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Going Public During a Pandemic: SPACs vs IPOs

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ABSTRACT

The listing of a company through a Special Purpose Acquisition Company (SPAC) can offer several benefits compared to the traditional IPO process. However, there is no evidence on whether macroeconomic factors affect the choice between SPACs and IPOs. To fill this gap, we study a global sample of 7,953 observations over 18 years, finding that the share of SPACs is negatively correlated with long-term interest rates. We also found that market sentiment has a strong positive impact on the share of SPACs, while market performance and market development do not have a significant effect. During the pandemic, listing with a SPAC was more likely, as companies prioritised speed and took advantage of market opportunities, particularly in the Technology and Healthcare sectors.

Keywords: SPACs, IPOs, Waves, Covid-19, Interest rates, Market sentiment

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1 Introduction

Special Purpose Acquisition Companies (SPACs) are established to raise capital through an IPO with the sole aim of acquiring a private company and making it listed. They are an exit opportunity that is an alternative to the standard IPO process and the M&A route. An IPO is an effective way for companies to raise significant capital and increase brand awareness, but it is expensive and time-consuming. SPACs offer a faster and less risky route to the public markets (Klausner *et al.*, 2022). M&A, on the other hand, provides immediate liquidity and can be strategically advantageous (Chemmanur *et al.*, 2023).

In this context, SPACs are an interesting phenomenon since they offer a faster and less risky route to the public markets (Klausner *et al.*, 2022), and represent a loss of power for controlling shareholders following a successful business combination, as in a conventional M&A transaction, whereas IPOs may be more compatible with the entrenchment of the existing management team. In particular, Chemmanur *et al.* (2023) find that firms with strong market power, greater control advantages and less information asymmetry are more inclined to pursue an IPO rather than a direct acquisition.

Previous literature investigated the determinants of the choice between IPO and M&A, identifying a relevant role of the company's stage of growth, market conditions and objectives (Brau *et al.*, 2003; Suzuki *et al.*, 2024). Along these lines, this paper aims to investigate the macroeconomic determinants that lead to a preference for a SPAC over an IPO. Indeed, although SPACs have been on the market for years, their popularity has been subject to several ups and downs during the last two decades. The latest widespread adoption happened in 2020 and 2021 (Passador, 2022) and a downsize of the phenomenon followed in 2022 (Coben and Fischer, 2023). The literature calls for research on the boom in SPACs, highlighting that an explanation of the drivers of the recent ups and downs is still missing (Huang *et al.*, 2023). Increasing our understanding of these mechanics can improve the design of policies and regulations concerning SPACs listings.

Previous research identifies three waves of SPACs: the first one, from 2003 to 2008; the second, from 2009 to 2019; and the third, which covers the pandemic period (2020 and 2021). The first-generation SPAC wave (2003–2008) has been the subject of some studies (Jenkinson and Sousa, 2011; Datar *et al.*, 2012; Cumming *et al.*, 2014; Kolb and Tykvová, 2016). These analyses suggested that SPACs destroyed value and focused on identifying the drivers that led firms to prefer this listing method. More specifically, Jenkinson and Sousa (2011) show that market prices of SPAC shares provide valuable information, if compared to the trust value per share, and that simple trading strategies can generate significant profits for investors. Their evidence suggests that despite the market accurately signalling that certain takeovers would be value-destroying, more than half of the business combinations of the SPACs were still approved by shareholders. Therefore, founders have a strong incentive to buy

shares just before the decision date, especially if they can identify shareholders who oppose the business combination and mislead investors into believing in the benefits of the deal; furthermore, some investors may be unable to attend the meeting or may choose not to vote their proxies. Among relevant firm-level determinants, ownership structure and the absence of growth opportunities played a pivotal role (Datar *et al.*, 2012; Cumming *et al.*, 2014; Kolb and Tykvová, 2016). For example, Cumming *et al.* (2014) show that the presence of active investors like private equity and hedge funds leads to a lower probability of concluding a successful business combination. Kolb and Tykvová (2016), instead, find that the companies that decide to be listed using a SPAC have lower growth opportunities (measured by the market-to-book asset ratio).

In addition, market conditions could influence the probability of successfully concluding the business combination. Indeed, Cumming *et al.* (2014) demonstrate that during market downturns, shareholders are more likely to reject the business combination and choose liquidity instead. This may be due to reduced overall market liquidity during downturns, which lead investors to choose safer and liquid options.

The second wave of SPACs (2009–2019) came with significant regulatory changes, as NASDAQ and NYSE allowed SPACs listings on their financial markets (D'Alvia, 2020). Regulatory improvements, which included more transparent listing standards and increased requirements, led to a renewed interest in SPACs after the financial crisis. The ability to list on major exchanges gave SPACs greater legitimacy, access to a broader investor base and increased liquidity, making them more attractive to sponsors and investors.

A series of empirical studies has examined the rise of the third wave of SPACs, which is characterised by a higher number of listings of SPACs during the COVID-19 pandemic (2020–2021). During this period, the market seems to reward SPACs that are quick in identifying their targets (Kiesel *et al.*, 2022) and, in the short-term, those that show a sustainability orientation in their business proposals (Dimic *et al.*, 2024). Gahng *et al.* (2023) study the key participants in the SPACs: investors, sponsors and companies. While investors and sponsors gain significantly high returns in the SPAC period, de-SPAC investors have typically seen poor returns.

Limited research has been conducted on the macroeconomic factors determining the issuance of Special Purpose Acquisition Companies (SPACs). Blomkvist and Vulanovic (2020), focusing on the first and the second wave, find that the SPAC share on the total IPOs is negatively related to the market volatility and the Variance Risk Premium. They attribute this result to the reluctance of risk-averse investors to invest in uncertain securities. Furthermore, recent evidence by Bui and Hwang (2024), focused on the last wave of SPACs in the United States, revealed a positive correlation between market sentiment and SPAC share of the total IPO issuance. This suggests that the uncertainty associated with SPACs becomes less significant during favourable business conditions.

