at least break-even on average to participate in the market, leading to expected underpricing in all IPOs. Collectively, firms benefit from underpricing because they attract capital from uninformed investors through their continued participation in the IPO market. However, underpricing is costly for an individual firm. Therefore, they have incentives to reduce it by reducing the information asymmetry (Allen and Faulhaber, 1989; Chemmanur, 1993; Welch, 1989). Recently, Chemmanur and Paeglis (2005) argue that management quality reduces this information asymmetry of common stock IPO, leading to reduced IPO underpricing. So, there should be a negative relationship between management quality and common stock IPO underpricing.

However, with a different asymmetric information assumption between issuing firms and investors, we can interpret underpricing differently. If companies have better information about the present value or risk of their future cash flows than do investors, underpricing can be used as firm quality signaling (Allen and Faulhaber, 1989; Grinblatt and Hwang, 1989; Welch, 1989). Recently, Zheng and Stangeland (2007) document that IPO firm quality, measured by the post-IPO growth in sales and EBITDA, is positively correlated with IPO underpricing. They argue that the result supports the notion that IPO firms with greater underpricing are of better quality.

We discuss that the market value of management quality is measurable as part of the first day unit closing price of SPAC IPO and expect positive relationship between management quality and SPAC IPO underpricing. The positive relationship is explained by above-mentioned IPO firm quality signaling argument. If the management quality represents the IPO firm quality for certain firms, such as SPAC IPO, it should be positively correlated with IPO underpricing. Especially, the argument applies to SPAC IPO because SPAC is a blank check company and it does not have any operations during the IPO process. So, the only firm quality signaling feature is the management quality. Also, it has an incentive to signal firm quality to outside investors to obtain their approval for future business combination. For common stock IPO firms, there are many other ways to signal their firm quality than the management quality because they are operating firms. Also, they do not have any incentives to signal firm quality through a “qualified” management team because they are not obliged to succeed in future business combinations led by such a team. So, we don’t expect the positive relationship between the management quality and underpricing for common stock IPO.

Also, the success of SPAC IPO depends on the quality management team who establishes the blank check company, especially their industry experience, and many SPAC specialists suspect its relation with stock price fluctuation around SPAC IPO and business combination period.

“...Investors are entrusting more and more money into the hands of talented SPAC management teams in the hopes that the SPAC might find a lucrative acquisition in a specified sector... ...Investors entrust an ‘experienced’ founding management team to seek out and consummate a value-building acquisition of an operating business...”

-‘SPACs Continuing To Grow And Evolve’ by M. Ridgway Barker and Randi-Jean G. Hedin, Kelly Drye & Warren LLP-

“... We’re seeing higher-quality management teams with proven ‘track’ records that are extremely interested in this vehicle...”

-Ciaran O’Kelly, Head of U.S. equities at Banc of America Securities-

We set up a hypothesis based on the argument above.

Hypothesis 1: There is a positive relationship between the SPAC management quality and underpricing of SPAC IPO.

According to Chemmanur and Paeglis (2005), better and more reputable managers may be able to select positive NPV projects, indicating a larger equilibrium scale of investment, thus induce a larger IPO offer size. As a SPAC has nothing but quality management team, SPAC IPO should induce a large IPO offer size.

Hypothesis 2: There is a positive relationship between the SPAC management quality and SPAC IPO offer size.

Firms with higher management quality and reputation attract top-tier underwriters (Chemmanur and Paeglis, 2005). Management quality and reputation reduces information asymmetry between firms going public and outside investors, as top-tier underwriters are supposed to do. So, it is easier for underwriters to attract outside investors with the help of a reputable management team. By the same logic, the quality management team of SPAC should attract top-tier underwriters, and underwriter reputation is positively correlated with the management quality and reputation.

Hypothesis 3: There is a positive relationship between the SPAC management quality and the top-tier underwriter dummy of SPAC IPO.

Given the reduced information asymmetry generated by quality management team through its certification, underwriters and other intermediaries might incur lower costs, underwriting spread and other offering costs, in acquiring and transmitting information about firms going public. Also, the reduction in outsiders' information acquisition costs for firms with quality management could also lead to greater institutional interest in the IPOs of such firms (Chemmanur and Paeglis, 2005). By the same logic, the quality management team of SPAC should incur lower costs and greater institutional interest.

Hypothesis 4: There is a negative relationship between the SPAC management quality and the underwriter spread or offering expenses of SPAC IPO. There is a positive relationship between the SPAC management quality and the institutional holdings or number of institutions after SPAC IPO.

3.2 Management Quality, Underpricing and the Success of Business Combinations

When we apply the above-mentioned asymmetric information argument (Hansen, 1987; Fishman, 1989; Eckbo, Giammarino and Heinkel, 1990) or valuation uncertainty argument (Lyandres, Zhdanov and Hsieh, 2008; Celikyurt, Sevilir and Shivdasani, 2008) to SPAC IPO and its future business combination, management quality and underpricing is the way to reduce asymmetric information or valuation uncertainty by signaling SPAC quality to outside investors. The IPO literature documents underpricing as a signal of firm quality (Ibbotson, 1975; Allen and Faulhaber, 1989; Grinblatt and Hwang, 1989; Welch, 1989). We argue that the market value of management quality is part of SPAC IPO pricing setting, and management quality is the signaling device of SPAC quality consistent with the positive relationship between management quality and underpricing. Based on an asymmetric information or valuation uncertainty argument and the IPO literature, management quality or underpricing signals SPAC firm quality, reduces asymmetric information or valuation uncertainty and facilitates future business combination. The success of the future business combination will be highly likely with the ratio of successful business combinations to ones in progress, better long-term unit price performance from IPO consummation until business combination and shorter time to deal from IPO until business combination. So, we set up following hypotheses.

Hypothesis 5: There is a positive relationship between SPAC IPO underpricing and the ratio of successful business combinations to ones in progress or the long-term unit price performance from IPO consummation until business combination. There is a negative relationship between SPAC IPO underpricing and time to deal from IPO until business combination.

Hypothesis 6: There is a positive relationship between SPAC management quality and the ratio of successful business combinations to ones in progress or the long-term unit price performance from

IPO consummation until business combination. There is a negative relationship between SPAC management quality and time to deal from IPO until business combination.

The valuation uncertainty or asymmetric information argument will disappear as the success probability of future business combination increases. Shorter time to deal and better long-term unit price performance will increase the success probability of future business combination, resulting in better stock return performance around SPAC business combination. As SPAC business combination involves the acquisition of a private company with promising investment opportunities, it will attract more institutional investors if the success probability of such business combination increases. So, we set up a following hypothesis.

Hypothesis 7: Shorter time to deal or better long-term unit price performance during IPO and business combination period leads to higher abnormal return around SPAC business combination announcement or consummation. Also, better long-term unit price performance leads to more institutional interest after business combination consummation.

CHAPTER 4 EMPIRICAL RESULTS

4.1 Data

The Reverse Merger Report from DealFlow Media is used for SPAC IPO characteristics information and we verify the information from Security and Exchange Commission (SEC) S-1 or 424B documents (SIC=6770). The stock price data is from Over The Counter (OTC) bulletin board and <http://www.eoddata.com>¹. If the stock goes public through American Stock Exchange, we verify the stock price through Center for Research in Security Prices (CRSP) database. The sample period is from August 2003 through February 2008. The sample consists of 151 firms and 158 SPAC offerings².

We also construct a matched sample of common stock IPO. We construct each sample by matching the gross proceeds and date. Since the total number of IPO is limited, the gross proceeds and date do not exactly match for each IPO. So, we selected the matched common stock IPO with the closest gross proceeds amount and date. The date of matched common stock issue is limited to one month before and after the SPAC issue date. The SDC Platinum database or <http://www.ipo.nasdaq.com> is used for common stock IPO characteristics information and we also verify the information from Security and Exchange Commission (SEC) S-1 or 424B documents. The sample period for matched common stock IPO for SPAC issues is from August 2003 through February 2008. The sample consists of 158 common stock offerings. For the institutional holdings or the number

¹ The reason we use two different stock price data sources is because the stock price information of some earlier SPACs is not on current OTC bulletin board but in <http://www.eoddata.com>. We verify the stock price information in this website with Bloomberg. Both the website and Bloomberg extract stock price information from major exchanges and professional employees for each company clean the stock price data. Both the website and Bloomberg do not extract stock price information from each other. So, we think it is safe to verify the stock price information of the website with Bloomberg.

² Seven firms issued two different SPAC offerings. Trinity Partners Acquisition Co. offered series A unit (ticker=TPQCU) and series B unit (ticker=TPQCZ). Mercator Partners Acquisition Corp. offered series A unit (ticker=MPAQU) and series B unit (ticker=MPABU). Juniper Partners Acquisition Corp. offered series A unit (ticker=JNPPU) and series B unit (ticker=JNPPZ). Good Harbor Partners Acquisition Corp. offered series A unit (ticker=GHBPAU) and series B unit (ticker=GHBPU). Global Services Partners Acquisition Corp. offered series A unit (ticker=GSPAUA) and series B unit (ticker=GSPBU). Israel Growth Partners Acquisition Corp. offered series A unit (ticker=IGPAUA) and series B unit (ticker=IGPBU). Middle Kingdom Alliance Corp. offered series A unit (ticker=MKGDU) and series B unit (ticker=MKGBU). Each series A or B unit consists of common stock, class W warrant, class Z warrant or warrant. The difference between class W warrant and class Z warrant is the expiration period. For example, for Trinity Partners Acquisition Co., the class W warrants will expire on July 29, 2009, or earlier upon redemption, while the class Z warrants will expire on July 29, 2011, or earlier upon redemption.

of institutions after the IPO (*instp*, *instn*), SPAC business announcement (*instpa*, *instna*) or consummation (*instpc*, *instnc*), we use 13-F and 13 F-E filings from WRDS (Wharton Research Data Services) database. For the underwriter reputation, we use the reputation ranking of Carter and Manaster (1990) to calculate the top-tier underwriter dummy.

For the success indicator, time to deal or unit price performance of SPAC business combination, we use a reduced sample. From 158 SPAC IPO sample, we select the subsample of SPAC which consummated business combination (53 SPAC IPOs, 49 SPACs) to calculate time to deal or stock return performance from IPO till business combination. Unit price performance is calculated by calculating Fama and Macbeth (1973) regression alpha of monthly average unit return on monthly Carhart (1997) four factors. Four factors information is from Kenneth R. French website. Also, we calculated the unit Cumulative Abnormal Return (CAR) around the announcement and consummation of SPAC business combination. We use the Brown and Warner (1985) procedure to calculate the abnormal return. Also, we divided SPAC IPO sample into three parts: ones consummated business combination (53 SPAC IPOs, 49 SPACs), ones liquidated (23 SPAC IPOs, 21 SPACs) and ones in progress (84 SPAC IPOs, 81 SPACs) to calculate the success indicator of business combination³. The sample period to calculate the success indicator is from March 2004 till November 2008. Success indicator is equal to one if SPAC consummated business combination, is equal to two if SPAC liquidated, and is equal to three if SPAC business combination is in progress. Table 1 shows the number of IPOs by year.

Table 1 Number of IPO by year

	2003	2004	2005	2006	2007	2008	Total
SPAC	1	13	30	40	66	8	158
Matched-Common	1	13	30	41	68	5	158
Final Sample	2	26	60	81	134	13	316

³ For ones liquidated, two SPACs (Shanghai Century Acquisition Corporation, ticker: SHA.U and Phoenix India Acquisition Corporation, ticker: PXIAU) announce two different targets for business combinations at two different periods. That's why 23 SPAC IPOs (21 SPACs) are categorized as ones liquidated.

4.2 Variable Construction

There are two empirical analyses in this study. First, we look at the relationship between management quality, reputation and SPAC IPO characteristics. Second, we investigate the relationship between management quality, reputation and the success of SPAC business combination. Also, we look at the relationship between time to deal, long-term unit price performance, institutional interest and cumulative abnormal returns or institutional interest around SPAC business combination.

For the first empirical study, we use the dependent variables as in Chemmanur and Paeglis (2005). The first dependent variable is IPO offer size ($lnsize_i$). It is the natural log of the offer size in millions of dollars for each firm i . The second dependent variable is top-tier underwriter dummy ($toptierdummy_i$). It is one if Carter and Manaster (1990) reputation ranking of lead underwriter is greater than or equal to 8 for each firm i . Otherwise, it is zero for each firm i . The third dependent variable is underwriting spread as the percentage of the offer price for each firm i ($spread_i$). The fourth dependent variable is other offering expenses as the percentage of the offer size for each firm i ($oexpense_i$). The fifth dependent variable is underpricing for each firm i ($underpricing_i$). The underpricing is measured as the difference between the closing price at the end of the first day and the offer price expressed as the percentage of the offer price for each security. Finally, the institutional holdings and the number of institutional investors are used as dependent variables. Institutional holdings is the natural log of the percentage of the offer allocated to institutional investors as reported in SEC 13-F filings at the end of the first quarter after the IPO for each firm i ($instp_i$). The number of institutional investors is the natural log of the number of institutional investors reported in SEC 13-F filings at the end of the first quarter after the IPO ($instn_i$).

The explanatory variables are the management quality and reputation variables. We divide the management quality and reputation variables into two parts: management experience and other management quality and reputation. We include management experience as part of the management

quality and reputation because management experience is crucial for SPACs to consummate business combination.

First, management experience is calculated as the average industry experience of management team (*meanmgtxper._i*). *Meanmgtxper._i* is the ratio of total industry experience years for management team members to number of management team members for each firm *i*. Second, other management quality and reputation variables follow those of Chemmanur and Paeglis (2005), except for the measure of CEO dominance. They measure CEO dominance by calculating the ratio of CEO salary and bonus of other team members listed in the executive compensation section of the prospectus. We exclude this variable because SPAC management team does not receive any compensation during the IPO process. The summary of other management quality and reputation variables is as follows. *tsize_i* is the number of officers with the rank of vice president or higher for each firm *i*. *pmba_i* is the percentage of MBA holders within the management team for each firm *i*. *pfteam_i* is the percentage of management team members who have the experiences of vice president or higher before joining the firm *i*. *plawacc_i* is the percentage of lawyers or accountants within the management team for each firm *i*. *tenure_i* is the average tenure of the management team for each firm *i*⁴. *Nonprofit_i* is the number of non-profit boards that management team members sit on for each firm *i*.

Control variables are as follows. *Toptierdummy_i* is not only used as a dependent variable but also a control variable⁵. *bva_i* is the book value of assets in millions of dollars for each firm *i*. Also, we include *bva2_i* (the squared term of *bva_i*) for each firm *i* as in Chemmanur and Paeglis (2005). We include the *lnfage_i*, which is the natural log of one plus firm age, where firm age is defined as the number of years between the year of incorporation and the time of going public⁶. Finally, *odir_i* is the number of outside directors for each firm *i*. The definition of outside directors is the directors who are

⁴ Some firms report the years of working within the firm or industry experience for the management team by year and month. For the month part, we divide it by twelve to convert it as a year.

⁵ We also calculate the lead underwriter reputation ranking for each IPO based on the Carter and Manaster reputation ranking. The empirical result is similar to one with top-tier dummy.

⁶ In general, the firm age of SPACs is less than one year. We divide it by twelve to convert it as a year.

not executives. It is based on Chemmanur and Paeglis (2005). Other than *odir_i*, Chemmanur and Paeglis (2005) use free cash flow as a percentage of the book value of assets to capture other aspects of firm quality. We did not use this measure because SPACs do not have any operating income during the IPO process.

For the second empirical study, we use dependent variables as follows. *Ttdma* or *ttdipoma*, represents time-to-deal in years from the announcement date till consummation date of SPAC business combination or from the initial filing date of SPAC IPO till the consummation date of SPAC business combination, respectively. *Ltpmau* represents unit return performance from the announcement date till consummation date of SPAC business combination. *Sindicator* is equal to one if SPAC consummated business combination, is equal to two if SPAC liquidated, and is equal to three if SPAC business combination is in progress. Explanatory and control variables are the same as ones in the first empirical study, except for underpricing. We include *underpricing* as the measure of firm quality signaling following previous literature (Allen and Faulhaber, 1989; Grinblatt and Hwang, 1989; Welch, 1989).

ACAR(-1,1), *ACAR(-2,2)*, *ACAR(-5,5)* represents unit CAR around the announcement of SPAC business combination with the event window (-1,1), (-2,2) and (-5,5), respectively. *CCAR(-1,1)*, *CCAR(-2,2)*, *CCAR(-5,5)* represents unit CAR around the consummation of SPAC business combination with the event window (-1,1), (-2,2) and (-5,5), respectively. *Instnc* or *instpc* represents the number of institutional investors at the end of the first quarter after SPAC business combination consummation or the ratio of institutional ownership to IPO unit offering amount at the end of the first quarter after SPAC business combination consummation, respectively. Explanatory variables are *ttdipo*, *ltpmau*, and *ltpipou*. *Ttdipo*, *ltpmau* or *ltpipou* represents time-to-deal in years from the initial filing date till the final prospectus filing date of SPAC IPO, unit return performance from the announcement till the consummation date of SPAC business combination or from the IPO consummation date till the

announcement date of SPAC business combination, respectively. Control variables are the same as ones in the first empirical study.

4.3 Summary Statistics : Management Quality, Reputation and IPO Characteristics

Table 2 shows the summary statistics of the sample. The sample consists of 158 SPAC IPOs with matched common stock IPOs. The SPAC IPO is the unit issue which is the combination of common stocks and warrants. For SPAC IPOs, 70 firms are traded in the over the counter (OTC) market, one firm is traded in Nasdaq, and 81 firms are traded in American Stock Exchange. For matched common stock IPOs, seven firms are traded in American Stock Exchange, 122 firms are traded in Nasdaq, and 29 firms are traded in New York Stock Exchange. 'N' is the number of observations.

Panel A or panel B shows the summary statistics for SPAC IPO or matched common stock IPO, respectively. The average *meanmgtxper* for SPAC IPO is 19.13 (median, 18.68). It is higher than that of matched common stock IPO (mean, 16.60; median, 16.22). More experienced people are in the management team for SPACs. The average *tsize* for SPAC IPO is 6.09 (median, 6). It is almost half of that for matched common stock IPO (mean, 12.11, median, 12). The average *pfteam* for SPAC IPO is 0.71 (median, 0.75). It is almost one and a half times larger than that for matched common stock IPO (mean, 0.49; median, 0.50). So, SPACs have smaller in team size but more people with experience in vice president or higher within the management team. The average *pmba* for SPAC IPO is 0.34 (median, 0.31). The average *plawacc* for SPAC IPO is 0.21 (median, 0.20). In general, more MBAs than lawyers or accountants are within the SPAC management team. However, they are not dominant because the ratio is less than fifty percent. The results are consistent with Chemmanur and Paeglis (2005), but the mean or median value is higher than their sample. The average *pmba* or *plawacct* for matched common stock IPO is 0.29 (median, 0.29) or 0.18 (median, 0.16) It seems that SPAC IPO involves more professionals than matched common stock IPO. The average *tenure* for SPAC IPO is 0.57 (median, 0.49). On average, SPAC management team has less than one year of tenure. It is

Table 2 Summary Statistics: Management Quality, Reputation and IPO Characteristics

The summary statistics of variables are presented. *Meanmgtxper.* is the mean industry experience of management team, *tsize* is the management team size, *pmba* is the the percentage of MBAs, *pfteam* is the percentage of management team members with the prior experience of vice presidents or higher, *plawacc* is the percentage of lawyers or accountants, *tenure* is the mean tenure of management team, *tenhet* is the coefficient of variation of the team member's tenures, *nonprofit* is the number of management team members who sit on non-profit boards, *odir* is the number of outside directors as defined in Chemmanur and Paeglis (2005). *lnbva*, *bva* and *bva2* represents the natural log of book value of total assets, book value of total assets and the squared term of bva, respectively. *lnfage* is the natural log of firm age defined as the period from firm's founding date till firm's IPO date. *lnsize* is the natural log of IPO offer size, *toptierdummy* is equal to one if IPO involves top-tier underwriters with Carter and Manaster's reputation ranking of eight or higher; otherwise, it is zero. *spread* and *oexpense* represents underwriting spread and other offering expense, respectively. *Underpricing* is the IPO underpricing. *instp* and *instn* is the natural log of the percentage of the offer allocated to institutional investors and the number of institutional investors as reported in SEC 13-F filings at the end of the first quarter after the IPO, respectively. Panel A is SPAC IPO (158 IPOs, 152 SPACs). Panel B is matched common stock IPO (158 IPOs). N represents the number of observations. Sample period is from August 2003 till February 2008.

Variable	N	Mean	Median	Minimum	Maximum	Standard Deviation
Panel A: SPAC IPO						
meanmgtxper.	158	19.13	18.68	6.86	33	5.09
tsize	158	6.09	6	2	13	1.90
pmba	158	0.34	0.31	0	1	0.23
pfteam	158	0.71	0.75	0	1	0.22
plawacc	158	0.21	0.20	0	0.75	0.17
tenure	158	0.57	0.49	0.19	2.33	0.30
tenhet	158	0.11	0	0	0.91	0.18
nonprofit	158	1.85	1	0	15	2.74
odir	158	3.08	3	0	10	1.63
lnbva	158	5.37	5.40	4.29	6.51	0.40
bva	158	0.36	0.25	0.02	3.26	0.47
bva2	158	0.35	0.06	0	10.60	1.33
lnfage	158	-0.57	-0.61	-1.39	1.61	0.50
lnsize	158	18.06	17.91	14.09	20.62	1.15
toptierdummy	158	0.29	0	0	1	0.46
spread	158	6.85	7	3	10	1.56
oexpense	158	7.22	7.44	0.33	12.91	2.28
underpricing	158	0.02	0.004	-0.05	0.25	0.04
instp	158	0.19	0.07	0	1	0.25
instn	158	6.87	2	0	48	10.28
Panel B: Matched Common Stock IPO						
meanmgtxper.	158	16.60	16.22	5	33.56	4.80
tsize	158	12.11	12	5	26	3.40
pmba	158	0.29	0.29	0	0.71	0.16
pfteam	158	0.49	0.50	0	1	0.17
plawacc	158	0.18	0.16	0	0.88	0.14
tenure	158	3.72	3.30	0.13	18.88	2.41
tenhet	158	0.82	0.74	0.06	2.05	0.36
nonprofit	158	1.34	0	0	10	1.98
odir	158	5.87	6	0	18	2.08
lnbva	158	8	7.90	5.07	9.62	0.76
bva	158	340.61	79.95	0.12	4163.12	632.63
bva2	158	513700.13	6393.59	0.01	17331586.04	2086518.58
lnfage	158	2.04	2.04	-1.79	3.95	0.92
lnsize	158	18.11	18.13	15.76	20.43	0.84
toptierdummy	158	0.67	1	0	1	0.47
spread	158	6.94	7	5	10	0.49
oexpense	158	3.39	2.83	0.20	14.38	2.15
underpricing	158	0.12	0.06	-0.31	0.73	0.19
instp	158	1.03	0.97	0	5.22	0.79
instn	158	29.42	25	0	117	23.02

understandable because SPAC is the newly-formed blank check company that seeks a business combination in the future. The document processing time is short for SPAC IPO. Because the management team is formed when the blank check company is founded, the average tenure of the management team is supposed to be short. However, that of the management team for matched common stock IPO is 3.72 (median, 3.30). The average *tenhet* is 0.11 (median, 0) for SPAC IPO. Comparing with matched common stock IPO (mean, 0.82; median, 0.74), it is relatively low. *Tenhet* is the tenure heterogeneity measured by the coefficient of variation of the management team member's tenure. So, the tenure of management team members is more heterogeneous for matched common stock IPO than that for SPAC IPO. The average *nonprofit* is 1.85 (median, 1) for SPAC IPO. It is higher than that for matched common stock IPO (mean, 1.34; median, 0). It seems that SPAC management team sits on more non-profit boards than the management team of matched common stock does.

