



# **Current State of Academic Research Regarding Profitability Characteristics of the U.S. SPAC**

A systematic literature review using the meta-narrative  
method

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<p>Abstract:</p> <p>A Special Purpose Acquisition Company (SPAC) is a shell corporation listed on a stock exchange with the intention of acquiring a private company and bringing it public without going through the traditional initial public offering (IPO) process. The SPAC vehicle has been long abandoned until its recent reemergence, followed by a sudden escalation in popularity. Consequently, the spike in SPAC-related activities and extensive media coverage produced an abundance of unstructured and unreliable data. Therefore, the main purpose of this study is to evaluate the current state of academic research in order to ensure availability of the up-to-date and reliable data. In particular, using the meta-narrative method, this paper conducts a systematic literature review of the scholarly papers discussing various profitability aspects of the current U.S. SPAC. The study identifies 7 recent studies covering stakeholder characteristics and incentives, pre- and post-merger returns, capital and cost structure, and market sentiment effects. Abstraction and interpretation of the reviewed sources reveal a handful of open debates, conflicting ideas, and gaps. In the end, this study determines that the available research provides valuable contributions to the field, but it is not sufficient to keep up with the SPAC development. Therefore, this paper proposes an agenda for further research and tries to encourage scholars to consider the U.S. SPAC vehicle as the potential area of their scientific work.</p>	
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# 1 INTRODUCTION

## 1.1 Background

A Special Purpose Acquisition Company (SPAC), classified as a type of “blank check” company in the United States, is a shell corporation listed on a stock exchange with the intention of acquiring a private company and bringing it public without going through the traditional initial public offering process. SPACs have become a popular vehicle for a variety of transactions, including the conversion of a private company to a publicly traded company. Nowadays, certain market participants trust that, through a SPAC transaction, a private company can become a publicly traded company with greater pricing certainty and control over deal terms contrary to traditional initial public offerings (IPOs). (The SEC’s Office of Investor Education and Advocacy (OIEA), 2020)

SPACs, as an investment vehicle, originate from 18<sup>th</sup> century England when “blank check” companies were first described as blind pools during the notorious South Sea Bubble (Shachmurove and Vulanovic, 2016). Nevertheless, “blank check” companies, as well as the U.S. financial market itself, had to undergo various transformations before the emergence of the contemporary SPACs that have recently been gaining popularity among investors and companies in the United States.

Lewellen (2009) argued that SPACs in their current form first were introduced in the mid-1990s. His reasoning is explained by the fact that in the late 1980s, “blank check” companies were often short-living and reasonably infamous for supporting prohibited “pump and dump” schemes. The scope of illegal activities facilitated by the predecessors of modern “blank check” companies led to Congressional investigations and the adoption of Rule 419 (often referred to as the “penny stock rule”) by the U.S. SEC in 1992. Consequently, the adoption of Rule 419 allowed the development of SPACs similar to the contemporary ones. Nevertheless, SPACs that occurred in the mid-1990s were featured by relatively small transaction volumes (typically less than \$5 million) and were frequently used as a vehicle to create reverse merger transactions. For that reason, some researchers believe that the first “real” SPAC, resembling modern SPACs, was developed later in the 2000s.

For example, Shachmurove and Vulanovic (2016, pp. 15-16) called the SPAC structure developed in the late 1990s as “the least distant cousin of modern SPAC”. They explain that in the mid-1990s, capital markets could be easily accessed through a traditional IPO, so there was no demand for alternative vehicles. It is also mentioned that in 1997 National Association of Securities Dealers (NASD) undertook severe measures against GKN Securities Corporation, which embodied the key promoter of blank checks at the time. Following the NASD ruling, all activity in the blank check market ceased until 2003. Therefore, the researchers believe that the first modern SPAC appeared as Millstream Acquisition Corp only in August 2003. The SPAC was underwritten by a small investment bank known as Early Bird Capital. The new SPAC structure followed all of the SEC’s previously imposed rules for the blank check market, as well as provided investors with some additional features that were not formally required.

The development of SPAC, obviously, did not stop in 2003. SPAC, both as an investment vehicle and an alternative to traditional IPOs, continued to evolve over the years. In 2020, the U.S. SPAC experienced a sudden escalation in popularity and, according to data gathered by Bloomberg, raised \$78 billion on U.S. exchanges, constituting over 45% of the year’s total IPO volume (Tse, 2020). Additionally, Nasdaq notes the record pace of SPACs and positive average returns even in the post-merger period since 2019 (Mackintosh, 2021). The spike in SPAC-related activities increased public involvement and attracted the attention of many companies, money managers, investors, financial analysts, investment banks, advisors, journalists, governmental organizations, and even celebrities. As a result, SPACs have been extensively covered by the media, even reaching video-sharing social networking platforms, i.e. TikTok (Surane & Tse, 2021). Such extensive media exposure, supposedly, should have helped to raise awareness and depict all the recent developments in the U.S. SPAC.

Nevertheless, picturing the U.S. SPAC of today is not an easy task for several reasons. Despite the abundance of information about the U.S. SPAC on the Internet, most of that data cannot be considered reliable for the fact that it is predominantly not research-based and not peer-reviewed. The overflow of unstructured and sometimes biased information can only create more confusion and misleadingness. For example, The SEC’s Office of Investor Education and Advocacy (2021) is concerned that some investors might base

their SPAC-related investment decisions solely on celebrity involvement. Besides, finding detailed answers to specific questions about SPAC among the countless articles on the Internet might be fairly tricky and time-consuming. Therefore, up-to-date academic research is vital for those seeking to acquire knowledge that is more dependable and specific.

## **1.2 Problem statement, aim and research questions**

The spiking activity in the SPAC field, however, is concerning for the fact that academic research might not be able to keep up with key developments related to SPACs. If academic research fails to advance at the same rate as the field, the results can have various gaps or even become irrelevant. In such situation, especially now when SPAC variations continue to expand and the attention is growing bigger, absence of the trustworthy data can be fairly troublesome for all those somehow involved with SPAC activities. Gaps and misconceptions in recent research and news can lead to wrong decision-making and misjudgment of the situation. For that reason, it is now a critical time to investigate the current state of academic research regarding the U.S. SPAC.

Therefore, the main purpose of this study is to conduct a semi-systematic review of the scholarly papers discussing various aspects of the U.S. SPAC profitability and, as a result, assist the further investigation of the current state of academic research regarding the U.S. SPAC.

In order to achieve the aforementioned goal, this study poses the following research questions.

The leading research question is:

- What is the current state of academic research regarding profitability characteristics of the U.S. SPAC?

The supporting questions are:

- What concepts, attitudes, questions, and debates around the U.S. SPAC profitability are prevailing nowadays in the research field?



- What are the particularities in research approaches that need to be addressed?
- Are there gaps or no longer relevant concepts in the research that require further investigation?

The following steps are implemented in the pursuit of the goal. Firstly, the paper attempts to synthesize the state of knowledge by gathering and examining relevant results and approaches. In particular, it identifies the recent scholarly papers observing the profitability characteristics of different U.S. SPAC stakeholders in various settings. Secondly, using the meta-narrative method of data abstraction and analysis, this paper strives to examine approaches, identify gaps, and compare concepts within the recent academic research and beyond. Finally, following the aim to create an agenda for further investigation, this study concludes with a discussion of possible interpretations and implications of the obtained results.

The results of this literature review can, potentially, make both practical and theoretical contributions to the field. The knowledge synthesis might become a valuable source of information about the U.S. SPAC, as it combines main concepts and maps the research. Consequently, navigation and search for specifics among the research field could be less complicated. This study might help both field professionals and all those seeking to raise their awareness about the U.S. SPAC. Especially, it may be valuable to the ones who have no means to access certain reports and (or) get some advice from qualified specialists. Besides, identification of gaps, irrelevancies and an agenda for further research can also have various benefits. It might direct further research to new directions and incentivize field professionals to revise their assumptions and strategies.

### **1.3 Limitations**

There are various limitations imposed on this thesis that are important to take into consideration.

To begin with, this study is a thesis for the bachelor's international business program with a major in financial management. According to the ARCADA UAS requirements, the thesis is supposed to contribute to the main field of the student's studies. Therefore, the

discussion of this paper is limited to financial management matters only. Furthermore, with the purpose to investigate the profitability characteristics of SPACs, it seems reasonable to mostly abandon the following SPAC-related discussions as having minor effects on the SPAC's profitability: specifics of regulatory frameworks and policy implications, evolution of non-financial tools and strategies, individualities of stakeholders that have no financial implications, non-financial characteristics of the SPAC structure, and characteristics of pre-IPO SPAC period (generates no profits). Nonetheless, any of the aforementioned discussions can be exploited if deemed necessary (e.g., to explain some profitability characteristics).

This literature review is limited to sources focusing on the U.S. SPACs only. The choice is explained by two factors. Firstly, the U.S. SPAC deal volumes constituted more than 50% of the global total in 2020 (see Appendix). Secondly, financial frameworks and regulations differ depending on the region. Therefore, isolating the study to a single area is crucial in order to avoid overcomplication and fallacies.

As the study is oriented on the U.S. market and addressed to an English-speaking audience, all the sources collected for the literature review are written in English.

Besides, this study aims to synthesize knowledge that is relevant today. Many of the SPAC studies collect at least 5-year long empirical data and then often take several years to publish. Therefore, to collect enough materials for the review and avoid studies that are based on outdated empirical data or no longer relevant assumptions, this paper investigates literature sources published within a 5-year time span (2017-2021).

The data collection process is also limited to digital copies of books and articles found in databases and libraries that are openly accessible to ARCADA UAS students.

Some other limitations of data collection and analysis depend on the methodology chosen. Hence, they are explained in the Methods part of the thesis.

## 1.4 Structure

The Section 1 of this literature review plays an introductory role. Starting with a discussion about the historical development and the recent boom of the U.S. SPAC, this chapter clarifies the motivation for the choice of topic. Afterwards, it guides the reader to the problems statement and the research questions. Additionally, the Section 1 explains some limitation imposed on this paper and briefly discusses the structure of this literature review.

The Section 2 familiarizes the reader with the theoretical framework. This chapter aims to present the main aspects of the U.S. SPAC in order to prepare the reader for the literature review. It starts with a general introduction to the SPAC vehicle and then continues with the theoretical outline including various aspects of the SPAC's lifecycle.

The Section 3 explains the features of the methodology applied in the paper and clarifies the reasons behind the methodology choice. Additionally, it documents, in detail, the steps taken to collect relevant data, conduct narrative analysis and report the results.

The Section 4 attempts to synthesize the state of knowledge by presenting the results abstracted from the identified academic papers. The aim of the chapter is to document and interpret the abstracted data. Besides, it provides brief subjective commentaries regarding some particularities, tries to evaluate the relevance of each source and, occasionally, provides the reader with recommendations or words of warning.

The Section 5 of this literature review continues the analysis with a discussion of the prevailing concepts, attitudes, questions, debates and gaps identified in the recent academic papers regarding the U.S. SPAC profitability characteristics. It tries to further interpret the results and identify the review implications. Additionally, proposes an agenda for further research.

The Section 6 answers the initial research questions with a concise summary of the current state of academic research regarding profitability characteristics of the U.S. SPAC. Additionally, it discusses reliability and validity of this literature review.

## **2 THEORETICAL FRAMEWORK**

### **2.1 Definition of SPAC**

A special purpose acquisition company (SPAC) is an investment vehicle in the form of a newly founded corporation that has undergone an IPO without having any operating assets or operating business. Some scholars recognize SPAC as an asset class in the U.S. equity market. The sole purpose of SPAC is to use the funds obtained in an IPO to finance the acquisition of a non-listed operating business. For that reason, SPAC is considered either as a “blank check” or a shell corporation, according to the U.S. regulation. After the deal completion, SPAC usually gets the name of the target company and re-quotes under a new ticker. Therefore, SPAC is also an alternative to a traditional IPO and direct listing. SPAC’s structure and processes resemble that of a reverse merger. As a result, some tend to believe that SPAC is just a type of reverse merger. Nevertheless, it is often argued that SPAC is not a reverse merger for the following reasons. Firstly, the founders (the sponsors) of SPAC are usually management professional with a significant track record in the private equity world. Secondly, 80-100% of the money raised in a SPAC IPO process are held in an escrow account and are not used until the acquisition deal or SPAC’s dissolution. Thirdly, in a reverse merger, the shell corporation is usually being acquired by the private company, whereas in SPAC, the target company is the one being acquired. (Lewellen, 2009; Shachmurove and Vulanovic, 2016; Finkelstein and Cooper, 2017; The SEC’s Office of Investor Education and Advocacy (OIEA), 2020; Caselli and Negri, 2021; Gahng, Ritter and Zhang, 2021)

### **2.2 SPAC’s lifecycle**

SPAC is usually a faster option to go public compared to a traditional IPO. Nonetheless, SPAC is a complex vehicle and consists of multiple stages. According to Kajerdt and Rydberg (2021), the SPAC stages can be identified as: formation, IPO, target search and negotiations, target announcement, shareholders’ voting, merger consummation/withdrawal/liquidation (see Figure 1). If SPAC manages to finalize a business combination, it enters the post-merger stage as an operating entity.