We expand this literature by comprehensively examining a global sample of 7,953 country-quarter-sectors observations over 18 years and investigating the impact of macroeconomic factors - including market return and market sentiment, volatility, interest rates, and market development - on the share of SPACs over the total number of listings. With the aim to provide a better comparison between SPAC and IPO, we have also required the occurrence of the merger for the inclusion of the SPACs in our sample, differently from the previous literature which considered all SPACs independently of their merger status.

We contribute to the literature in several ways. First, we examine the impact of market sentiment on the different types of investment (e.g., Arif and Lee, 2014; Bui and Hwang, 2024; Song et al., 2024), finding a positive impact on the share of SPACs. Second, we contribute to the growing body of research on SPAC waves (Blomkvist and Vulanovic, 2020; Bui and Hwang, 2024) with insights into the unprecedented rise of SPACs during the pandemic, a period of economic uncertainty. Indeed, SPACs could be used by companies to raise capital quickly and with greater price certainty, while investors saw SPACs as a viable investment option. Finally, the third contribution is to provide, to the best of our knowledge, the first global study on macroeconomic factors driving SPACs issuance, providing insights applicable across different economies and regulatory environments. Our findings remain consistent across various robustness checks, considering: all SPACs with a pending business combination; the impact of venture capital and private equity; short-term interest rates rather than long-term interest rates; and, finally, a sample that does not include the United States.

The remainder of the paper is structured as follows: Section 2 provides a brief literature review of the micro and macro factors influencing the choice between IPO and SPAC. Section 3 describes the data and methodology used. Section 4 presents the results of our research, and Section 5 presents a robustness check. Section 6 summarises the results.

2 The Impact of Macroeconomic Factors on the Listing of SPACs and IPOs

Several elements may influence the decision to list on stock markets, either through a traditional IPO or through acquisition by a SPAC. Summarising the existing literature, the following groups of factors can impact the share of SPACs over the total number of listings: interest rates, market valuation, market development, and uncertainty.

Interest Rates:
The primary motivation behind any listing process is to raise new capital. Funds are required to finance growth without being subject to the constraints of debt capital (Röell, 1996). Therefore, the first consideration for any firm

evaluating the possibility of listing is the current cost of debt. Indeed, as shown by Angelini and Foglia (2018), the number of IPOs increases when the cost of debt is high because firms prefer to go public rather than cope with a high cost of debt. A similar issue exists for SPACs. Lewellen (2009) notes that SPACs tend to get into debt to acquire the target firm. For this reason, SPACs are more frequent in an environment where the cost of debt is lower (Kolb and Tykvová, 2016). Consequently, when investigating the choice between IPOs and SPACs, we might expect that an increase in interest rates reduces the choice of SPACs over traditional IPOs.

Market Valuation and Sentiment:
Enterprises often take advantage of "windows of opportunity" (Ritter, 1991), driven by increased investment prospects and investor optimism. Indeed, a large body of literature suggests that corporate managers conduct IPOs at certain times to take advantage of overoptimistic investor sentiment (e.g., Lee *et al.*, 1991; Lowry, 2003). Similarly to IPOs, SPACs approvals have been found sensitive to market conditions (Cumming *et al.*, 2014). Accordingly, the stock market's rate of return and factors that measure market valuation and sentiment, such as the price-to-earnings ratio, market-to-book, Investor Sentiment Index, and Consumer Confidence Index, could be positively related to the share of SPACs. To the best of our knowledge, only Blomkvist and Vulanovic (2020) investigate the relationship between the average daily excess return on the CRSP index and the share of SPACs over IPOs, and they find that it negatively impacts the SPACs share over IPOs and the SPAC volume, contrary to expectations. The Investor Sentiment Index proposed by Baker and Wurgler (2006) has been studied by Bai *et al.* (2021), using a sample of US SPACs and IPOs from 2003 to 2020. They found a positive relationship between Investor Sentiment and the share of SPACs over the total number of listings. Bui and Hwang (2024), using a sample of US SPACs and IPOs from 2003 to 2021, also found that the market sentiment proxied by the Investor Sentiment Index and Consumer Confidence Index positively correlates with the SPAC share. The positive correlation between the share of SPACs over the total number of listings and market sentiment can also be related to the aim to speed up the listing process to benefit from favourable market prospects through SPACs (Kovalev, 2021; Gahng *et al.*, 2023; Gahng *et al.*, 2023).

Market Development:
Market development and the quality of regulations are expected to be correlated with the decision to list through a SPAC or an IPO. More developed financial markets and institutions, associated with sound policies, can smooth the process of the creation of SPACs and increase investor protection. A review of the history and the regulation of SPACs in the US and the European context (D'Alvia, 2020) suggests indeed that the absence of harmonised regulations between exchange and national laws can create tensions that limit the growth

of SPACs, compared to the well-established regulation of traditional IPOs. Without tailored rules, the SPACs structure creates a misalignment of interests between the sponsor and the investors at the time of the business combination (Klausner *et al.*, 2022). As a result, sponsors have a strong incentive to accept almost any type of merger transaction, especially when they do not face reputational threats (Del Giudice and Signori, 2024). With more disclosure and better due diligence, SPACs can be a viable alternative to traditional IPOs. For this reason, we believe that more developed and better-regulated countries, providing higher investor protection, are associated with an increase in the number of SPACs that successfully complete their business combination.

Uncertainty:
Several indicators related to market uncertainty have been investigated by previous studies. Volatility could play a role in influencing the choice between SPACs and IPOs, because the simplicity of the SPAC process might be appreciated when market uncertainty is high: the trust account structure provides a degree of protection against market volatility by preserving capital until an acquisition is made; the presence of the redemption option allows investors to get their stake back if no deal is concluded, (Gahng *et al.*, 2023) and, at the time of acquisition, target companies can directly negotiate the acquisition price with sponsors without the influence of external elements. Conversely, previous literature found a negative relationship between IPOs and market uncertainty (Schill, 2004; Angelini and Foglia, 2018). In particular, Schill (2004) finds that during times of increased market volatility, companies tend to avoid issuing new equity, arguing that equity offerings are much more sensitive to price volatility than debt offerings.