For control variables, the average *odir* for SPAC IPO (mean, 3.08; median, 3) is almost half of that for matched common stock IPO (mean, 5.87; median, 6). More outside directors are involved in the management team of matched common stock. The average *bva* is 0.36 for SPAC IPO (median, 0.25), while it is 340.61 for matched common stock IPO (median, 79.95). As SPACs do not have any business operation at the time of IPO, their book value of asset is cash from management team. That is why *bva* for SPAC is so small comparing with matched common stock. The average *lnfage* is -0.57 for SPAC IPO (median, -0.61), while it is 2.04 for matched common stock IPO (median, 2.04). *lnfage* is the natural log of firm age in years. As the age of most SPACs in the sample is less than one year, the value of *lnfage* is negative.

For dependent variables, the average *lnsize* is 18.06 (median, 17.91) for SPAC IPO. Comparing with matched common stock IPO (mean, 18.11; median, 18.13), it is very close even though it is not the same. As we already mentioned from the matched sample construction process, we cannot match two samples exactly by the size due to the limit of available IPO firms. So, there is a small difference

between them. Top-tier underwriter dummy (*toptierdummy*) is much higher for matched common stock IPO than for SPAC IPO. The average *toptierdummy* for SPAC IPO is 0.29 (median, 0). On the other hand, that for matched common stock IPO is 0.67 (median, 1). Greater than sixty five percent of matched common stock IPO is supported by top-tier underwriters within our sample. The result is also consistent with previous literature (Schultz, 1993; Jain, 1994). The average *spread* for SPAC IPO is 6.85 (median, 7), while that for matched common stock IPO is 6.94 (median, 7). The seven percent solution of underwriting spread holds both for SPAC IPO and for matched common stock IPO (Chen and Ritter, 2000). The average *oexpense* for SPAC IPO is 7.22 (median, 7.44). Comparing with matched common stock IPO (mean, 3.39; median, 2.83), other offering expense as the percentage of offer size is way higher. The average *underpricing* for SPAC IPO is 0.02 (median, 0.004). It is smaller than that of matched common stock IPO (mean, 0.12; median 0.06). The average *instp* is 0.19 for SPAC IPO (median, 0.07), while it is 1.03 for matched common stock IPO (median, 0.97). The average *instn* is 6.87 (median, 2), while it is 29.42 (median, 25). Comparing with matched common stock IPO, institutional investors are not attracted to SPAC IPO.

Overall, management experience, other management quality and reputation or offering characteristics are different between SPAC IPO and matched common stock IPO. However, offering size and underwriting spreads are similar. The result implies that the effects of explanatory variables on varying dependent variables will be different among SPAC IPO and matched common stock IPO.

4.4 Correlation : Management Quality, Reputation and IPO Characteristics

Table 3 shows the correlation between independent variables. Panel A shows the correlation for SPAC IPO. Panel B shows the correlation for matched common stock IPO. Chemmanur and Paeglis (2005) control for the correlation between firm size proxies (*lnbva*, *bva*, and *bva2*) and other management quality and reputation variables either by adjusting proxies for firm size and using these adjusted proxies in various regressions or by using proxies of firm size as control variables in these regressions. As we can see from panel A and B of Table 3, no management quality and reputation

Table 3 Pearson Correlation: SPAC IPO vs. Matched Common Stock IPO

The Pearson correlation results for SPAC and matched common stock IPO are provided. The definitions of variables are the same as the ones in Table 2.

	meanmgt exper.	tsize	pmba	pfteam	plawacc	tenure	tenhet	non- profit	lnbva	bva	bva2	lnfage	odir
<i>Panel A: Correlations between independent variables for SPAC IPO</i>													
meanmgtexper.	1												
tsize	0.12	1											
pmba	-0.02	-0.16	1										
pfteam	0.11	-0.03	-0.10	1									
plawacc	-0.16	0.04	-0.10	-0.11	1								
tenure	0.21	0.00	-0.15	0.05	-0.13	1							
tenhet	0.13	0.42	-0.13	0.05	0.04	-0.02	1						
nonprofit	0.13	0.33	-0.07	0.20	-0.06	-0.18	0.30	1					
lnbva	0.22	0.27	-0.24	-0.02	-0.04	0.32	0.42	0.13	1				
bva	0.11	0.16	-0.16	0.04	0.06	0.23	0.38	0.13	0.77	1			
bva2	0.05	0.06	-0.09	0.03	0.09	0.09	0.25	0.10	0.54	0.94	1		
lnfage	0.27	0.12	-0.15	0.05	-0.12	0.84	0.18	-0.14	0.38	0.27	0.12	1	
odir	0.07	0.66	-0.16	0.14	0.11	-0.10	0.23	0.31	0.24	0.13	0.06	-0.08	1
	meanmgt exper.	tsize	pmba	pfteam	plawacc	tenure	tenhet	non- profit	lnbva	bva	bva2	lnfage	odir
<i>Panel B: Correlations between independent variables for matched common stock IPO</i>													
meanmgtexper.	1												
tsize	-0.05	1											
pmba	-0.08	-0.08	1										
pfteam	0.12	-0.25	0.09	1									
plawacc	0.25	-0.16	-0.01	-0.05	1								
tenure	0.21	0.20	-0.07	-0.20	0.01	1							
tenhet	0.12	-0.13	0.01	0.15	0.07	-0.04	1						
nonprofit	0.26	0.12	0.03	0.01	0.12	0.16	-0.01	1					
lnbva	0.40	0.30	0.06	0.05	0.11	0.18	0.01	0.22	1				
bva	0.27	0.33	-0.03	-0.01	0.09	0.05	-0.04	0.32	0.68	1			
bva2	0.16	0.34	-0.04	-0.09	0.07	0.05	-0.05	0.27	0.44	0.91	1		
lnfage	0.14	0.08	0.04	-0.15	0.03	0.50	0.37	0.02	0.13	0.05	0.03	1	
odir	0.17	0.72	-0.14	-0.12	-0.04	0.18	-0.11	0.06	0.37	0.40	0.42	0.07	1

variables are highly correlated with firm size proxies. So, we did not report the regression results using adjusted proxies.⁷ Also, *tenure* has a high correlation with *lnfage* or *tsize* has a high correlation with *odir* (correlation coefficients of 0.84 and 0.66 for SPAC IPO; correlation coefficients of 0.50 and 0.72 for matched common stock IPO). We adjust this variable for *lnfage* and *odir* and use the adjusted *tenure* or *tsize* in various regressions. However, the regression results do not change when we run regressions without adjustment. So, we did not report the results with adjusted variables.

Table 4 shows the relationship between firm size and proxies for management quality and reputation as in Chemmanur and Paeglis (2005). Panel A shows the relationship for SPAC IPO. Panel B shows the relationship for matched common stock IPO. As we can see from panel A and Panel B of Table 4, there is no monotonic relationship between firm size and management quality and reputation variables except for *meanmgtxper.* in panel B. As we can see from panel B, the *meanmgtxper.* of matched common stock IPO increases as firm size increases. However, as we can see from panel B of Table 3, the correlation between *meanmgtxper.* and *lnbva*, *bva* or *bva2* is not high (less than 40 percent). So, we perform the regression analyses without any adjustment as in Chemmanur and Paeglis (2005).⁸

4.5 Factor Analysis: Management Quality, Reputation and IPO Characteristics

Common factor analysis is executed based on Chemmanur and Paeglis (2005). They argue that the analysis captures the common variation among management quality and reputation variables which is not captured by individual variable. Also, we perform the analysis based on management quality and reputation variables.⁹

⁷ The regression results are qualitatively similar to ones without adjustment.

⁸ For each regression analysis in this study, we calculate the Variance Influence Factor (VIF) to detect multicollinearity problem due to high correlation among some of independent variables. VIF is less than 2 for each regression. Considering the standard VIF value is 4 for multicollinearity detection point, we can run regressions without considering multicollinearity problem.

⁹ Chemmanur and Paeglis (2005) perform the analysis based on firm-size-adjusted management quality and reputation variables because their variables increase with firm size. However, our sample does not show any distinctive increasing pattern as firm size increases as we show in Table 4. So, we perform our analysis without firm-size adjustment. We also perform the analysis, not reported, with firm-size adjustment, and both results are qualitatively the same.

Table 4 Average Management Experience, Quality and Reputation by Firm Size

The average management experience, quality and reputation by firm size for SPAC and matched common stock IPO are provided. The definitions of variables are the same as the ones in Table 2. Quintile 1 to quintile 5 represents the firm size quintiles. Firm size is defined as the book value of total assets.

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
<i>Panel A: SPAC IPO</i>					
meanmgtexper.	16.44	19.27	20.22	19.93	19.70
tsize	5.13	5.66	6.50	6.25	6.90
pmba	0.41	0.40	0.30	0.36	0.23
pfteam	0.76	0.67	0.69	0.70	0.73
plawacc	0.24	0.21	0.19	0.20	0.20
tenure	0.47	0.52	0.47	0.60	0.80
tenhet	0.01	0.07	0.13	0.11	0.26
nonprofit	0.94	1.81	2.78	1.63	2.06
<i>Panel B: Matched Common Stock IPO</i>					
meanmgtexper.	14.38	15.00	16.05	18.53	19.04
tsize	10.65	11.66	13.06	11.78	13.39
pmba	0.29	0.26	0.30	0.32	0.28
pfteam	0.49	0.46	0.45	0.55	0.50
plawacc	0.15	0.16	0.19	0.18	0.21
tenure	2.94	3.57	4.03	4.17	3.87
tenhet	0.81	0.80	0.79	0.83	0.84
nonprofit	1.35	0.44	1.22	1.53	2.19

Thus, the team resources factor (TRF) score is obtained using common factor analysis on *tsize*, *pmba*, *plawacc*, and *pfteam* variables. Similarly, the team structure factor (TSF) score is obtained using common factor analysis on *tenure* and *tenhet*. We exclude CEO compensation variable (*fceo*) which is included in Chemmanur and Paeglis (2005) to calculate TSF score because it is not available for SPACs.¹⁰

Table 5 presents the results of the common factor analysis. Panel A presents starting communalities, calculated as the squared multiple correlations obtained from regressing each of the management quality measures on the other measures within the same dimension, while panel B reports the eigenvalues of the reduced correlation matrices. The only difference with Chemmanur and Paeglis (2005) is that we exclude *fceo* variable.

¹⁰ SPAC CEOs do not receive any compensation until they consummate business combination. It is prescribed in SEC filings.

Table 5 Common Factor Analysis with Six Measures of Management Quality

Common factor analysis statistics are presented. TRF is the management team resources factor score from *tsize*, *plawacc*, *pfteam* and *pmba*. TSF is the management team structure factor score from *tenure* and *tenhet*. The definition of other variables are the same as ones in Table 2.

<i>Panel A: estimated communalities of six management quality measures</i>									
<i>SPAC IPO</i>					<i>Matched Common Stock IPO</i>				
	<i>tsize</i>	<i>plawacc</i>	<i>pfteam</i>	<i>pmba</i>		<i>tsize</i>	<i>plawacc</i>	<i>pfteam</i>	<i>pmba</i>
TRF	0.0851	0.0478	0.000001	0.1186	TRF	0.1993	0.0196	0.1469	0.0318
	<i>tenure</i>	<i>tenhet</i>				<i>tenure</i>	<i>tenhet</i>		
TSF	0.0079	0.0079			TSF	0.0205	0.0205		
<i>Panel B: eigenvalues of the reduced correlation matrix of six management quality measures</i>									
<i>SPAC IPO</i>					<i>Matched Common Stock IPO</i>				
	1	2	3	4		1	2	3	4
TRF	0.25151	-0.21335	-0.04562	0.14018	TRF	0.39769	-0.24803	-0.03787	0.11306
TSF	0.01580	-0.01532			TSF	0.04096	-0.03785		
<i>Panel C: correlations between the common factors and six management quality measures</i>									
<i>SPAC IPO</i>					<i>Matched Common Stock IPO</i>				
	<i>tsize</i>	<i>plawacc</i>	<i>pfteam</i>	<i>pmba</i>		<i>tsize</i>	<i>plawacc</i>	<i>pfteam</i>	<i>pmba</i>
TRF	0.6407	0.4802	0.0020	-0.7565	TRF	-0.8122	0.2546	0.6973	0.3246
	<i>tenure</i>	<i>tenhet</i>				<i>tenure</i>	<i>tenhet</i>		
TSF	0.7126	-0.7126			TSF	0.7209	-0.7209		
<i>Panel D: descriptive statistics of the common factors extracted from six management quality measures</i>									
<i>SPAC IPO</i>					<i>Matched Common Stock IPO</i>				
	TRF	TSF				TRF	TSF		
Maximum	1.089	0.569			Maximum	1.323	0.834		
3 rd quartile	0.275	0.059			3 rd quartile	0.370	0.107		
Median	0.029	0.01			Median	0.007	0.012		
1 st quartile	-0.297	-0.039			1 st quartile	-0.289	-0.104		
Minimum	-1.293	-0.452			Minimum	-1.755	-0.617		
Mean	0	0			Mean	0	0		

Similar to Chemmanur and Paeglis (2005), the summed communalities are less than or equal to the eigenvalues for the first factor in the factor analysis for each dimension of management quality and reputation, suggesting that one factor in each of the dimensions parsimoniously explains the intercorrelations among the individual measures. For example, the sum of estimated communalities of the team resources factor (TRF) score is 0.251501, which is smaller than the eigenvalue for the first factor (0.25151) for SPAC IPO. That of team structure factor (TSF) score is 0.0158, which is equal to the eigenvalue for the first factor (0.0158) for SPAC IPO.

Correlations between the common factor scores and their respective original measures of management quality are reported in Panel C, while Panel D reports summary statistics of TRF and TSF scores for SPAC IPO and matched common stock IPO. As we can see from Panel C, the correlation between TRF and *tsize* or *pfteam* is high for matched common stock IPO. That between TRF and *plawacc* or *pmba* is relatively low for matched common stock IPO. The correlation between TSF and *tenure* or *tenhet* is high. The result is consistent with Chemmanur and Paeglis (2005). For SPAC IPO, the correlation between TRF and *tsize* or *pmba* is high while that between TRF and *plawacc* or *pfteam* is relatively low. So, team size and the percentage of MBA holders are major components of TRF for SPAC IPO, while team size and the percentage of team members with prior vice president or higher are major components of TRF for matched common stock IPO. The correlation between TSF and *tenure* or *tenhet* is high.

In panel D, the average TRF or TSF is the same between SPAC IPO and matched common stock IPO. The median TRF is higher for SPAC IPO than that for matched common stock IPO. However, the median TSF is similar between SPAC IPO and matched common stock IPO. The median values are close to zero both for SPAC IPO and for matched common stock IPO. The result is consistent with Chemmanur and Paeglis (2005).

Table 6 reports the results of our univariate tests of the relationship between management quality and reputation and IPO characteristics for SPAC IPO (Panel A and Panel B) and matched common stock IPO (Panel C and Panel D). We split the sample by management quality factor score (TRF and TSF) quintiles and by firm size quintiles. Panel A and C show the test results of top-tier underwriter dummy, IPO offer size in millions, underwriting spread as a percentage of offer price and other offering expenses as a percentage of offer size. Panel B and D show the test results of IPO underpricing, institutional holdings and the number of institutional investors.

For SPAC IPO, consistent with Chemmanur and Paeglis (2005), we find that high management quality firms (i.e., firms in the top TRF score quintile) are associated with top-tier underwriters, incur lower underwriting spread, and attract greater institutional interest. For example, the difference between top-tier underwriter dummy of firms in the top and the bottom TRF score quintiles is 0.128 within one percent significance level. The difference is statistically significant for all IPO characteristics except for underpricing and other offering expenses. They do not vary much with TRF score for SPAC IPO.

The variation of SPAC IPO characteristics across TSF score is consistent with the result of Chemmanur and Paeglis (2005), except for underpricing and the number of institutional investors. Underpricing is higher for high TSF score but the difference between underpricing of firms in the top and the bottom TSF score quintiles is not statistically significant. Also, the difference between top and bottom TSF quintiles is statistically significant for institutional holdings after IPO, which is not the case for Chemmanur and Paeglis (2005).

However, for matched common stock IPO, we find that high team resource factor firms (i.e., firms in the top TRF score quintile) are less likely to be associated with top-tier underwriters, incur higher underwriting spread, and lower institutional holdings. Other offering expenses, underpricing and the number of institutional investors are not statistically different between top and bottom TRF

Table 6 IPO Characteristics split into firm size, management quality and reputation factor quintiles: SPAC vs. Matched common stock

Average IPO characteristics split into firm size, management quality and reputation factor (TRF, TSF) quintiles for SPAC and matched common stock IPOs are provided. Panel A & B show IPO characteristics for SPAC IPO. Panel C & D are IPO characteristics for matched common stock IPO. The definitions of variables are the same as ones in Table 2 and Table 5. T-test results for the difference in means are reported. T-statistics are in parentheses. *, **, *** represents ten, five and one percent significance level, respectively.

Panel A: Underwriter reputation, IPO offer size, underwriting spread, offering expense and underpricing split into firm size and management quality quintiles (SPAC IPO)

Firm size quintiles	Management Quality Quintiles													
	TRF						TSF							
toptierdummy	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	0.107	0.122	0.203	0.186	0.254	0.174		0.290	0.208	0.130	0.136	0.111	0.152	
2	0.212	0.197	0.263	0.241	0.310	0.228		0.367	0.242	0.204	0.222	0.179	0.259	
3	0.293	0.310	0.414	0.386	0.382	0.369		0.471	0.367	0.306	0.333	0.321	0.358	
4	0.263	0.263	0.309	0.328	0.407	0.314		0.439	0.295	0.279	0.302	0.259	0.315	
5	0.288	0.311	0.386	0.370	0.471	0.364		0.481	0.345	0.317	0.322	0.360	0.381	
Average	0.233	0.223	0.315	0.285	0.379		-0.128 (-3.35)***	0.440	0.273	0.277	0.248	0.230		0.174 (4.50)***
Insize	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	67.813	72.114	78.074	81.987	119.053	83.808		134.936	102.37	67.531	56.757	55.780	90.398	
2	107.854	99.490	101.492	111.335	142.343	106.894		168.037	113.060	97.227	89.584	89.213	118.283	
3	133.099	132.150	140.029	151.053	158.812	145.748		192.157	146.051	129.962	124.769	127.111	143.500	
4	110.668	105.475	118.689	116.106	158.419	121.871		179.911	116.525	108.747	102.737	101.616	123.253	
5	127.702	135.786	149.477	156.694	195.074	152.010		191.159	165.780	133.110	131.484	140.975	166.067	
Average	109.427	104.458	117.552	115.120	157.840		-43.77 (-3.33)***	173.240	102.366	100.867	93.462	123.234		73.77 (5.70)***
spread	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	7.540	7.375	7.242	7.490	7.241	7.286		7.371	7.276	7.540	7.394	7.295	7.286	
2	7.131	7.205	6.732	7.052	6.747	6.972		6.877	7.069	7.273	7.004	6.653	7.051	
3	6.851	6.854	6.539	6.715	6.465	6.643		6.625	6.800	7.012	6.574	6.376	6.647	
4	6.933	7.000	6.588	6.805	6.543	6.717		6.640	6.856	7.089	6.700	6.537	6.813	
5	6.646	6.608	6.260	6.408	6.266	6.507		6.287	6.643	6.767	6.288	6.161	6.364	
Average	6.890	6.992	6.775	6.857	6.629		0.348 (2.67)***	6.596	6.960	7.125	6.789	6.592		0.217 (1.58)
oexpense	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	8.271	8.228	8.031	7.967	8.038	8.099		7.845	8.103	8.328	8.180	8.080	8.216	
2	7.402	7.616	7.134	7.041	7.037	7.192		6.873	7.560	7.507	7.198	7.099	7.193	
3	7.097	7.310	6.827	6.775	6.794	6.873		6.548	7.242	7.311	6.901	6.720	6.920	
4	6.953	7.286	6.853	6.764	6.808	6.845		6.484	7.346	7.152	6.850	6.768	6.801	
5	6.908	7.175	6.599	6.845	6.645	6.909		6.520	7.063	7.146	6.699	6.716	6.890	
Average	7.090	7.702	7.211	6.860	7.071		0.237 (1.28)	6.635	7.583	7.575	7.050	6.742		-0.157 (-0.88)

(Table 6 continued)

Panel B: Underpricing, holdings of institutional shareholders and number of institutional shareholders split into firm size and management quality quintiles (SPAC IPO)

Firm size quintiles	Management Quality Quintiles													
	TRF						TSF							
underpricing	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	0.027	0.029	0.020	0.023	0.021	0.025		0.025	0.022	0.022	0.022	0.028	0.025	
2	0.013	0.020	0.017	0.017	0.018	0.016		0.018	0.014	0.015	0.018	0.021	0.017	
3	0.017	0.014	0.014	0.015	0.017	0.016		0.014	0.014	0.013	0.015	0.021	0.016	
4	0.010	0.013	0.009	0.011	0.010	0.010		0.010	0.008	0.007	0.009	0.019	0.008	
5	0.014	0.016	0.012	0.013	0.013	0.014		0.012	0.012	0.010	0.013	0.023	0.016	
Average	0.015	0.023	0.013	0.014	0.017		0.0001 (0.04)	0.015	0.017	0.012	0.014	0.024		-0.006 (-1.44)
instp	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	0.148	0.126	0.159	0.134	0.216	0.157		0.192	0.170	0.133	0.151	0.139	0.157	
2	0.205	0.174	0.185	0.177	0.248	0.198		0.232	0.208	0.191	0.180	0.172	0.197	
3	0.193	0.173	0.211	0.174	0.219	0.194		0.237	0.202	0.167	0.199	0.169	0.195	
4	0.203	0.168	0.192	0.172	0.254	0.198		0.222	0.197	0.189	0.206	0.177	0.198	
5	0.224	0.193	0.225	0.202	0.274	0.224		0.264	0.219	0.203	0.205	0.227	0.224	
Average	0.195	0.167	0.194	0.172	0.242		-0.047 (-2.10)**	0.229	0.199	0.177	0.188	0.177		0.056 (2.55)**
instn	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	3.143	3.224	4.627	3.983	7.780	4.551		6.968	5.038	4.148	3.966	2.667	4.557	
2	6.327	5.820	6.526	6.345	9.741	6.952		9.517	6.677	6.593	6.167	5.625	6.916	
3	5.776	6.207	8.052	7.070	9.018	7.225		9.961	7.033	6.355	7.404	5.625	7.276	
4	5.667	5.526	6.545	6.172	9.983	6.779		9.088	6.262	6.607	6.849	5.167	6.795	
5	7.695	7.230	9.070	8.537	11.686	8.844		10.923	8.828	8.000	7.949	8.320	8.804	
Average	5.722	5.601	6.964	6.421	9.642		-3.858 (-4.31)***	9.291	6.768	6.341	6.467	5.481		4.089 (4.84)***

(Table 6 continued)

Panel C: Underwriter reputation, IPO offer size, underwriting spread and offering expense split into firm size and management quality quintiles (Matched Common Stock IPO)