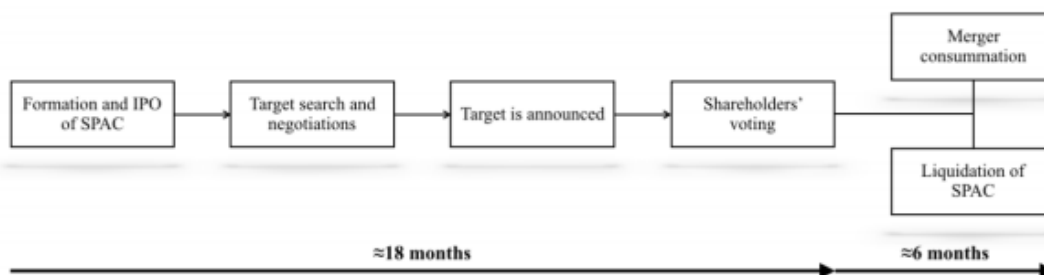


Figure 1 (Kajerdt and Rydberg, 2021)

## 2.2.1 Formation and IPO of SPAC

SPAC's lifecycle starts from the formation (pre-IPO) phase. During this phase, individuals or organizations possessing certain experience and managerial skills consider creating an investment opportunity in the form of a shell company with the sole purpose of acquiring a private company. At this stage, the founders operate as one entity to serve as a SPAC sponsor. The sponsor accumulates means to pay for the IPO and buys founder shares at their nominal price. This nominal investment entitles the sponsor to a certain proportion of the total shares outstanding after the IPO completion. The proportion often equals a 20% share (Lenahan *et al.*, 2018). Nevertheless, founder shares are usually redeemable only after the completion of a business combination (De-SPAC transaction) and the potential return is called "promote" (Cenzato, 2019). At this stage, the sponsor also arranges all preparations to enter the market. Some of those arrangements might include specifying the industry focus (Lenahan *et al.*, 2018).

In the next phase, a newly found organization with no business operations undergoes an IPO process. Sponsors use this time to acquire funds from investors in the IPO. The future shareholders are usually comprised of hedge funds, private equity funds, and pension funds (Aktas, Andres and Ozdakak, 2017). The funds are mostly raised through issuing of units in the IPO. A typical unit is a financial instrument comprised by a common share and derivative securities. The most common type of security being used in the SPAC unit is a warrant. A warrant is a call option issued by the SPAC that entitles its holder to buy a share fraction at a certain exercise price within a predetermined maturity period starting after the completion of the business combination (Gahng, Ritter and Zhang, 2021). The IPO proceeds are being held in an interest-bearing escrow account (trust) until the De-

SPAC transaction consummation when the unit becomes unbundled and separate trading of the shares and warrants is allowed. Considering the fact that SPAC is a cash-based company that exists only to raise capital, find a target company and complete a merger, the management team is the only parameter available for evaluation by investors at this stage. Therefore, sponsors' credibility, reputation and connections are considered to be decisive factors in the success of the IPO. (Cenzato, 2019; Caselli and Negri, 2021; Gahng, Ritter and Zhang, 2021)

Then, after the IPO is successfully completed, the escrow account is financed with about 85-100% (usually about 98%) of funds coming from the public investors and 2% or more from the SPAC sponsor, totaling to a sum that is equivalent to 100% or more of the gross IPO proceeds. The holdings of the trust account are usually invested in short-term U.S. government claims or held as cash. A piece of IPO proceeds is also used to cover the upfront underwriting discount that is typically around 2%. (Ghosh Ray and Ghosh Ray, 2017; Lenahan *et al.*, 2018)

### **2.2.2 Target search and negotiations**

At this stage, the SPAC sponsor starts screening the market to identify the target (or targets). According to the stock exchange rules, SPAC must acquire a target or targets with an aggregate fair market value of at least 80% of the SPAC's capital held in the trust account. Therefore, if the SPAC sponsor fails to find one target company that is big enough, multiple targets need to be identified. Furthermore, the management team often searches for a target that is four to eight times bigger than the SPAC itself in order to alleviate the dilutive effects of the founder shares (Lenahan *et al.*, 2020). The target search phase is imposed with a time limitation. The sponsor usually has 18 to 24 months (can be extended to 36 according to the stock exchange rules) in order to identify the target. The industry of operations of potential targets, sectors and geographic location are commonly pre-defined in the IPO, but they are not binding (The SEC's Office of Investor Education and Advocacy (OIEA), 2020). Furthermore, pre-identification of the target is forbidden according to the U.S. regulations (Gahng, Ritter and Zhang, 2021). Therefore, the sponsor needs to conduct research to discover the investment opportunities. The management team makes use of various M&A strategies and tools, including due diligence and audit.

The search phase is financed with the sponsor's funds and, sometimes, interest earned from the trust account. When the most appropriate option is chosen, the target search is followed by negotiations and target announcement.

During the negotiations phase, the sponsor discusses the terms of the De-SPAC transaction until the agreement with the managers of the target company is found. Thorough due diligence ought to be conducted before settling. Business, financial, and legal aspects of the target company are evaluated. At the same time, the target may choose to perform due diligence on the SPAC. At this stage, the parties also conduct the valuation and discuss the terms of the business combination agreement and other related documents. When the SPAC managers come to an agreement with the managers of the target company, they notify the shareholders of the target with the letter of intent (LOI) and start inking a definitive agreement. Next, the definitive merger agreement is signed by both parties and the business combination is announced to the public (including the SPAC shareholders). In addition, the sponsor often tries to secure extra financing through debt and private investment in public equity (PIPE) deals in advance of signing the definitive acquisition agreement. These capital sources are essential to secure enough cash for the completion of the business combination when many SPAC shareholders decide to redeem their shares. Capital raised through PIPE deals may constitute up to three times the funds raised during the IPO. The advantage of PIPE deals is that they can take the form of forward purchase agreements, where PIPEs agree to commit exactly the amount of funds needed at the time of closing of the business combination. Furthermore, considering the time when PIPE deals are usually marketed, PIPE investors play an important part in validating the fair value of the target at the moment of the De-SPAC negotiations. Following the signing of the definitive merger agreement, the SPAC and target corporation would act as quickly as possible to finalize the business combination and submit the filings required by the SEC. (Murray, 2017; Cenzato, 2019; The SEC's Office of Investor Education and Advocacy (OIEA), 2020; ATTORNEY PUBLICATIONS, 2021; Kajerdt and Rydberg, 2021)

### **2.2.3 Business combination announcement, shareholders' approval, redemptions**

Traditionally, the business combination announcement follows the definitive merger agreement, but there were some cases where the announcement took place before signing a definitive merger agreement. Importantly, those events are followed by the presentation of the De-SPAC transaction to the existing SPAC investors. Depending on the SPAC, the presentation is performed in one of the three forms: proxy statement, information statement, tender offer statement. The proxy statement is sent if the SPAC needs shareholder approval of the business combination. It is usually followed by a shareholder vote. The information statement is sent when the SPAC requires shareholder approval, but the sponsor and its affiliates carry enough votes to authorize the De-SPAC transaction. If the SPAC does not require a shareholder approval of the transaction, the SPAC investors receive the tender offer. All three types of statements contain essential information regarding the target company and the initial business combination. In addition, the statements clarify the redemption rights of the SPAC investors. (The SEC's Office of Investor Education and Advocacy (OIEA), 2020)

When it comes to the business combination announcement, shareholder approval, redemption rights, and tender offers, the recent SPACs differed markedly and even brought some innovation to the field, says Murray (2017). Historically, a vote against the business combination was followed by the nonnegotiable redemption of shares of the non-approving shareholders. Nevertheless, many SPACs adopted a two-stage approach that allowed the investors not voting in favor of the merger to decide for themselves on their stock conversion. Furthermore, some recent SPACs abandoned the shareholder approval requirement at all. Those SPACs initiate a tender offer after completion of the business combination for shareholders to redeem their shares. This structure allows to shorten the merger process and avoid uncertainty over voting intentions (Gahng, Ritter and Zhang, 2021).

Regardless of the approach, the fraction of funds that is withdrawn as a result of the investor stock redemptions must not exceed a certain threshold. The threshold is defined by the SPAC prospectus. The average threshold level has soared dramatically over the past



10 years. Additionally, the definitive merger agreement usually involves a minimum cash requirement. If the SPAC fails to meet the minimum cash condition for the De-SPAC transaction as a result of the stock redemptions, the sponsor is allowed to try to attract additional investments to compensate for redemptions. The management team of the SPAC could also seek to review the merger agreement with the target corporation. (Cenzato, 2019; The SEC's Office of Investor Education and Advocacy (OIEA), 2020; ATTORNEY PUBLICATIONS, 2021; Caselli and Negri, 2021)

#### **2.2.4 Merger consummation / withdrawal / liquidation**

The last stage of the SPAC lifecycle has several development scenarios: merger consummation, withdrawal, or liquidation.

The first scenario takes place when the business combination is approved by the SPAC shareholders (if necessary), and the capital raised is sufficient to execute the acquisition. In this case, the SPAC and the target proceed with the merger consummation. The shareholders who have exercised their redemption rights are liquidated. Their stocks are converted into a share of the assets held in the SPAC's trust account (usually on a pro-rata basis). Nevertheless, depending on the SPAC, initial investors are often allowed to keep the warrants. Other shareholders become stockholders of the new business combination. The SPAC, basically, transforms into a publicly listed operating company that usually adopts the name and the business operations of the target company. In other words, the approving shareholders become stockholders of the target company, which is a public entity, while the SPAC stops being only an investment vehicle and enters a post-merger stage as an operating company. (Cenzato, 2019; Caselli and Negri, 2021; Gahng, Ritter and Zhang, 2021; Kajerdt and Rydberg, 2021)

The second scenario is the acquisition withdrawal. The SPAC follows this path when one of the aforementioned criteria for a merger consummation is not met, but there is some time left for the managers to achieve a new De-SPAC deal. Depending on the problem and time left, the sponsor might try to renegotiate with the target for better merger terms, attract additional funds, or continue screening the market for a new target. The time constraint can, sometimes, be extended through the shareholders' vote. The redemption rights

work in the same way as in the first scenario, sometimes with minor deviations in certain SPACs. (Cenzato, 2019; Caselli and Negri, 2021; Kajerdt and Rydberg, 2021)

The liquidation happens when there is no time left for the sponsor, and one of the criteria for a merger consummation is not met. In this situation, the SPAC's shareholders receive all of the remaining funds as well as the interest accrued from trading in short-term government securities. The capital left may be smaller than the original investment pool because some funds could be used during the screening and negotiations phases, but it is often not the case. The conversion of stockholders' shares usually happens on a pro-rata basis. The sponsor, in turn, loses all of the initial investments and is not compensated. Additionally, both public investor warrants and sponsor private placement warrants become worthless. Nevertheless, the shareholders often may choose to sell their SPAC units no later than five days prior to liquidation if the redemption values are lower than the market prices. (Cenzato, 2019; Caselli and Negri, 2021; Gahng, Ritter and Zhang, 2021; Kajerdt and Rydberg, 2021)

### **2.2.5 Operating company**

The post-merger phase starts after the completion of the business combination. It is a critical stage as the purpose of any SPAC is to consummate a merger. Some scholars even divide the SPAC's lifecycle into two periods only: the SPAC period, that is, before the business combination or liquidation, and the De-SPAC period, which starts on the first day of trading as a merged business (Gahng, Ritter and Zhang, 2021).

The De-SPAC period is featured by the following events. Firstly, it is the moment when the target company finally becomes public and receives the SPAC's capital. Secondly, the SPAC sponsor gets the promote and other compensations only after the De-SPAC transaction. Thirdly, it is often the case that the SPAC warrants can be exercised only in the De-SPAC period. Finally, former SPAC investors acquire shareholder rights in the new public business combination.