From an empirical perspective, however, results are contrasting. Blomkvist and Vulanovic (2020) observe that the SPAC share over total listings is negatively influenced by market volatility and Variance Risk Premium (VRP) and ascribe their results to investors' risk aversion. On the contrary, recent evidence by Bai *et al.* (2021) and Bui and Hwang (2024) find no statistically significant correlation between the SPAC share and, respectively, the level of volatility and the VRP. On the contrary, Kolb and Tykvová (2016) find that the probability of choosing a SPAC increases in a highly volatile environment because SPACs already have the necessary capital at the time of acquisition and because they allow to convert investors' shares into cash through the redemption rights. We argue that uncertain environments are particularly fertile for SPACs compared to IPOs, leading us to expect a positive relationship between volatility and SPAC share.

All these arguments could also interact with the specific characteristics of the COVID-19 outbreak. Previous studies hint and demonstrate that the pandemic might be associated with potential structural changes in firms' financial policies (Goodell, 2020; Pagano and Zechner, 2022). For incumbent

firms, during a time of crisis, it is imperative to prioritise speed over precision (Furstenthal *et al.*, 2021). Furthermore, some small and young companies not yet qualified to participate in a traditional IPO process could miss some market opportunities (Erickson *et al.*, 2021), in particular within sectors like the Healthcare and Technology that have had a strong boost following the pandemic. Considering also that IPOs during the pandemic experienced greater underpricing linked to market uncertainty (Baig and Chen, 2022), while on the other side, SPACs provide pricing certainty. We can expect during the COVID-19 pandemic a greater likelihood of listing a SPAC than conducting an IPO.

3 Data and Methodology

We start from all SPACs and IPOs listed between January 1st, 2004 and December 31st, 2021, resulting in a sample of 1,641 SPACs and 25,179 IPOs. The data are gathered from the EIKON-Refinitiv platform. We included in this initial sample only SPACs and IPOs that have been successfully listed; regarding SPACs, we have considered not only the listing event, but we have conditioned the inclusion in the sample to the occurrence of the business combination (the so-called "de-SPAC transaction"). This approach allows us to do a more pertinent comparison of the two phenomena, ensuring that only SPACs that have successfully completed their intended purpose - merging with an operating company - are included, making them comparable to IPOs, which represent companies that have gone public. Conditioning sample inclusion on the occurrence of the merger allows us to extend the previous literature. Indeed, the previous papers considered all SPACs regardless of the status of the business combination. As a result, we have eliminated 729 SPACs that have not concluded their business combination, remaining with a sample of 912 SPACs. Then, since SPACs cannot acquire companies in all countries – often due to regulatory restrictions – we have excluded countries that did not have at least one target of the business combination.[1] We decided to focus on the country of the target company, instead of the country of listing of the

[1]We have considered 55 countries, which we report: Argentina, Australia, Austria, Bahamas, Barbados, Belgium, Brazil, British Virgin Islands, Canada, Cayman Islands, China, Colombia, Costa Rica, Cyprus, Finland, France, Germany, Guernsey, Hong Kong, Iceland, India, Indonesia, Ireland, Isle of Man, Israel, Italy, Japan, Jersey, Jordan, Kazakhstan, Kuwait, Luxembourg, Malaysia, Mauritius, Mexico, Morocco, Netherlands, Norway, Peru, Seychelles, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Syria, Taiwan, Tanzania, Turkey, Uganda, United Arab Emirates, United Kingdom, United States and Vietnam. Since some countries have few observations (less than 30 in total), we decided to group them together and take the country most represented, in this case Austria, as a reference. This subgroup consists of: Argentina, Austria, Bahamas, Barbados, British Virgin Islands, Colombia, Costa Rica, Cyprus, Iceland, Kazakhstan, Kuwait, Mauritius, Peru, Seychelles, Syria, Tanzania and Uganda.

SPAC, so we could consider potential jurisdictional characteristics, in line with previous findings showing the relevance of unobserved characteristics on SPACs performance (Groh *et al.*, 2022).

Finally, we model the dependent variable, the SPAC share, taking inspiration from Blomkvist and Vulanovic (2020), Bai *et al.* (2021) and Bui and Hwang (2024), as the number of SPACs divided by the number of SPACs plus the number of traditional IPOs, in each sector,[2] each quarter and each nation. Our final sample is composed of 7,953 observations over 18 years.

We investigate the effect of several variables, as highlighted in the previous section, to account for different market characteristics, including interest rates, market valuation and sentiment, market development, uncertainty and the pandemic period.

Interest Rates:
We use the long-term interest rate (InterestRate) as a key variable to capture the cost of debt in each country. This is represented by the yield on the 10-year Treasury Note of each country.

Market Valuation and Sentiment:
Regarding the market valuation we use three different variables that are the market return, the price-earnings ratio and the market-to-book. The market return variable (MarketReturn) represents the overall return of the stock market in each country over a 3-month period. The Price-Earnings Ratio (PriceEarnings) is calculated by dividing a stock's current price by its earnings per share. This ratio helps determine whether stocks in a given country and sector are relatively over- or under-valued based on their earnings. The Market-to-Book Ratio (MarketToBook) compares a company's current stock price with its book value per share. The book value represents the net asset value of a company, while the market price reflects how investors value the company. This ratio helps to indicate whether stocks in a given country and sector are relatively over- or under-valued based on balance sheet fundamentals.

Regarding the market sentiment, instead, we use the Investor Sentiment Index and the Consumer Confidence Index. The Investor Sentiment Index (Sentiment) is based on the framework developed by Baker and Wurgler (2006). The Consumer Confidence Index (Confidence) is an indicator that measures how optimistic or pessimistic consumers are about the overall economic situation. It is usually derived from national surveys in which consumers are asked about their views on the current and future state of the economy. As each country conducts its own version of this index, there may be differences in the way the survey is conducted and the way the index is measured, so we

[2]We used the TRBC sectoral classification of Refinitiv, that considers: Basic Materials, Consumer Cyclicals, Consumer Non-Cyclicals, Energy, Financials, Healthcare, Industrials, Real Estate, Technology and Utilities.

have standardised the index (calculating a z-score) to ensure consistency and comparability across countries.