Firm size quintiles		Management Quality Quintiles												
toptierdummy	TRF					Average	1st-5th	TSF					Average	1st-5th
	1	2	3	4	5			1	2	3	4	5		
1	0.569	0.517	0.536	0.527	0.509	0.532		0.455	0.527	0.579	0.556	0.541	0.541	
2	0.732	0.661	0.655	0.596	0.610	0.661		0.552	0.678	0.698	0.649	0.678	0.644	
3	0.764	0.702	0.679	0.655	0.667	0.691		0.614	0.724	0.741	0.672	0.709	0.684	
4	0.780	0.678	0.702	0.655	0.642	0.669		0.579	0.709	0.742	0.712	0.717	0.692	
5	0.889	0.768	0.814	0.741	0.727	0.800		0.673	0.814	0.839	0.793	0.815	0.775	
Average	0.739	0.656	0.677	0.608	0.636		0.113 (2.89)**	0.605	0.682	0.755	0.647	0.656		-0.113 (-2.80)***
Insize	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	72.905	90.890	79.715	85.423	87.146	81.297		94.523	97.987	75.158	70.615	78.199	84.571	
2	75.044	88.899	76.667	78.797	89.047	76.836		88.358	98.817	76.362	67.267	76.886	77.329	
3	84.287	104.264	89.006	90.604	102.020	87.966		98.213	114.952	86.885	80.930	89.833	91.644	
4	112.351	124.324	108.626	109.156	118.898	114.671		118.917	127.54	110.979	102.838	114.093	114.874	
5	147.748	141.286	143.109	146.971	159.680	144.048		147.109	157.087	139.426	139.597	155.128	151.119	
Average	98.467	132.805	99.425	90.995	103.022		-12.69 (-1.67)*	109.424	112.765	87.346	80.240	119.685		7.52 (0.40)
spread	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	7.033	7.079	7.017	7.061	7.095	7.064		7.100	7.089	7.053	7.065	6.986	7.038	
2	6.906	6.953	6.945	6.968	7.006	6.940		7.041	6.953	6.941	6.989	6.858	6.990	
3	6.904	6.931	6.932	7.008	7.008	6.963		7.061	6.922	6.970	6.957	6.878	6.965	
4	6.845	6.882	6.842	6.940	6.933	6.873		6.982	6.884	6.871	6.872	6.828	6.850	
5	6.841	6.882	6.813	6.877	6.882	6.868		6.960	6.855	6.858	6.850	6.771	6.813	
Average	6.874	6.981	6.934	6.988	6.980		-0.079 (-2.00)**	7.051	6.972	6.906	6.973	6.866		0.161 (3.70)***
oexpense	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	3.789	3.727	4.050	3.854	3.830	3.727		3.882	3.697	4.244	3.852	3.583	3.971	
2	3.620	3.873	4.157	3.958	3.727	4.058		3.883	3.840	4.088	3.947	3.607	3.973	
3	3.326	3.252	3.617	3.521	3.427	3.473		3.701	3.222	3.755	3.334	3.123	3.597	
4	2.647	2.795	3.161	3.024	3.003	2.959		3.169	2.879	3.167	2.767	2.589	2.975	
5	2.755	2.745	3.185	2.872	2.885	2.795		3.025	2.824	3.281	2.867	2.456	2.640	
Average	2.909	3.236	3.645	3.501	3.105		-0.155 (-0.85)	3.584	3.261	3.814	3.641	2.523		0.439 (2.33)**

(Table 6 continued)

Panel D: Underpricing, holdings of institutional shareholders and number of institutional shareholders split into firm size and management quality quintiles (Matched Common Stock IPO)

Firm size quintiles	Management Quality Quintiles													
	TRF						TSF							
underpricing	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	0.111	0.098	0.105	0.112	0.125	0.112		0.089	0.121	0.088	0.123	0.128	0.125	
2	0.139	0.093	0.109	0.126	0.117	0.125		0.101	0.103	0.123	0.126	0.131	0.117	
3	0.137	0.115	0.112	0.147	0.133	0.132		0.107	0.131	0.135	0.137	0.135	0.129	
4	0.132	0.090	0.112	0.132	0.105	0.122		0.099	0.113	0.111	0.114	0.136	0.113	
5	0.132	0.121	0.124	0.150	0.109	0.121		0.099	0.119	0.137	0.138	0.144	0.121	
Average	0.136	0.110	0.111	0.135	0.122		0.012 (0.45)	0.102	0.120	0.123	0.126	0.136		-0.036 (-2.27)**
instp	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	0.984	0.999	0.927	0.915	0.940	0.953		0.951	0.957	0.966	1.007	0.895	0.955	
2	1.047	1.020	0.947	0.868	0.933	0.963		0.921	0.961	1.022	1.001	0.912	0.963	
3	1.086	1.133	1.042	0.946	0.974	1.036		0.933	1.105	1.053	1.107	0.972	1.034	
4	1.185	1.097	1.070	1.035	1.053	1.088		1.063	1.076	1.118	1.081	1.105	1.089	
5	1.182	1.149	1.056	1.035	1.021	1.089		1.020	1.116	1.136	1.102	1.058	1.086	
Average	1.097	1.080	1.008	0.960	0.984		0.113 (1.79)*	0.978	1.043	1.059	1.060	0.988		-0.007 (-0.11)
instn	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	25.103	24.259	21.500	26.855	26.909	24.925		27.691	26.236	22.789	23.963	24.016	24.939	
2	29.768	25.429	22.948	27.105	28.763	26.803		28.431	27.339	25.623	26.649	25.847	26.778	
3	28.327	29.088	26.571	29.845	29.817	28.730		28.684	31.207	28.293	27.759	27.782	28.745	
4	33.949	30.186	28.263	31.397	32.000	31.159		32.053	31.164	30.306	30.746	31.660	31.186	
5	38.370	33.821	31.085	37.414	37.055	35.549		35.309	35.322	35.196	34.879	36.815	35.504	
Average	31.103	28.557	26.073	30.523	30.909		0.199 (0.11)	30.434	30.254	28.441	28.799	29.224		1.390 (0.68)

score quintiles. The difference between top-tier underwriter dummy of firms in the top and the bottom TRF score quintiles is 0.113 within one percent significance level. The difference between underwriting spread as a percentage of the offer price in the top and the bottom TRF score quintiles is 0.079 within five percent significance level. Finally, the difference between institutional holdings in the top and the bottom TRF score quintiles is 0.113 within five percent significance level. The results are not consistent with Chemmanur and Paeglis (2005).

For TSF score results, we find that high team structure factor firms (i.e., firms in the top TSF score quintile) are associated with top-tier underwriters, incur lower expenses of going public (both in terms of underwriting spread and other expenses of going public) and higher underpricing. The Institutional holdings and the number of institutional investors are not statistically different between top and bottom TSF score quintiles.

Table 7 reports the results of our univariate tests of the relationship between management experience and reputation and IPO characteristics for SPAC IPO and matched common stock IPO. As management experience is crucial for the success of SPAC IPO, we performed the same analysis as in Table 6 using management experience. We split the sample by management experience and by firm size quintiles. Panel A shows the test results of top-tier underwriter dummy, IPO offer size in millions, underwriting spread as a percentage of offer price and other offering expenses as a percentage of offer size. Panel B shows the test results of IPO underpricing, institutional holdings and the number of institutional investors.

For SPAC IPO, consistent with Chemmanur and Paeglis (2005), we find that high management experience firms are associated with top-tier underwriters, incur lower offering expenses (both underwriting spread and other offering expenses), and greater underpricing. For example, the difference between top-tier underwriter dummy of firms in the top and the bottom TRF score quintiles is 0.009 within one percent significance level. The difference is statistically significant for all IPO characteristics except for the institutional holdings and the number of institutional investors. The

Table 7 IPO characteristics split into firm size and management experience quintiles: SPAC vs. Matched common stock

Average IPO characteristics split into firm size, management experience (*meanmgtxper.*) quintiles for SPAC and matched common stock IPOs are provided. Panel A shows IPO characteristics for SPAC IPO. Panel B shows IPO characteristics for matched common stock IPO. The definitions of variables are the same as ones in Table 2 and Table 5. T-test results for the difference in means are reported. T-statistics are in parentheses. *, **, *** represents ten, five and one percent significance level, respectively.

Panel A: Underwriter reputation, IPO offer size, underwriting spread and offering expense split into firm size and management experience quintiles

Firm size quintiles	Management Experience Quintiles													
	SPAC						Matched Common Stock							
toptierdummy	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	0.106	0.200	0.186	0.220	0.158	0.174		0.549	0.544	0.500	0.536	0.533	0.532	
2	0.175	0.259	0.263	0.281	0.246	0.245		0.684	0.614	0.633	0.656	0.661	0.650	
3	0.288	0.397	0.368	0.404	0.327	0.357		0.714	0.683	0.698	0.667	0.702	0.693	
4	0.246	0.321	0.327	0.368	0.316	0.316		0.702	0.689	0.661	0.690	0.725	0.693	
5	0.259	0.407	0.362	0.417	0.365	0.362		0.836	0.778	0.764	0.784	0.769	0.786	
Average	0.215	0.317	0.301	0.338	0.282		-0.065 (-1.86)*	0.697	0.662	0.651	0.667	0.678		0.028 (1.21)
Insize	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	58.508	77.776	77.689	126.863	75.681	83.303		73.592	86.474	66.465	101.917	86.849	83.059	
2	87.369	107.231	110.454	147.311	110.239	112.521		76.825	83.815	65.713	94.999	83.891	81.049	
3	118.166	137.456	129.010	191.676	138.680	142.998		87.399	91.856	80.564	110.187	99.169	93.835	
4	94.441	116.327	122.116	160.782	118.820	122.497		108.201	111.005	100.822	133.242	121.037	114.861	
5	122.346	156.287	151.018	175.763	152.067	151.496		150.645	137.789	140.818	153.693	157.444	148.078	
Average	96.166	119.015	118.057	160.479	119.097		-22.850 (-2.29)**	99.332	102.188	90.876	118.808	109.678		-7.239 (-1.49)
spread	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	7.514	7.380	7.381	7.350	7.279	7.381		7.062	7.094	7.060	7.063	7.009	7.058	
2	7.356	6.910	7.045	6.908	6.649	6.974		6.952	7.015	6.951	6.940	6.926	6.957	
3	7.051	6.591	6.778	6.618	6.373	6.682		6.937	6.997	6.953	6.941	6.960	6.958	
4	7.114	6.703	6.849	6.754	6.425	6.769		6.831	6.960	6.876	6.861	6.908	6.887	
5	6.708	6.376	6.425	6.397	6.304	6.442		6.810	6.935	6.869	6.839	6.833	6.857	
Average	7.149	6.792	6.896	6.805	6.606		0.531 (4.00)***	6.918	7.000	6.942	6.929	6.927		-0.016 (-0.60)
oexpense	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	8.539	8.232	8.019	7.672	8.131	8.119		3.827	4.331	3.906	3.602	3.584	3.850	
2	7.892	7.228	7.220	6.722	7.174	7.247		3.957	4.100	3.974	3.692	3.662	3.877	
3	7.695	6.897	6.911	6.306	6.981	6.958		3.849	3.867	3.514	3.139	3.136	3.501	
4	7.600	6.863	7.027	6.393	6.730	6.923		2.865	3.304	2.970	2.614	2.825	2.916	
5	7.529	6.957	6.785	6.342	6.605	6.844		2.787	3.422	2.965	2.680	2.506	2.872	
Average	7.851	7.235	7.192	6.687	7.124		0.719 (4.63)***	3.457	3.805	3.466	3.145	3.143		0.192 (1.93)*

(Table 7 continued)

Panel B: Underpricing, holdings of institutional shareholders and number of institutional shareholders split into firm size and management experience quintiles

Firm size quintiles underpricing	Management Experience Quintiles													
	SPAC					Matched Common Stock								
	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	0.025	0.022	0.020	0.020	0.031	0.024		0.134	0.112	0.085	0.129	0.094	0.111	
2	0.017	0.017	0.014	0.011	0.026	0.017		0.128	0.122	0.087	0.130	0.111	0.116	
3	0.018	0.014	0.013	0.009	0.023	0.015		0.143	0.126	0.115	0.148	0.111	0.129	
4	0.010	0.011	0.006	0.004	0.022	0.011		0.122	0.109	0.094	0.129	0.118	0.114	
5	0.014	0.013	0.011	0.007	0.025	0.014		0.145	0.128	0.106	0.141	0.114	0.127	
Average	0.017	0.015	0.013	0.010	0.025		-0.009 (-2.53)**	0.134	0.119	0.097	0.135	0.110		0.026 (2.30)**
instp	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	0.113	0.195	0.159	0.178	0.133	0.156		0.924	0.909	1.042	0.944	0.945	0.953	
2	0.154	0.238	0.210	0.213	0.172	0.197		0.943	0.902	1.089	0.954	0.944	0.966	
3	0.154	0.246	0.194	0.204	0.170	0.194		1.075	0.981	1.085	1.019	1.022	1.036	
4	0.154	0.246	0.206	0.211	0.179	0.199		1.093	1.057	1.121	1.087	1.088	1.089	
5	0.171	0.264	0.224	0.247	0.206	0.222		1.106	1.026	1.159	1.115	1.037	1.089	
Average	0.149	0.238	0.199	0.211	0.172		-0.021 (-1.19)	1.028	0.975	1.099	1.024	1.007		0.028 (0.71)
instn	1	2	3	4	5	Average	1st-5th	1	2	3	4	5	Average	1st-5th
1	3.213	5.600	4.661	6.119	3.123	4.543		25.373	24.421	22.776	28.643	23.550	24.953	
2	5.895	7.690	7.386	7.649	6.140	6.952		27.667	26.579	24.020	29.721	25.516	26.701	
3	6.220	8.483	6.842	8.281	6.182	7.202		29.250	26.633	26.962	32.633	28.088	28.713	
4	5.557	7.625	7.345	8.035	5.561	6.825		30.982	30.295	29.678	34.207	30.647	31.162	
5	6.966	9.630	8.948	10.167	8.000	8.742		37.197	32.746	35.455	37.667	34.712	35.555	
Average	5.570	7.806	7.036	8.050	5.801		-0.180 (-0.24)	30.094	28.135	27.778	32.574	28.503		2.057 (1.86)*

institutional holdings tend to increase as management experience increases, but the difference between top and bottom management experience quintiles is not statistically significant. The number of institutional investors does not vary much with management experience.

On the other hand, for matched common stock IPO, we find higher management experience leads to lower other offering expenses, underpricing and the number of institutional investors. For top-tier underwriter dummy, underwriting spread and institutional holdings, the difference between top and bottom management experience quintiles is not statistically significant. The difference between other offering expenses of firms in the top and the bottom management experience quintiles is 0.192 within ten percent significance level. The difference between the underpricing of firms in the top and the bottom management experience quintiles is 0.026 within five percent significance level. Finally, the difference between the number of institutional investors in the top and the bottom management experience quintiles is 2.057 within ten percent significance level.

4.6 Cross-Sectional Regression of Offer Size on Management Experience, Other Management Quality and Reputation: SPAC IPO and Matched Common Stock IPO

We use a cross-sectional regression analysis to assess the effect of management experience, other management quality and reputation on SPAC or matched common stock IPO offer size.¹¹ We use a censored tobit regression as in Chemmanur and Paeglis (2005). Our base regression model is as follows.

$$Offsize_i = \alpha_i + \beta_1 * mearmgexper_i + \beta_2 * bva_i + \beta_3 * bva2_i + \beta_4 * ln fage_i + \beta_5 * odir_i + \varepsilon_i \dots (1)$$

where α_i and ε_i is constant term and error components.¹²

¹¹ Before we perform the regression analysis, we do the multicollinearity test by calculating Variance Influence Factor (VIF) values. On average, VIF value is less than 2 for each regression. If we set the cut-off criterion of the multicollinearity at the VIF value of 4, which is a widely used criterion, there is no serious multicollinearity in the sample. We perform this test throughout the whole regression analysis.

¹² Chemmanur and Paeglis (2005) do not include yeardummy in the regression. We perform regression analysis with yeardummy and the result is qualitatively the same as without it.

The definition of other variables in equation (1) is the same as ones in Table 2. From our base regression model, we add other management quality and reputation variables in Table 2 for each firm i . We expect positive relationship between management quality and reputation variables and IPO offer size ($Offsize_i$) based on our hypothesis 2 and Chemmanur and Paeglis (2005).

Table 8 shows the tobit regression results of the equation (1). T-statistics are in the parentheses. *, **, *** represents ten, five and one percent significance level, respectively. We find positive relationships between $meanmgtexper.$ and $lnsize$ of SPAC IPO. The result is consistent with our hypothesis 2 and Chemmanur and Paeglis (2005). However, we find no statistical relationships between $meanmgtexper.$ and $lnsize$ of matched common stock IPO except for regression 5. The result is not consistent with Chemmanur and Paeglis (2005). In regression 1, one standard deviation increase in $meanmgtexper.$ increases $lnsize$ by 20% (approximately \$1.22 million dollars). It seems that the average management experience of SPACs signal firm quality so that they attract more outside investors and induce larger offer size. However, common stock investors are not attracted by the average management experience.

We find negative relationships between $tsize$, $pfteam$, $plawacc$ or $tenure$ and $lnsize$ of SPAC IPO. The result is not consistent with our hypothesis 2 and Chemmanur and Paeglis (2005). On the other hand, we find a positive relationship between $nonprofit$ and $lnsize$ of SPAC IPO. The result is consistent with our hypothesis 2 and Chemmanur and Paeglis (2005). In regression 1, one standard deviation increase in $nonprofit$ increases $lnsize$ by 22.31% (approximately \$1.25 million dollars). It is not management quality itself but management reputation outside business community that induces larger offer size for SPAC IPO. We find positive relationships between $tsize$, $pmba$, $pfteam$ or $tenure$ and $lnsize$ of matched common stock IPO. The result is consistent with Chemmanur and Paeglis (2005). In regression 1, one standard deviation increase in $tsize$, $pmba$, $pfteam$ and $tenure$ increases $lnsize$ by 30.00% (approximately \$1.35 million dollars), 21.09% (approximately \$1.23 million dollars), 14.36% (approximately \$1.15 million dollars) and 10.72% (approximately \$1.11 million dollars), respectively.

Table 8 Relationship between offer size and management experience, quality and reputation: SPAC vs. Matched common stock

The censored tobit regression results are provided. The dependent variable is the natural log of IPO offer size (*lnsize*). Total of 158 observations, 158 SPAC IPOs (152 SPACs) and 158 matched common stock IPOs from August 2003 till February 2008, are used in the regression analysis. The definitions of variables are the same as ones in Table 2. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents ten, five and one percent significance level, respectively.

	SPAC					Matched Common					
	1	2	3	4	5	1	2	3	4	5	
intercept	4.277 (10.21)***	2.735 (8.75)***	3.220 (9.23)***	2.788 (9.26)***	2.756 (9.01)***	intercept	2.823 (7.44)***	4.306 (15.35)***	3.798 (11.99)***	3.799 (12.92)***	3.972 (11.94)***
mean- mgtexper.	0.039 (3.08)***	0.039 (2.78)***	0.043 (3.11)***	0.041 (3.04)***	0.034 (2.47)**	mean- mgtexper.	-0.006 (-0.50)	-0.019 (-1.52)	-0.008 (-0.60)	-0.015 (-1.28)	-0.021 (-1.74)*
tsize	-0.132 (-2.79)***					tsize	0.088 (3.83)***		0.074 (3.14)***		
pmba	-0.353 (-1.28)					pmba	1.315 (4.25)***			1.350 (4.10)***	
pfteam	-1.281 (-4.35)***		-0.884 (-2.86)***			pfteam	0.869 (2.70)***				0.623 (1.82)*
plawacc	-0.785 (-2.02)**					plawacc	0.168 (0.45)				
tenure	-1.417 (-3.86)***			-1.375 (-3.56)***		tenure	0.044 (1.78)*				
nonprofit	0.081 (3.19)***				0.071 (2.65)***	nonprofit	-0.048 (-1.76)*				
bva	3.212 (7.24)***	3.068 (6.40)***	3.002 (6.42)***	3.382 (7.21)***	2.961 (6.29)***	bva	1.591 (7.88)***	1.715 (7.82)***	1.647 (7.70)***	1.678 (8.03)***	1.652 (7.51)***
bva2	-0.894 (-5.95)***	-0.841 (-5.15)***	-0.817 (-5.12)***	-0.943 (-5.90)***	-0.819 (-5.12)***	bva2	-0.309 (-5.19)***	-0.350 (-5.32)***	-0.339 (-5.30)***	-0.343 (-5.48)***	-0.329 (-4.99)***
lnfage	0.182 (0.36)	-1.642 (-4.42)***	-1.579 (-4.35)***	-0.209 (-0.39)	-1.493 (-4.06)***	lnfage	-0.085 (-1.10)	-0.012 (-0.16)	-0.030 (-0.41)	-0.024 (-0.33)	0.010 (0.13)
odir	0.301 (5.66)***	0.232 (5.25)***	0.250 (5.75)***	0.209 (4.87)***	0.201 (4.47)***	odir	-0.108 (-2.87)***	-0.014 (-0.48)	-0.103 (-2.56)**	0.001 (0.03)	-0.008 (-0.28)
Pseudo-R ²	0.26	0.18	0.19	0.20	0.19	Pseudo-R ²	0.26	0.16	0.19	0.20	0.17
N	158	158	158	158	158	N	158	158	158	158	158

Overall, more management experience and higher management team reputation outside business community leads to larger IPO offer size for SPAC IPO. However, it is not the case in other management quality variables. The result is consistent with industry prediction that management experience plays an important role in attracting investors for future SPAC business combination.

4.7 Cross-Sectional Regression of Underwriter Reputation on Management Experience, Other Management Quality and Reputation: SPAC IPO and Matched Common Stock IPO

We use a cross-sectional regression analysis to assess the effect of management experience, other management quality and reputation on the underwriter reputation of SPAC or matched common stock. We use a binary logistic regression. Our base regression model is as follows. We predict a positive relationship between management quality or reputation variables and underwriter reputation as in our hypothesis 3 and Chemmanur and Paeglis (2005).

$$\Pr(\text{toptierdummy}_i) = \frac{e^{x'\beta}}{1 + e^{x'\beta}} = \Lambda(X'\beta) \dots (2)$$

Λ is the logistic cumulative distribution function. X is a vector of covariates (*meanmgtxper.*, *bva*, *bva2*, *lnfage*, and *odir*).¹³ The definition of other variables in equation (1) is the same as ones in Table 2. From our base regression model, we add other management quality and reputation variables in Table 2 for each firm i .

Table 9 shows the binary logistic regression results of the equation (2). Z-statistics are in the parentheses. *, **, *** represents ten, five and one percent significance level, respectively. Panel A shows the regression results of SPAC IPO. Panel B shows the regression results of matched common stock IPO.

No relationships are found between management quality and reputation variables and *toptierdummy* of SPAC IPO, except for *odir*. There is a positive relationship between *odir* and

¹³ Chemmanur and Paeglis (2005) does not include year dummy in their regression equation. We perform the regression analysis with year dummy and our results do not change.

Table 9 Relationship between underwriter reputation and management experience, quality and reputation: SPAC vs. Matched common stock
 The binary logistic regression results are provided. The dependent variable is top-tier underwriter dummy (*toptierdummy*). Panel A shows the regression results of SPAC IPO. Panel B shows the regression results of matched common stock IPO. Total of 158 observations, 158 SPAC IPOs (152 SPACs) and 158 matched common stock IPOs from August 2003 till February 2008, are used in the regression analysis. The definitions of variables are the same as ones in Table 2. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents the ten, five and one percent significance level, respectively.