At the same time, it is crucial to beware of potential pitfalls hidden in the post-merger phase. The recent research reveals poor average returns on the common shares during the

De-SPAC period. Furthermore, it seems that even the shareholders of successful business combinations may experience low stock returns, as merger success triggers investors to exercise their warrants and rights, in turn, dragging down the common shares' prices. The returns on warrants, though, are surprisingly high. Consequently, warrant investors consistently outperform common share investors. Exercising of derivative securities (e.g., warrants and rights) and issuing of cheap stock, however, result in greater dilution. In addition, the sponsor's compensation brings down the value of the post-merger common stock. In order to avoid the adverse effects of dilution, the majority of initial investors choose to redeem their shares, thus, cutting the SPAC's capital and amplifying the dilution effects. As a result, non-redeeming and non-initial SPAC period investors often suffer a substantial loss. Some papers document that because of the dilution caused by the net promote, derivative securities and underwriting fees, the average cash per share received by the business combination is drastically lower than the cash per share raised in the SPAC IPO. ((Dimitrova, 2017; Klausner, Ohlrogge and Ruan, 2020; Renaissance Capital, 2020; Gahng, Ritter and Zhang, 2021)

Nonetheless, there are ways to mitigate risks associated with the De-SPAC period. It is often said that the sponsor plays a key role in the SPAC's success. The post-merger period is no different. To begin with, high-quality sponsors might find a highly attractive target and negotiate a good deal, thus, making the share price to be higher than the redemption price. In this case, investors would choose to sell their stocks on the market over redemption. Additionally, the high-quality sponsors may close lucrative PIPE deals by either attracting new third-party investors or becoming those investors themselves. Enthusiastic PIPEs can bring substantial capital allowing the SPAC to merge with bigger targets and decreasing the promote dilution. PIPEs also reduce dilution by diminishing the warrants-to-shares ratio, as they are usually not compensated with dilutive security derivatives. The bad PIPE deals happen when PIPEs are allowed to buy common shares below the initial price, thus, further diluting the stock. Nevertheless, such deals are scarce and used as a last resort. Furthermore, the respected sponsors may afford to reduce warrants coverage. The sponsors of the most recent SPAC are also known to compensate non-redeeming shareholders, reduce or eliminate the sponsor promote and extend the vesting period of the sponsor warrants. For example, the SPAC launched by Pershing Square in 2020 was deprived of any promote, while the warrants owned by the hedge fund were 20% out of

the money and non-vesting for three years after the business combination completion. Pershing's SPAC also chose to support non-redeeming shareholders by allocating warrants from redeeming to non-redeeming stockholders. Finally, the ongoing engagement of high-quality sponsors might by itself add value to the business combination. ((Dimitrova, 2017; Huebscher, 2020; Klausner, Ohlrogge and Ruan, 2020; Renaissance Capital, 2020; Gahng, Ritter and Zhang, 2021).

To sum up, the post-merger phase entails various nuances that might be both encouraging and discouraging for different parties in certain situations. Therefore, it is always essential to pay close attention to the SPAC's sponsor and be aware of the prospectus terms.

## 3 METHODS

### 3.1 Methodology choice

In order to investigate the current state of academic research regarding profitability characteristics of the U.S. SPAC, this study conducts a systematic literature review using the meta-narrative method. A systematic literature review using the meta-narrative method, as a research methodology, can also be called semi-systematic or narrative literature review (Wong *et al.*, 2013; Snyder, 2019). Despite the fact that literature review often comprises only a review section of a research paper, it can also be a stand-alone work, thus, becoming both a method of study and an outcome (Brocke *et al.*, 2015). This paper is an instance of such a stand-alone literature review.

A literature review refines existing literature in a specified area to provide an outline of the current state of knowledge. It facilitates recognition and interpretation of themes, traditions and terms used in the research field. Literature reviews are often driven by the necessity to evaluate the state of research, acknowledge existing theories, investigate research approaches and techniques, highlight remaining contradictions, identify research gaps and, finally, propose further research areas. Additionally, a literature review is a good way to appraise noteworthy authors and papers. (Rowley and Slack, 2004)

Consequently, as a research methodology, a literature review is the most suitable option in situations when the aim is to keep up with state-of-the-art research and synthesize the state of knowledge. “By integrating findings and perspectives from many empirical findings, a literature review can address research questions with a power that no single study has”, says Snyder (2019, p. 333).

The semi-systematic methodology, in particular, is appropriate for several reasons. This method is initially designed to address broader topics that have been differently conceptualized and studied by groups of scholars from various fields. Besides, a narrative review allows hindering an entire systematic review process, which helps this study concentrate on research that is still relevant today. Furthermore, a semi-systematic review attempts to

discover and comprehend different perspectives. By doing so, not only this method summarizes research results, but it also studies various research approaches. Thus, while synthesizing the state of knowledge, a narrative review is also well-suited to identify gaps and develop further research agenda. (Wong *et al.*, 2013)

The main difficulties conducting a semi-structured review lie in the process. In comparison to the straightforward methodology for systematic reviews following standards and rules that are strictly defined, a semi-systematic review process requires a lot more tailoring and development to the specific task. In order to address the research question and be transparent about the procedures, it is often required to create individual guidelines and a thorough strategy to ensure that the relevant literature is correctly covered. (Snyder, 2019)

Nevertheless, there are some universal guidelines that are recommended to follow when conducting a narrative literature review. The review process should comprise four phases: designing, conducting, analysis, and writing. The subsequent paragraphs of this chapter discuss the main steps and key choices suggested for each phase. The discussion is followed by a clarification of the implementation of those steps in this literature review. (Snyder, 2019)

The designing phase should consider whether a literature review is relevant. It should look for possible contributions and decide whether those are of any interest to the public. Therefore, it is helpful to scan and get acquainted with the field as the first step. Then, it is necessary to clearly define and formulate the objective, scale, and research questions. Implementation of those steps helps to choose the most appropriate approach. The next step is considering search strategies, terms, space, inclusion and exclusion criteria. The last step is to provide transparency and reasoning behind all the choices. Execution of the aforementioned steps is reflected in the Section 1.3 and in the following text.

The conducting phase starts from a pilot test of the review process and then is followed by adjustments and iterations until the final sample is identified. The particular steps taken in this study to obtain the final sample are described in the Section 3.2.

The analysis phase begins with familiarizing with the data from the final sample, organizing it, and identifying how it can be used to perform analysis. The methods of abstracting and coding relevant data are considered and clearly formulated next. It is advised that abstraction notes incorporate the aim of the research paper, a summary of the content, the study design and methods, results and conclusions, and evaluation comments when needed (Green, Johnson and Adams, 2006). Thereafter, an interpretation approach is chosen and continued with a search for themes, consistencies, differences, paradoxes, and inconsistencies (Coffey and Atkinson, 1996). It is essential to monitor the process carefully and remember the research purpose to ensure quality, reliability, and relevancy in all those steps. The Section 3.3 describes the steps taken in this paper in order to perform a literature review analysis.

When it comes to the writing phase of a semi-systematic literature review, the structure, types of data and level of detail can be arranged in a variety of ways. Nevertheless, certain generalizations can be drawn. It is required to report on the study methodology in accordance with accepted conventions. The process of designing the review, data collection, analysis, synthesis, and reporting should be described transparently. One of the notorious guidelines commonly recommended for semi-systematic reviews is RAMESES (Wong *et al.*, 2013). It is a standard addressing how narrative reviews should be reported and structured. As an undergraduate thesis, this paper uses an adaptation of the RAMESES standard to avoid overcomplication and conflicts with the thesis writing guidelines provided by ARCADA UAS.

Assuming all the aforementioned features of the research methodology used to conduct this particular semi-systematic literature review, the method can be described as follows. It is a basic inductive type of research that pursues an exploratory goal by means of collecting secondary data and conducting qualitative analysis in a descriptive way.

## **3.2 Data collection**

As it is mentioned earlier, data collection is comprised of steps from designing and conducting phases. This paper starts clarifying the methods used to identify relevant literature

in the Section 1.3, where the research limitations are discussed. Overall, the following data collection steps were applied in this paper.

The first step aimed to design a preliminary search strategy. As it is noted in the Section 1.3, this study aims to synthesize the state of knowledge regarding the U.S. SPAC profitability characteristics and puts an emphasis on academic research, relevance today and the U.S. market. Therefore, the preliminary search strategy was to find recent academic literature about the profitability characteristics of the U.S. SPAC that is written in English, US-oriented and published not earlier than in 2017.

In the next step, the space of search was chosen. The department for Business Management and Analytics of ARCADA UAS provides its student with the following resources: Arcada Finna library; Ebook Central, Ebsco ebooks, Elib, Ellibs, Perlego Ebooks, DOAB -Directory of Open Access Books, INTECH - Science, Technology and Medicine open access publisher, and OAPEN Library e-book collections; Emerald, ABI/INFORM, Academic Search Complete (EBSCO), Sage, ScienceDirect, and SpringerLink databases. Other literature resources used in this paper are SSRN and ResearchGate databases, as well as Google Scholar search engine. They are well-known data collection resources that often provide free access to various financial papers. Extension of the electronic search beyond the aforementioned literature resources did not seem reasonable for two reasons. Firstly, most other established in the financial field resources restrict access to their publications. Secondly, going through each existing database was considered to be counterproductive as the Google Scholar search engine helps to find search results from all kinds of scholarly literature resources. Hand search and library search options were not available at the time due to the situation caused by the coronavirus disease (COVID-19). As a result, the space for this literature review was defined by the aforementioned resources.

In order to properly implement the search strategy, the search terms were defined in the next step. The initial choice of search terms consisted of the following words: SPAC, Special Purpose Acquisition Company, the U.S. SPAC, US SPAC, SPAC IPO, IPO, blank check, shell company. Nevertheless, from the pilot trial of literature search, it became obvious that a basic search is not enough. A basic search in most databases would confuse the financial term “SPAC” with medical and engineering terms. Furthermore,



most of the search results just contained part “spac” in some of the words (e.g. space) and had no connection with the financial term whatsoever. The basic search for “Special Purpose Acquisition Company” provided mostly irrelevant results as the term was identified as a set of words rather than a phrase. Results of the basic search for words IPO, blank check or shell company were too broad and not necessarily related to the U.S. SPAC. As a result, it was decided that the preliminary search strategy and techniques ought to be improved.

Most of the aforementioned literature sources provide an advanced search alternative that offers a variety of search criteria, helping to achieve better search results. Thus, the next step attempted to use those more advanced search alternatives and information retrieval technics in order to improve the search strategy. Firstly, it was decided to use Boolean operators. Boolean operators (e.g. AND, OR, NOT) allow to combine or exclude terms in order to achieve greater accuracy of search (Rowley and Slack, 2004). Secondly, brackets and quotation mark were applied to increase search precision. Brackets enable a researcher to define the correct usage and meaning of search terms and combinations, while quotation marks allow exact phrase searching.

Consequently, the problem of search results with different connotations of the term “SPAC” was solved with brackets and Boolean operators: (SPAC AND IPO) OR (SPAC AND BLANK CHECK) OR (SPAC AND shell company). In order to tackle the problem of exact phrasing, quotation marks were added in the following way: (“SPAC” AND “IPO”) OR (“SPAC” AND “BLANK CHECK”) OR (“SPAC” AND “shell company”) OR (“Special Purpose Acquisition Company”). Usage of the advanced search alternatives also allowed to add such exclusion parameters as language and time of publication. Besides, while adjusting the search statement, it was noticed that in many publications discussing the U.S. SPAC, the part “the U.S.” (or “US”) is omitted. Therefore, it seemed unreasonable to include the terms “US SPAC” and “the U.S. SPAC” in the search statement. The last problem of the search statement was related to the variation of the search terms. For example, SPAC and SPACs are of equal interest to this paper, but the last-mentioned version of the search statement would not allow finding the second. Therefore, a trial of a wildcard character - Asterisk (\*) was conducted. Asterisk (\*) takes the place of zero or more characters in a search term in order to allow variations. Nevertheless, the

trial showed no increase in relevant data. Therefore, the previously mentioned version of the search statement was kept.

The new search iterations using the developed search statement started the conducting phase of this literature review in the subsequent step. The aim of this step was to make sure that the search statement did not require further adjustments. The new iterations revealed less than 150 unique search results altogether at this stage (the data collection resources often replicated the search results, and presenting the reader with the exact number of search outcomes in each of those resources could be misleading). Furthermore, from the titles of many articles, it was possible to derive that they are not US-oriented and, consequently, not relevant. Besides, access to numerous articles was restricted. Therefore, it was decided that the search statement does not require further specifications that could result in an even narrower pool of academic papers. In addition, lists of references and citations of irrelevant or non-accessible papers that appeared in this step were tracked and investigated in order to increase the chances of finding key works in the field. This process is known as snowballing (Greenhalgh and Heath, 2010).

The following step of data collection was to approve the research strategy and define the sample for a full reading. In this step, more qualitative techniques of exclusion were applied. Firstly, it was decided to carefully read abstracts of each article that did not fall under exclusion criteria till that moment. Papers that had the abstract part focused on the U.S. SPAC were accepted to the sample without further investigation. In other cases, the term “SPAC” was searched for in the full text, and the context was evaluated. The content was used to understand whether the paper investigates the U.S. SPAC. Afterwards, the papers’ methods part was investigated. Papers with no mentioning of SPAC in the methods were excluded from the final sample. Such a decision was made to avoid papers that mention the U.S. SPAC superficially while being focused on some other topics. Only 17 sources were picked for further analysis. The most common exclusion reasons were: a) mentioning of SPAC in the exclusion criteria, b) superficial mentioning of SPAC with no evaluation conducted, c) investigation of non-US SPAC.