Market Development:
We use two variables to assess both the quality of regulation and the level of market development in different countries. The Regulatory Quality variable (RuleQuality) is one of six indicators measuring government effectiveness, based on the Worldwide Governance Indicators (WGI) developed by Kaufmann *et al.* (2011). These variable captures perceptions of the government's ability to design and enforce policies and regulations that are conducive to private sector development. Regulatory quality is measured on a scale from −2.5 to 2.5, with higher values indicating more effective regulatory frameworks. The market development variable (HighvsLow) is a dummy variable used to differentiate between countries according to the size of their capital markets. Specifically, it takes the value of 1 if the market capitalisation of domestic listed companies (expressed as a percentage of GDP) in a given country is above the average for all countries in that year. If a country's market capitalisation falls below this average, the variable is equal to 0. This measure helps to distinguish between countries with more developed financial markets (those with higher market capitalisation) and those with less developed markets, allowing a clear comparison of market maturity across countries and over time.

Uncertainty:
We use two variables to capture uncertainty in our analysis: market volatility (Volatility) and the variance risk premium (VRP). Market volatility represents the level of expected stock market fluctuations over a 3-month period. The volatility indices are constructed by using stock market option prices to estimate the expected variability of market returns. In addition to market volatility, we also consider the variance risk premium. According to Zhou (2018), the VRP is "defined as the difference between risk-neutral expectations and objective expectations of realised variance". In simpler terms, it reflects the gap between the risk perceived by the market (risk-neutral expectations) and the actual risk that materialises (objective expectations). Both variables quantify market uncertainty, but from slightly different perspectives. The volatility index focuses on the level of expected stock price fluctuations, while the VRP captures the additional premium that investors demand to bear uncertainty. Together, they provide a comprehensive picture of market risk and help us understand the dynamics of uncertainty.

Pandemic Period:
We created a dummy variable (DummyCovid) that takes the value 1 if the listing process takes place during the pandemic period (from 1st January 2020 to the 31st Decembre 2021); 0 if the listing process takes place before this date.

Table 1 provide definitions and sources of each variable.

All the variables are lagged by one quarter[3] (Bui and Hwang, 2024) and are winsorized at 2% and 98% threshold. Finally, we have also used the one-quarter lag of our dependent variable to account for potential predictive power. In particular, a period with a high number of SPACs is more likely to be followed by a period with a high number of SPACs, and vice versa.

We estimate the following two equations. Equation 1 is estimated for the first three Models, while Equation 2 is used for model four.

$$\begin{aligned}\text{SPACshare}_{i,t} = {} & \beta_1 * \text{Long} - \text{Term I.R.}_{i,t} + \beta_2 * \text{MarketReturn}_{i,t} \\ & + \beta_3 * \text{MarketToBook}_{i,t} + \beta_4 * \text{Confidence}_{i,t} \\ & + \beta_5 * \text{HighvsLow}_{i,t} + \beta_6 * \text{Volatility}_{i,t} + \beta_7 * \text{VRP}_t \\ & + \beta_8 * \text{DummyCovid}_t + \beta_9 * \text{SPACshare}_{i,t-1+\varepsilon_{i,t}} \qquad (1) \\ \text{SPACshare}_{i,t} = {} & \beta_1 * \text{Long} - \text{Term I.R.}_{i,t} + \beta_2 * \text{MarketReturn}_{i,t} \\ & + \beta_3 * \text{MarketToBook}_{i,t} + \beta_4 * \text{Sentiment}_{i,t} \\ & + \beta_5 * \text{RuleQuality}_{i,t} + \beta_6 * \text{Volatility}_{i,t} + \beta_7 * \text{VRP}_t \\ & + \beta_8 * \text{SPACshare}_{i,t-1} + \varepsilon_{i,t} \qquad (2)\end{aligned}$$

Given the positive correlation (higher than 0.5) between the DummyCovid and the Investor Sentiment Index, we implement these variables in different regression models. We check for multicollinearity calculating the variance inflation factors. The values do not exceed a value of 3.20, well below the threshold of 10, suggesting that multicollinearity is not a problem in our estimates. In all specifications, we have included country and sector fixed effects but not time-fixed effects, because they would be collinear with the independent variable DummyCovid. Table 2 presents the summary statistics of our dataset, while Table 3 includes the Correlation Matrix.

Figure 1 highlights the number of SPACs compared to the number of IPOs in our sample and Figure 2 shows the percentage of SPACs out of the total number of listings. As can be seen, the number of both SPACs and IPOs increased significantly during the pandemic, while the proportion between the two listing processes shows a relevant growth in the use of SPACs versus previous periods. Figure 3 shows that the predominant sectors during the pandemic period were Technology and Healthcare, representing 30% and 19% of the company combinations respectively. In addition, the number of SPACs that completed mergers in these sectors during the pandemic period was even higher than the sum of the previous years. This sectoral difference confirms what Passador (2022) reported about the dominance of the technology and healthcare sector in the US context.

[3]We do not lag the variable DummyCovid while the RuleQuality and HighvsLow are lagged by one year because they are annual variables.

Table 1: Detailed definition of variables and their sources.

Variables	Names	Descriptions	Sources
		Dependent Variable	
SPAC Share	SPACshare	This variable is represented by: (number of SPACs)/(number of SPACs + number of IPOs). For doing this calculation we have considered the sector, the nation, and the quarter of the year. In particular, for the SPACs we have considered the sector and the nation of target company. As a result, the dependent variable equals SPAC share in each sector for each quarter for each nation.	Refinitiv Workspace
		Independent Variables	
Long-term interest rate	Long-term I.R.	The long-term interest rate is represented by the yield of the Treasury Note with a maturity of 10 years. This yield is calculated on the first day of each quarter. Note that not all countries have Treasure Note with such maturity. For this reason, we have used Treasure Note with maturities as close as possible to that named above. For countries without available data, we made a reasonable approximation using available data from other countries, based on the country's development and geographical proximity. The value is divided by 100 for reasons of scale.	Refinitiv Workspace

Table 1: Continued.