Panel A: SPAC	1	2	3	4	5
intercept	-0.635 (-2.59)***	-0.713 (-4.07)***	-0.724 (-3.84)***	-0.703 (-3.82)***	-0.708 (-4.08)***
meanmgtxper.	0.006 (0.87)	0.010 (1.40)	0.010 (1.40)	0.010 (1.41)	0.008 (1.09)
tsize	0.001 (0.04)		0.004 (0.16)		
pmba	-0.023 (-0.15)			-0.025 (-0.17)	
pfteam	0.068 (0.38)				
plawacc	-0.225 (-0.90)				
tenure	0.154 (0.36)				
nonprofit	0.017 (1.30)				0.020 (1.58)
bva	0.789 (3.10)***	0.811 (3.34)***	0.806 (3.30)***	0.800 (3.19)***	0.786 (3.20)***
bva2	-0.208 (-2.63)***	-0.217 (-2.82)***	-0.215 (-2.78)***	-0.214 (-2.71)***	-0.212 (-2.75)***
lnfage	-1.005 (-1.41)	-0.813 (-3.34)***	-0.820 (-3.31)***	-0.814 (-3.34)***	-0.744 (-3.02)***
odir	0.142 (3.73)***	0.154 (4.79)***	0.151 (4.09)***	0.154 (4.79)***	0.145 (4.53)***
Pseudo R ²	0.39	0.37	0.37	0.37	0.39
N	158	158	158	158	158

(Table 9 continued)

Panel B: Matched					
Common Stock	1	2	3	4	5
intercept	-0.696 (-2.29)**	0.033 (0.17)	-0.291 (-1.30)	-0.110 (-0.53)	0.032 (0.17)
meanmgtexper.	-0.009 (-1.01)	-0.015 (-1.85)*	-0.008 (-0.95)	-0.014 (-1.67)*	-0.015 (-1.86)*
tsize	0.062 (2.97)***		0.055 (2.77)***		
pmba	0.467 (1.99)**			0.469 (1.93)*	
pfteam	0.431 (1.74)*				
plawacc	0.134 (0.49)				
tenure	0.026 (1.21)				
nonprofit	-0.013 (-0.58)				0.004 (0.21)
bva	0.632 (2.52)**	0.694 (2.91)***	0.677 (2.93)***	0.676 (2.82)***	0.690 (2.90)***
bva2	-0.107 (-0.85)	-0.131 (-1.29)	-0.132 (-1.39)	-0.127 (-1.19)	-0.132 (-1.30)
lnfage	-0.060 (-0.96)	0.004 (0.08)	-0.018 (-0.33)	-0.009 (-0.17)	0.005 (0.09)
odir	-0.031 (-0.98)	0.039 (1.84)*	-0.027 (-0.86)	0.042 (1.97)**	0.040 (1.84)*
Pseudo R ²	0.20	0.12	0.16	0.14	0.12
N	158	158	158	158	158

toptierdummy from regression 1 to regression 5. The result is statistically significant within one percent significance level. The positive effect represents the higher probability to involve top-tier underwriters. The result is consistent with our hypothesis 3 and Chemmanur and Paeglis (2005). As more outside directors are involved in the team, more top-tier underwriters are involved in SPAC IPO. It seems that management reputation outside business community, as defined in Chemmanur and Paeglis (2005), is important in attracting top-tier underwriters. We calculate the odds ratio from logistic regression. For example, as *odir* increases from 0 to 1 (the number of outside directors in firm *i* increases by one), so do the odds of hiring top-tier underwriter from 0.006 to 0.018 in regression 1.

For other control variables, we find negative relationships between *Infage* and *toptierdummy* from regression 2 to regression 5. The relationships are statistically significant within one percent significance level. Also, we find positive relationships between *bva* and *toptierdummy* from regression 1 to regression 5. The relationships are statistically significant within one percent significance level. The result is consistent with Chemmanur and Paeglis (2005).

For matched common stock IPO, we find consistent positive relationships between *tsize* or *pmba* and *toptierdummy*. Also, we find consistent positive relationships between *bva* and *toptierdummy*. The result is consistent with Chemmanur and Paeglis (2005). In regression 1, as *tsize* increases from 6 to 7 (one more person joins the management team with six members for firm *i*), so do the odds of hiring top-tier underwriter from 0.286 to 0.412.

Overall, for SPAC IPO, higher management experience or other management quality variables do not attract top-tier underwriters. The result is not consistent with our prediction in a hypothesis 3. As we can see from the average *toptierdummy* in Table 2, comparing with common stock IPO, top-tier underwriters seldom participate in SPAC IPO underwriting.

4.8 Cross-Sectional Regression of Underwriting Spread or Other Offering Expenses on Management Experience, Other Management Quality and Reputation : SPAC IPO and Matched Common Stock IPO

We use a cross-sectional regression analysis to assess the effect of management experience, other management quality and reputation on the underwriting spread or other offering expenses of SPAC or matched common stock IPO. We perform Ordinary Least Squares (OLS) estimation as in Chemmanur and Paeglis (2005). Our base regression models are as follows.

$$Spread_i = \alpha_i + \beta_1 * meanmgexper._i + \beta_2 * bva_i + \beta_3 * bva2_i + \beta_4 * ln fage_i + \beta_5 * odir_i + \varepsilon_i \dots (3)$$

$$Oexpense_i = \alpha_i + \beta_1 * meanmgexper._i + \beta_2 * bva_i + \beta_3 * bva2_i + \beta_4 * ln fage_i + \beta_5 * odir_i + \varepsilon_i \dots (4)$$

where α_i and ε_i is constant term and error components.¹⁴ The definition of other variables in equation (1) is the same as ones in Table 2. From our base regression models, we add other management quality and reputation variables in Table 2 for each firm i . Also, we perform the same regression by substituting $lnsize_i$ for bva_i and $bva2_i$ in regression 2. Our prediction is that there is a negative relationship between management quality or reputation and underwriting spread or other offering expenses as in our hypothesis 4 and Chemmanur and Paeglis (2005).

Table 10 shows the regression results of the equation (3). T-statistics are in the parentheses. *, **, *** represents ten, five and one percent significance level, respectively. Panel A and B shows the regression results of SPAC and matched common stock IPO. We find negative relationships between $tsize$ and $spread$ of SPAC IPO in regression 1, 2 and 4. The result is consistent with our hypothesis 4 and Chemmanur and Paeglis (2005). In regression 1, one standard deviation increase in $tsize$ decreases spread by 31.98%. We cannot find any relationship between other management quality and reputation variables and $spread$. We find negative relationships between $lnfage$ and spread of SPAC IPO in regression 3. The result is consistent with Chemmanur and Paeglis (2005). In regression 3, one standard deviation increase in $lnfage$ decreases spread by 5.08%.

¹⁴ Chemmanur and Paeglis (2005) does not include year dummy in their regression equation. We perform the regression analysis with year dummy and our results do not change.

Table 10 Relationship between underwriting spread and management experience, quality and reputation: SPAC vs. Matched common stock
 The OLS regression results are provided. The dependent variable is underwriting spread (*spread*). Panel A shows the regression results of SPAC IPO. Panel B shows the regression results of matched common stock IPO. Total of 158 observations, 158 SPAC IPOs (152 SPACs) and 158 matched common stock IPOs from August 2003 till February 2008, are used in the regression analysis. The definitions of variables are the same as ones in Table 2. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents the ten, five and one percent significance level, respectively.

Panel A: SPAC	1	2	3	4	5
intercept	8.321 (10.78)***	9.176 (9.67)***	8.767 (17.04)***	9.292 (16.65)***	8.506 (14.96)***
meanmgtexper.	-0.028 (-1.17)	-0.022 (-0.90)	-0.031 (-1.34)	-0.029 (-1.28)	-0.032 (-1.39)
tsize	-0.169 (-1.93)*	-0.216 (-2.45)**		-0.186 (-2.27)**	
pmba	0.631 (1.24)	0.692 (1.34)			0.552 (1.08)
pfteam	0.754 (1.39)	0.546 (0.95)			
plawacc	0.802 (1.12)	0.690 (0.95)			
tenure	-0.630 (-0.93)	-1.169 (-1.73)*			
nonprofit	-0.020 (-0.43)	-0.012 (-0.25)			
bva	-2.077 (-2.54)**		-2.742 (-3.48)***	-2.490 (-3.17)***	-2.613 (-3.28)***
bva2	0.615 (2.22)**		0.833 (3.10)***	0.750 (2.80)***	0.797 (2.94)***
lnfage	-0.238 (-0.25)	-0.359 (-0.38)	-1.045 (-1.71)*	-0.858 (-1.41)	-0.987 (-1.61)
odir	0.071 (0.73)	0.119 (1.11)	-0.038 (-0.52)	0.100 (1.06)	-0.027 (-0.37)
lnsize		-0.203 (-1.61)			
Adjusted R ²	0.18	0.16	0.15	0.18	0.15
N	158	158	158	158	158

(Table 10 continued)

Panel B: Matched					
Common Stock	1	2	3	4	5
intercept	7.359 (26.01)***	8.140 (29.83)***	6.972 (36.23)***	7.233 (32.77)***	6.883 (35.78)***
meanmgtexper.	0.010 (1.13)	0.007 (0.85)	0.012 (1.43)	0.006 (0.72)	0.015 (1.84)*
tsize	-0.044 (-2.57)**	-0.023 (-1.38)		-0.038 (-2.32)**	
pmba	0.169 (0.73)	0.498 (2.19)**			
pfteam	-0.420 (-1.75)*	-0.215 (-0.93)			
plawacc	-0.232 (-0.82)	-0.192 (-0.72)			
tenure	-0.047 (-2.56)**	-0.034 (-1.96)*			-0.046 (-2.52)**
nonprofit	0.032 (1.56)	0.016 (0.85)			
bva	-0.489 (-3.24)***		-0.496 (-3.29)***	-0.460 (-3.09)***	-0.536 (-3.60)***
bva2	0.092 (2.06)**		0.101 (2.25)**	0.096 (2.15)**	0.110 (2.46)**
lnfage	0.078 (1.36)	0.053 (0.98)	0.008 (0.17)	0.018 (0.35)	0.082 (1.41)
odir	0.038 (1.37)	0.008 (0.32)	-0.022 (-1.10)	0.023 (0.84)	-0.013 (-0.67)
lnsize		-0.256 (-5.53)***			
Adjusted R ²	0.13	0.22	0.07	0.10	0.10
N	158	158	158	158	158

For matched common stock IPO, we find negative relationships between *tsize*, *pftteam* or *tenure* and *spread* in regressions 1, 2, 4 and 5. The results are consistent with Chemmanur and Paeglis (2005). In regression 1, one standard deviation increase in *tsize* decreases *spread* by 14.98%. One standard deviation increase in *pftteam* decreases *spread* by 6.94%. Finally, one standard deviation increase in *tenure* decreases *spread* by 11.46%. For control variables, there are negative relationships between *bva* or *lnsize* and *spread* from regression 1 to regression 5. The results are statistically significant within one percent significance level. In regression 1, one standard deviation increase in *bva* decreases *spread* by 30.92%. In regression 2, one standard deviation increase in *lnsize* decreases *spread* by 21.45%.

Table 11 shows the regression results of the equation (4). T-statistics are in the parentheses. *, **, *** represents ten, five and one percent significance level, respectively. Panel A shows the regression results of SPAC IPO. Panel B shows the regression results of matched common stock IPO.

We find negative relationships between *meanmgtexper.* and *oexpense* of SPAC IPO in regression 1, 3, 4 and 5. Also, we find negative relationships between *nonprofit* and *oexpense* of SPAC IPO in regression 1, 3, 4 and 5. We substitute *lnsize* for *bva* and *bva2* to control for the IPO offer size instead of firm size as in Chemmanur and Paeglis (2005). We find negative relationships between *tsize* or *tenure* and *oexpense* of SPAC IPO in regression 2. The results are consistent with our hypothesis 4 and Chemmanur and Paeglis (2005). In regression 1, one standard deviation increase in *meanmgtexper.* decreases *oexpense* by 36.06%. Also, one standard deviation increase in *nonprofit* decreases *oexpense* by 43.36%. In regression 2, one standard deviation increase in *tsize* decreases *oexpense* by 38.33%. One standard deviation increase in *tenure* decreases *oexpense* by 75.01%. Finally, we find negative relationships between *lnsize* and *oexpense* of SPAC IPO in regression 2. One standard deviation increase in *lnsize* decreases *oexpense* by 103.87%.

For matched common stock IPO, we find negative relationships between *meanmgtexper.* and *oexpense* in regressions 2. The result is consistent with Chemmanur and Paeglis (2005). In regression 2,

Table 11 Relationship between offering expenses and management experience, quality and reputation: SPAC vs. Matched common stock

The OLS regression results are provided. The dependent variable is other offering expenses (*oexpense*). Panel A shows the regression results of SPAC IPO. Panel B shows the regression results of matched common stock IPO. Total of 158 observations, 158 SPAC IPOs (152 SPACs) and 158 matched common stock IPOs from August 2003 till February 2008, are used in the regression analysis. The definitions of variables are the same as ones in Table 2. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents the ten, five and one percent significance level, respectively.

Panel A: SPAC	1	2	3	4	5
intercept	9.912 (8.83)***	13.784 (10.65)***	10.355 (13.89)***	10.752 (13.14)***	10.378 (13.87)***
meanmgtexper.	-0.071 (-2.07)**	-0.037 (-1.10)	-0.083 (-2.47)**	-0.082 (-2.43)**	-0.082 (-2.43)**
tsize	-0.077 (-0.60)	-0.202 (-1.68)*		-0.141 (-1.17)	
pmba	-0.279 (-0.38)	-0.530 (-0.75)			
pfteam	1.103 (1.40)	-0.027 (-0.03)			
plawacc	0.649 (0.62)	-0.093 (-0.09)			
tenure	-1.127 (-1.15)	-2.500 (-2.71)***			
nonprofit	-0.158 (-2.32)**	-0.092 (-1.38)			-0.616 (-0.64)
bva	-3.380 (-2.84)***		-4.046 (-3.54)***	-3.855 (-3.34)***	-3.905 (-3.35)***
bva2	0.882 (2.19)**		1.084 (2.78)***	1.021 (2.60)***	1.038 (2.61)***
lnfage	0.936 (0.68)	0.999 (0.77)	0.115 (0.13)	0.256 (0.29)	0.757 (0.57)
odir	-0.093 (-0.66)	0.172 (1.17)	-0.165 (-1.57)	-0.061 (-0.44)	-0.175 (-1.64)
lnsize		-0.902 (-5.23)***			
Adjusted R ²	0.18	0.27	0.17	0.17	0.16
N	158	158	158	158	158

(Table 11 continued)

Panel B: Matched					
Common Stock	1	2	3	4	5
intercept	4.957 (3.98)***	9.739 (9.21)***	4.325 (5.21)***	5.021 (5.22)***	4.294 (5.19)***
meanmgtexper.	-0.050 (-1.25)	-0.060 (-1.86)*	-0.016 (-0.44)	-0.031 (-0.83)	-0.027 (-0.73)
tsize	-0.094 (-1.24)	0.056 (0.86)		-0.102 (-1.42)	
pmba	-1.212 (-1.19)	1.012 (1.15)			
pfteam	0.131 (0.12)	1.586 (1.77)*			
plawacc	1.334 (1.08)	1.671 (1.62)			
tenure	-0.115 (-1.41)	-0.042 (-0.63)			
nonprofit	0.173 (1.94)*	0.098 (1.36)			0.135 (1.53)
bva	-2.707 (-4.08)***		-2.580 (-3.97)***	-2.486 (-3.82)***	-2.696 (-4.14)***
bva2	0.550 (2.80)***		0.562 (2.89)***	0.547 (2.82)***	0.558 (2.88)***
lnfage	0.367 (1.44)	0.233 (1.11)	0.144 (0.65)	0.168 (0.76)	0.145 (0.66)
odir	0.080 (0.65)	-0.093 (-0.93)	-0.067 (-0.78)	0.054 (0.44)	-0.055 (-0.64)
lnsize		-1.710 (-9.55)***			
Adjusted R ²	0.14	0.40	0.11	0.12	0.12
N	158	158	158	158	158

one standard deviation increase in *meanmgtexper.* decreases *oexpense* by 24.03%. For control variables, there are negative relationships between *bva* or *lnsize* and *oexpense* from regression 1 to regression 5. The results are statistically significant within one percent significance level. The results are consistent with Chemmanur and Paeglis (2005). In regression 1, one standard deviation increase in *bva* decreases *oexpense* by 171.22%. In regression 2, one standard deviation increase in *lnsize* decreases *oexpense* by 143.45%.

We find consistent negative relationships between IPO offer size (*lnsize*) and underwriting expenses (*spread* or *oexpense*) both for SPAC IPO and for matched common stock IPO. The results are consistent with Chemmanur and Paeglis (2005) and the argument of economies of scale in underwriting (Altinkiliç and Hansen, 2000). Overall, for SPAC IPO, management experience does not have any statistically significant relationship with underwriting spread even though the sign is negative. However, it has negative relationship with other offering expenses for SPAC IPO with statistical significance.

4.9 Cross-Sectional Regression of Underpricing on Management Experience, Other Management Quality and Reputation: SPAC IPO and Matched Common Stock IPO

We use a cross-sectional regression analysis to assess the effect of management experience, other management quality and reputation on SPAC or matched common stock IPO underpricing. We perform OLS estimation as in Chemmanur and Paeglis (2005).¹⁵ Our base regression model is as follows.

$$\begin{aligned} \text{Underpricing}_i = & \alpha_i + \beta_1 * \text{meanmgtexper.}_i + \beta_2 * \text{bva}_i + \beta_3 * \text{bva2}_i \dots (5) \\ & + \beta_4 * \ln \text{fage}_i + \beta_5 * \text{toptierdummy}_i + \varepsilon_i \end{aligned}$$

¹⁵ Chemmanur and Paeglis (2005) winsorize underpricing at the 1st and the 99th percentile. We run the regressions with winsorization and the results do not change. So, we report the regression results without winsorization. Chemmanur and Paeglis (2005) use the residuals from the regression of underwriter reputation on management quality and reputation variables to fix the effect of high correlation between them. However, we do not see high correlation between them in our sample. So, we use underwriter reputation (*toptierdummy*) in the regression. Also, Variance Inflation Factor (VIF) score tells us that no multicorrelation problem.

where α_i and ε_i is constant term and error components. Year dummies are included in the regression. The definition of other variables in equation (1) is the same as ones in Table 2. From our base regression model, we add other management quality and reputation variables in Table 2 for each firm i . We expect a positive relationship between SPAC management quality and underpricing, while a negative relationship is expected between the management quality of matched common stock and underpricing as in our hypothesis 1.

Table 12 shows the OLS regression results of the equation (5). T-statistics are in the parentheses. *, **, *** represents ten, five and one percent significance level, respectively. The coefficients of year dummies are not reported.

We find positive relationships between *meanmgtxper.* and *underpricing* of SPAC IPO. Also, we find positive relationships between *tsize* and *underpricing* of SPAC IPO. The relationships are statistically significant within five percent significance level. The result is consistent with our hypothesis 1 and our discussion in section 2. In regression 1, one standard deviation increase in *meanmgtxper.* increases *underpricing* by 0.65%. If we translate this increase into “money left on the table” defined as in Loughran and Ritter (2002), it increases by the amount of \$734.32. Also, one standard deviation increase in *tsize* increases *underpricing* by 0.81%. Similarly, it is translated into the increase of \$915.08 for “money left on the table”. For control variables, there is a negative relationship between *bva* and *underpricing*. The result is consistent with Chemmanur and Paeglis (2005). In regression 1, one standard deviation increase in *bva* decreases *underpricing* by 3.34%. It seems that the average management experience and management team size of SPACs are valued by the IPO market by signaling firm quality. However, other management quality and reputation variables are not valued by the IPO market for SPAC IPO.

For matched common stock IPO, we do not find any relationship between *meanmgtxper.* and *underpricing*. The result implies that average management experience is valuable in special issues like

Table 12 Relationship between underpricing and management experience, quality and reputation: SPAC vs. Matched common stock

The OLS regression results are provided. The dependent variable is IPO underpricing (*underpricing*). Total of 158 observations, 158 SPAC IPOs (152 SPACs) and 158 matched common stock IPOs from August 2003 till February 2008, are used in the regression analysis. The definitions of variables are the same as ones in Table 2. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents the ten, five and one percent significance level, respectively. The coefficients of year dummies are not reported.

SPAC	1	2	3	4	Matched Common Stock	1	2	3	4
intercept	-0.031 (-0.68)	-0.032 (-0.70)	-0.011 (-0.27)	-0.011 (-0.27)	Intercept	0.066 (0.30)	0.090 (0.41)	0.075 (0.37)	0.134 (0.68)
meanmgtexper.	0.001 (1.89)*	0.001 (1.85)*	0.001 (1.80)*	0.001 (1.87)*	meanmgtexper.	-0.001 (-0.39)	-0.001 (-0.26)	-0.001 (-0.39)	0.001 (0.18)
tsize	0.005 (2.33)**	0.005 (2.49)**			tsize	-0.001 (-0.28)	-0.003 (-0.54)		
pmba	0.005 (0.39)	0.005 (0.35)			pmba	-0.051 (-0.54)	-0.070 (-0.73)		
pfteam	0.002 (0.10)	0.004 (0.25)	-0.001 (-0.09)		pfteam	0.187 (1.91)*	0.176 (1.79)*	0.159 (1.70)*	
plawacc	-0.004 (-0.20)	-0.005 (-0.22)			plawacc	-0.077 (-0.65)	-0.081 (-0.69)		
tenure	0.023 (1.22)	0.021 (1.13)			tenure	0.014 (1.86)*	0.013 (1.75)*		
nonprofit	-0.002 (-1.24)	-0.001 (-1.08)		-0.001 (-0.67)	nonprofit	-0.020 (-2.43)**	-0.020 (-2.44)**		-0.018 (-2.27)**
bva	-0.071 (-3.06)***	-0.068 (-2.88)***	-0.058 (-2.56)**	-0.057 (-2.53)**	bva	0.029 (0.48)	0.012 (0.19)	-0.019 (-0.31)	0.011 (0.18)
bva2	0.021 (2.69)***	0.020 (2.58)**	0.017 (2.20)**	0.017 (2.18)**	bva2	-0.003 (-0.16)	0.001 (0.06)	0.004 (0.20)	-0.002 (-0.11)
lnfage	-0.010 (-0.37)	-0.017 (-0.63)	0.010 (0.50)	0.008 (0.42)	lnfage	-0.004 (-0.17)	-0.003 (-0.15)	0.017 (0.83)	0.011 (0.52)
toptierdummy		-0.011 (-1.19)	-0.009 (-1.03)	-0.008 (-0.87)	toptierdummy		0.047 (1.27)	0.043 (1.20)	0.048 (1.36)
Year Dummies	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Adjusted R ²	0.08	0.08	0.07	0.07	Adjusted R ²	0.03	0.04	0.01	0.02
N	158	158	158	158	N	158	158	158	158

SPAC IPO. However, we find negative relationships between *nonprofit* and *underpricing*, while we find positive relationships between *pfteam* or *tenure* and *underpricing*. The result is not consistent with Chemmanur and Paeglis (2005). It seems that management reputation outside business community leads to lower underpricing, while other management quality does not. In regression 1, one standard deviation increase in *nonprofit* decreases *underpricing* by 3.96%. It is translated into the reduction of \$4,473.70 for “money left on the table”.

Overall, consistent with firm quality signaling argument, our result implies that management quality (management experience and management team size) signals firm quality to the market through underpricing for SPAC IPO. However, it is not the case for matched common stock IPO.

4.10 Cross-Sectional Regression of Institutional Interest on Management Experience, Other Management Quality and Reputation: SPAC IPO and Matched Common Stock IPO

We use a cross-sectional regression analysis to assess the effect of management experience, other management quality and reputation on the institutional interest in SPAC or matched common stock IPO. We use two institutional interest variables as in Chemmanur and Paeglis (2005): the natural logarithm of the percentage of the offer allocated to institutional investors at the end of the first quarter after the IPO (*instp*) and that of the number of institutional investors at the end of the first quarter after going public (*instn*). We use censored tobit regression as in Chemmanur and Paeglis (2005).¹⁶ Our base regression model is as follows.

$$\begin{aligned} instp_i = & \alpha_i + \beta_1 * mean\ mgt\ exp\ er._i + \beta_2 * bva_i + \beta_3 * bva2_i \\ & + \beta_4 * \ln\ fage_i + \beta_5 * toptierdummy_i + \varepsilon_i \end{aligned} \quad \dots (6)$$

where α_i and ε_i is constant term and error components. The definition of other variables in equation (1) is the same as ones in Table 2. From our base regression model, we add other management quality and reputation variables in Table 2 for each firm *i*. Also, we substitute *instn_i* for *instp_i* as the alternative institutional interest dependent variable. We predict positive relationships

¹⁶ Chemmanur and Paeglis (2005) do not include year dummy variables. We run the regressions with year dummies and the results do not change.

between management quality or reputation variables and institutional interest as in hypothesis 4 and Chemmanur and Paeglis (2005).

Table 13 shows the OLS regression results of the equation (6). T-statistics are in the parentheses. *, **, *** represents ten, five and one percent significance level, respectively. We find positive relationships between *tsize* and *instp* or *instn* of SPAC IPO in regression 1, 3, 4 and 6. The relationship is statistically significant within five or one percent significance level. The result is consistent with our hypothesis 4 and Chemmanur and Paeglis (2005). In regression 1, one standard deviation increase in *tsize* increases *instp* by 6.19%. In regression 4, one standard deviation increase in *tsize* increases *instn* by 278.29%, more than doubling the number of institutional investors. It seems that management team size is important factor in attracting institutional investors.