The last step was developed to define the final sample by excluding the sources that provide insignificant insights into profitability characteristics of the current U.S. SPAC. In

order to get into the final sample, each article met at least one of the following conditions: the paper investigates returns/capital structure/cost structure of the U.S. SPAC, or despite having no direct contributions, the paper provides the review with useful indirect insights into the profitability characteristics of the U.S. SPAC. In order to pick the right candidates, the articles were read in full. This process revealed the fact that “the structure of SPACs fundamentally changed in 2010” (Gahng, Ritter and Zhang, 2021, pp. 15, 56–57). Therefore, it was decided to eliminate sources that provide no insights into the U.S. SPACs that entered the market after 2010. As a result, only 7 articles were included in the final sample.

To sum up, the process of data collection went through numerous trials and iterations. Advanced search alternatives embedded in the accessible literature resources and snowballing were used to conduct the final search. The final search statement was: (“SPAC” AND “IPO”) OR (“SPAC” AND “BLANK CHECK”) OR (“SPAC” AND “shell company”) OR (“Special Purpose Acquisition Company”). In addition, the search was limited to the sources in English published from 2017 to 2021. The final search strategy aimed to gather sources that clearly state the methods applied and provide insights about the profitability characteristics of the U.S. SPAC. The strategy comprised several steps: title and abstract scanning, intext search for the term “SPAC”, context evaluation, scanning of methods, reading in full. Application of the data collection approach helped to identify 7 papers that were considered relevant and, therefore, constitute the final sample.

### **3.3 Data analysis**

The data analysis phase of this paper, as in most other semi-systematic reviews, was conducted with a narrative approach. This qualitative method is pluralistic in nature and aims to tease out the central narratives of various research traditions by learning from different approaches (Greenhalgh and Heath, 2010). Therefore, in order to explore the many ways in which the U.S. SPAC has been researched, this paper tried to reflect on peculiarities of topic conceptualization in different traditions, essential theories, study designs and key empirical conclusions.

The first step of the data analysis was to closely familiarize with all the sources in the final sample. In order to collect an organized data and get a better picture of the papers, it was decided to abstract valuable findings in a designated excel file. The following parameters of abstraction were developed: citation, topic, aim, synopsis of the content, research methods and design, results and conclusions, evaluation and appraisal comments. The narrative review utilizes an inductive approach. Therefore, no coding strategy was defined before abstracting. The adaptation of the abstraction results is presented in chronological order in the Section 4.

In the step following abstraction and familiarization, it was discovered that the subjects discussed and the methods used in the articles chosen for the review are quite diverse. Nevertheless, some common features between particular sources were prominent. In particular, despite approaching the topics differently, the articles discuss similar issues. These communalities indicated that thematic categorization is possible. Therefore, coding based on the abstracted data was conducted. As a result, this literature review codes the data in accordance with the topics prevailing in the literature. In particular, the review distinguished the following leading themes: stakeholder characteristics and incentives, pre- and post-merger returns, capital and cost structure, and market sentiment effects. These codes allowed to categorize the abstracted data in groups in order to combine already developed interpretations and develop them further, in a more focused manner. As a result, it becomes possible to generate more qualitative implications, discuss the findings and provide recommendation for further research in the Section 5.

Lastly, this paper produces some hypotheses that are based on the subjective implications and interpretations of the reviewed literature. Those hypotheses are developed with the sole purpose of proposing an agenda for further research.

## 4 RESULTS

In a pursuit to evaluate the current state of academic research regarding profitability characteristics of the U.S. SPAC, the Section 4 of this literature review attempts to synthesize the state of knowledge by presenting the results abstracted from the identified academic papers. The results are documented with a degree of interpretation and complemented with brief subjective commentaries that address some particularities of certain findings, methods, and argumentations. Additionally, this review tries to evaluate the relevance of each source and, occasionally, provides the reader with recommendations or words of warning.

### 4.1 “SPACs: post-merger survival” (Vulanovic, 2017)

This paper intends to examine how institutional characteristics of SPACs are linked to their post-merger survival. It manages to generate new (at the time) data about the SPAC survival rates, suggests that some aspects of the SPAC post-merger performance are determined by its institutional and market characteristic, as well as extends general knowledge about overall SPAC post-merger performance.

In order to conduct the research, a unique sample of 105 SPACs listed in the United States is chosen. The final sample is comprised of SPACs that entered the market not earlier than in August 2003 and successfully completed the merger by the end of 2013. The sample is observed only in June 2016, allowing to observe all except one of these merged SPACs for at least three years following the merger consummation.

The research itself is divided into two sections. The first one describes the design and approaches used, as well as provides the reader with a rather broad analysis of the sample. This section consists of the following subsections: SPAC market overview, descriptive statistics of the sample, descriptive statistics of subsamples, hypothesis development and empirical procedures. The other part of the research “discusses results of empirical tests conducted to determine the impact of the set of institutional and market characteristics of SPACs on their post-merger survival likelihood” (Vulanovic, 2017, p. 692). This section is comprised of logistic regression results and multinomial logistic regression results.

A wide variety of different findings regarding the SPACs that were launched and then merged in the period between 2003 and 2013 is presented in this paper. The author concludes the paper with a discussion of the following key results and assumptions about their implication. Firstly, it is indicated that, in certain situations, the prospectus attributes defining SPACs, as well as market characteristics of pre-merger SPACs, predict post-merger survival. It is noted that the SPACs using transparent and attractive methods to tackle the founder's moral hazard and asymmetric information and to measure investment banking characteristics and post-merger performance perform noticeably better. Secondly, the SPACs failure rate is documented to be 58.09%, which is greater than any formerly registered failure rate in the literature discussing post-IPO survival. Thirdly, the post-merger buy-and-hold strategy is reported to generate an average return of -40% one year after the merger. This finding helps to better perceive post-merger SPACs valuation and leads the author to the assumption that some stakeholders are incentivized to approve bad acquisitions in order to collect their compensations or underwriting fees.

Additionally, it seems reasonable to mention some other findings regarding the performance of the SPACs from the sample. About 56% of SPAC IPOs are found to be oversubscribed. Furthermore, the mean initial SPAC IPO dilution for outside investors is registered to be 35.31% and explained by the issuance of warrants and SPAC founders maintaining at least 20% of the equity. Nonetheless, the average return on holding units starting from IPO until the announcement date is 12.85%. Besides, the average redemption threshold jumped from 20% in 2003 to 81.53% in 2013. Throughout that period, the average merger size was 1.96 times higher than the gross IPO proceeds.

The paper is definitely very insightful and covers a wide range of SPAC questions, but it should be noted that 75% of the SPACs in the final sample underwent IPO before 2008. It is a relatively old sample, considering that SPAC volumes plummeted in 2009 and reemerged later in 2010 with innovations to the area and fundamental adjustments to the structure (Murray, 2017; Gahng, Ritter and Zhang, 2021, p. 15).

## **4.2 “Emerging Trends in the Special Purpose Acquisition Company Market: Implications of Front-End IPO Underpricing” (Griffin, 2019)**

The study aims to examine the drivers of the substantial capital inflow in the U.S. SPAC observed the last few years by addressing the viability of the capital-raising method. The author complements the literature by discussing the U.S. SPAC profitability characteristics in the following ways. The paper compares the SPAC IPO first-day returns with those of traditional IPOs and examines how the availability of information factored into the price discovery affects the investment value uncertainty and profitability dynamics. Additionally, the study observes how the SPAC’s investor base and degree of underpricing might depend on the SPAC’s size.

The goal is approached in the following way. The research starts with a deep review of reading materials focusing on the mechanics of the SPAC’s capital raising method. It continues with an event study examining first-day returns of 74 SPACs appeared between January 1, 2010, and December 31, 2016. The event study distinguishes the results between SPAC IPOs that raised less than \$100m and more than \$100m. The necessity of the distinction is explained by the assumption that the investor base of larger SPAC IPOs may be constructed with larger institutional investors who, in turn, might have some influence on the underpricing.

The results reveal that SPAC IPOs experience greater levels of underpricing in comparison to traditional IPOs. It is assumed that the SPAC’s underpricing is a form of investor compensation for the risks associated with the absence of information about the potential target at the time of SPAC IPO that investors could factor into the price discovery. The traditional IPOs, on the contrary, deal with identified and scrutinized operational companies with real cash flows. Additionally, it is assumed that the sponsors have higher contributions into large sizes SPACs in order to manage the “trust-account-to-proceed” ratio, thus, making investments in larger SPACs more secure and further contributing to underpricing (as both small and big SPACs usually begin trading at similar prices per share).

Additionally, it is observed that that the SPAC IPOs raising above \$100m tend to experience greater underpricing than the ones raising less than \$100m. This phenomenon is explained by the fact that larger SPACs are associated with more powerful and demanding institutional investors who are able to negotiate more lucrative deals and secure their exit positions. Meanwhile, the average retail investors in smaller SPACs might not have the same privileges.

The author notes the difficulty of staging and running the test due to the sample imperfection and changing market conditions. It is said that the results might be skewed by “differences in the overall market not related to the specific SPAC” studied.

The author addresses the gap in research of the post-acquisition operating performance of firms acquired by SPACs as a potential area for further research.

Concluding with implication, the paper suggests that for “retail investors that desire exposure to a private equity-esque alternative investment, SPACs are just about the only way they can obtain that kind of exposure (assuming they do not meet the accredited investor criteria or have the significant capital necessary to invest in an actual private equity fund)”. At the same time, the author says that “since SPAC managers are not compensated for their work in searching for a suitable investment, the highest quality managers are not always the ones involved in SPAC management”. Therefore, the author claims that retail investors are “better off avoiding this market altogether”. Additionally, the paper suggests SPAC manager to “make concessions to investors if they hope to appeal to larger, more powerful institutional investors”.

This literature review believes that the following issues regarding the discussed paper should be addressed. Firstly, a considerable share of the argumentation is based on the non-confirmed assumption that average non-accredited investors can participate in SPAC IPO. In fact, retail investors usually have little access to the primary markets, while large institutional investors prevail in most SPACs (Klausner, Ohlrogge and Ruan, 2020). Secondly, it seems that the article misinterprets the SPAC capital structure, as it claims that SPAC managers (the sponsor) are not compensated. It is common knowledge that SPAC



sponsors are widely compensated and, furthermore, the promote often brings significant dilution.

Nonetheless, the observation that SPAC IPOs, especially with over \$100m in proceeds, experience higher underpricing than traditional IPOs might be applicable to the real world. Additionally, the unavailability of information about operational business might, indeed, influence underpricing.

Considering everything mentioned above, despite some inconsistencies and irregularities, the study reveals some observations that could be a base for further investigation. Nevertheless, this literature review advises the reader to pay extra attention to the explanations, claims and observation provided in the reviewed paper. Additionally, it could be said that the observed paper may serve as an example of the complexity and ambiguity of the topic, thus, proving the necessity for relevant academic research.

### **4.3 “SPAC IPO waves” (Blomkvist and Vulcanovic, 2020)**

The purpose of the following paper is to explain the time-series determinants of the fluctuations in the SPAC share and volume. It contributes to the current research by addressing two empirical questions about the demand fluctuations caused by interactions between investors and the U.S. SPAC in times of increased uncertainty and elevated levels of risk aversion.

In order to conduct the research, the authors “study the effect of market uncertainty (VIX) and time-varying risk aversion (variance risk premium — VRP) on the SPAC share and volume”. The study is conducted in two stages. The first stage is the principal analysis of the dependence of the “SPAC share” and the “SPAC volume” on VIX and VPR indices. The sample used in the first stage includes all SPACs introduced between Q3 2003 and Q4 2019 and distributes them over 66 quarters. The second stage searches for the link between the “Sponsor share” and the VIX/VRP. It is said that the “Sponsor share” data is only available during 57 quarters. The research conducted uses the following control variables: “average daily excess return on the CRSP index, change in the Fed Funds rate,

GDP growth, 3-month T-bill rate minus fed funds rate, the natural logarithm of the number of M&As, average underpricing and the Pastor and Stambaugh's (2003) liquidity premium”.

The results of the first study suggest that the “aggregated SPACs issuance is negatively related to VIX and VRP”. The findings are explained by the unwillingness of the risk-averse investors to join SPAC IPOs during times of high VIX and VRP. It is assumed that the investors hesitate to participate because of the SPAC opacity coming from the non-existent operational history. In other words, the analysis reveals that SPACs are more sensitive to VIX and VRP than traditional IPOs.

The second study reveals that the SPAC sponsors hold bigger portions of the SPAC warrants when VIX and VPR are high. Furthermore, it is uncovered that the “Sponsor share” level is negatively related to the number of SPACs listed. Therefore, it is assumed that by purchasing additional warrant sponsors increase their “skin in the game” in order to signal the SPAC's quality in times of high uncertainty and risk aversion.

To conclude, despite being very concise, the paper provides the reader with empirical observations of phenomena that might significantly affect profitability characteristics of the U.S. SPAC and be useful for both academics and field professionals.