Short-term interest rate	Short-term I.R.	The short-term interest rate is represented by the yield of the Treasury Bill with a maturity of 3-months. This yield is calculated on the first day of each quarter. Note that not all countries have Treasure Bill with such maturity. For this reason, we have used Treasure Bill with maturities as close as possible to that named above. For countries without available data, we made a reasonable approximation using available data from other countries, based on the country's development and geographical proximity. The value is divided by 100 for reasons of scale.	Refinitiv Workspace
Market Return	MarketReturn	Represents the market return of each country over a 3-month period. The market return is calculated on the first day of the quarter. For countries without available data, we made a reasonable approximation using available data from other countries, based on the country's development and geographical proximity. The value is divided by 100 for reasons of scale.	Refinitiv Workspace
Price-Earnings Ratio	PriceEarnings	This variable is the price-earnings ratio. This item represents the current Price divided by Earnings Per Share (EPS). Each country has a different value for each quarter and for each sector. The value is divided by 100 for reasons of scale.	Refinitiv Workspace

Table 1: Continued.

Market-to-Book	MarketToBook	This variable represents current price divided by Book Value per Share. Each country has a different value for each quarter and for each sector.	Refinitiv Workspace
Consumer Confidence Index	Confidence	The CCI is a survey that measures consumers' optimism or pessimism about the general state of the economy. Each country conducts a different survey. For this reason, we have standardized the results to make them comparable. For countries without a CCI, we made a reasonable approximation using available data from other countries, based on the country's development and geographical proximity.	Refinitiv Workspace
Investor Sentiment Index	Sentiment	According to Baker and Wurgler (2006) "...sentiment drives the relative demand for speculative investments, and therefore causes cross-sectional effects even if arbitrage forces are the same across stocks." For a detailed description of the Investor Sentiment refers to Baker and Wurgler (2006).	Jeffrey Wurgler
Quality of the Regulation	RuleQuality	The Regulatory Quality is 1 one 6 variables that represent the government effectiveness (WGI) created by Kaufmann *et al.* (2011). This variable captures the "perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.". This variable moves in a range of -2.5 to 2.5.	World Bank

Table 1: Continued.

Market development	HighvsLow	Dummy variable that takes the value 1 if the market capitalization of domestic listed companies (% of GDP) in each country is higher than the average of all countries in a specific year; 0 otherwise.	World Bank
Volatility	Volatility	Represents the market volatility over a 3-month period. For the American countries and for Africa we have used the VIX index; for European countries we have used the Vstoxx index; then, for Asian countries and for Australia we have used the HIS volatility index future. Volatility indexes express the magnitude of expected fluctuations in the stock market, using as input the price of stock market options. The volatility is calculated on the first day of the quarter. The value is divided by 100 for reasons of scale.	Refinitiv Workspace
Variance Risk Premium	VRP	According to Zhou (2018) the variance risk premium "is defined as the difference between risk-neutral expectations and objective expectations of realised variance." The VRP value is divided by 100 for reasons of scale.	Hao Zhou's Personal Page
Dummy Covid	DummyCovid	Dummy variable that takes the value of 1 if the listing process occurs after the 1st of January 2020; 0 if the listing process occurs before of this date.	Refinitiv Workspace

Table 1: Continued.

Venture Capital	VC	The impact of venture capital is calculated as the ratio of the total amount of capital invested by the VC divided by the number of companies that have received the capital. For countries without available data, we made a reasonable approximation using available data from other countries, based on the country's development and geographical proximity. The value is divided by 100 for reasons of scale.	Refinitiv Workspace
Private Equity	PE	The impact of private equity is calculated as the ratio of the total amount of capital invested by the PE divided by the number of companies that have received the capital. For countries without available data, we made a reasonable approximation using available data from other countries, based on the country's development and geographical proximity. The value is divided by 100 for reasons of scale.	Refinitiv Workspace
Lag of the SPAC share	SPACshare_{t-1}	One-quarter lag of the dependent variable SPACshare.	Refinitiv Workspace

Table 2: Descriptive statistics post-winsorization. This table presents summary statistics of the variables used in this research. We provide number of observations, mean, standard deviation, minimum and maximum values of each variable. For a complete description of each variable, please see Table 3.

Variable	Obs	Mean	Std. Dev.	Min	Max
SPACshare	4737	0.035	0.147	0.000	0.995
Long-term I.R.	4690	0.034	0.023	−0.001	0.112
Short-term I.R.	4634	0.023	0.244	−0.006	0.112
MarketReturn	4736	0.032	0.083	−0.187	0.231
PriceEarnings	4654	0.208	0.123	0.053	0.725
MarketToBook	4639	2.737	1.923	0.599	10.84
Confidence	4708	0.100	0.925	−1.853	1.766
Sentiment	4737	−0.098	0.363	−0.850	0.963
RuleQuality	4737	1.067	0.791	−0.471	2.154
HighvsLow	4737	0.693	0.461	0.000	1.000
Volatility	4707	0.037	0.328	−0.434	1.373
VRP	4737	0.135	0.169	−0.190	0.722
DummyCovid	4737	0.127	0.333	0.000	1.000
VC	3866	0.095	0.122	0.000	0.580
PE	4260	0.157	0.249	0.000	1.351

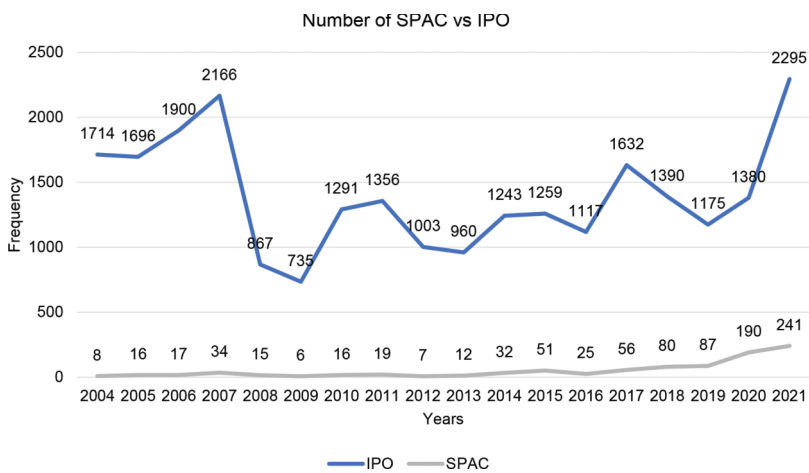

Figure 1: Number of SPACs that completed the business combination vs IPOs.
Source: Refinitiv; author elaboration of data.