For control variables, we find positive relationships between *toptierdummy* and *instp* or *instn* of SPAC IPO from regression 1 to regression 8. The relationships are statistically significant within one percent significance level. The result is consistent with Chemmanur and Paeglis (2005). In regression 1, one standard deviation increase in *toptierdummy* increases *instp* by 7.47%. Also, in regression 4, one standard deviation increase in *toptierdummy* increases *instn* by 355.24%, more than tripling the number of institutional investors. As in Chemmanur and Paeglis (2005), underwriter reputation is important factor in attracting the institutional investors of SPAC IPO as well as the institutional investors of common stock IPO. We find negative relationships between *lnfage* and *instp* or *instn* of SPAC IPO in regression 2, 3, 5, 6, 7 and 8. The relationships are statistically significant within five or one percent significance level. In regression 2, one standard deviation increase in *lnfage* decreases *instp* by 9.66%. In regression 5, one standard deviation increase in *lnfage* decreases *instn* by 447.35%, more than four times reduction in the number of institutional investors. For SPACs, firm age is less than one year. If we consider this firm age as the preparation time for going public, higher firm age can

Table 13 Relationship between institutional interest and management experience, quality and reputation: SPAC vs. Matched common stock

The censored tobit regression results are provided. The dependent variables is the natural log of the percentage of the offer allocated to institutional investors (*instp*) and the number of institutional investors (*instn*) as reported in SEC 13-F filings at the end of the first quarter after the IPO, respectively. Panel A shows the regression results of SPAC IPO. Panel B shows the regression results of matched common stock IPO. Total of 158 observations, 158 SPAC IPOs (152 SPACs) and 158 matched common stock IPOs from August 2003 till February 2008, are used in the regression analysis. The definitions of variables are the same as ones in Table 2. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents the ten, five and one percent significance level, respectively.

Panel A: SPAC	1	2	3	4	5	6	7	8
Dependent Variable	INSTP	INSTP	INSTP	INSTN	INSTN	INSTN	INSTN	INSTN
intercept	0.017 (0.11)	0.181 (1.84)*	0.029 (0.25)	2.608 (0.45)	7.045 (1.84)*	-0.248 (-0.06)	6.326 (1.51)	6.694 (1.75)*
meanmgtexper.	-0.001 (-0.21)	-0.0001 (-0.02)	-0.0002 (-0.05)	-0.087 (-0.49)	-0.078 (-0.43)	-0.085 (-0.49)	-0.083 (-0.45)	-0.100 (-0.54)
tsize	0.033 (2.31)**		0.032 (2.45)**	1.467 (2.71)***		1.531 (3.08)***		
pmba	0.125 (1.22)			1.906 (0.49)			1.690 (0.42)	
pfteam	-0.042 (-0.39)			-4.666 (-1.14)				
plawacc	-0.055 (-0.39)			-2.789 (-0.50)				
tenure	0.072 (0.38)			0.547 (0.06)				
nonprofit	0.006 (0.61)			0.165 (0.46)				0.346 (0.99)
toptierdummy	0.164 (2.77)***	0.212 (3.77)***	0.166 (2.86)***	7.795 (3.48)***	9.816 (4.54)***	7.637 (3.49)***	9.888 (4.56)***	9.211 (4.12)***
bva	0.165 (0.97)	0.217 (1.27)	0.147 (0.88)	16.627 (2.53)**	20.037 (3.00)***	16.525 (2.56)**	20.496 (3.03)***	19.349 (2.90)***
bva2	-0.058 (-1.02)	-0.078 (-1.36)	-0.055 (-0.97)	-4.539 (-2.10)**	-5.720 (-2.58)***	-4.554 (-2.12)**	-5.849 (-2.61)***	-5.539 (-2.50)**
Infage	-0.402 (-1.32)	-0.312 (-2.08)**	-0.331 (-2.29)**	-19.741 (-1.34)	-19.344 (-3.13)***	-19.926 (-3.39)***	-19.196 (-3.09)***	-18.286 (-2.95)***
LR	34.91	26.61	32.47	59.14	48.09	57.18	48.27	49.06
Pseudo R ²	0.26	0.20	0.25	0.06	0.05	0.06	0.05	0.05
N	158	158	158	158	158	158	158	158

(Table 13 continued)

Panel B:								
Matched Common Stock	1	2	3	4	5	6	7	8
Dependent Variable	INSTP	INSTP	INSTP	INSTN	INSTN	INSTN	INSTN	INSTN
intercept	0.577 (1.28)	1.091 (3.86)***	0.738 (2.08)**	4.194 (0.34)	25.182 (3.21)***	24.637 (2.48)**	17.631 (2.15)**	24.734 (3.19)***
meanmgtexper.	0.007 (0.52)	-0.006 (-0.42)	-0.003 (-0.24)	-0.186 (-0.49)	-0.394 (-1.06)	-0.391 (-1.04)	-0.323 (-0.88)	-0.268 (-0.71)
tsize	0.033 (1.61)		0.031 (1.61)	0.386 (0.70)		0.048 (0.09)		
pmba	0.778 (2.10)**			27.158 (2.70)***			26.373 (2.57)**	
pfteam	-0.145 (-0.38)			20.846 (2.01)**				
plawacc	-0.490 (-1.09)			-13.111 (-1.08)				
tenure	-0.006 (-0.21)			0.508 (0.63)				
nonprofit	-0.045 (-1.42)			-1.729 (-2.01)**				-1.573 (-1.77)*
toptierdummy	0.381 (2.78)***	0.478 (3.59)***	0.420 (3.07)***	10.814 (2.90)***	13.592 (3.68)***	13.503 (3.53)***	12.226 (3.35)***	13.675 (3.75)***
bva	0.212 (0.86)	0.178 (0.72)	0.175 (0.71)	22.771 (3.40)***	22.917 (3.33)***	22.911 (3.33)***	22.883 (3.39)***	24.199 (3.53)***
bva2	-0.054 (-0.75)	-0.040 (-0.56)	-0.055 (-0.77)	-4.074 (-2.11)**	-4.638 (-2.33)**	-4.661 (-2.32)**	-4.525 (-2.32)**	-4.634 (-2.35)**
lnfage	-0.162 (-1.77)*	-0.152 (-1.87)*	-0.160 (-1.98)**	-2.136 (-0.86)	-1.762 (-0.78)	-1.774 (-0.79)	-1.953 (-0.88)	-1.777 (-0.80)
LR	28.94	18.82	21.39	52.56	36.04	36.05	42.52	39.15
Pseudo R ²	0.08	0.05	0.06	0.04	0.03	0.03	0.03	0.03
N	158	158	158	158	158	158	158	158

be interpreted as the delay in going public. As a SPAC starts with a blank check company, institutional investors worry about the success of going public as its firm age increases. So, their interest in a SPAC IPO will decrease as time goes by, i.e., firm age increases.

For matched common stock IPO, we find positive relationships between *pmba* and *instp* or *instn*. Also, we find positive relationships between *pfteam* and *instn*. The relationships are statistically significant within five or ten percent significance level. In regression 1, one standard deviation increase in *pmba* increases *instp* by 12.48%. In regression 4, one standard deviation increase in *pfteam* increases *instn* by 344.37%, close to 3.5 times increase in the number of institutional investors. The results are consistent with Chemmanur and Paeglis (2005).

For control variables, there are positive relationships between *toptierdummy* and *instp* or *instn*. The relationships are statistically significant within five or one percent significance level. The results are consistent with Chemmanur and Paeglis (2005). In regression 1, one standard deviation increase in *toptierdummy* increases *instp* by 17.97%. In regression 4, one standard deviation increase in *toptierdummy* increases *instn* by 509.78%, five times increase in the number of institutional investors.

Overall, both for SPAC IPO and matched common stock IPO, Management team size (*tsize*), Management team members whose prior position is vice president or higher (*pfteam*), those with MBA degrees (*pmba*) and top-tier underwriter dummy (*toptierdummy*) certify firm's quality, resulting in the reduction of outsiders' information acquisition costs about the firm. So, the firm becomes attractive to institutional investors.

4.11 Summary Statistics: Management Quality, Reputation and the Success of Business Combinations

Table 14 shows the summary statistics of the sample. The sample size is different based on dependent variables. The sample consists of 53 SPAC business combinations when dependent variable is time-to-deal. It involves 53 SPAC business combinations when dependent variable is long-term

Table 14 Summary statistics: management quality, reputation and the success of business combinations

Summary statistics results are presented. *Ttdma*, *ttdipoma*, *ttdipo* represents time-to-deal in years from the announcement date till consummation date of SPAC business combination, from the initial filing date of SPAC IPO till the consummation date of SPAC business combination, and from the initial filing date till the consummation date of SPAC IPO, respectively. *Ltpmau*, *ltpipomau*, *ltpipou* represents unit price performance from the announcement date till consummation date of SPAC business combination, from SPAC IPO till the consummation date of SPAC business combination, and from the SPAC IPO date till the announcement of SPAC business combination, respectively. They are constructed by calculating Fama and Macbeth (1973) regression alpha of monthly average unit price on monthly Carhart (1997) four factors. *Sindicator* is equal to one if SPAC consummated business combination, is equal to two if SPAC liquidated, and is equal to three if SPAC business combination is in progress. *ACAR(-1,1)*, *ACAR(-2,2)*, *ACAR(-5,5)* represents unit cumulative abnormal return (CAR), as in Brown and Warner (1985), around the announcement of SPAC business combination. *CCAR(-1,1)*, *CCAR(-2,2)*, *CCAR(-5,5)* represents unit CAR around the consummation of SPAC business combination. Event window is (-1,1), (-2,2) and (-5,5), respectively. The percentage of non-negative CARs is in a bracket. *Instna* or *instnc* represents the number of institutional investors at the end of the first quarter following SPAC business combination announcement or consummation, respectively. *Instpa* or *instpc* represents the ratio of the institutional ownership to IPO unit offering amount at the end of the first quarter following SPAC business combination announcement or consummation. *Meanmgtexper* is the mean industry experience of management team, *underpricing* is the IPO underpricing, *tsize* is the management team size, *pmba* is the the percentage of MBAs, *pfteam* is the percentage of management team members with the prior experience of vice presidents or higher, *plawacc* is the percentage of lawyers or accountants, *tenure* is the mean tenure of management team, *tenhet* is the coefficient of variation of the team member's tenures, *nonprofit* is the number of management team members who sit on non-profit boards, *odir* is the number of outside directors as defined in Chemmanur and Paeglis (2005). *Lnava*, *bva* and *bva2* represents the natural log of book value of total assets, book value of total assets and the squared term of *bva*, respectively. *Lnage* is the natural log of firm age defined as the period from firm's founding date till firm's IPO date. *Toptierdummy* is equal to one if IPO involves top-tier underwriters with Carter and Manaster's reputation ranking of eight or higher; otherwise, it is zero. N represents the number of observations (from September 2003 until May 2008 and, for *Sindicator*, until November 2008).

	N	Mean	Median	Standard Deviation	Minimum	Maximum
<u>Dependent Variables</u>						
<u>Time to deal(years)</u>						
ttdma	53	0.66	0.54	0.33	0.17	1.75
ttdipoma	53	1.64	1.80	0.46	0.68	2.75
ttdipo	53	0.99	1.07	0.46	0.21	1.73
<u>Long-term SPAC unit price performance</u>						
ltpmau	51	-0.002	-0.002	0.003	-0.01	0.01
ltpipomau	51	-0.002	-0.003	0.002	-0.01	0.002
ltpipou	53	-0.002	-0.003	0.003	-0.005	0.01
<u>Deal success dummy</u>						
sindicator	158	2.194	3	0.908	1	3
<u>CAR aournd SPAC Business Combination Announcement Date</u>						
ACAR(-1,1)	51 [66.67%]	0.06	0.002	0.10	-0.01	0.44
ACAR(-2,2)	51 [64.71%]	0.07	0.003	0.12	-0.13	0.49
ACAR(-5,5)	51 [56.86%]	0.07	0.006	0.15	-0.16	0.70
<u>CAR around SPAC Business Combination Consummation Date</u>						
CCAR(-1,1)	49 [34.69%]	-0.03	-0.002	0.14	-0.50	0.39
CCAR(-2,2)	49 [36.73%]	-0.03	-0.005	0.16	-0.51	0.39
CCAR(-5,5)	49 [44.90%]	-0.03	-0.001	0.15	-0.50	0.36
<u>Institutional Interest after SPAC Business Announcement and Consummation</u>						
instna	53	9.55	3	15	0	71
instpa	53	0.25	0.10	0.30	0	1.09
instnc	53	12.83	5	17.64	0	80
instpc	53	0.50	0.30	0.61	0	2.53
<u>Explanatory Variables</u>						
meanmgtexper	158	19.13	18.68	5.09	6.86	33
underpricing	158	0.02	0.004	0.04	-0.05	0.25
tsize	158	6.09	6	1.9	2	13
mba	158	0.34	0.31	0.23	0	1
executive	158	0.71	0.75	0.22	0	1
lawacct	158	0.21	0.2	0.17	0	0.75
tenure	158	0.57	0.49	0.3	0.19	2.33
tenhet	158	0.11	0	0.18	0	0.91
nonprofit	158	1.85	1	2.74	0	15
<u>Control Variables</u>						
toptierdummy	158	0.29	0	0.46	0	1
Lnava	158	5.37	5.4	0.4	4.29	6.51
bva	158	0.36	0.25	0.47	0.02	3.26
bva2	158	0.35	0.06	1.33	0	10.6
Lnage	158	-0.57	-0.61	0.5	-1.39	1.61

SPAC unit price performance.¹⁷ It is 158 SPAC IPOs when dependent variable is success indicator. It is 51 SPAC business combinations when dependent variable is CAR around SPAC business announcement date. It is 49 SPAC business combinations when dependent variable is CAR around SPAC business consummation date. Finally, it is 53 SPAC business combinations when dependent variables are the number of institutional investors or the ratio of the institutional ownership to IPO unit offering amount at the end of the first quarter following SPAC business combination announcement (*instna* or *instpa*) or consummation (*instnc* or *instpc*). Explanatory variables are *meanmgtexper.*, other management quality and reputation variables and underpricing. Control variables are *toptierdummy*, *bva*, *bva2* and *lnfage*. 'N' is the number of observations. Sample period is from September 2003 until May 2008 (from September 2003 until November 2008 when we use *sindicator* as a dependent variable). The percentage of non-negative CARs is in square bracket.

The average *ttdma* is 0.66 (median, 0.54). The average *ttipoma* is 1.64 (median, 1.80). Finally, the average *ttipou* is 0.99 (median, 1.07). It takes longer time for SPACs to go public than to consummate SPAC business combination from the announcement date. The average *ltpmau* is -0.002 (median, -0.003). Finally, the average *ltpipou* is -0.002 (median, -0.003). The average unit price performance does not vary much from the initial filing of IPO till the consummation of SPAC business combination. The average *sindicator* is 2.194 (median, 3). More than half of SPAC IPO is still in progress of finding the target of business combination. More SPACs are successful (53 SPAC IPOs, 49 SPACs) than they are liquidated (23 SPAC IPOs, 21 SPACs) in the sample.

The average *ACAR(-1,1)* is 0.06 (median, 0.002). The average *ACAR(-2,2)* is 0.07 (median, 0.003). Finally, the average *ACAR(-5,5)* is 0.07 (median, 0.007). As we can see from the pattern, CARs around the announcement of SPAC business combination are positive and increasing as event window

¹⁷ There is a discrepancy in the number of observations between *ltpipou* (53 observations) and *ltpmau* or *ltpipomau* (51 observations). It is because KBL Healthcare Acquisition Corp. II Unit (Symbol: KBLHU) and Healthcare Acquisition Corp. Unit (Symbol: HAQ.U) do not have enough unit price record to calculate the long-term unit price performance after SPAC business combination announcement

increases. The average $CCAR(-1,1)$ is -0.03 (median, -0.002). The average $CCAR(-2,2)$ is -0.03 (median, -0.005). Finally, the average $CCAR(-5,5)$ is -0.03 (median, -0.001). Average CARs are all negative and don't change as event window increases around the consummation of SPAC business combination.

The average $instna$ is 9.55 (median, 3). The average $instnc$ is 12.83 (median, 5). As we can see from the pattern, the average number of institutional investors is higher when SPAC business combinations are consummated. The average $instpa$ is 0.25 (median, 0.10). The average $instpc$ is 0.5 (median, 0.3). By the same token, the average ratio of institutional ownership to IPO unit offering amount is higher when SPAC business combinations are consummated. When we compare the above-mentioned results with average $instn$ (6.89) and $instp$ (0.19) at the end of the first quarter following SPAC IPO in Table 2, we can observe substantial increase in institutional interest.

Overall, the average time-to-deal is longer for IPO than for business combination. Also, the average long-term unit price performance does not change from IPO till business combination. More success than failure in SPAC business combination even though more than half of the sample is still in progress of finding the target of business combination. Average CARs are positive and increasing around SPAC business combination announcement date, while those are negative and don't change around SPAC business combination consummation date. Finally, the average institutional interest substantially increases throughout SPAC business combination process, comparing with that after SPAC IPO.

4.12 Correlation: Management Quality, Reputation and the Success of Business Combinations

Table 15 shows the correlation results among variables. Panel A shows the correlation results when dependent variable is time-to-deal. Panel B shows the correlation results when dependent variable is long-term unit price performance. Panel C shows the correlation results when dependent variable is success indicator. Panel D or E shows the correlation results when dependent variable is cumulative abnormal returns around SPAC business combination announcement (panel D) or

Table 15 Pearson correlation: Time-to-deal, long-term unit price performance, success indicator, cumulative abnormal return and institutional interest

Pearson correlation results of variables used in regression analyses from Table 14 are provided. P-values are in parentheses. a, b and c represents ten, five and one percent significance level, respectively.

Panel A: Dependent variables=Time to deal															
	ttdma	ttdipoma	ttdipo	meanmg -texper.	under- pricing	tsize	pmba	pfteam	plawacc	tenure	tenhet	non- profit	toptier- dummy	bva	Infage
ttdma	1														
ttdipoma	0.349 (0.011) ^b	1													
ttdipo	-0.373 (0.006) ^c	0.740 (<.001) ^c	1												
meanmg -texper.	-0.226 (0.104)	-0.349 (0.010) ^c	-0.183 (0.189)	1											
under- pricing	-0.195 (0.162)	-0.073 (0.604)	0.068 (0.629)	0.222 (0.110)	1										
tsize	-0.093 (0.509)	0.013 (0.925)	0.080 (0.571)	0.103 (0.465)	0.178 (0.203)	1									
pmba	0.023 (0.870)	0.152 (0.278)	0.134 (0.340)	-0.122 (0.385)	-0.039 (0.783)	-0.015 (0.913)	1								
pfteam	0.010 (0.945)	0.037 (0.790)	0.030 (0.831)	0.059 (0.675)	0.083 (0.557)	-0.217 (0.119)	-0.061 (0.666)	1							
plawacc	-0.226 (0.103)	-0.152 (0.278)	0.012 (0.931)	-0.149 (0.288)	-0.065 (0.644)	0.037 (0.792)	-0.063 (0.656)	-0.013 (0.927)	1						
tenure	0.133 (0.343)	0.098 (0.487)	0.001 (0.994)	0.295 (0.032) ^b	-0.067 (0.634)	0.037 (0.793)	0.106 (0.450)	0.050 (0.724)	-0.190 (0.173)	1					
tenhet	-0.205 (0.141)	-0.174 (0.212)	-0.025 (0.857)	0.278 (0.044) ^b	0.269 (0.052) ^a	0.450 (0.001) ^c	-0.177 (0.206)	-0.031 (0.826)	0.0004 (0.998)	0.063 (0.656)	1				
non- profit	-0.242 (0.081) ^a	-0.294 (0.032) ^b	-0.118 (0.401)	0.184 (0.186)	0.099 (0.481)	0.148 (0.290)	-0.063 (0.652)	0.099 (0.479)	-0.075 (0.593)	-0.188 (0.177)	0.270 (0.051) ^a	1			
toptier- dummy	-0.223 (0.108)	-0.440 (0.001) ^c	-0.276 (0.046) ^b	0.196 (0.159)	0.153 (0.275)	0.204 (0.144)	-0.134 (0.338)	0.135 (0.334)	0.061 (0.666)	0.072 (0.608)	0.504 (<.001) ^c	0.322 (0.019) ^b	1		
bva	-0.012 (0.934)	-0.336 (0.014) ^b	-0.325 (0.018) ^b	0.327 (0.017) ^b	0.192 (0.169)	0.449 (0.001) ^c	-0.230 (0.097) ^a	-0.017 (0.901)	-0.147 (0.295)	0.397 (0.003) ^c	0.595 (<.001) ^c	0.183 (0.189)	0.462 (0.001) ^c	1	
Infage	0.078 (0.577)	0.018 (0.899)	-0.039 (0.784)	0.362 (0.008) ^c	0.039 (0.784)	0.161 (0.250)	0.011 (0.941)	0.056 (0.689)	-0.202 (0.147)	0.954 (<.001) ^c	0.316 (0.021) ^b	-0.119 (0.398)	0.219 (0.115)	0.560 (<.001) ^c	1

(Table 15 continued)

Panel B: Dependent variables=Long-term unit price performance															
	ltpmau	ltpipoma	ltpipou	meanmg -texper.	under- pricing	tsize	pmba	pfteam	plawacc	tenure	tenhet	non- profit	toptier- dummy	bva	Infage
ltpmau	1														
ltpipoma	0.720 (<.001) ^c	1													
ltpipou	0.277 (0.049) ^b	0.738 (<.001) ^c	1												
meanmg -texper.	-0.165 (0.248)	-0.284 (0.044) ^b	-0.234 (0.099) ^a	1											
under- pricing	0.178 (0.213)	0.092 (0.521)	0.041 (0.778)	0.248 (0.079) ^a	1										
tsize	-0.122 (0.395)	-0.370 (0.008) ^c	-0.368 (0.008) ^c	0.077 (0.594)	0.199 (0.161)	1									
pmba	0.100 (0.487)	0.096 (0.504)	-0.052 (0.716)	-0.076 (0.594)	-0.066 (0.645)	0.015 (0.916)	1								
pfteam	0.097 (0.499)	0.114 (0.427)	0.039 (0.784)	0.021 (0.884)	0.105 (0.462)	-0.272 (0.054) ^a	-0.016 (0.909)	1							
plawacc	0.079 (0.579)	0.213 (0.133)	-0.008 (0.956)	-0.178 (0.211)	-0.054 (0.709)	-0.0004 (0.998)	-0.040 (0.781)	-0.047 (0.744)	1						
tenure	-0.169 (0.236)	-0.381 (0.006) ^c	-0.288 (0.041) ^b	0.295 (0.036) ^b	-0.064 (0.658)	0.023 (0.870)	0.117 (0.415)	0.040 (0.783)	-0.204 (0.152)	1					
tenhet	-0.047 (0.745)	-0.250 (0.076) ^a	-0.276 (0.050) ^b	0.263 (0.062) ^a	0.283 (0.044) ^b	0.452 (0.001) ^c	-0.154 (0.280)	-0.052 (0.716)	-0.010 (0.944)	0.060 (0.674)	1				
non- profit	0.130 (0.363)	0.044 (0.758)	-0.106 (0.458)	0.187 (0.190)	0.102 (0.475)	0.129 (0.365)	-0.068 (0.637)	0.090 (0.532)	-0.093 (0.514)	-0.197 (0.166)	0.275 (0.051) ^a	1			
toptier- dummy	0.092 (0.522)	-0.055 (0.701)	-0.093 (0.518)	0.200 (0.160)	0.155 (0.278)	0.199 (0.163)	-0.140 (0.329)	0.133 (0.352)	0.054 (0.706)	0.069 (0.629)	0.509 (<.001) ^c	0.318 (0.023) ^b	1		
bva	-0.210 (0.139)	-0.353 (0.011) ^b	-0.240 (0.090) ^a	0.311 (0.026) ^b	0.208 (0.143)	0.435 (0.001) ^c	-0.210 (0.139)	-0.049 (0.732)	-0.174 (0.223)	0.394 (0.004) ^c	0.592 (<.001) ^c	0.177 (0.215)	0.463 (0.001) ^c	1	
Infage	-0.180 (0.205)	-0.438 (0.001) ^c	-0.345 (0.013) ^b	0.359 (0.010) ^c	0.045 (0.756)	0.149 (0.297)	0.023 (0.873)	0.043 (0.765)	-0.218 (0.125)	0.314 (0.954 (<.001) ^c)	0.314 (0.025) ^b	-0.127 (0.376)	0.217 (0.127)	0.557 (<.001) ^c	1