#### **4.4 “A Sober Look at SPACs” (Klausner, Ohlrogge and Ruan, 2020)**

This paper analyzes the structure of SPACs and the costs built into their structure. The additional purpose of this work is to evaluate popular comments regarding the advantages of the SPAC vehicle and its performance. The findings contribute to the existing research by revealing the extent of costs inherited in the SPAC structure and extending general knowledge about the IPO structure. At the same time, the study finds that many existing claims about SPAC are, for the most part, overstated and shows that the U.S. SPACs perform worse than it is commonly believed.

The research design is complex and consists of 5 sections conducting research on different matters. The first section investigates what is SPAC in general by approaching it as a “circuitous path to the public markets”. It considers the SPAC IPO as a way to start a company that will later raise new funds to bring another firm public via a merger (or “IPO from a functional perspective”). The second section studies SPAC investment trends. The approach used looks to demonstrate that the gap between the SPAC IPO and the SPAC merger is much wider than redemption rates by investigating investors, redemption rates and refinance market exit. The third section researches the dilution and misaligned incentives inherent in the SPAC structure by investigating the sponsor promote and cash investment, underwriting fees and publicly held warrants and rights. The fourth section aims to identify the stakeholders bearing the SPAC costs by means of studying shareholder and sponsor returns. The fifth part evaluates various claims by investigating “regulatory preferences for SPACs over traditional IPOs”, “transactional benefits of SPACs over IPOs”, and the possibility of achieving SPAC advantages without the additional costs. The part is concluded with the presentation of Pershing Square Tontine Holdings as an exemplary exception proving that the accepted SPAC structure is wrong. The research is concluded by the discussion of necessary changes and policy implications to the current U.S. SPAC. The research is based on the analysis of 47 SPACs that merged in the period between January 2019 and June 2020.

The paper manages to present the reader with numerous observations and findings of SPACs. The main result extending the knowledge about the U.S. SPAC performance are presented further.

One of the key findings in the research addresses the SPAC cost structure. It is the first paper to identify the extent of dilution effects on merger costs. It is said that despite raising \$10 per share in the IPO, the median SPAC holds only \$6.67 in cash for each outstanding share by the time of the merger. The study is also one of the first to reveal that the redemptions amplify dilution effects. Trying to identify who bears the costs of dilution, the paper investigates returns of sponsors and shareholders and identifies that the SPAC shares tend to drop by one-third of their value or more within a year. The authors connect the underperformance to the aforementioned dilution and, later, conclude that the cost inherited in the SPAC structure is not being covered by the target company but rather

transform into losses of the non-redeeming SPACs. Consequently, “from the perspective of companies going public, ... SPACs have indeed been cheap”. Besides, the claims about price and deal certainty are found to be overstated. SPACs that are not able to meet the minimum cash requirement as a result of redemption sometimes either re-negotiate the definitive merger agreement at the very last moment or just fail. As a result, the study raises the question of whether the “cheapness” of the SPAC vehicle for companies going public is a sustainable situation.

Additionally, the study observes the misaligned incentives embedded in the SPAC structure. It is noted that sponsors and underwriters are usually well-compensated even for the poorly performing business combinations but lose money in case of a failed merger. Thus, even though they get higher returns on good deals, the main incentive is to close any merger, which is not in line with the goals of holding investors. Besides, the study compares the performance of the HQ SPACs to that of other SPACs, where HQ stands for “high-quality sponsor”. The definition “high-quality sponsor” implies that the sponsor/manager team is either “listed in PitchBook with assets under management of \$1 billion or more” or “a former CEO or other senior officer (for example, corporate president) of a Fortune 500 company”. The results show that HQ SPACs significantly outperform other SPACs with one-year mean returns of -6% and -57.3%, respectively but still considerably underperform the market. The investigation into the significance and incentives of SPAC sponsors raise some is found to be concerning. Therefore, the authors decide to address the issue and propose some changes and policy implications.

The investigation into SPAC investors revealed that there are two main groups of shareholders that come and leave at different times. The IPO shareholders are mostly institutional investors who redeem most of their shares before or at the merger and not interested in long-term investment. The mean annualized return for IPO redeeming shareholders is found to be 11.6%. Therefore, it is said that “most shareholders that invest in a SPAC’s IPO or that buy shares between its IPO and its merger play no role in the sole function for which SPACs are organized—to bring private companies public”, in other words, “they are not investing in SPACs as a form of private equity”. To replenish the capital losses, prior to the merger, SPACs seek additional funds from third-party investors or the sponsor. It is also mentioned that investors buying shares after the target announcement

are, practically, “investing in the target company, just as any investor would invest in any other public company”. To sum up, the findings support the belief that SPAC and merger are independent of each other.

Some of the paper’s proposals on SPAC market regulation that might seriously impact the SPAC vehicle profitability and design ask for various additional disclosure in the SPAC process and imposition of underwriter liabilities similar to those faced by investment banks.

It should be noted that SPACs chosen for the final sample merged between January 2019 and June 2020, meaning that the post-merger performance may have been exposed to extremely high levels of volatility in 2020 (due to the COVID-19 situation). Some scholars report that the performance of the U.S. SPAC is contingent on the VIX (CBOE Volatility Index) levels and equity market sentiment (Blomkvist and Vulcanovic, 2020; Bai, Ma and Zheng, 2021). Therefore, some of the results regarding the U.S. SPAC performance might be disturbed by extreme market conditions, thus, making the sample less representative of the wider population. Particularly, this literature review recommends paying extra attention to the results regarding post-merger performance and redemption patterns.

Furthermore, the method used to identify the “divestment” rates (the 90% mean and the 98% median) might be found peculiar by the reader for several reasons. The “divestment” rate is a measure that is supposed to quantify the extent to which “SPAC investors express confidence in the sponsor’s proposed deal by holding their shares through the merger and thereafter”. Firstly, the method accounts for 13F filers only who, according to the statistics from the paper, on average constitute only 79% of the shareholders. Secondly, the paper documents that the vast majority of 13F filers are the “SPAC Mafia”. Consequently, measuring the “divestment rate” by looking at the investors aiming to redeem their shares is questionable. Thirdly, it is said that “a 75% divestment rate means that 75% of the shares held by 13F filers prior to the SPAC’s merger announcement were either redeemed or sold to new investors after the prospective target was announced”. This statement may indicate that rather than looking at individual filers, the study examines the total “divestment” not accounting for the difference in holding volumes between investors. Fourthly,

the method compares the 13F filings made 6 months before the merger with the 13F filings reported after the merger. There is a chance that such measure does not account for the fact that investors, initially willing to hold the stock, might be forced by post-merger market conditions to change their decision. Moreover, due to the fact that 13F filing is reported with a time lag, the method accounts for mergers completed in the second half of 2019 only. This particular sample, consequently, might have experienced even greater exposure to the extreme market situation and rocketing volatility at the beginning of 2020. Therefore, the scholars researching redemptions and market exit patterns might consider further investigation of these observations.

It is also noteworthy that the approach measuring “the dilution that the sponsor’s promote imposes on a SPAC’s eventual merger” might be misleading for some as it comes after the discussion about the net sponsor’s compensation. It is important not to confuse those concepts, as the method does not account for the fact that sponsors often act as PIPE investors, sometimes buying private placement shares above their real value - at a nominal price (Gahng, Ritter and Zhang, 2021). Furthermore, sponsors’ compensations to PIPEs and non-redeeming investors through a transfer of shares, warrants and personal funds is not taken into consideration either. Additionally, it is not clear whether the methods used in the calculation only account for the initial promote share or all the shares the sponsor owns by the time of merger consummation. Therefore, this literature review recommends the reader to be highly attentive while reading the subsection 3. A.

In conclusion, it should be said this paper plays an essential role in the evolution of knowledge about SPACs and their performance. Besides addressing a wide range of issues regarding the SPAC cost structure and performance, it shows the U.S. SPACs from a new perspective. By stating that SPAC IPO and merger are almost independent events, this study abolishes SPAC’s private equity characteristics. Additionally, it addresses the overall sustainability and rationality of the SPAC vehicle. Finally, various peculiarities and open discussions in the paper provide a serious base for further research.

#### **4.5 “SPACs” (Gahng, Ritter and Zhang, 2021)**

The focus of this paper is to investigate the economics of main stakeholders (investors, operating firms, and sponsors), examine the SPAC structure, and explore the SPAC market evolution. The paper contributes to the literature by providing a better understanding of SPACs in four main ways. Firstly, the paper generates new data about investor returns through the SPAC lifecycle and interprets it in relation to the SPAC economic structure. Secondly, the research extends the knowledge about the SPAC cost structure and assumes the reasons why companies choose SPAC over traditional IPO. Thirdly, the new perspectives on the behaviour and incentives of sponsors and underwriters are presented to the public. Lastly, this paper describes how the SPAC market has recently evolved towards a more sustainable equilibrium of stakeholders’ returns and incentives.

For the empirical performance analysis, SPAC investor returns are investigated by dividing the lifecycle of SPACs into two periods – the SPAC period and the De-SPAC period. In the SPAC period, the investor returns are measured through the implementation of an ‘optimal redemption strategy’. According to the strategy, the investors are assumed to hold the units until “five trading days prior to the close of business consummation closing or liquidation” and then either sell or redeem depending on the market price. In the De-SPAC part, a buy and hold strategy is implemented. It assumes that the investors buy shares/warrants on the first day of trading as a merged company and hold for one or three years. The SPAC cost structure analysis addresses direct costs of underwriting and indirect cost embedded in dilution.

In order to conduct the research, the paper overall investigates 378 SPAC IPOs listed in the United States between January 2010 and October 2020, where Over-The-Counter (OTC) markets are not included. The sample choice is explained by the fact that the U.S. SPAC structure underwent fundamental changes in 2010. For the SPAC period returns, 114 SPACs going public between January 2010 and May 2018 are investigated. The De-SPAC period returns are studied by investigating 97 successful mergers from the previous sample and additional 17 SPACs that went public later and managed to consummate business combinations by September 2020.

This paper brings a considerable number of insights into the SPAC world. Many of the findings and theories developed are directly or indirectly related to profitability characteristics of the U.S. SPAC.

To begin with, the analysis of the SPAC period returns reveals the following facts. The average equally weighted annualized return on units is 9.3%, and the average IPO proceeds-weighted annualized return is 10.6%. Additionally, it is identified that even liquidated SPACs provide positive equally weighted returns of 2% on average. Furthermore, the worst-performing SPAC in the sample managed to generate a 0.51% return. As a result, the authors compare the SPAC unit with a default-free convertible bond but with extra warrants. The high performance during the SPAC period is explained by the fact that units provide an opportunity to become a shareholder of a freshly listed corporation with a money-back guarantee and significant upside potential. Importantly, the paper observed that the recent SPACs started experiencing a sudden jump (rather than a steady growth over months) in the unit price on the first trading day. The authors explain the phenomena by the fact that the markets have become more efficient and investors, finally, identified that SPAC units deliver lucrative securities and should worth substantially more than 10\$ (usually). This pricing development, similar to traditional IPOs, leaves fewer profits for the secondary market investors. However, the difference is that the SPAC IPO unit is initially undervalued due to the dilutive effects of the warrants. The paper indicates that the dilution caused by warrants reached 80% in 2018 and declined to 40% only in the second half of 2020.

In the post-merger period, in turn, the returns on the common shares and warrants are measured separately. This paper agrees with other literature that the average equally-weighted common share public investors returns are significantly negative (i.e., -15.6%) already in one year. However, it is noted that the public-cash weighted method delivers considerably better results (-4%) for the same period. This second method is assumed to be more representative of the real situation, as it considers SPAC economic structure and refers to the IPO proceeds after redemptions. It is reasonable because the statistics present that most of the shares are redeemed in underperforming SPACs, whereas the well-performing SPACs could keep most of the IPO proceeds. The warrants, on the other hand, are found to provide surprisingly high returns. The one-year buy-and-hold strategy shows



that the average equally weighted return on warrants is 44.3%, and price-weighted is 15.6%. Thus, the combined average return of the price-weighted warrants and the public cash-weighted shares could be close to zero (still falling far behind the market). Besides, it is worth mentioning that the overall post-merger survival rate is found to be well above 70% since 2013.

Additionally, SPAC is found to be a much more expensive version of going public than traditional IPO or direct listing. It should be noted that the study investigated the costs from a private operating company's perspective. In the period between January 2019 and June 2020, the SPAC merger costs 14.1% of the total IPO proceeds versus 4.8% for the traditional IPOs. Nevertheless, SPAC popularity only continues to grow, reaching a record pace in 2021. It is assumed that the SPAC advantages are embedded in its structure and economic roles of SPAC sponsors and SPAC IPO investors, as well as supported by regulations advantage ("safe harbor").