Table 3: Correlation Matrix.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) SPACshare	1.000															
(2) Long-term I.R.	−0.145	1.000														
	(0.000)															
(3) Short-term I.R.	−0.123	0.915	1.000													
	(0.000)	(0.000)														
(4) MarketReturn	0.002	0.030	0.004	1.000												
	(0.865)	(0.041)	(0.787)													
(5) PriceEarnings	0.005	0.069	0.044	0.120	1.000											
	(0.718)	(0.000)	(0.003)	(0.000)												
(6) MarketToBook	0.019	0.220	0.196	0.082	0.644	1.000										
	(0.207)	(0.000)	(0.000)	(0.000)	(0.000)											
(7) Confidence	0.118	0.030	0.118	0.017	0.139	0.089	1.000									
	(0.000)	(0.043)	(0.000)	(0.236)	(0.000)	(0.000)										
(8) Sentiment	0.070	−0.005	0.092	0.092	0.179	0.156	0.270	1.000								
	(0.000)	(0.744)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)									
(9) RuleQuality	0.085	−0.550	−0.486	−0.031	−0.241	−0.261	0.012	0.003	1.000							
	(0.000)	(0.000)	(0.000)	(0.031)	(0.000)	(0.000)	(0.420)	(0.825)								
(10) HighvsLow	0.027	−0.126	−0.092	−0.034	−0.123	−0.082	−0.018	−0.077	0.429	1.000						
	(0.066)	(0.000)	(0.000)	(0.021)	(0.000)	(0.000)	(0.214)	(0.000)	(0.000)							
(11) Volatility	0.018	0.011	0.041	−0.485	−0.038	0.006	0.059	0.023	−0.017	0.017	1.000					
	(0.217)	(0.435)	(0.006)	(0.000)	(0.009)	(0.672)	(0.000)	(0.110)	(0.253)	(0.255)						
(12) VRP	0.070	−0.044	−0.095	0.247	0.101	0.045	−0.185	0.141	−0.044	−0.081	−0.281	1.000				
	(0.000)	(0.003)	(0.000)	(0.000)	(0.000)	(0.002)	(0.000)	(0.000)	(0.003)	(0.000)	(0.000)					
(13) DummyCovid	0.182	−0.173	−0.156	0.080	0.233	0.132	0.128	0.558	−0.044	−0.134	−0.019	0.419	1.000			
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.003)	(0.000)	(0.195)	(0.000)				
(14) VC	0.061	−0.136	−0.105	−0.004	0.065	0.033	0.093	0.061	−0.095	−0.044	0.004	0.020	0.194	1.000		
	(0.000)	(0.000)	(0.000)	(0.796)	(0.000)	(0.042)	(0.000)	(0.000)	(0.000)	(0.006)	(0.810)	(0.204)	(0.000)			
(15) PE	0.023	−0.074	−0.070	0.014	0.015	−0.033	0.009	0.023	−0.040	0.006	−0.008	0.009	0.086	0.588	1.000	
	(0.141)	(0.000)	(0.000)	(0.366)	(0.342)	(0.031)	(0.560)	(0.142)	(0.008)	(0.708)	(0.624)	(0.557)	(0.000)	(0.000)		
(16) SPACshare_{t-1}	0.276	−0.144	−0.120	0.033	0.030	0.037	0.102	0.087	0.071	0.030	−0.014	0.075	0.193	0.121	0.057	1.000
	(0.000)	(0.000)	(0.000)	(0.023)	(0.044)	(0.011)	(0.000)	(0.000)	(0.000)	(0.037)	(0.322)	(0.000)	(0.000)	(0.000)	(0.000)	

Notes: p-values are shown in the parentheses below the coefficients.

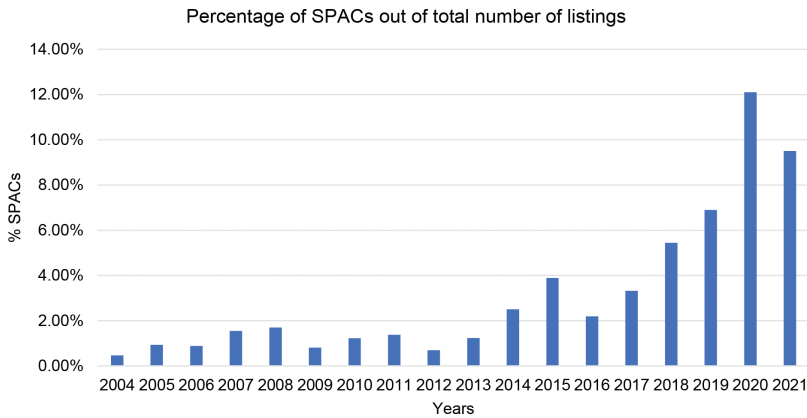

Figure 2: Percentage of global SPACs that have completed the business combination out of the total number of listings.

Source: Refinitiv; author elaboration of data.