(Table 15 continued)

Panel C: Dependent variables=Success indicator													
	sindicador	meanmg	under- pricing	tsize	pmba	pfteam	plawacc	tenure	tenhet	non- profit	toptier- dummy	bva	Infage
sindicador	1												
meanmg	0.269	1											
-texper.	(0.001) ^c												
under- pricing	-0.037	0.146	1										
	(0.646)	(0.066) ^a											
tsize	0.278	0.110	0.024	1									
	(<.001) ^c	(0.167)	(0.763)										
pmba	-0.033	-0.039	0.063	-0.159	1								
	(0.675)	(0.621)	(0.432)	(0.045) ^b									
pfteam	0.078	0.095	-0.026	-0.019	-0.077	1							
	(0.327)	(0.234)	(0.741)	(0.811)	(0.332)								
plawacc	-0.095	-0.157	-0.029	0.041	-0.102	-0.116	1						
	(0.232)	(0.047) ^b	(0.715)	(0.607)	(0.197)	(0.145)							
tenure	0.277	0.219	0.069	-0.009	-0.156	0.031	-0.129	1					
	(<.001) ^c	(0.006) ^c	(0.386)	(0.915)	(0.049) ^b	(0.699)	(0.103)						
tenhet	0.134	0.127	-0.055	0.421	-0.125	0.059	0.034	-0.022	1				
	(0.092) ^a	(0.110)	(0.491)	(<.001) ^c	(0.116)	(0.457)	(0.665)	(0.787)					
non- profit	0.146	0.129	-0.092	0.337	-0.076	0.205	-0.063	-0.181	0.306	1			
	(0.065) ^a	(0.104)	(0.246)	(<.001) ^c	(0.340)	(0.009) ^c	(0.428)	(0.022) ^b	(<.001) ^c				
toptier- dummy	0.357	0.101	-0.167	0.366	-0.097	0.122	-0.025	-0.189	0.222	0.354	1		
	(<.001) ^c	(0.205)	(0.035) ^b	(<.001) ^c	(0.222)	(0.125)	(0.757)	(0.017) ^b	(0.005) ^c	(<.001) ^c			
bva	0.167	0.104	-0.112	0.161	-0.155	0.045	0.058	0.222	0.379	0.127	0.209	1	
	(0.035) ^b	(0.191)	(0.157)	(0.042) ^b	(0.050) ^b	(0.570)	(0.464)	(0.005) ^c	(<.001) ^c	(0.110)	(0.008) ^c		
Infage	0.311	0.232	0.039	0.129	-0.160	0.048	-0.076	0.807	0.152	-0.101	-0.165	0.248	1
	(<.001) ^c	(0.003) ^c	(0.622)	(0.105)	(0.043) ^b	(0.549)	(0.342)	(<.001) ^c	(0.055) ^a	(0.205)	(0.037) ^b	(0.002) ^c	

(Table 15 continued)

Panel D: Dependent variables=Cumulative Abnormal Return around SPAC business combination announcement															
	ACAR (-1,1)	ACAR (-2,2)	ltpipou	mean- gtexper.	under- pricing	tsize	pmba	pfteam	plawacc	tenure	tenhet	non- profit	toptier- dummy	bva	Infage
ACAR (-1,1)	1														
ACAR (-2,2)	0.864 (<.001) ^c	1													
ltpipou	0.631 (<.001) ^c	0.584 (<.001) ^c	1												
mean- gtexper.	-0.156 (0.275)	-0.184 (0.197)	-0.220 (0.114)	1											
under- pricing	0.009 (0.948)	-0.041 (0.777)	0.036 (0.800)	0.222 (0.110)	1										
tsize	-0.226 (0.111)	-0.207 (0.146)	-0.334 (0.015) ^b	0.103 (0.465)	0.178 (0.203)	1									
pmba	0.037 (0.797)	0.031 (0.828)	-0.056 (0.689)	-0.122 (0.385)	-0.039 (0.783)	-0.015 (0.913)	1								
pfteam	0.120 (0.401)	0.087 (0.546)	0.054 (0.702)	0.059 (0.675)	0.083 (0.557)	-0.217 (0.119)	-0.061 (0.666)	1							
plawacc	-0.313 (0.026) ^b	-0.220 (0.121)	0.009 (0.952)	-0.149 (0.288)	-0.065 (0.644)	0.037 (0.792)	-0.063 (0.656)	-0.013 (0.927)	1						
tenure	-0.083 (0.564)	-0.035 (0.806)	-0.279 (0.043) ^b	0.295 (0.032) ^b	-0.067 (0.634)	0.037 (0.793)	0.106 (0.450)	0.050 (0.724)	-0.190 (0.173)	1					
tenhet	-0.047 (0.741)	-0.035 (0.808)	-0.270 (0.050) ^b	0.278 (0.044) ^b	0.269 (0.052) ^b	0.450 (0.001) ^c	-0.177 (0.206)	-0.031 (0.826)	0.0004 (0.998)	0.063 (0.656)	1				
non- profit	0.143 (0.316)	0.141 (0.325)	-0.092 (0.511)	0.184 (0.186)	0.099 (0.481)	0.148 (0.290)	-0.063 (0.652)	0.099 (0.479)	-0.075 (0.593)	-0.188 (0.177)	0.270 (0.051) ^b	1			
toptier- dummy	0.092 (0.519)	0.031 (0.830)	-0.086 (0.540)	0.196 (0.159)	0.153 (0.275)	0.204 (0.144)	-0.134 (0.338)	0.135 (0.334)	0.061 (0.666)	0.072 (0.608)	0.504 (<.001) ^c	0.322 (0.019) ^b	1		
bva	0.001 (0.996)	-0.010 (0.946)	-0.224 (0.106)	0.327 (0.017) ^b	0.192 (0.169)	0.449 (0.001) ^c	-0.230 (0.097) ^a	-0.017 (0.901)	-0.147 (0.295)	0.397 (0.003) ^c	0.595 (<.001) ^c	0.183 (0.189)	0.462 (0.001) ^c	1	
Infage	-0.087 (0.542)	-0.042 (0.772)	-0.335 (0.014) ^b	0.362 (0.008) ^c	0.039 (0.784)	0.161 (0.250)	0.011 (0.941)	0.056 (0.689)	-0.202 (0.147)	0.954 (<.001) ^c	0.316 (0.021) ^b	-0.119 (0.398)	0.219 (0.115)	0.560 (<.001) ^c	1

(Table 15 continued)

Panel E: Dependent variables=Cumulative Abnormal Return around SPAC business combination consummation																		
	CCAR	CCAR	CCAR	ttdipo	ltpmau	ltpipou	meanm- gtexper.	under- pricing	tsize	pmba	pfteam	plawacc	tenure	tenhet	non- profit	toptier- dummy	bva	Infage
	(-1,1)	(-2,2)	(-5,5)															
CCAR	1																	
(-1,1)																		
CCAR	0.892	1																
(-2,2)	(<.001) ^c																	
CCAR	0.838	0.806	1															
(-5,5)	(<.001) ^c	(<.001) ^c																
ttdipo	-0.140	-0.165	-0.148	1														
	(0.336)	(0.256)	(0.311)															
ltpmau	0.280	0.310	0.432	0.059	1													
	(0.054) ^a	(0.032) ^b	(0.002) ^c	(0.681)														
ltpipou	0.345	0.386	0.461	-0.393	0.277	1												
	(0.015) ^b	(0.006) ^c	(0.001) ^c	(0.004) ^c	(0.049) ^b													
meanm- gtexper.	-0.156	-0.162	-0.199	-0.183	-0.165	-0.220	1											
	(0.286)	(0.267)	(0.170)	(0.189)	(0.248)	(0.114)												
under- pricing	-0.055	-0.017	0.040	0.068	0.178	0.036	0.222	1										
	(0.709)	(0.907)	(0.784)	(0.629)	(0.213)	(0.800)	(0.110)											
tsize	-0.168	-0.304	-0.146	0.080	-0.122	-0.334	0.103	0.178	1									
	(0.250)	(0.034) ^b	(0.316)	(0.571)	(0.395)	(0.015) ^b	(0.465)	(0.203)										
pmba	0.110	0.067	0.034	0.134	0.100	-0.056	-0.122	-0.039	-0.015	1								
	(0.450)	(0.648)	(0.815)	(0.340)	(0.487)	(0.689)	(0.385)	(0.783)	(0.913)									
pfteam	0.066	0.002	0.116	0.030	0.097	0.054	0.059	0.083	-0.217	-0.061	1							
	(0.654)	(0.991)	(0.429)	(0.831)	(0.499)	(0.702)	(0.675)	(0.557)	(0.119)	(0.666)								
plawacc	0.226	0.204	0.117	0.012	0.079	0.009	-0.149	-0.065	0.037	-0.063	-0.013	1						
	(0.118)	(0.161)	(0.424)	(0.931)	(0.579)	(0.952)	(0.288)	(0.644)	(0.792)	(0.656)	(0.927)							
tenure	-0.176	-0.183	-0.158	0.001	-0.169	-0.279	0.295	-0.067	0.037	0.106	0.050	-0.190	1					
	(0.227)	(0.210)	(0.277)	(0.994)	(0.236)	(0.043) ^b	(0.032) ^b	(0.634)	(0.793)	(0.450)	(0.724)	(0.173)						
tenhet	-0.122	-0.264	-0.005	-0.025	-0.047	-0.270	0.278	0.269	0.450	-0.177	-0.031	0.0004	0.063	1				
	(0.403)	(0.067) ^a	(0.972)	(0.857)	(0.745)	(0.050) ^b	(0.044) ^b	(0.052) ^b	(0.001) ^c	(0.206)	(0.826)	(0.998)	(0.656)					
non- profit	-0.225	-0.224	-0.207	-0.118	0.130	-0.092	0.184	0.099	0.148	-0.063	0.099	-0.075	-0.188	0.270	1			
	(0.121)	(0.121)	(0.154)	(0.401)	(0.363)	(0.511)	(0.186)	(0.481)	(0.290)	(0.652)	(0.479)	(0.593)	(0.177)	(0.051) ^A				
toptier- dummy	-0.022	0.012	0.033	-0.276	0.092	-0.086	0.196	0.153	0.204	-0.134	0.135	0.061	0.072	0.504	0.322	1		
	(0.879)	(0.937)	(0.820)	(0.046) ^b	(0.522)	(0.540)	(0.159)	(0.275)	(0.144)	(0.338)	(0.334)	(0.666)	(0.608)	(<.001) ^c	(0.019) ^b			
bva	-0.371	-0.452	-0.314	-0.325	-0.210	-0.224	0.327	0.192	0.449	-0.230	-0.017	-0.147	0.397	0.595	0.183	0.462	1	
	(0.009) ^c	(0.001) ^c	(0.028) ^b	(0.018) ^b	(0.139)	(0.106)	(0.017) ^b	(0.169)	(0.001) ^c	(0.097) ^a	(0.901)	(0.295)	(0.003) ^c	(<.001) ^c	(0.189)	(0.001) ^c		
Infage	-0.201	-0.256	-0.151	-0.039	-0.180	-0.335	0.362	0.039	0.161	0.011	0.056	-0.202	0.954	0.316	-0.119	0.219	0.560	1
	(0.167)	(0.076) ^a	(0.300)	(0.784)	(0.205)	(0.014) ^b	(0.008) ^c	(0.784)	(0.250)	(0.941)	(0.689)	(0.147)	(<.001) ^c	(0.021) ^b	(0.398)	(0.115)	(<.001) ^c	

(Table 15 continued)

Panel F: Dependent variables=Institutional Interest after SPAC business combination announcement or consummation																
	instnc	instpc	ltpmau	ltpipo- mau	meanm- gtexper.	under- pricing	tsize	pmba	pfteam	plawacc	tenure	tenhet	non- profit	toptier- dummy	bva	Infage
instnc	1															
instpc	0.861 (<.001) ^c	1														
ltpmau	0.360 (0.009) ^c	0.438 (0.001) ^c	1													
ltpipo- mau	0.122 (0.392)	0.265 (0.060) ^a	0.720 (<.001) ^c	1												
meanm- gtexper.	0.077 (0.583)	-0.006 (0.966)	-0.165 (0.248)	-0.284 (0.044) ^b	1											
under- pricing	0.168 (0.229)	0.165 (0.238)	0.178 (0.213)	0.092 (0.521)	0.222 (0.110)	1										
tsize	-0.012 (0.935)	-0.130 (0.355)	-0.122 (0.395)	-0.370 (0.008) ^c	0.103 (0.465)	0.178 (0.203)	1									
pmba	-0.249 (0.072) ^a	-0.187 (0.181)	0.100 (0.487)	0.096 (0.504)	-0.122 (0.385)	-0.039 (0.783)	-0.015 (0.913)	1								
pfteam	0.049 (0.729)	0.087 (0.536)	0.097 (0.499)	0.114 (0.427)	0.059 (0.675)	0.083 (0.557)	-0.217 (0.119)	-0.061 (0.666)	1							
plawacc	0.012 (0.934)	0.027 (0.847)	0.079 (0.579)	0.213 (0.133)	-0.149 (0.288)	-0.065 (0.644)	0.037 (0.792)	-0.063 (0.656)	-0.013 (0.927)	1						
tenure	-0.077 (0.585)	-0.036 (0.799)	-0.169 (0.236)	-0.381 (0.006) ^c	0.295 (0.032) ^b	-0.067 (0.634)	0.037 (0.793)	0.106 (0.450)	0.050 (0.724)	-0.190 (0.173)	1					
tenhet	0.329 (0.016) ^b	0.146 (0.298)	-0.047 (0.745)	-0.250 (0.076) ^a	0.278 (0.044) ^b	0.269 (0.052) ^a	0.450 (0.001) ^c	-0.177 (0.206)	-0.031 (0.826)	0.0004 (0.998)	0.063 (0.656)	1				
non- profit	0.496 (<.001) ^c	0.317 (0.021) ^b	0.130 (0.363)	0.044 (0.758)	0.184 (0.186)	0.099 (0.481)	0.148 (0.290)	-0.063 (0.652)	0.099 (0.479)	-0.075 (0.593)	-0.188 (0.177)	0.270 (0.051) ^a	1			
toptier- dummy	0.538 (<.001) ^c	0.410 (0.002) ^c	0.092 (0.522)	-0.055 (0.701)	0.196 (0.159)	0.153 (0.275)	0.204 (0.144)	-0.134 (0.338)	0.135 (0.334)	0.061 (0.666)	0.072 (0.608)	0.504 (<.001) ^c	0.322 (0.019) ^b	1		
bva	0.186 (0.182)	0.050 (0.724)	-0.210 (0.139)	-0.353 (0.011) ^b	0.327 (0.017) ^b	0.192 (0.169)	0.449 (0.001) ^c	-0.230 (0.097) ^a	-0.017 (0.901)	-0.147 (0.295)	0.397 (0.003) ^c	0.595 (<.001) ^c	0.183 (0.189)	0.462 (0.001) ^c	1	
Infage	0.011 (0.937)	-0.002 (0.986)	-0.180 (0.205)	-0.438 (0.001) ^c	0.362 (0.008) ^c	0.039 (0.784)	0.161 (0.250)	0.011 (0.941)	0.056 (0.689)	-0.202 (0.147)	0.954 (<.001) ^c	0.316 (0.021) ^b	-0.119 (0.398)	0.219 (0.115)	0.560 (<.001) ^c	1

consummation (panel E). Finally, panel F shows the correlations results when dependent variable is institutional interest variables after SPAC business combination consummation.

For panel A, the correlation between *meanmgtexper.* and *ttdipoma* is -0.349. The correlation is statistically significant within ten percent significance level. As the average industry experience of SPAC management team increases, time-to-deal from IPO till business combination decreases. The correlation between *nonprofit* and *ttdma* or *ttdipoma* is -0.242 or -0.294 with the statistical significance of ten or five percent significance level, respectively. As more SPAC management team members sit on non-profit boards, time-to-deal from the announcement till the consummation of SPAC business combination or that from IPO till business combination decreases. The correlation between *top-tierdummy* and *ttdipoma* or *ttdipo* is -0.440 or -0.276, respectively. The correlation is statistically significant within five or one percent significance level. As more top-tier underwriters are involved in SPAC IPO, time-to-deal from IPO till business combination or that from initial filing till IPO decreases. The correlation between *bva* and *ttdipoma* or *ttdipo* is -0.336 or -0.325 with the statistical significance within five percent significance level, respectively. As the book value of total assets increases, time-to-deal from IPO till business combination or that from initial filing till IPO decreases.

For panel B, the correlation between *meanmgtexper.* and *ltpipomau* or *ltpipou* is -0.284 or -0.234 with the statistical significance within ten or five percent significance level. As the average industry experience of SPAC management team increases, long-term unit price performance from IPO till business combination or that from initial filing till IPO decreases. The correlation between *tsize* and *ltpipomau* or *ltpipou* is -0.370 or -0.368 with the statistical significance of one percent significance level, respectively. As SPAC management team size increases, long-term unit price performance from IPO till business combination or that from initial filing till IPO decreases. The correlation between *tenure* and *ltpipomau* or *ltpipou* is -0.381 or -0.288, respectively. The correlation is statistically significant within five or one percent significance level. As the tenure of SPAC management team increases, long-term unit price performance from IPO till business combination or that from initial

filing till IPO decreases. The correlation between *bva* and *ltpipomau* or *ltpipou* is -0.353 or -0.240 with the statistical significance within ten or five percent significance level, respectively. As the book value of total assets increases, long-term unit price performance from IPO till business combination or that from initial filing till IPO decreases. Finally, the correlation between *lnfage* and *ltpipomau* or *ltpipou* is -0.438 or -0.345. The correlation is statistically significant within five or one percent significance level. As firm age increases, long-term unit price performance from IPO till business combination or that from initial filing till IPO decreases.

For panel C, the correlation between *meanmgtxper.* and *sindicator* is 0.269 with the statistical significance within one percent significance level. As the average industry experience of SPAC management team increases, success indicator increases. Positive correlations are found between *sindicator* and *tsize*, *tenure*, *nonprofit*, *toptierdummy*, *bva* or *lnfage*. The correlations are statistically significant within ten, five or one percent significance level. As more than half of success indicator consists of SPAC business combination in progress (success indicator=3), the correlation is biased towards them. We run multinomial logistic regression with *sindicator* as a dependent variable to further investigate the relationship between management quality and reputation and the success of SPAC business combination.

For panel D, the correlations between cumulative abnormal returns around SPAC business combination announcement (*ACAR(-1,1)* and *ACAR(-2,2)*) and *ltpipou* are positive significant. Long-term unit price performance from IPO till business combination announcement is positively correlated with *ACAR(-1,1)* and *ACAR(-2,2)* within one percent significance level. The result is consistent with our hypothesis 7. The correlation between control variables and *ACAR(-1,1)*, *ACAR(-2,2)* or *ACAR(-5,5)* is statistically insignificant except for that between *plawacc* and *ACAR(-1,1)* (They are negatively correlated within five percent significance level).

For panel E, the correlations between cumulative abnormal returns around SPAC business combination consummation (*CCAR(-1,1)*, *CCAR(-2,2)* and *CCAR(-5,5)*) and *ltpmau* or *ltpipou* are

positive significant. Especially, the correlation is significant within one percent significance level between *ltpipou* and *CCAR(-1,1)*, *CCAR(-2,2)* and *CCAR(-5,5)*. The long-term unit price performance of SPAC IPO is a strong predictor of cumulative abnormal returns around SPAC business combination consummation. So, the result is consistent with our hypothesis 7. For control variables, the correlation between *bva* and *CCAR(-1,1)*, *CCAR(-2,2)* or *CCAR(-5,5)* is negative significant within five percent significance level. Considering the negative firm size effect on the abnormal return of acquisitions (Moeller *et al.* (2004)), the result is consistent with previous literature.

For panel F, the correlation between between *ltpmau* and *instnc* or *instpc* is positive significant. Long-term unit price performance during SPAC business combination process is positively correlated with the institutional interest after SPAC business combination consummation. The result is consistent with our hypothesis 7. For control variables, consistent with underwriter certification argument (Chemmanur and Paeglis (2005)), more reputable underwriters attract more institutional investors after SPAC business combination consummation. Also, more management team members who sit on non-profit organization board leads to higher institutional interest after the consummation of SPAC business combination. The result is consistent with Chemmanur and Paeglis (2005).

4.13 Factor Analysis: Management Quality, Reputation and the Success of Business Combinations

Factor analysis is performed on the characteristics of the success of SPAC business combination. We calculated the Team Resources Factor (TRF) and the Team Structure Factor (TSF) as we did in section 4.5. Then, we split the characteristics into firm size, TRF and TSF scores. Also, we split the characteristics into firm size and management experience.

Table 16 reports the results of our univariate tests of the relationship between other management quality and reputation and SPAC business combination success characteristics (Panel A) and between management experience or underpricing and SPAC business combination success characteristics (Panel B). We split the sample by TRF and TSF quintiles and by firm size quintiles in

Table 16 Variables measuring SPAC business combination success split into firm size, management quality and reputation factor quintiles

The average values of characteristics of SPAC business combination success variables are provided. Panel A shows ones split into firm size, management quality and reputation factor (TRF, TSF) quintiles. Panel B shows ones split into firm size, management experience (*meanmgtxper.*) quintiles. The definitions of variables are the same as ones in Table 14. T-test results for the difference in means are reported. T-statistics are in parentheses. *, **, *** represents ten, five and one percent significance level, respectively.

Panel A: Time-to-deal, long-term unit price performance, and success indicator split into firm size and management quality quintiles

Management Quality Quintiles										
Firm Size Quintiles		TRF				TSF				
<i>ttdipoma</i>	1	2	3	Average	1st-3rd	1	2	3	Average	1st-3rd
1	1.653	1.815	2.014	1.827		1.562	1.501	2.100	1.721	
2	1.716	1.687	1.777	1.727		1.857	1.949	1.811	1.872	
3	1.404	1.501	1.384	1.430		1.549	1.725	1.762	1.679	
	1.591	1.668	1.725			1.656	1.725	1.891		
Average					-0.045 (-0.30)					-0.377 (-1.75)
<i>ltpmau</i>	1	2	3	Average	1st-3rd	1	2	3	Average	1st-3rd
1	-0.0005	-0.0020	-0.0028	-0.0018		-0.0005	-0.0008	-0.0024	-0.0012	
2	-0.0020	-0.0029	-0.0028	-0.0026		-0.0016	-0.0006	-0.0016	-0.0013	
3	-0.0025	-0.0014	-0.0020	-0.0020		-0.0054	-0.0022	-0.0036	-0.0037	
	-0.0017	-0.0021	-0.0025			-0.0025	-0.0012	-0.0025		
Average					0.001 (1.08)					0.002 (1.28)
<i>sindicator</i>	1	2	3	Average	1st-3rd	1	2	3	Average	1st-3rd
1	2.037	1.588	1.889	1.838		1.500	1.720	2.375	1.865	
2	2.294	2.059	2.300	2.218		2.182	2.158	2.385	2.242	
3	2.333	2.400	2.625	2.453		2.474	2.100	2.667	2.414	
	2.221	2.016	2.271			2.052	1.993	2.476		
Average					-0.208 (-1.21)					-0.377 (-2.55)**

(Table 16 continued)

Panel B: Time-to-deal, long-term unit price performance, and success indicator split into firm size and management experience quintiles

Management Experience Quintiles					
Firm size quintiles					
<i>ttdipoma</i>	1	2	3	Average	1st-3rd
1	1.788	1.772	1.738	1.766	
2	1.914	1.840	1.413	1.722	
3	0.789	1.471	1.461	1.240	
Average	1.497	1.694	1.537		0.289 (1.89)*
<i>ttdma</i>	1	2	3	Average	1st-3rd
1	0.785	0.465	0.440	0.563	
2	0.711	0.765	0.825	0.767	
3	0.564	0.622	0.574	0.587	
Average	0.687	0.617	0.613		0.872 (0.40)
<i>sindicator</i>	1	2	3	Average	1st-3rd
1	1.560	1.867	2.462	1.963	
2	1.909	2.091	2.524	2.175	
3	2.647	2.353	2.474	2.491	
Average	2.039	2.104	2.487		-0.509 (-2.83)***
Underpricing Quintiles					
Firm size quintiles					
<i>ltpmau</i>	1	2	3	Average	1st-3rd
1	-0.002	-0.001	-0.002	-0.0017	
2	-0.005	-0.003	0.001	-0.0023	
3	-0.004	-0.001	-0.002	-0.0023	
Average	-0.004	-0.002	-0.001		-0.003 (-2.08)*

panel A. Also, we split the sample by management experience or underpricing quintiles and by firm size quintiles in panel B. The variables of SPAC business combination success characteristics are *ttidipoma*, *ltpmau* and *sindicator*.