The results of this research also shed new light on the sponsors and underwriters, showing that their profits not as lucrative as it is often believed, especially for the weak deals. This paper documents that the sponsors, on average, forfeit 34% of their common share promotes and 42% of their private placement warrants in order to compensate non-redeeming investors and attract new capital. This paper also claims that numerous similarities between the SPAC sponsors and specialized private equity (PE) general partners (GPs) may, to some extent, justify the sponsor's high returns. Additionally, it is said that despite some perverse incentives of sponsors, they often buy private placement offers for \$5 million dollars or more. Consequently, "the higher value of the trust makes redemption slightly more attractive for the public investors, increasing the incentive of the sponsor to propose a good merger". Underwriters, in turn, usually surrender about 24% of their deferred commissions. It is also indicated that these sacrifices are higher when the merger proposal is not welcomed by the market, and the redemption levels are high.

Finally, the research document significant developments in the SPAC market. As investors became aware of SPAC advantages, the sponsors do not need to overcompensate the initial investors in order to raise sufficient funds in IPO. As a result, the capital structure

of SPACs is moving towards a “more sustainable equilibrium” by making units less attractive in the SPAC and more attractive in the De-SPAC period. The warrants tend to offer fewer shares and, consequently, becoming less dilutive.

It may be noted that the authors claim about increasing incentives of sponsors to propose a good merger when they have more “skin in the game” could be interpreted differently. It is common knowledge that SPAC liquidation makes a sponsor lose all the initial investments. Consequently, having more “skin in the game” may motivate sponsors to close a bad deal when they are not able to identify an attractive target or negotiate a good deal in time, rather than completely losing their investments. The fact that even poorly performing business combinations may bring the sponsor a lucrative compensation might be all the more reason for the sponsor’s perverse incentives.

To conclude, this paper addresses a remarkably wide range of questions regarding SPACs and discusses many topics that are related to the performance of SPACs. Besides the aforementioned results, the paper presents the reader with various observations, such as that higher redemption rates and the late timing of the merger closure are featured by lower SPAC and De-SPAC returns. It also conducts a deep investigation into warrants and their dilutive effects and returns that were never investigated so thoroughly before. Moreover, this paper uses the most recent SPACs in the investigation and turns the discussion about the post-merger performance and stakeholders’ incentives in a new positive direction, thus, making it the most relevant and relatable to the current situation in the U.S. market.

#### **4.6 “Reaching for Yield in the Going-Public Market: Evidence from SPACs” (Bai, Ma and Zheng, 2021)**

The main purpose of this paper is to address the reasons behind SPAC existence and its popularity. The authors contribute to the existing literature with a “unified explanation for the existence, time-series variation, and recent boom of the Special Purpose Acquisition Company (SPAC)”. Furthermore, this paper extends the knowledge about the crucial roles of various SPAC stakeholders. Finally, the paper provides arguments proving the

necessity to align SPAC managers with long-term investments and recommendations that could potentially improve SPAC structure.

In order to achieve the study goal, the following approaches are used. The authors build a theoretical framework discussing the difference between operational businesses and investors interested in SPACs and traditional IPO markets. They consider SPAC managers as non-bank certification intermediaries that create an opportunity for yield-seeking investors to safely become part of value-creating but risky operational companies. Then, their approach explains some observed empirical patterns of the U.S. SPAC market profitability and performance. The paper is concluded with a discussion about incentives aligning and SPAC structure recommendation. The sample used in the empirical analysis uses the U.S. SPACs from the first quarter (Q1) 2003 to the third quarter (Q3) 2020.

Some of the main findings regarding the U.S. SPAC profitability characteristics suggest that the companies that SPACs bring public those companies that on the quality and risk scales qualify as “Good Risky” (G/R). In particular, empirical analysis shows that the SPAC firms are smaller and have much lower revenue, cash holdings, and payouts than the traditional IPO counterparts. Nonetheless, SPAC firms have similar or higher growth rates in terms of revenue, market cap, assets, and innovative activity several years after going public.

The aforementioned observations produce two key implications. Firstly, it is decided that the IPO markets are segmented in a way that traditional IPOs bring public companies certified as “Good Safe” (G/S) versus G/R firms going public through SPACs. Secondly, it is assumed that the U.S. SPACs attract investors that look for good but risky investments that yield high returns. Thus, it also can be assumed that the SPACs’ share of IPO markets depends on the proportion of yield-seeking investors.

The segmentation of IPO markets implication is further supported in the following way. Firstly, traditional IPOs underwriters tend to avoid risky deals because they have certain liabilities (Section 11 of the U.S. Securities Act of 1933) for bringing firms public. At the same time, the sponsor can “bypass the underwriter liability as issuances in the reverse merger are not underwritten”. Secondly, the paper assumes that using the financial and

industry expertise, the sponsor acts as a non-bank certification intermediary. The assumption is based on the fact that the SPAC firms should be of lower quality and potential for growth than the IPO firms to confirm the “null hypothesis”, suggesting that the sponsor does not have a certification role. Besides, it is mentioned that sponsors are compensated with founder shares and, therefore, they might have aligned incentives with SPAC investors. Nonetheless, it is also noted later that the sponsor’s incentives are hard to evaluate, as the merger consummation can be prioritized over everything else.

The implication suggesting that the SPAC market attract yield-seeking investors is supported by the empirical analysis showing that the SPAC targets are found to be riskier than traditional IPO firms.

Another important finding of the research is that the equity market sentiment is strongly positively correlated with the SPAC activity. Furthermore, a one-standard-deviation increase in the equity market sentiment is deemed to cause a 6% rise in the SPAC market. It is said that “the equity sentiment measure explains 35% of the variation in the number of SPACs and 30% of the variation in the share of SPACs in the going-public market”. This observation proves that an increase in the proportion of yield-seeking investors explains the increase in the demand for value-generating risky firms, which are represented by SPACs in the IPO market. The relation between credit market sentiment and the SPAC issuance is found negative but statistically insignificant. The overall market sentiment does not seem to provide valuable explanations of the SPAC performance.

Lastly, the policy discussion identifies the following issues that may cause agency problems: asymmetric information between SPAC managers and public investors, the short-termism of myopic SPAC managers, and inefficient contracts. The authors suggest that “a stepwise release structure of SPAC founder compensation could help solve the inefficient contract problem and alleviate agency issues by better aligning the incentives of SPAC managers with those of long-term investors”. Additionally, the authors oppose the proposal of imposing underwriting liabilities from Klausner, Ohlrogge, and Ruan (2021) by saying that “increasing expected litigation costs for intermediaries in the SPAC market might not be optimal as it could disrupt the core economic function of SPACs of taking value-creating risky firms public”.

To conclude, this paper plays a significant role in the pool of academic research regarding the U.S. SPAC. It sheds new light on the significance of the SPAC mechanism as a vehicle that “completes the going-public market and solves this inefficiency of capital allocation”. The study also explains the recent surge and attractiveness of SPACs by identifying the elevated levels of profitability and the relation between yield-seeking investors and the vehicle. Additionally, the authors join the current policy debate and address the agency problems.

#### **4.7 “The Tesla Effect and the Mispricing of Special Purpose Acquisition Companies (SPACs)” (Saengchote, 2021)**

The purpose of the paper is to investigate the investment dimension from a behavioural finance perspective. The author contributes to the knowledge about the U.S. SPAC with a study addressing elevated issuance and profitability of SPACs in 2020. Additionally, the paper discusses the “EV SPAC bubble” and proposes the “Tesla effect” theory that may explain some behavioural patterns of the electric vehicle (EV)-related SPAC investors.

In order to investigate the SPAC boom and estimate the impact of EV linkage on SPAC prices, the study conducts several observations followed by a multivariate analysis looking into the “difference-in-differences”. It starts from forming a sample of 276 exchange-traded SPACs that went public between January 2018 and December 2020. Further, it differentiates 30 SPACs that enter into a definitive agreement with EV targets. The analysis itself also consists of several parts. The first part presents quarterly summary statistics. The second part observes the average SPAC unit price 50 days before and after the combination announcement. The observation includes all SPACs from 2019 and distinguished EV and Non-EV SPACs from 2020. The third part shows the average SPAC unit price 50 days prior to the merger in the same manner. In the last part, the study conducts the price regression analysis.

The main observation from the summary statistics is that EV SPACs experience a much greater average unit price increase than Non-EV SPACs after the target announcement,

while the average pre-announcement unit price is close to 10 for both EV and Non-EV SPACs. Additionally, the median time required for a SPAC to enter in a definitive agreement has been decreasing over the past few years. For comparison, it took a median of 715 days for SPAC IPOs from Q1 2018, whereas Q1 2020 median was already 213, and it went down to 79 days in Q4 2020.

Visualization of SPACs from 2019 and distinguished EV and Non-EV SPACs from 2020 reveals two main findings. Firstly, it becomes obvious that SPACs from 2020, especially the EV SPACs, experience considerably greater unit price increase at the period between target announcement until the business combination. The author refers to the results as “the anomaly in the SPAC market in 2020”. Secondly, the average EV SPAC unit price several days before the announcement and before consummation is almost twice higher than that of the Non-EV SPACs.

Finally, the multivariate analysis reveals several additional patterns. It confirms that the unit price, on average, is higher after the target announcement. Additionally, the coefficient of SPAC unit prices to NASDAQ is stronger after target announcement as well (higher for EV SPACs). Next, the author limits EV to vehicle manufacturing and energy in a way making targets directly comparable with Tesla’s offerings. As a result, the EV sample decreases to 22 SPACs. This change in the sample increases the post-announcement price difference between Non-EV SPACs and EV (vehicle & energy) even further, indicating that the EV boom may be closely related to the rise of Tesla. Lastly, the analysis looks at “Thematic” SPACs related to other “targets that popular among investors, namely cannabis- and space-related”, thus, limiting the sample to 10 issuances. The results show that for “Thematic” SPACs, coefficients are indistinguishable from zero.

The author interprets the fact that many SPACs in 2020 trade above the initial price (especially EV SPACs) as “mispricing”. The argumentation supporting this interpretation is that because SPACs are “pools of capital with known value to be deployed, their exchange value is already predetermined prior to merger”. The paper explains that overpayment with a suggestion that investors might have a poor understanding of SPAC as an investment opportunity. Additionally, it is noted that the “anomalous mispricing” of the EV SPACs is closely related to the rise of Tesla stock in 2020. In the end, the author warns

that, while the SPAC market grows rapidly and sponsors quickly secure deals, there could be considerable financial damages caused by mispricing and misunderstanding. Therefore, the paper calls for further research on this problem.

It should be noted that such the “mispricing” argumentation might not account for the fact that SPACs may intentionally underprice the issue to attract less risk-averse yield-seeking investors (Bai, Ma and Zheng, 2021). Additionally, the capital value might change drastically prior to the merger consummation due to redemptions and PIPE deals. Nonetheless, considering mentioned in the study abnormality of trading price spikes prior to the merger and inferior performance after the merger, mispricing may indeed be one of the explanations for the abnormal profitability.

Overall, the article presents the reader with the behavioural finance perspective on some profitability characteristics of the U.S. SPAC. In particular, the paper implies that the “SPAC frenzy” in 2020 may be caused by investors’ low competence rather than a discovery of the exceptional value of the vehicle. In addition, it reveals an abnormality of returns for the EV SPACs in 2020 and explains it with the proposed “Tesla effect” theory. Therefore, this literature review acknowledges the input to the academic research and recommends the article paper for familiarization.

## **5 DISCUSSION**

The Section 5 of this literature review continues the analysis with a discussion of the prevailing concepts, attitudes, questions, debates and gaps identified in the recent academic papers regarding the U.S. SPAC profitability characteristics. In order to keep the discussion concise, this paper distinguishes the leading themes that constitute the following subsections. Each of the following subsections attempts to further interpret the results and consider the implications.

### **5.1 Stakeholder characteristics and incentives**

The main SPAC stakeholders are a sponsor, underwriters, various investors, an operational company.

#### **5.1.1 Sponsor and underwriters**

To begin with, the reviewed literature pays great attention to SPAC sponsors and underwriters (Vulanovic, 2017; Klausner, Ohlrogge and Ruan, 2020; Bai, Ma and Zheng, 2021; Gahng, Ritter and Zhang, 2021). The reason for high interest in the characteristics of sponsors is explained by several factors. Firstly, the SPAC vehicle by itself is fully dependent on the sponsor, especially since the abandonment of shareholder voting (Gahng, Ritter and Zhang, 2021). Secondly, the fact that other stakeholders are directly influenced by the incentives and experience of sponsors and underwriters raises concerns about agency problems.

The sponsor is often viewed as a team of c-suite well-known experienced managers. Klausner, Ohlrogge and Ruan (2020) reveal that it is not always the case and present the observation that, on average, SPACs with “high quality” sponsors significantly outperform those with less experienced managerial teams. Sponsors look for underwriters, attract funding, negotiate a deal, secure more funding and close deal. Furthermore, there is an opinion that sponsors act as a non-bank certification intermediary in order to bring to



the segmented IPO market “good and risky” firms (Bai, Ma and Zheng, 2021). This ubiquity of the sponsor role creates an asymmetry of information and potential agency problems.