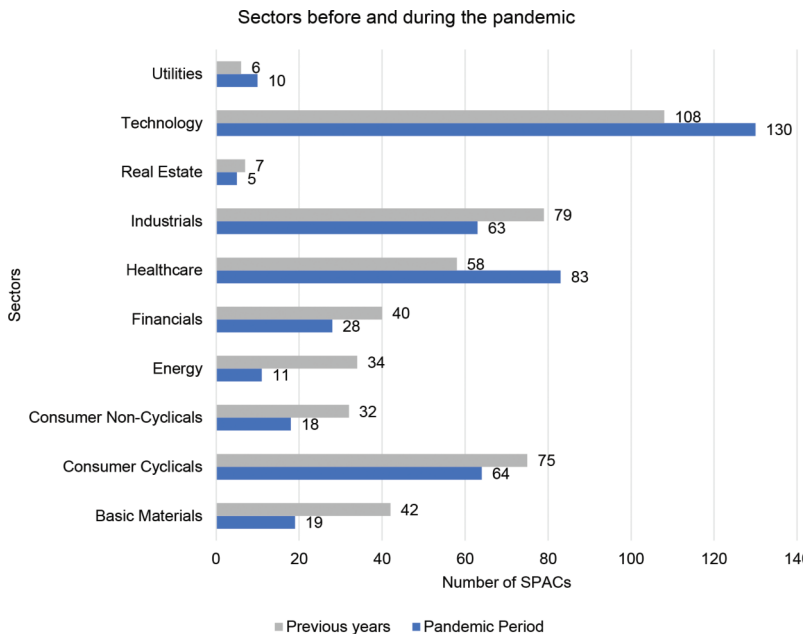

Figure 3: Comparison of SPAC acquisition sectors in the pandemic period with previous years.

Source: Refinitiv; author elaboration of data.

4 Results

Table 4 shows the results of the panel regressions. All models show a negative and statistically significant coefficient of the relationship between the share of SPACs and the long-term interest rate. Considering the first column, we can see that an increase of 1% in the interest rate reduces the SPAC share by 1.314%. This confirms our expectation that when the cost of debt increases, SPACs are less likely to be listed, and companies prefer to access capital markets through an IPO rather than take on debt through a SPAC.

Regarding market valuation (Market returns, price-earnings ratio and the market-to-book value), coefficients are never statistically significant, highlighting that the market return does not affect the frequency of listings of SPACs vs. IPOs. Our results do not confirm the negative results of Blomkvist and Vulanovic (2020), that however are statistically significant only in the specifications including the VIX index. This result is therefore not robust to different specifications and on a global sample covering a longer time period.

Market sentiment measures are included in Model 3 and 4. The Consumer Confidence Index in Model 3 has a positive coefficient that is highly statistically significant. A one standard deviation increase in the Consumer Confidence Index increases the share of SPACs by 1.39%. Our results confirm those of Bui and Hwang (2024) that found that a higher market sentiment is positively associated with the share of SPACs on a sample of US SPACs. In Model 4, including the Investor Sentiment, we have decided not to include the DummyCovid because investors' sentiment was higher during the pandemic, as evidenced by the positive and high correlation between the two variables. Following Bui and Hwang (2024), we have also separated the Investor Sentiment from the Consumer Confidence Index. The Investor Sentiment has a positive and highly statistically significant coefficient, confirming the findings of Bai *et al.* (2021) and Bui and Hwang (2024) based on a US sample. In particular, a one standard deviation increase in the Investor Sentiment leads to a 0.44% increase in the share of SPACs.

Looking at market development variables, the quality of regulation shows a positive but weakly significant correlation with the share of SPACs. As expected, countries with stronger regulatory frameworks are associated with a higher number of SPACs successfully completing their mergers. On the other hand, the coefficients on market development (HighvsLow) are not statistically significant. This implies that larger markets, in terms of market capitalisation, do not automatically translate into higher success rates for SPACs.

Considering the uncertainty, we have explored the volatility and the Variance Risk Premium (VRP). The first three models show that the volatility is weakly correlated to the choice between SPACs and IPOs. Our results therefore partially support those of Kolb and Tykvová (2016) and Papathanasiou *et al.*

Table 4: Results of the panel regressions in the main analysis. The dependent variable is the share of SPACs in the total number of IPOs and is calculated on a quarterly basis. It considers only the SPACs that have completed the business combination. We investigate the effect of several variables to account for different market characteristics, including long-term interest rates, market valuation and sentiment (market return, price-to-earnings ratio, market-to-book, Investor Sentiment and Consumer Confidence Index), market development (rule quality and high-vs-low), uncertainty (volatility and Variance Risk Premium) and the DummyCovid. Finally, we have also used the one-quarter lag of our dependent. All variables are used considering a quarterly lag, except for DummyCovid, RuleQuality and HighvsLow which are annual variables. RuleQuality and HighvsLow are considered with one year lag.

Variables	**(1)**	**(2)**	**(3)**	**(4)**
Long-term I.R.	-1.314^{***}	-1.414^{***}	-1.547^{***}	-1.743^{***}
	(0.239)	(0.256)	(0.259)	(0.260)
MarketReturn	-0.012	-0.021	-0.035	-0.021
	(0.030)	(0.031)	(0.032)	(0.031)
PriceEarnings	-0.005			
	(0.023)			
MarketToBook		0.004	0.002	0.004
		(0.003)	(0.002)	(0.003)
Confidence			0.015^{***}	
			(0.004)	
Sentiment				0.012^{**}
				(0.006)
RuleQuality	0.040^{*}			0.044^{*}
	(0.023)			(0.023)
HighvsLow		0.002	0.003	
		(0.011)	(0.011)	
Volatility	0.013^{*}	0.012^{*}	0.013^{*}	0.017^{**}
	(0.007)	(0.007)	(0.007)	(0.007)
VRP			0.032^{*}	0.037^{*}
			(0.019)	(0.019)
DummyCovid	0.047^{***}	0.045^{***}	0.031^{***}	
	(0.011)	(0.011)	(0.010)	
SPACshare_{t-1}	0.141^{***}	0.141^{***}	0.135^{***}	0.149^{***}
	(0.042)	(0.041)	(0.040)	(0.043)
Country FE	Yes	Yes	Yes	Yes
Sector FE	Yes	Yes	Yes	Yes
Obs.	4588	4572	4543	4572

Notes: Robust standard errors are in parentheses. The VIF coefficients of the variables do not exceed 3.20, which is materially below the threshold of 10. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level.

(2022) - demonstrating that SPACs are less susceptible to turbulent market conditions. In addition, also the Variance Risk Premium is positive but weakly statistically significant.