For Panel A, we do not find any statistically significant pattern between management quality and SPAC business combination success measures, except for *TSF* (management quality reputation factor) and *sindicator* (SPAC business combination success dummy). *Sindicator* is higher for high *TSF* score, and the difference between top and bottom *TSF* quintiles is statistically significant within five percent significance level. As management reputation factor increases, the probability of SPAC business combination still in progress increases. As half of SPAC business combination is in progress from our sample, SPACs with relatively higher management reputation are still under work for their business combination. From our result, we can infer that it is not the whole management quality but a certain factor within the quality that affects the success of SPAC business combination.

For panel B, we find that high management experience firms are associated with shorter time-to-deal from IPO till business combination and higher success indicator. The difference between time-to-deal from IPO till business combination of firms in the top and the bottom management experience quintiles is 0.289 within ten percent significance level. Also, the difference between the success indicator in the top and the bottom management experience quintiles is -0.509 within one percent significance level. The result is consistent with our hypothesis 6. Higher management experience leads to higher probability succeeding in SPAC business combination, measured by time-to-deal and long-term unit price performance. The result implies that management experience is the factor within the management quality that affects the success of SPAC business combination.

We argue that SPAC management quality is valued in the market by SPAC IPO underpricing and show the positive relationship between management experience and SPAC IPO underpricing. Underpricing reflects the value of management experience. So, we split the sample by underpricing and firm size quintiles. As we can see from the result, long-term unit price performance during

business combination process (*ltpmau*) increases as SPAC IPO underpricing increases. The difference between the *ltpmau* in the top and the bottom underpricing quintiles is -0.003 within one percent significance level.

The variation of SPAC business combination success indicator (*sindicator*) across TRF score, TSF score or management experience quintiles can be biased towards ones in progress (*sindicator=3*) because it takes up more than half of the total sample. So, we will further investigate the relationship between management quality and reputation and success indicator by running multinomial logistic regressions.

4.14 Cross-Sectional Regression of Time to Deal on Management Quality and Reputation or SPAC IPO Underpricing

We use a cross-sectional regression analysis to investigate the effect of management experience, other management quality and reputation or underpricing on time-to-deal in years. The dependent variables are time-to-deal in years from IPO till business combination (*tt dipoma*) and time-to-deal in years from the announcement till the consummation of business combination (*tt dma*). We use censored tobit regression. Our base regression model is as follows.

$$tt dipoma_i = \alpha_i + \beta_1 * meanmgtexper._i + \beta_2 * underpricing_i + \beta_3 * bva_i + \beta_4 * bva2_i \dots (7) \\ + \beta_5 * ln fage_i + \beta_6 * toptierdummy_i + \gamma * yeardummy + \varepsilon_i$$

where α_i and ε_i is constant term and error components. The definition of other variables in equation (1) is the same as ones in Table 2 or Table 14. From our base regression model, we add other management quality and reputation variables in Table 2 for each firm *i*. Also, we substitute *tt dma_i* for *tt dipoma_i* as the alternative time-to-deal measure.

Table 17 shows the censored tobit regression results of the equation (7). T-statistics are in parentheses. *, **, *** represents ten, five and one percent significance level, respectively. The coefficients of year dummies are not reported.

Table 17 Regression results of time-to-deal from IPO filing till M&A consummation on management experience, IPO underpricing and management quality

The censored tobit regression results are provided. Total of 53 observations from September 2004 till May 2008, are used in the regression analysis. Dependent variable is time-to-deal in years from the initial filing date of SPAC IPO till the consummation date of SPAC business combination (*ttidipoma*). The definitions of variables are the same as ones in Table 14. The regression coefficients of year dummies are not reported in the regression. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents the one, five and ten percent significance level, respectively.

	1	2	3	4	5
Dependent Variable= <i>ttidipoma</i>					
intercept	0.622 (1.34)	1.162 (3.24)***	1.175 (3.27)***	0.892 (2.28)**	1.267 (3.29)***
meanmgtxper.	-0.040 (-3.82)***	-0.037 (-3.35)***	-0.038 (-3.38)***	-0.040 (-3.61)***	-0.037 (-3.36)***
underpricing	0.254 (0.21)	1.154 (0.93)	1.168 (0.95)	0.942 (0.78)	1.109 (0.90)
tsize	0.067 (1.93)*				
pmba	-0.079 (-0.43)		-0.085 (-0.47)		
pfteam	0.424 (2.23)**			0.292 (1.56)	
plawacc	-0.246 (-1.01)				-0.185 (-0.73)
tenure	-0.659 (-0.50)				
nonprofit	-0.037 (-1.42)				
toptierdummy	-0.465 (-2.21)**	-0.539 (-2.64)**	-0.540 (-2.65)**	-0.585 (-2.90)***	-0.520 (-2.54)**
bva	-0.311 (-0.30)	-1.286 (-1.47)	-1.345 (-1.53)	-0.961 (-1.09)	-1.375 (-1.57)
bva2	-1.073 (-0.75)	0.601 (0.52)	0.632 (0.55)	0.254 (0.22)	0.709 (0.61)
lnfage	1.944 (0.98)	1.038 (2.03)**	1.086 (2.09)**	0.990 (1.98)**	1.011 (1.98)**
yeardummy	Yes	Yes	Yes	Yes	Yes
Pseudo-R ²	0.67	0.55	0.56	0.59	0.56
N	53	53	53	53	53

We find negative relationships between *meanmgtxper.* and *ttidipoma* from regression 1 to regression 5. The relationships are statistically significant within one percent significance level. The result is consistent with our hypothesis 6. However, we do not find any relationships between

underpricing and *ttipoma*. The result is not consistent with our hypothesis 5. In regression 1, one standard deviation increase in *meanmgtxper.* decreases *ttipoma* by 18.98%.

For control variables, we find negative relationships between *toptierdummy* and *ttipoma* from regression 1 to regression 5. The relationships are statistically significant within five or one percent significance level. In regression 1, one standard deviation increase in *toptierdummy* decreases *ttipoma*. Also, we find positive relationships between *lnfage* and *ttipoma* with the statistical significance within five percent significance level from regression 2 to regression 5. In regression 2, one standard deviation increase in *lnfage* increases *ttipoma* by 12.23%. It seems that top-tier underwriter involvement in SPAC IPO significantly reduces time-to-deal from IPO till business combination. As we discussed in earlier sections, firm age can be considered as time to prepare for going public in SPAC IPO. If it is correct, positive correlation is expected because time-to-deal starts from IPO initial filing period.

Table 18 shows the censored tobit regression results of the equation (7) with time-to-deal from the announcement till the consummation of SPAC business combination (*ttdma*) as the dependent variable. T-statistics are in parentheses. *, **, *** represents ten, five and one percent significance level, respectively. The coefficients of year dummies are not reported.

We find negative relationships between *meanmgtxper.* and *ttdma* from regression 1 to regression 5. The relationships are statistically significant within five percent significance level. The result is consistent with our hypothesis 6. However, we do not find any statistical relationships between *underpricing* and *ttipoma* even though the signs of coefficients are negative. The result is not consistent with our hypothesis 5. In regression 1, one standard deviation increase in *meanmgtxper.* decreases *ttdma* by 11.55%.

For control variables, we find negative relationships between *toptierdummy* and *ttdma* from regression 2 to regression 4. The relationships are statistically significant within ten percent significance level. In regression 2, one standard deviation increase in *toptierdummy* decreases *ttdma* by

Table 18 Regression results of time-to-deal from M&A announcement till M&A consummation on management experience, IPO underpricing and management quality

The censored tobit regression results are provided. Total of 53 observations from September 2004 till May 2008, are used in the regression analysis. Dependent variable is time-to-deal in years from the announcement date till consummation date of SPAC business combination (*ttdma*). The definitions of variables are the same as ones in Table 14. The regression coefficients of year dummies are not reported in the regression. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents the one, five and ten percent significance level, respectively.

	1	2	3	4	5
Dependent Variable= <i>ttdma</i>					
intercept	0.544 (1.22)	0.479 (1.42)	0.479 (1.42)	0.299 (0.81)	0.664 (1.86)*
meanmgtxper.	-0.024 (-2.41)**	-0.025 (-2.36)**	-0.025 (-2.36)**	-0.026 (-2.52)**	-0.025 (-2.39)**
underpricing	-1.864 (-1.56)	-1.632 (-1.39)	-1.631 (-1.39)	-1.752 (-1.51)	-1.695 (-1.47)
tsize	0.012 (0.37)				
pmba	-0.010 (-0.05)		-0.003 (-0.02)		
pfteam	0.231 (1.26)			0.193 (1.08)	
plawacc	-0.343 (-1.46)				-0.327 (-1.39)
tenure	0.260 (0.21)				
nonprofit	-0.039 (-1.58)				
toptierdummy	-0.185 (-0.91)	-0.328 (-1.70)*	-0.328 (-1.70)*	-0.360 (-1.87)*	-0.296 (-1.55)
bva	1.690 (1.71)*	1.008 (1.23)	1.006 (1.21)	1.226 (1.47)	0.853 (1.05)
bva2	-1.882 (-1.37)	-1.051 (-0.97)	-1.050 (-0.97)	-1.280 (-1.17)	-0.859 (-0.80)
lnfage	-0.071 (-0.04)	0.659 (1.38)	0.660 (1.35)	0.628 (1.33)	0.611 (1.30)
yeardummy	Yes	Yes	Yes	Yes	Yes
Pseudo-R ²	0.51	0.35	0.35	0.38	0.40
N	53	53	53	53	53

8.74%. Also, we do not find any statistical relationships between *lnfage* and *ttdma*. Similar to Table 17, the average industry experience of SPAC management team and top-tier underwriter involvement in

SPAC IPO reduces time-to-deal from the announcement till the consummation of SPAC business combination.

4.15 Cross-Sectional Regression of Long-term Unit Price Performance on Management Quality and Reputation or SPAC IPO Underpricing

We use a cross-sectional regression analysis to see the relationship between management experience, other management quality and reputation or underpricing, and long-term unit price performance. The dependent variable is the Fama and Macbeth (1973) regression alpha from the regression of monthly average unit return on monthly Carhart (1997) four-factors from the announcement till the consummation of SPAC business combination (*ltpmau*). We use OLS regression. Our base regression model is as follows.

$$ltpmau_i = \alpha_i + \beta_1 * meanmgtexper._i + \beta_2 * underpricing_i + \beta_3 * bva_i + \beta_4 * bva2_i + \beta_5 * ln fage_i + \beta_6 * toptierdummy_i + \gamma * yeardummy + \varepsilon_i \dots (8)$$

where α_i and ε_i is constant term and error components. The definition of other variables in equation (1) is the same as ones in Table 2 or Table 14. From our base regression model, we add other management quality and reputation variables in Table 2 for each firm *i*.

Table 19 shows the OLS regression results of the equation (8). T-statistics are in parentheses. *, ** represents ten or five percent significance level, respectively. The coefficients of year dummies are not reported.

We find positive relationships between *underpricing* and *ltpmau* from regression 1 to regression 5. The relationships are statistically significant within ten percent significance level. The result is consistent with our hypothesis 5. However, we do not find any relationships between *meanmgtexper.* and *ltpmau*. The result is not consistent with our hypothesis 6. In regression 1, one standard deviation increase in *underpricing* increases *ltpmau* by 0.07%. For control variables, we find positive relationships between *toptierdummy* and *ltpmau* from regression 1 to regression 5. The relationships are statistically significant within five percent significance level. In regression 1, one

Table 19 Regression results of long-term unit price performance from M&A announcement till M&A consummation on management experience, IPO underpricing and management quality

The OLS regression results are provided. Total of 51 observations from September 2004 till May 2008, are used in the regression analysis. Dependent variable is unit price performance from the announcement date till consummation date of SPAC business combination (*ltpmau*). It is calculated by running Fama and Macbeth (1973) regression alpha of monthly average unit price on monthly Carhart (1997) four factors. The definitions of variables are the same as ones in Table 14. The regression coefficients of year dummies are not reported in the regression. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents the one, five and ten percent significance level, respectively.

	1	2	3	4	5
Dependent Variable= <i>ltpmau</i>					
intercept	0.005 (1.67)	0.005 (1.63)	0.005 (1.54)	0.006 (1.77)*	0.005 (1.58)
meanmgtxper.	-0.0001 (-0.87)	-0.0001 (-0.85)	-0.0001 (-0.84)	-0.0001 (-0.88)	-0.0001 (-0.88)
underpricing	0.020 (1.94)*	0.020 (1.93)*	0.020 (1.92)*	0.019 (1.91)*	0.020 (1.92)*
tsize					
pmba		0.001 (0.39)			
pfteam			-0.0002 (-0.18)		
plawacc				-0.001 (-0.62)	
tenure					
nonprofit					0.00003 (0.16)
toptierdummy	0.004 (2.58)**	0.004 (2.56)**	0.004 (2.55)**	0.004 (2.62)**	0.004 (2.26)**
bva	0.004 (0.58)	0.004 (0.60)	0.004 (0.49)	0.003 (0.45)	0.004 (0.44)
bva2	-0.013 (-1.40)	-0.013 (-1.39)	-0.013 (-1.29)	-0.012 (-1.27)	-0.013 (-1.18)
lnfage	0.0002 (0.04)	-0.0002 (-0.04)	0.0002 (0.05)	-0.00003 (-0.01)	0.0004 (0.10)
yeardummy	Yes	Yes	Yes	Yes	Yes
Adjusted-R ²	0.23	0.21	0.21	0.21	0.21
N	51	51	51	51	51

standard deviation increase in *toptierdummy* increases *ltpmau* by 0.11%. We show that there is a positive relationship between *meanmgtxper.* and *underpricing* by arguing that outside investors value SPAC management team experience and it is reflected in underpricing. Also, SPAC IPO underpricing

predicts the long-term unit price performance by signaling firm quality. The result is consistent with the firm quality signaling theory of IPO underpricing. Also, top-tier underwriter involvement in SPAC IPO has positive effect on the long-term unit price performance.

4.16 Cross-Sectional Regression of the Success Probability in Business Combination on Management Quality and Reputation or SPAC IPO Underpricing

We use a cross-sectional regression analysis to see the effect of management experience, other management quality and reputation or underpricing on the success probability in business combination. The dependent variable is equal to one if SPAC consummated business combination, is equal to two if SPAC liquidated, and is equal to three if SPAC business combination is in progress (*sindicator*). We use multinomial logistic regression. Our base regression model is as follows.

$$\Pr\left(\frac{\text{sin dicator}_i = 1}{\text{sin dicator}_i = 3}\right) = \frac{e^{x'\beta}}{1 + e^{x'\beta}} = \Lambda(X' \beta) \dots (9)$$

Λ is the logistic cumulative distribution function. X is a vector of covariates (*meanmgtxper.*, *stoptierdummy*, *bva*, *bva2*, *lnfage* and *yeardummy*). The definition of other variables in equation (1) is the same as ones in Table 2 or Table 14. From our base regression model, we add other management quality and reputation variables in Table 2 for each firm i .

Table 20 shows the multinomial logistic regression results of the equation (9). Z-statistics are in parentheses. *, *** represents ten or one percent significance level, respectively. The coefficients of year dummies are not reported. We find negative relationships between *meanmgtxper.* and *sindicator* from regression 1 to regression 5. The relationships are statistically significant within ten percent significance level. The interpretation is that the probability of choosing consummated SPAC business combinations over one in progress decreases as *meanmgtxper.* increases. The result is consistent with our previous analysis in Table 15 and Table 16, but it is not consistent with our hypothesis 6. However, we do not find any relationships between *underpricing* and *sindicator*. The result is not consistent with our hypothesis 5.

Table 20 Regression results of success indicator on management experience, IPO underpricing and management quality

The multinomial logistic regression results are provided. Total of 158 observations from September 2004 till November 2008, are used in the regression analysis. Dependent variable is equal to one if SPAC consummated business combination, is equal to two if SPAC liquidated, and is equal to three if SPAC business combination is in progress (*sindicator*). The definitions of variables are the same as ones in Table 14. The regression coefficients of year dummies are not reported in the regression. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents the one, five and ten percent significance level, respectively.

	1	2	3	4	5
Dependent Variable= <i>sindicator</i>					
intercept	4.642 (3.60)***	5.153 (3.71)***	4.365 (3.06)***	4.333 (3.16)***	3.170 (2.03)**
meanmgtxper.	-0.112 (-2.16)**	-0.113 (-2.17)**	-0.113 (-2.17)**	-0.108 (-2.09)**	-0.109 (-2.08)**
underpricing	1.965 (0.33)	1.803 (0.30)	1.896 (0.32)	1.925 (0.32)	1.740 (0.29)
tsize					
pmba		-1.136 (-1.15)			
pfteam			0.406 (0.41)		
plawacc				0.842 (0.61)	
tenure					
nonprofit					-0.050 (-0.49)
toptierdummy	-3.082 (-4.34)***	-3.119 (-4.36)***	-3.117 (-4.37)***	-3.097 (-4.34)***	-2.971 (-3.99)***
bva	0.669 (0.32)	0.296 (0.14)	0.807 (0.38)	0.724 (0.35)	0.688 (0.33)
bva2	-0.560 (-0.57)	-0.472 (-0.48)	-0.644 (-0.64)	-0.592 (-0.59)	-0.570 (0.58)
lnfage	-8.170 (-3.89)***	-8.137 (-3.92)***	-8.196 (-3.90)***	-8.172 (-3.89)***	-8.210 (-3.84)***
yeardummy	Yes	Yes	Yes	Yes	Yes
Pseudo R ²	0.25	0.26	0.25	0.25	0.26
N	158	158	158	158	158

For control variables, we find negative relationships between *toptierdummy*, *lnsta* or *lnfage* and *sindicator* from regression 1 to regression 5. The relationships are statistically significant within ten or

one percent significance level. The interpretation is that the probability of choosing consummated SPAC business combination over one in progress decreases as *toptierdummy*, *lnsta* or *lnfage* increases.

Overall, it seems that SPAC business combination in progress dominates the sample and the result is biased towards *sindicator=3*.¹⁸

4.17 Cumulative Abnormal Returns or Institutional Interest Split into Firm Size and the Success Characteristics of SPAC Business Combination Quintiles

Table 21 shows the relationship between CARs one or two days before and after SPAC business combination announcement ($ACAR(-1,1)$, $ACAR(-2,2)$) and long-term unit price performance from IPO consummation till SPAC business combination announcement (*ltpipou*). We split the sample by *ltpipou* and by firm size quintiles.

We find positive patterns between long-term unit price performance from IPO consummation till SPAC business combination announcement (*ltpipou*) and cumulative abnormal return one day

Table 21 CARs around SPAC business combination announcement split into firm size quintiles and long-term unit price performance quintiles

The average values of cumulative abnormal returns around SPAC business combination announcement ($ACAR(-1,1)$ and $ACAR(-2,2)$) are provided. The table shows ones split into firm size and long-term unit price performance from IPO consummation till SPAC business combination announcement (*ltpipou*) quintiles. T-test results for the difference in means are reported. T-statistics are in parentheses. *, **, *** represents ten, five and one percent significance level, respectively.

Firm Size Quintiles	ltpipou			Average	1st-3rd
$ACAR(-1,1)$	1	2	3		
	1	0.055	0.017	0.086	0.053
	2	0.001	0.024	0.155	0.060
	3	0.014	0.068	0.181	0.088
Average	0.023	0.036	0.141		-0.113 (-3.56)***
$ACAR(-2,2)$	1	2	3	Average	1st-3rd
	1	0.020	0.014	0.094	0.043
	2	0.022	0.003	0.243	0.089
	3	0.013	0.085	0.160	0.086
Average	0.018	0.034	0.166		-0.138 (-3.27)***

¹⁸ We perform the same analysis without *toptierdummy* or with the residual from the regression of *meanmgtexper.* on *toptierdummy*. The results are qualitatively the same. Also, we perform the same regression analysis by substituting *sdummy* (dummy variable equal to one if consummated and zero if liquidated) for *sindicator*. There is no statistically significant relationship between *sdummy* and management quality or reputation variables.

($ACAR(-1,1)$) or two days ($ACAR(-2,2)$) before and after SPAC business combination announcement. The difference (-0.113) of $ACAR(-1,1)$ between top and bottom *ltpipou* quintiles is statistically significant within one percent significance level (t-statistic=-3.56). Also, the difference (-0.138) of $ACAR(-2,2)$ between top and bottom *ltpipou* quintiles is statistically significant within one percent significance level (t-statistic=-3.27). As long-term unit price performance from IPO consummation till SPAC business combination announcement increases, cumulative abnormal return one day or two days before and after SPAC business combination announcement increases.

The result is consistent with our hypothesis 7. Higher success probability of SPAC business combination, measured by the long-term unit price performance, is positively correlated with better SPAC business combination performance, measured by cumulative abnormal returns.

Table 22 shows the relationship between time-to-deal from IPO initial filing till IPO consummation (*ttdipo*) and CARs one, two or five days before and after SPAC business combination consummation ($CCAR(-1,1)$, $CCAR(-2,2)$ or $CCAR(-5,5)$). We split the sample by *ttdipo* quintiles and by firm size quintiles.

We find a negative pattern in the relationship between *ttdipo* and $CCAR(-1,1)$, $CCAR(-2,2)$ or $CCAR(-5,5)$, even though the difference of cumulative abnormal returns between top and bottom *ttdipo* quintiles is not statistically significant. The results imply IPO period predicts the performance of SPAC business combination around consummation date. Also, the result is consistent with our hypothesis 7. Less time to deal from IPO initial filing till IPO consummation is negatively correlated with better SPAC business combination performance, measured by cumulative abnormal returns, around consummation date.

Table 23 shows the relationship between long-term unit price performance from SPAC business combination announcement till consummation (*ltpmau*) or from IPO consummation till SPAC business combination announcement (*ltpipou*) and CARs one, two or five days before and after SPAC

Table 22 CARs around SPAC business combination consummation split into firm size and time-to-deal quintiles

The average values of cumulative abnormal returns (CARs) around SPAC business combination consummation ($CCAR(-1,1)$, $CCAR(-2,2)$ and $CCAR(-5,5)$) are provided. CARs are split into firm size and time-to-deal from IPO initial filing till IPO consummation (*tdipo*) quintiles. T-test results for the difference in means are reported. T-statistics are in parentheses. *, **, *** represents ten, five and one percent significance level, respectively.