Additionally, sponsors are compensated upon merger consummation. This fact raises concerns about sponsor incentives. It is acknowledged that sponsors might be motivated to bring “bad” companies public in order to get their compensation and secure their initial investment (Klausner, Ohlrogge and Ruan, 2020; Bai, Ma and Zheng, 2021). Nonetheless, there is also an opinion that sponsors are motivated to bring good companies public because the extent of compensation depends on the firm’s performance (Bai, Ma and Zheng, 2021; Gahng, Ritter and Zhang, 2021).

The underwriting role in the U.S. SPAC is usually taken by large investment banks and, partially, sponsors. The underwriter takes a significant fee for SPAC issuance and merger. The important feature is that underwriters are usually paid in two instalments, and the second payment is received upon merger consummation. Therefore, there is a concern that underwriters might conduct less strict due diligence in order to bring some company public and get the money (Klausner, Ohlrogge and Ruan, 2020; Bai, Ma and Zheng, 2021; Gahng, Ritter and Zhang, 2021).

As a result, all three sources discussing sponsor roles emphasize the necessity to ensure alignment of incentives of sponsors, underwriters, and other stakeholders. However, they provide distinct suggestions on the matter. Klausner, Ohlrogge and Ruan (2020) propose to improve the situation, mostly by tightening SPAC regulation, or rather by abandoning the SPAC vehicle and focusing on improvement of traditional IPOs and direct listing characteristics. Nevertheless, this opinion is not shared by the other scholars. Bai, Ma and Zheng (2021) agree on the benefits of the stepwise founder compensation but believe that the other aforementioned propositions could disrupt the core function of SPACs - taking value-creating risky firms public. Furthermore, Gahng, Ritter and Zhang (2021), while acknowledging that sponsors may overcompensate initial investors to attract more capital, believe that sponsors in the recent SPACs are incentivized to bring good firms public. They explain it by the fact that recently sponsors started having more “skin in the game” through the purchase of warrants and by becoming PIPE investors. Additionally, they

observe positive trends in the cost structure of the recent SPACs. Therefore, the authors believe that SPACs may come to a more sustainable equilibrium without any interference. This literature review assumes that the difference in suggestions may be explained by the discrepancy in authors' perception of the economical roles of SPACs.

### **5.1.2 Investors**

The investor group is represented by initial investors, secondary market pre- and post-merger investors, and third-party private placement investors.

The literature review results indicate that the initial investors base consists primarily of institutional investors and sometimes exceptionally wealthy individuals seeking high-yield investments with relatively medium risks (Klausner, Ohlrogge and Ruan, 2020; Bai, Ma and Zheng, 2021). Nonetheless, the reviewed sources assign different roles to those investors. Klausner, Ohlrogge and Ruan (2020) come to a conclusion that SPACs do not have private equity characteristics as initial investors, in their vast majority, are seeking to profit on selling or redeeming their common shares before the merger and, potentially, obtain additional returns on warrants. The other paper sticks to the idea that the initial investors use SPACs as an opportunity to acquire (G/R) firms that are not present in the traditional IPO market. Additionally, there is an opinion that bigger investors incentivize underpricing of SPACs to gain more on the price elevation (Griffin, 2019).

The group of secondary market investors is only slightly discussed in the context of SPAC dilution and post-merger profitability issues. It is only mentioned that they are "investing in the target company, just as any investor would invest in any other public company" (Klausner, Ohlrogge and Ruan, 2020). Therefore, the constitution, roles, and incentives of secondary market investors as SPAC profitability characteristics might require further addressing.

The third-party private placement investors are invited to participate in the SPAC when the sponsor needs or decides to raise additional capital for the merger consummation. The group is also represented by institutional investors and exceptionally wealthy individuals (Klausner, Ohlrogge and Ruan, 2020; Gahng, Ritter and Zhang, 2021). The question

whether these investors support the target company after the merger stays opened. Nonetheless, the fact that being compensated mostly with common shares they invest in the identified target might indicate their interest in overall business combination performance; unless the real aim is to negotiate a lucrative deal and acquire shares below the fair value (Griffin, 2019; Klausner, Ohlrogge and Ruan, 2020; Gahng, Ritter and Zhang, 2021).

### **5.1.3 Operational company**

An operational company is a business looking to go public through a SPAC vehicle. Bai, Ma and Zheng (2021) observe that SPAC firms are smaller and have much lower revenue, cash holdings, and payouts than the traditional IPO counterparts. Additionally, the paper finds that the average SPAC IPO firm is “good and risky”. Operational companies might be incentivized to choose SPAC over traditional IPO due to potential gains that are discussed in the following subsection.

## **5.2 Profitability observations**

To begin with, the profitability characteristics of the pre-merger period are fundamentally different from those of the post-merger period. Therefore, profitability observations are divided into two parts. Additionally, it would be wrong to say that the operational firm profits directly from SPAC, but the vehicle bring some actual and potential gain. That is why the way operational businesses profit from the U.S. SPAC is discussed separately.

### **5.2.1 Pre-merger SPAC profitability**

The only stakeholders who can potentially get returns during this phase are initial investors, secondary investors, and underwriters. The literature review does not provide any empirical observations of profitability on secondary investments during the pre-merger state. Nonetheless, some sources assume that the secondary investors have little to gain or suffer substantial losses if they choose not to redeem their shares (Vulanovic, 2017; Griffin, 2019; Klausner, Ohlrogge and Ruan, 2020).

The underwriters usually charge a certain percentage in fees, usually between 5%-5.5%, which is slightly lower than in a traditional IPO. The fee is paid in two instalments, where the second one is executed upon the merger. The discussion, though, revolves around the fact that the fees are contingent on the SPAC IPO proceed, while the SPAC IPO funds are significantly lower by the time of the merger (a result of redemptions). Klausner, Ohlrogge and Ruan (2020) identify that the effective median underwriter compensation is 16.3%, and together with Gahng, Ritter and Zhang (2021), agree that the effective cost of underwriting is higher in SPACs.

Significant positive returns on the initial investment observed in 6 out of 7 papers, while the left one did not provide any empirical findings concerning the matter. Furthermore, the common opinion is that initial investors are overcompensated. Nevertheless, it would be wrong to claim that the papers agree on this subject. The papers look at the same issue from different perspectives, use different methods and, sometimes, observe different intervals (e.g. prior- and post-announcement of the target or before merger consummation). Most importantly, the argumentation is different. For example, Klausner, Ohlrogge and Ruan (2020), and Gahng, Ritter and Zhang (2021) both deem the pre-merger period as risk-free. Nevertheless, the first paper believes that the overcompensation is a counter-measure to compensate investors for the embedded dilution and incentives them to hold shares through the merger. The second paper, in turn, assumes that the pre-merger period is independent of the post-merger period and, therefore, underpricing may be just a measure to add one unnecessary step (the SPAC IPO) and create potential returns for the sponsor. Vulcanovic (2017), in turn, does not provide any argumentation, as the study is focused on the post-merger period. Alternatively, Griffin (2019) and Bai, Ma and Zheng (2021) relate SPAC IPO underpricing to the different risks associated with SPACs: absence of target information and theory about the IPO market segmentation. In addition, Saengchote (2021) associates the elevated profitability with “mispricing” and low competence of initial investors, thus, calling the situation abnormal (especially in the EV industry). This literature review assumes that each of the argumentations might be applicable to some extent. Nevertheless, it is impossible to identify the extent without a proper empirical study.

### 5.2.2 Post-merger SPAC profitability

The post-merger period, in turn, is a period where all the stakeholders can, potentially, profit or suffer losses.

The ones who almost always significantly profit are the sponsor and the underwriter, as they receive compensations upon completion of the merger (Vulanovic, 2017; Klausner, Ohlrogge and Ruan, 2020; Bai, Ma and Zheng, 2021; Gahng, Ritter and Zhang, 2021). Nevertheless, while Klausner, Ohlrogge and Ruan (2020) are of the opinion that the sponsor and underwriters are vastly overcompensated, Gahng, Ritter and Zhang (2021) mention the downwards trend in their compensations and identifies some indirect way sponsors and underwriters use to compensate other stakeholders. Furthermore, this literature review assumes that the two paper initially choose different perspective: while both papers identify some new issuances of SPACs that distribute profits more evenly between stakeholders, in contrast to the second paper, the first one describes it as an exception from the rule rather than a new trend.

Regarding SPAC investors, the review literature distinguishes three main categories: common shareholders, warrant/right holders, or holders of both. Vulkanovic (2017) and Klausner, Ohlrogge and Ruan (2020) do not account much for warrant/right holders and, therefore, observe significant negative returns in the period. Gahng, Ritter and Zhang (2021) use a different approach and present the reader with a different opinion. While using equally weighted mean, they also identify significant negative returns of common shareholders; it is emphasized that the cash-weighted approach is more appropriate and the results are much more promising (slightly negative returns). Most importantly, though, Gahng, Ritter and Zhang (2021) analyze returns of warrant investors and identify average equally weighted returns of 44.3% and price-weighted of 15.6%. Thus, their conclusion is that the buy and hold strategy brings about 0 returns to investors that hold both common shares and warrants. Besides, it is also found that the overall survival rate of the U.S. SPACs is well above 70% since 2013 versus 41.91 identified by Vulkanovic (2017). Therefore, this literature review emphasizes two ideas. Firstly, returns vary significantly

depending on the investment construction and SPAC performance. Secondly, the real returns might be not as bad as it was assumed since 2017 when Vulanovic published his research.

Additionally, the Section 1 of this literature mentions the Nasdaq report revealing that the average one-year post-merger returns are significantly positive in 2021. There, it should be mentioned that the findings from the reviewed literature regarding post-merger profitability might have become partially irrelevant. Another possible explanation could be that Nasdaq uses a different analysis approach or the published data is wrong.

### **5.2.1 Gains of operational company**

The literature review reveals that the gains of an operational company are not as plain and hard to calculate. Nevertheless, the following potential gains are discussed.

Firstly, both SPACs and IPO provide the operating company with capital and access to the public market (exit opportunity and public debt). Nevertheless, the embedded underpricing of traditional IPOs and the complex cost structure of SPACs make the evaluation of gains fairly difficult (Klausner, Ohlrogge and Ruan, 2020; Gahng, Ritter and Zhang, 2021). Nonetheless, not assuming opportunity costs, well-performing SPAC with a promising target and high-quality managers can bring to the firm very substantial capital at the estimated fair value (Vulanovic, 2017; Klausner, Ohlrogge and Ruan, 2020; Gahng, Ritter and Zhang, 2021).

Secondly, it is agreed that the U.S. SPAC is less scrutinized than traditional IPOs and, therefore, is advantageous (Klausner, Ohlrogge and Ruan, 2020; Bai, Ma and Zheng, 2021; Gahng, Ritter and Zhang, 2021). In particular, the sponsor is not liable for SPAC's poor performance, and the operating companies can reveal insights and forecasts to the private investors with no regulatory consequences. Therefore, SPACs provide the opportunity for companies that are hard to evaluate due to the ambiguity and complexity of their operations.

Thirdly, there is a common belief that SPACs are cheaper, quicker and bring more certainty to the operational company. Nevertheless, this literature review reveals that those assumptions may be overstated. The cost of going public through SPAC is discussed in the following subsection, and it was already mentioned that effective underwriting fees are higher for SPACs, while initially, SPAC IPO is cheaper. Regarding the timeframe, Gahng, Ritter and Zhang (2021) agree with the statement, while Klausner, Ohlrogge and Ruan (2020) argue that in certain situations, SPACs take longer than traditional IPOs and mention that the merger timeframe and capital, despite being agreed upon, might have to be changed and renegotiated due to redemptions.

Finally, there is an open debate whether SPACs constitute private equity characteristics. Gahng, Ritter and Zhang, 2021 accepts the possibility that initial investors, PIPEs and the sponsor can contribute to the operating company with their “names” and managerial experience. Klausner, Ohlrogge and Ruan, 2020, on the contrary, that pre-merger stakeholders mostly leave the company through redemption or sale before or right after the merger.

### **5.3 Capital and cost structure**

It was long thought that SPACs are cheap, but the recent research reveals that the implicit costs built into SPACs obfuscate the real costs of listing, which can be significantly higher than traditional IPOs (Vulanovic, 2017; Klausner, Ohlrogge and Ruan, 2020; Gahng, Ritter and Zhang, 2021). The literature agrees on the fact that a substantial portion of all costs is created by the dilution hidden in the U.S. SPAC structure. Nonetheless, the papers provide a variety of different (sometimes conflicting) perspectives and ideas regarding origins, consequences, and the extent of dilution.

To begin with, the authors agree that some of the key dilution sources are the sponsor’s promote and warrants. Additionally, the two more recent papers also note that redemptions amplify the dilution, whereas Vulkanovic (2017) does not indicate it anywhere. This literature review explains the gap by the fact that Vulkanovic (2017) used an older sample that included many SPACs that still had low redemption thresholds and shareholder voting. Lastly, Klausner, Ohlrogge and Ruan (2020) and Gahng, Ritter and Zhang (2021)

also discuss the deferred underwriter's fee as an additional reason for dilution. Nonetheless, the papers do not come to a consensus regarding the magnitude of dilution and victims.

Vulanovic (2017) mentions general dilution effects on the outside investors (35.31%). Klausner, Ohlrogge and Ruan (2020), assigning the dilution mostly to the promote and redemptions, assume that non-redeeming investors bear almost all the costs. Gahng, Ritter and Zhang (2021), in turn, slightly touch all the aforementioned reasons of dilution but in detail discusses the effects of dilution caused by warrants (average 40-80% per unit). They seem to be looking at the consequences from a broader and more optimistic perspective. Firstly, they observe that initial investors recognized the lucrative unit compensation making SPAC vehicle more popular. As a result, sponsors have less incentive to overcompensate initial investors and downgrade warrants, thus, reducing the dilution. Secondly, the authors believe that the dilution costs have been distributed more evenly in the recent SPACs, as sponsors and underwriter intentionally reduce their profits and distribute them among non-redeeming investors and PIPEs. Additionally, the paper presumes that SPAC costs are also distributed to the operational business, thus, opposing the opinion of Klausner, Ohlrogge and Ruan (2020) that SPAC IPOs are cheaper than traditional IPOs.

Considering the disagreement in the key research addressing SPAC dilution effects, it seems reasonable to continue observing the market and further investigate the matter in order to have a better understanding of the cost dispersion trends and their influence on the SPAC performance.

## **5.4 Market sentiment**

The reviewed literature also pays special attention to the ways market situation and beliefs affect SPACs (Blomkvist and Vulanovic, 2020; Bai, Ma and Zheng, 2021; Saengchote, 2021).

Two papers identify a correlation between market sentiment and SPAC IPO issuances. According to Blomkvist and Vulanovic (2020), SPACs issuances are negatively related



to overall market sentiment (VIX and VRP). The authors explain that SPACs might be precepted as a more opaque investment than traditional IPOs due to non-existent operational history and, therefore, avoided during times of high uncertainty. Interestingly, Bai, Ma and Zheng (2021), using a similar sample, found no indicators that overall market sentiment explain market issuance. However, they revealed that the equity market sentiment is strongly positively correlated with the SPAC activity, thereby explaining 35% of the variation in the number of SPACs and 30% of the variation in the share of SPACs in the going-public market. They explain the strong correlation by the fact that by providing value-generating firms, SPACs complete the IPO market and attract more investments when the proportion of risk-averse yield-seeking investors increase. It is interesting how, despite conflicting observations and different perspectives, the two papers might indicate that SPACs are considered to be opaquer and attract less risk-averse investors. Bai, Ma and Zheng (2021) also mention that the relation between credit market sentiment and the SPAC issuance is found negative but statistically insignificant.

Additionally, the literature provides some observation of behavioural patterns in the SPAC market. Blomkvist and Vulcanovic (2020) notice that in times of high uncertainty and risk aversion how sponsors increase their “skin in the game” in order to signal the SPAC’s quality to potential investors. Saengchote (2021) observes abnormal returns (“mispricing”) on the EV SPACs and links the finding with the rise of Tesla stock in 2020 (“The Tesla effect”) and explains the phenomenon by investors’ irrational behaviour (“misconception”) and weak understanding of the SPAC vehicle.

## **5.5 Implications**

Despite the fact that each of the reviewed papers provided valuable contributions to the field, there are numerous questions left without any proper answer. Additionally, the review process revealed a handful of open debates and conflicting ideas in the literature. Furthermore, a wide variety of approaches used to address similar issues might characterize the U.S. SPAC as a fairly ambiguous and complex topic, meaning that media coverage alone is not enough, and academic research is required. Lastly, it was observed that the U.S. SPAC is constantly changing, whereas the research is not able to keep up simply because it takes time to collect and analyze enough sensible data in order to generate

statistically significant results. Therefore, this paper proposes an agenda for further research and tries to encourage scholars to consider the U.S. SPAC vehicle as to the potential area of their scientific work.

## **5.6 Additional commentaries and further research agenda**

The developed interpretations and implications create a wide range of recommendations for further investigation in order to answer the last research question. Additionally, some of the observations motivated this paper to develop extra hypotheses (or rather assumptions) with the sole purpose of proposing an agenda for further research.

### **5.6.1 Hypotheses**

The first hypothesis attempts to address the claim, according to Klausner, Ohlrogge and Ruan, (2020, p. 39), that “SPACs’ post-merger shareholders are footing the bill for sponsors’, targets’, and redeeming IPO-stage investors’ good fortune”. It should be noted that the developed hypotheses deliver potential perspectives with the sole purpose of generating agenda for further investigation.

To begin with, Gahng, Ritter and Zhang (2021, p. 24-25) say that it is normal for low-performing SPACs to have an almost 100% redemption rate. As a result, there may be very few non-redeeming investors left in most poorly performing SPACs. Additionally, the same paper reports that, due to the unit structure, even the worst deals used to generate positive results in the pre-merger stage and recently started compensating holding investors. Therefore, the post-merger fall might be less severe for non-redeeming investors. Nonetheless, it might be that the most significant part in this is that, as reported by Klausner, Ohlrogge and Ruan (2020); and Gahng, Ritter and Zhang (2021), rare well-performing SPACs generate extreme post-merger returns. Therefore, remembering that Bai, Ma and Zheng (2021) qualify SPAC investors as seeking “good and risky” high-yield opportunities, and considering the aforementioned investor’s protection; this paper proposes that there is a chance that holding investors keep well-diversified SPAC portfolios, hoping that the potential profits generated by few well-performing targets might outweigh all the losses. In other words, recent SPACs did not have any redemption thresholds, and,

therefore, there is a chance that rather than being incompetent, initial holding investors see some potential benefits in the profitability characteristics of SPACs. Thus, this study promotes investigation into the constitution of non-redeeming investors to the agenda of potential research.

The other part of the post-merger investors consists of private placement investors and secondary market investors. This literature review proposes that there might be a chance that some of those post-merger period shareholders are long-term quality investors conducting fundamental financial analysis of each potential target. Therefore, they would not be involved in the SPAC IPO when the target is not announced. Instead, they would believe in the long-term potential of their investment and, possibly, support the company through shareholder activism in order to secure that growth in the post-merger period. The obvious question arising from the hypothesis is why some shareholders would join after business consummation rather than in the period between announcement and merger. This literature review does not have a clear answer to this question but assumes that long-term investors could wait to avoid externalities in case of merger failure. Alternatively, long-term investors could be anticipating the price correction that usually happens after the merger. In any way, this literature review highly recommends including characteristics of post-merger investors in the further research agenda as well.

The second hypothesis discusses mentioned by Vulanovic (2017) trend to raise and remove redemption thresholds in the recent SPACs. There is an opinion that higher threshold levels make SPACs more appealing to potential IPO investors. Nevertheless, the trend is puzzling, as redemptions tend to amplify dilution effects that are adverse for the investors in common shares. It is possible that the higher redemptions threshold might increase the merger chances, as the sponsor becomes less dependent on the IPO investors' capital. Nevertheless, it is only true if the sponsor is able to attract enough external funding and meet the minimum cash requirements. Besides, even assuming that the high redemption thresholds increase the sponsor's chances to "pull off" a merger, the potential targets engaging with such SPACs risk receiving significantly fewer funds than expected as a result of many redemptions. Nevertheless, the completion of a poorly performing business combination with high redemptions level has both negative and positive implications to each party involved with the SPAC. For example, the only way for the sponsor to avoid the

loss of initial investments is to complete the merger. Moreover, the high redemption thresholds provide initial investors with significant down-side protection, thus, attracting less risk-averse investors who might be willing to speculate on the warrants rather than seek long-term investments. It should also be mentioned that some companies desperately pursuing public presence and additional capital might be willing to accept significant underpricing and risks. Thus, this literature review proposes that investigation of the possible reasons behind the trend towards higher redemption thresholds might significantly improve our understanding of stakeholder true incentives.

### **5.6.2 Further research agenda**

Considering the identified conspicuous ongoing debates and non-researched areas, this literature review manages to select many themes for further investigation. Additionally, considering the fact that the U.S. SPAC is constantly changing, and the reviewed literature has many conflicting ideas, it might be worth reproducing all of the aforementioned empirical studies. Thus, the proposed further research agenda includes the following themes:

- the rationality of the U.S. SPAC vehicle,
- the ongoing debate around SPAC's private equity characteristics,
- misaligned incentives and potential agency problems,
- self-regulation of sponsor and underwriter compensations,
- constitution of various stakeholder groups,
- sustainability of distribution of costs and profits,
- profitability of stakeholders in different phases,
- underpricing characteristics,
- dilution characteristics,
- market sentiment effects on the U.S. SPAC,
- competence and awareness of SPAC stakeholders,
- level of satisfaction of operational companies with the U.S. SPAC vehicle,
- secondary market investors in SPAC,
- constitution and incentives of non-redeeming investors,
- characteristics of post-merger investors,
- reasons behind the trend towards high or no redemption thresholds.

## 6 CONCLUSION

The leading question of this paper asked for the evaluation of the current state of academic research regarding profitability characteristics of the U.S. SPAC. This literature review managed to identify 7 relevant scholarly articles and determined that the observed sources alone are insufficient to holistically grasp profitability characteristics of the U.S. SPAC, thus, revealing the scarcity of the research.

The evaluation is validated with the answers to the additional research questions. In particular, conducting individual narrative analysis of each source, this literature review identified the main concepts and attitudes. Additionally, the research addressed some particularities of the conspicuous approaches and revealed that the authors used a variety of distinct methods in order to explain analogous issues. Further, the paper congruently discussed the findings and revealed prevailing today debates and opened questions. The discussion aided to discover the many conflicting concepts and ideas that indicate probable gaps and potential irrelevancies in the current state of academic research. Finally, using the aforementioned interpretations and implications, this literature review succeeded in developing the agenda for further research.

Understandably, this study is not flawless and has some weak sides. It should be mentioned that the scope of the research is limited to the identified accessible sources and individual selection bias. Additionally, due to the qualitative nature of the narrative approach, interpretations, implications, and conclusions are drawn with some degree of subjectivity. The review also could not get access to some existing papers. Finally, the research discussion is mostly tied to the reviewed (final sample) sources. Therefore, the conclusions about the irrelevancy of the synthesized knowledge are in the vast majority based on the conflicts and inconsistencies from within the reviewed literature rather than from beyond.

Nonetheless, the reliability and validity of the research were ensured. Firstly, the data collection process was conducted rigorously and through many iterations. None of the restricted papers appeared during the snowballing. Each of the steps taken is described and explained in the Section 3. Therefore, it should be possible to replicate the process.

The results of further replications, of course, will differ with the issuance of new academic articles, but it does not affect the reliability of this research as it was designed specifically to evaluate the current situation and recommend immediate actions. Secondly, this literature review attempted to reduce the potential bias by not embracing any opinions and reflecting original meanings and perspectives from the reviewed sources. The narrative method that was chosen for the data collection and analysis, in turn, allowed to critically examine topics that were previously researched from different perspectives. Thirdly, this literature review successfully addressed all of the research questions and, besides proposing the research agenda, it even attempted to cultivate some new hypotheses to motivate further studies. Lastly, it should be taken into consideration that the sole purpose of this study was to evaluate and review the current state of the academic research. Therefore, the aim of this study approves for the fact that the results and the main discussion are based predominantly on the data abstracted from the final sample of the scholarly papers. To summarize, the study seems to be reliable and valid if viewed as a reflection of the current state of academic research rather than a representation of state-of-the-art knowledge.

As it was mentioned, the academic papers currently contributing to the field are not sufficient considering a variety of identified conflicts, debates, open questions, as well as trends that require further observation as the U.S. SPAC develops further. Consequently, this paper proposed an agenda for further research regarding the profitability characteristics of the U.S. SPAC. However, the review process crossed some discussions addressing agency problems and regulatory matters that might have serious implication beyond the profitability aspects. Therefore, this paper also emphasizes the overall necessity for further research of the U.S. SPAC within and beyond the profitability settings.

To conclude, the main purpose of this study is successfully achieved through a semi-systematic review of the scholarly papers discussing various aspects of the U.S. SPAC profitability and the results, indeed, assist the further investigation of the current state of academic research regarding the U.S. SPAC.

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## **APPENDIX**

According to the Reuters' article reported by Murugaboopathy (2021), the SPAC global deal volumes reached \$157 billion in 2020. SPAC IPO Transactions Statistics by SPACInsider (2021), in turn, published that gross proceeds from the U.S. SPAC deals amount to over \$ 83 billion the same year. Therefore, it is safe to assume that the U.S. SPAC deal volumes constitute more than 50% of the global result.