		Time-to-deal Quintiles (from IPO initial filing till IPO consummation)				
Firm size quintiles		tdipo				
$CCAR(-1,1)$		1	2	3	Average	1st-3rd
	1	0.026	0.107	0.049	0.061	
	2	0.002	-0.061	-0.110	-0.056	
	3	-0.019	-0.145	-0.092	-0.085	
Average		0.003	-0.033	-0.051		0.031 (0.80)
$CCAR(-2,2)$		1	2	3	Average	1st-3rd
	1	0.028	0.106	0.041	0.058	
	2	-0.009	-0.054	-0.065	-0.043	
	3	-0.009	-0.136	-0.202	-0.116	
Average		0.003	-0.028	-0.075		0.022 (0.48)
$CCAR(-5,5)$		1	2	3	Average	1st-3rd
	1	0.027	0.124	-0.005	0.049	
	2	-0.007	-0.058	-0.098	-0.054	
	3	-0.019	-0.107	-0.093	-0.073	
Average		0.0003	-0.014	-0.065		0.057 (1.30)

business combination consummation ($CCAR(-1,1)$, $CCAR(-2,2)$ or $CCAR(-5,5)$). We split the sample by *ltpmau* or *ltpipou* quintiles and by firm size quintiles.

We find a positive relationship between *ltpmau* or *ltpipou* and $CCAR(-1,1)$, $CCAR(-2,2)$ or $CCAR(-5,5)$. The difference (-0.062; -0.096; -0.142) of $CCAR(-1,1)$, $CCAR(-2,2)$ or $CCAR(-5,5)$ between top and bottom *ltpmau* quintiles is statistically significant within ten percent (t-statistic=-2.03) or one (t-statistic=-3.71; t-statistic=-6.10) percent significance level, respectively. Also, the difference (-0.130; -0.158; -0.158) of $CCAR(-1,1)$, $CCAR(-2,2)$ or $CCAR(-5,5)$ between top and bottom *ltpipou* quintiles is statistically significant within five percent (t-statistic=-2.61; t-statistic=-2.83) or one (t-statistic=-3.27) percent significance level, respectively. Better long-term unit price performance during SPAC business combination period or post-IPO period leads to higher cumulative abnormal returns around SPAC business combination consummation. Again, the result is consistent with our hypothesis 7 and previous literature about merger-driven IPO.

Table 23 CARs around SPAC business combination consummation split into firm size and long-term unit price performance quintiles

The average values of cumulative abnormal returns (CARs) around SPAC business combination consummation ($CCAR(-1,1)$, $CCAR(-2,2)$ and $CCAR(-5,5)$) are provided. CARs are split into firm size and long-term unit price performance from SPAC business combination announcement till SPAC business combination consummation ($ltpmau$) or from IPO consummation till SPAC business combination announcement ($ltpipou$) quintiles. T-test results for the difference in means are reported. T-statistics are in parentheses. *, **, *** represents ten, five and one percent significance level, respectively.

Firm Size Quintiles		Long-term Unit Price Performance Quintiles									
		ltpmau					ltpipou				
$CCAR(-1,1)$		1	2	3	Average	1st-3rd	1	2	3	Average	1st-3rd
1		-0.036	0.041	0.108	0.038		0.114	0.004	0.079	0.066	
2		-0.091	-0.008	-0.071	-0.057		-0.115	-0.030	-0.006	-0.050	
3		-0.114	-0.033	-0.068	-0.072		-0.122	-0.078	0.017	-0.061	
Average		-0.080	0.000	-0.010		-0.062	-0.041	-0.035	0.030		-0.130
						(-2.03)*					(-2.61)**
$CCAR(-2,2)$		1	2	3	Average	1st-3rd	1	2	3	Average	1st-3rd
1		-0.009	-0.008	0.120	0.034		0.114	0.012	0.070	0.065	
2		-0.109	0.025	-0.036	-0.040		-0.104	-0.019	0.007	-0.039	
3		-0.117	-0.105	-0.031	-0.084		-0.169	-0.065	0.045	-0.063	
Average		-0.078	-0.029	0.018		-0.096	-0.053	-0.024	0.041		-0.158
						(-3.71)***					(-2.83)**
$CCAR(-5,5)$		1	2	3	Average	1st-3rd	1	2	3	Average	1st-3rd
1		-0.048	-0.029	0.112	0.012		0.174	-0.020	0.044	0.066	
2		-0.131	-0.009	0.033	-0.036		-0.159	-0.050	0.074	-0.045	
3		-0.132	-0.032	0.001	-0.054		-0.134	-0.022	0.028	-0.043	
Average		-0.104	-0.023	0.049		-0.142	-0.040	-0.031	0.049		-0.158
						(-6.10)***					(-3.27)***

Finally, Table 24 shows the univariate analysis result between long-term unit price performance from SPAC business combination announcement till consummation (*ltpmau*) or from IPO consummation till SPAC business combination consummation (*ltpipomau*) and the number of institutional investors (*instnc*) or the ratio of institutional ownership to IPO offering amount (*instpc*) at the end of the first quarter after SPAC business combination consummation. We split the sample by *ltpmau* or *ltpipomau* quintiles and by firm size quintiles.

We find positive patterns in the relationship between *ltpmau* or *ltpipomau* and *instnc* or *instpc*. The difference (-12.53) of *instnc* between top and bottom *ltpmau* quintiles is statistically significant within ten percent significance level (t-statistic=-1.84). On the other hand, the difference (-8.65) of *instnc* between top and bottom *ltpipomau* quintiles is not statistically significant (t-statistic=-1.22) even though the positive pattern shows in the relationship between *ltpipomau* and *instnc*. The difference (-0.54; -0.45) of *instpc* between top and bottom *ltpmau* or *ltpipomau* quintiles is statistically significant within five or ten percent significance level (t-statistic=-2.36; t-statistic=-1.99). As long-term unit price performance from SPAC business combination announcement till consummation or from IPO consummation till SPAC business combination consummation increases, the institutional interest after SPAC business combination consummation increases. The result is consistent with our hypothesis 7.

Overall, the results from Table 21 to Table 24 show that shorter time-to-deal or better unit price performance leads to better SPAC business combination performance measured by cumulative abnormal returns. Also, better unit price performance leads to more institutional interest after business combination consummation. The results are consistent with our hypothesis 7 and previous merger-driven IPO literature. However, some of the results are not statistically significant even though their relationship pattern is consistent with our hypothesis 7. So, we perform regression analysis from Table 25 to Table 28 to verify our findings here.

Table 24 Institutional interest after SPAC business combination split into firm size and time-to-deal or long-term unit price performance quintiles

The average institutional interest after SPAC business combination is provided. The table shows the number of institutional investors at the end of the first quarter after SPAC business combination consummation (*instnc*) or the ratio of the institutional ownership to IPO unit offering amount at the end of the first quarter following SPAC business combination consummation (*instpc*) split into firm size and long-term unit price performance from IPO consummation till SPAC business combination consummation (*ltpipomau*) or from business combination announcement till consummation (*ltpmau*) quintiles. T-test results for the difference in means are reported. T-statistics are in parentheses. *, **, *** represents ten, five and one percent significance level, respectively.

Long-term Unit Price Performance Quintiles										
Firm Size Quintiles		ltpmau				ltpipomau				
<i>instnc</i>	1	2	3	Average	1st-3rd	1	2	3	Average	1st-3rd
1	2.67	3.40	10.00	5.36		0.00	4.00	9.63	4.54	
2	8.43	10.29	23.75	14.16		9.57	9.57	23.00	14.05	
3	12.57	8.60	38.60	19.92		11.67	23.00	30.00	21.56	
	7.89	7.43	24.12			7.08	12.19	20.88		
Average					-12.53					-8.65
					(-1.84)*					(-1.22)
<i>instpc</i>	1	2	3	Average	1st-3rd	1	2	3	Average	1st-3rd
1	0.18	0.20	0.57	0.32		0.00	0.24	0.55	0.26	
2	0.36	0.30	1.17	0.61		0.43	0.19	1.25	0.62	
3	0.43	0.27	1.21	0.64		0.34	1.01	0.86	0.74	
	0.32	0.26	0.98			0.26	0.48	0.89		
Average					-0.54					-0.45
					(-2.36)**					(-1.99)*

4.18 Cross-Sectional Regressions of CARs or Institutional Interest around or after SPAC Business Combinations on Long-term Unit Price Performance or Time-to-Deal

Table 25 shows the OLS regression results of cumulative abnormal returns around SPAC business combination announcement ($ACAR$) on the long-term unit price performance from IPO consummation till SPAC business combination announcement ($ltipou$). Cumulative abnormal return is calculated following Brown and Warner (1985). Event window for abnormal return is (-1,1), (-2,2) and (-5,5). T-statistics are in the parentheses. *, **, *** represents ten, five or one percent significance level, respectively. The coefficients of year dummies are not reported. N represents the number of observations.

We find positive relationships between $ltipou$ and $ACAR(-1,1)$ or $ACAR(-2,2)$. The relationships are statistically significant within one percent significance level. One standard deviation increase in $ltipou$ increases $ACAR(-1,1)$ by 7.43% and $ACAR(-2,2)$ by 8.58%. Long-term unit price performance from IPO consummation till SPAC business combination announcement is positively correlated with SPAC business combination announcement return.

Table 26 shows the OLS regression results of cumulative abnormal returns around SPAC business combination consummation ($CCAR$) on time to deal from IPO initial filing till IPO consummation ($ttdipo$).

Consistent with the pattern we find in Table 22, we find negative relationships between $ttdipo$ and $CCAR(-1,1)$, $CCAR(-2,2)$ or $CCAR(-5,5)$. The relationships are statistically significant within five percent significance level. One standard deviation increase in $ttdipo$ decreases $CCAR(-1,1)$ by 5.23%, $CCAR(-2,2)$ by 5.31% and $CCAR(-5,5)$ by 5.28%. Longer time to deal from IPO initial filing till IPO consummation leads to lower announcement return in SPAC business combination consummation.

Table 27 shows the OLS regression results of cumulative abnormal returns around SPAC business combination consummation ($CCAR$) on long-term unit price performance from SPAC business combination announcement till consummation ($ltpmau$) or from IPO consummation till the

Table 25 Regression results of CARs around SPAC business combination on the long-term unit price performance

The OLS regression results are provided. Total of 51 observations (from September 2004 till May 2008) are used in the regression analysis. Dependent variables are cumulative abnormal return around SPAC business combination announcement (*ACAR*). Event windows are (-1,1) and (-2,2). The definitions of variables are the same as ones in Table 14. The regression coefficients of year dummies are not reported in the regression. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents the one, five and ten percent significance level, respectively.

	1	2
Dependent Variable	ACAR	ACAR
	(-1,1)	(-2,2)
intercept	-0.001	-0.042
	(-0.01)	(-0.25)
ltpipou	29.330	33.903
	(5.27)***	(4.43)***
meanmgtexper.	-0.004	-0.006
	(-1.35)	(-1.69)
underpricing	-0.253	-0.528
	(-0.83)	(-1.26)
tsize	-0.003	-0.002
	(-0.31)	(-0.17)
pmba	0.034	0.034
	(0.74)	(0.54)
pfteam	0.048	0.057
	(1.02)	(0.89)
plawacc	-0.104	-0.082
	(-1.66)*	(-0.95)
tenure	-0.102	-0.490
	(-0.31)	(-1.10)
nonprofit	0.009	0.009
	(1.37)	(1.03)
toptierdummy	0.004	-0.008
	(0.08)	(-0.11)
bva	0.001	0.273
	(0.00)	(0.76)
bva2	0.068	-0.374
	(0.19)	(-0.75)
Infage	0.242	0.938
	(0.50)	(1.40)
yeardummy	Yes	Yes
Adjusted-R ²	0.46	0.36
N	51	51

Table 26 Regression results of CARs around SPAC business combination consummation on time-to-deal from IPO announcement till IPO consummation

The OLS regression results are provided. Total of 49 observations from September 2004 till May 2008 are used in the regression analysis. Dependent variables are cumulative abnormal return around SPAC business combination consummation (CCAR). Event window is (-1,1), (-2,2) and (-5,5), respectively. The definitions of variables are the same as ones in Table 14. The regression coefficients of year dummies are not reported in the regression. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents the one, five and ten percent significance level, respectively.

	1	2	3
Dependent Variables	CCAR (-1,1)	CCAR (-2,2)	CCAR (-5,5)
intercept	-0.022 (-0.11)	0.181 (0.80)	0.031 (0.14)
ttdipo	-0.116 (-2.21)**	-0.118 (-2.04)**	-0.117 (-2.06)**
meanmgtexper.	0.001 (0.22)	-0.001 (-0.24)	-0.004 (-0.69)
underpricing	0.280 (0.44)	0.871 (1.26)	0.511 (0.75)
tsize	0.014 (0.85)	0.003 (0.17)	0.019 (1.07)
pmba	0.008 (0.10)	-0.034 (-0.39)	-0.036 (-0.41)
pfteam	-0.039 (-0.45)	-0.055 (-0.58)	0.009 (0.09)
plawacc	0.063 (0.57)	0.073 (0.61)	-0.032 (-0.27)
tenure	0.237 (0.40)	0.913 (1.40)	-0.030 (-0.05)
nonprofit	0.014 (1.04)	0.004 (0.30)	0.010 (0.66)
toptierdummy	-0.046 (-0.48)	0.064 (0.60)	-0.028 (-0.27)
bva	-1.705 (-3.03)***	-1.123 (-1.81)*	-1.434 (-2.35)
bva2	1.746 (2.40)**	1.015 (1.27)	1.350 (1.71)
Infage	0.006 (0.01)	-1.071 (-1.09)	0.518 (0.54)
yeardummy	Yes	Yes	Yes
Adjusted-R ²	0.16	0.21	0.14
N	49	49	49

Table 27 Regression results of CARs around SPAC business combination consummation on long-term unit price performance

The OLS regression results are provided. Total of 49 observations from September 2004 till May 2008 (48 observations for regression 1, 3 and 5) are used in the regression analysis. Dependent variables are cumulative abnormal return around SPAC business combination consummation (CCAR). Event window is (-1,1), (-2,2) and (-5,5), respectively. The definitions of variables are the same as ones in Table 14. The regression coefficients of year dummies are not reported in the regression. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents the one, five and ten percent significance level, respectively.

	1	2	3	4	5	6
Dependent Variables	CCAR (-1,1)	CCAR (-1,1)	CCAR (-2,2)	CCAR (-2,2)	CCAR (-5,5)	CCAR (-5,5)
intercept	-0.030 (-0.13)	-0.178 (-0.81)	0.185 (0.72)	0.037 (0.15)	-0.044 (-0.19)	-0.187 (-0.85)
ltpmau	18.951 (1.65)		22.116 (1.79)*		36.255 (3.28)***	
ltpipou		19.802 (2.00)*		18.054 (1.65)		29.257 (2.93)***
meanmgtexper.	0.002 (0.49)	0.004 (0.80)	0.0001 (0.01)	0.001 (0.28)	-0.002 (-0.49)	-0.0003 (-0.06)
underpricing	-0.099 (-0.15)	-0.192 (-0.31)	0.498 (0.68)	0.406 (0.59)	-0.080 (-0.12)	-0.028 (-0.04)
tsize	-0.002 (-0.10)	0.011 (0.68)	-0.015 (-0.77)	-0.0001 (-0.01)	0.00002 (0.00)	0.018 (1.07)
pmba	-0.005 (-0.06)	0.033 (0.41)	-0.049 (-0.53)	-0.011 (-0.13)	-0.071 (-0.87)	0.002 (0.02)
pfteam	-0.042 (-0.41)	-0.036 (-0.42)	-0.062 (-0.57)	-0.054 (-0.56)	0.042 (0.43)	0.015 (0.17)
plawacc	0.040 (0.35)	0.112 (0.97)	0.047 (0.37)	0.117 (0.91)	-0.042 (-0.38)	0.047 (0.41)
tenure	0.304 (0.49)	0.121 (0.20)	0.998 (1.50)	0.806 (1.21)	0.047 (0.08)	-0.199 (-0.33)
nonprofit	0.003 (0.21)	0.012 (0.85)	-0.007 (-0.46)	0.002 (0.11)	-0.010 (-0.66)	0.008 (0.56)
toptierdummy	-0.048 (-0.47)	-0.029 (-0.30)	0.056 (0.51)	0.084 (0.78)	-0.066 (-0.67)	-0.021 (-0.22)
bva	-1.405 (-2.29)**	-1.446 (-2.63)**	-0.843 (-1.28)	-0.851 (-1.40)	-0.977 (-1.65)	-1.209 (-2.17)**
bva2	1.670 (2.06)**	1.571 (2.16)**	0.993 (1.14)	0.828 (1.03)	1.186 (1.51)	1.215 (1.65)
lnfage	-0.273 (-0.29)	0.122 (0.13)	-1.397 (-1.39)	-0.974 (-0.97)	0.154 (0.17)	0.726 (0.79)
yeardummy	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted-R ²	0.11	0.14	0.20	0.17	0.28	0.23
N	48	49	48	49	48	49

announcement of SPAC business combination (*ltpipou*).

We find positive relationships between *ltpmau* and *CCAR(-2,2)* or *CCAR(-5,5)*. The relationships are statistically significant within one or ten percent significance level. One standard deviation increase in *ltpmau* increases *CCAR(-2,2)* by 5.67% and *CCAR(-5,5)* by 9.29%. Also, we find positive relationships between *ltpipou* and *CCAR(-1,1)* or *CCAR(-5,5)*. The relationships are statistically significant within ten or one percent significance level. One standard deviation increase in *ltpipou* increases *CCAR(-1,1)* by 5.26% and *CCAR(-5,5)* by 7.77%. Long-term unit price performance from SPAC business combination announcement till consummation or from IPO initial filing till IPO consummation is positively correlated with the announcement return of SPAC business combination consummation.

For control variables, firm size measured by the book value of assets at the time of IPO (*bva*) has negative relationships with *CCAR(-1,1)*, *CCAR(-2,2)* and *CCAR(-5,5)* in regression 1, 2 and 6. The relationships are significant within five percent significance level. Larger firms tend to have lower abnormal return around SPAC business combination consummation. The result is consistent with previous literature (Moeller et al., 2004).

Table 28 shows the censored tobit regression results of the ratio of institutional ownership to IPO offering amount at the end of the first quarter following SPAC business combination consummation (*instpc*) or the number of institutional investors at the end of the first quarter following SPAC business combination consummation (*instnc*) on long-term unit price performance from SPAC business combination announcement till consummation (*ltpmau*) or from IPO consummation till SPAC business combination consummation (*ltpipomau*).

Also, we find positive relationships between *ltpmau* or *ltpipomau* and *instnc* or *instpc*. The relationships are statistically significant within ten, five or one percent significance level. One standard deviation increase in *ltpmau* increases *instnc* by 619.50% and *instpc* by 21.81%. One standard deviation increase in *ltpipomau* increases *instnc* by 862.96% and *instpc* by 27.39%. Long-term unit

Table 28 Regression results of institutional interest after SPAC business combination on long-term unit price performance

The censored tobit regression results are provided. Total of 51 observations from September 2004 till May 2008 are used in the regression analysis. Dependent variables are the number of institutional investors at the end of the first quarter after SPAC business combination consummation (*instnc*) and the ratio of institutional ownership to IPO unit offering amount at the end of the first quarter after SPAC business combination consummation (*instpc*). The definitions of variables are the same as ones in Table 14. The regression coefficients of year dummies are not reported in the regression. N represents the number of observations. T-statistics are in parentheses. *, **, *** represents the one, five and ten percent significance level, respectively.

	1	2	3	4
Dependent Variables	instnc	instnc	instpc	instpc
intercept	17.583 (0.83)	6.562 (0.29)	0.969 (1.12)	0.660 (0.70)
ltpmau	2150.102 (2.82)***		75.700 (2.42)**	
ltpipomau		5234.24 (2.59)**		166.115 (1.99)*
meanmgtexper.	-0.246 (-0.56)	-0.244 (-0.54)	-0.012 (-0.69)	-0.013 (-0.70)
underpricing	48.874 (0.87)	46.847 (0.81)	2.546 (1.11)	2.616 (1.10)
tsize	-2.952 (-1.89)*	-2.328 (-1.44)	-0.086 (-1.35)	-0.067 (-1.00)
pmba	-13.572 (-1.78)*	-13.093 (-1.70)*	-0.514 (-1.65)	-0.492 (-1.54)
pfteam	-8.043 (-0.93)	-6.586 (-0.74)	-0.172 (-0.48)	-0.130 (-0.35)
plawacc	6.779 (0.66)	7.226 (0.69)	0.062 (0.15)	0.066 (0.15)
tenure	-3.667 (-0.07)	-26.707 (-0.48)	1.039 (0.45)	0.229 (0.10)
nonprofit	3.063 (2.81)***	2.774 (2.49)**	0.064 (1.42)	0.054 (1.19)
toptierdummy	27.200 (2.95)***	30.318 (3.34)***	0.969 (2.57)**	1.100 (2.94)***
bva	-5.865 (-0.12)	0.815 (0.02)	0.259 (0.13)	0.519 (0.26)
bva2	11.452 (0.17)	-8.840 (-0.13)	-0.564 (-0.21)	-1.337 (-0.49)
lnfage	-8.210 (-0.10)	29.477 (0.35)	-1.414 (-0.41)	-0.107 (-0.03)
yeardummy	Yes	Yes	Yes	Yes
LR	45.12	44.13	29.43	27.77
Pseudo-R ²	0.11	0.11	0.28	0.27
N	51	51	51	51

price performance from SPAC business combination announcement till consummation (*ltpmau*) or from IPO till SPAC business consummation (*ltpipomau*) is positively correlated with the institutional interest around SPAC business combination announcement or consummation.

Overall, our regression analysis results manifest our findings in univariate analysis from Table 21 to Table 24 and our hypothesis 7. Time-to-deal or unit price performance during IPO and business combination period has positive effects on the announcement return around SPAC business combination event. Also, better SPAC unit price performance during IPO and business combination period attracts higher institutional interest. The results are also consistent with merger-driven IPO literature.

CHAPTER 5 CONCLUDING REMARKS

This paper empirically investigates the market value of management experience and its relationship with SPAC IPO underpricing or the success of SPAC business combination. First, we find that the market value of SPACs consists of proceeds in trust account and management quality which is measurable.

Second, we find that the average management experience of SPACs signal firm quality so that they attract more outside investors and induce larger offer size. Also, it is not management quality itself but management reputation outside business community that induces larger offer size for SPAC IPO. As more management team members sit on non-profit board or more outside directors are involved in the team, more top-tier underwriters are involved in SPAC IPO. Underwriting spread decreases as SPAC management team size increases, and other offering expenses decreases as SPAC management team size, tenure, average management team experience or the number of non-profit boards that team members sit on increases. The average management experience and management team size of SPACs are valued by the IPO market by signaling firm quality as a form of SPAC IPO underpricing. Finally, management team size is important factor in attracting institutional investors in SPAC IPO.

Thrid, we find negative relationships between the average SPAC management team experience and time-to-deal in years from IPO till business combination or that from the announcement till consummation of business combination. We find positive relationships between underpricing and long-term unit price performance from the announcement till consummation of business combination. So, SPAC management team experience or SPAC IPO underpricing positively affects the success of SPAC business combination. The result is consistent with the argument of underpricing as a firm quality signal.

Finally, we empirically investigate the effect of time-to-deal or long-term SPAC unit price performance on SPAC business combination performance or institutional interest around or after the

business combination. We find that shorter time-to-deal or better long-term unit price performance from IPO till business combination leads to higher cumulative abnormal return around SPAC business combination announcement or consummation. Also, better long-term unit price performance attracts more institutional interest after the consummation of SPAC business combination.

The result implies that IPO price performance before business combination resolves the valuation uncertainty of IPO firms. Also, the resolved valuation uncertainty increases the probability of success in business combination and leads to better return performance around business combination. Finally, institutional investors appreciate the valuation certainty and increase their investment in merged firms. The result is consistent with the uncertainty resolution hypothesis of merger-driven IPO literature (Lyandres, Zhdanov and Hsieh, 2008; Celikyurt, Sevilir and Shivdasani, 2008).

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