The dummy representing the pandemic period is positive and statistically significant in all the models, confirming our expectations. Considering the

first column, being in the pandemic period increases the share of SPACs, on average, by 4.7%. Companies seem to prioritise speed in an uncertain environment, since listing through SPAC usually takes less time than a traditional IPO. Moreover, Erickson *et al.* (2021) highlight that, during 2019, raising capital for businesses through IPOs has become more complex, leading IPO candidate companies to postpone listing. As a result, companies have sought alternative sources of financing, like SPACs. Finally, through SPACs companies benefit from negotiating directly with sponsors, avoiding the need for costly roadshows that can influence the listing price, while investors gain certainty through the right to redeem. This combination of benefits – valuation certainty for companies and reduced risk for investors - has been highlighted a key driver in the increasing popularity of SPACs (Gahng *et al.*, 2023; Passador, 2023), that seem particularly valuable during the Covid-19 pandemic.

Another reason for the increase in the percentage of SPACs could be explained by the fact that the need for businesses to raise capital (Pagano and Zechner, 2022) and investor enthusiasm has generated interest in SPAC sponsors. Indeed, Klausner *et al.* (2022) define this period as a SPAC bubble because the share prices surpass their normal prices (of $10), reaching their peak at $11.50. According to them, what differentiates this period from the previous one are the lower redemptions, fewer warrants, larger PIPEs[4] and more high-quality sponsors. It is interesting to note that the only other period where the proportion of SPACs to IPOs was so high (in the United States) was during the global financial crisis. The high volatility in the Credit Suisse report explains the relationship between the two periods and the number of SPACs (Cruz *et al.*, 2020).

Finally, we highlight that the coefficient of the volatility has a higher statistical significance in the last model. A one standard deviation increase in the volatility change increases the share of SPACs by 0.56%. This could be explained by the fact that this specification does not include the DummyCovid, that in the other regressions captures the higher market volatility during the pandemic, partially contrasting the significance of the volatility coefficient.

5 Robustness Check

We try to consolidate our results by implementing a set of robustness checks. First, we replicate all our regressions using a dataset that includes both the SPACs that have completed their acquisition and the SPACs that have a pending business combination. In this case, after 24 months, the SPAC has

[4]PIPE stands for Private Investments in Public Equity, and it involves private investors to purchase shares of listed companies. They are often used by companies undergoing a SPAC merger to secure additional funding (Klausner *et al.*, 2022).

announced the target but has not yet completed the merger (allowing us to consider 124 additional SPACs). This approach helps to mitigate the potential selection bias, thereby validating the robustness of our results. The results confirm our initial hypothesis.

Second, venture capital (VC) and private equity (PE) can have a crucial role in filling the financing gap for innovative companies (Block *et al.*, 2018; Cumming *et al.*, 2023), and it might be assumed that the level of VC and PE investments in a certain country have a significant effect over the choice of a certain listing strategy. Recent evidence is provided by Hansen (2025), who investigates the influence of venture capital and private equity on the choice of companies to go public through a traditional IPO or a SPAC, using a sample of 795 companies listed during 2020 and 2021. His findings reveal that IPO companies were more likely to receive financial support from PE investors, while the effect of venture capital is often not statistically significant. We examine whether such a significant effect is observed at the country level, taking into account the impact of both venture capital and private equity activity. In particular, the impact of venture capital (private equity) is calculated as the ratio of the total amount of capital invested by VC (PE) divided by the number of companies that have received the capital at the country level.[5] In Table 5, we find that these two control variables are not statistically significant. Finally, we notice that when we add these control variables, the coefficient of the Investor Sentiment Index loses its statistical significance. This could be due to the fact that both PE and VC markets are influenced by investor sentiment, according to Kleinert and Hildebrand (2024), which find that hot venture capital markets are characterised by optimistic market sentiment. As a result, in periods of positive sentiment, investors are more likely to allocate funds to PE and valuations tend to rise (Achleitner *et al.*, 2014).

Third, in Table 6 we replicate all our regressions using the short-term interest rate instead of the long-term interest rate. The results are consistent, the only difference is that RuleQuality assumes a higher statistical significance (increasing from 10% to 1%).

At last, in Table 7 we replicate the entire model without including the United States. This allows us to differ from the previous studies by Blomkvist and Vulanovic (2020) and Bui and Hwang (2024), which only consider SPACs and IPOs listed in the US. Also in this case, the results are consistent with the main analysis.

[5]Both the variable related to the impact of VC and PE are considered with a lag of one year and alternatively with a lag of two years. The results do not differ.

Table 5: Results of the panel regressions in the robustness check analysis: variant with the venture capital and the private equity. The dependent variable is the share of SPACs in the total number of IPOs and is calculated on a quarterly basis. It considers only the SPACs that have completed the business combination. We investigate the effect of several variables to account for different market characteristics. In this case, we consider the short-term interest rates instead of the long-term interest rates. The other variables are the same of the main analysis and that are the market valuation and sentiment (market return, price-to-earnings ratio, market-to-book, Investor Sentiment and Consumer Confidence Index), market development (rule quality and high-vs-low), uncertainty (volatility and Variance Risk Premium) and the DummyCovid. We also add the impact of venture capital and the impact of private equity. Finally, we have also used the one-quarter lag of our dependent. All variables are used considering a quarterly lag, except for DummyCovid, RuleQuality and HighvsLow, which are annual variables, and the VC and the PE. RuleQuality, HighvsLow, VC and PE are considered with one year lag.

Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Long-term I.R.	-1.316^{***}	-1.352^{***}	-1.522^{***}	-1.723^{***}	-1.267^{***}	-1.317^{***}	-1.457^{***}	-1.717^{***}
	(0.258)	(0.274)	(0.286)	(0.273)	(0.236)	(0.250)	(0.257)	(0.260)
MarketReturn	0.000	-0.011	-0.024	-0.006	-0.003	-0.012	-0.025	-0.009
	(0.035)	(0.036)	(0.037)	(0.036)	(0.033)	(0.034)	(0.034)	(0.033)
PriceEarnings	-0.015				-0.008			
	(0.028)				(0.026)			
MarketToBook		0.006^{*}	0.004	0.006^{*}		0.005^{*}	0.003	0.005^{*}
		(0.003)	(0.003)	(0.003)		(0.003)	(0.002)	(0.003)
Confidence			0.016^{***}				0.016^{***}	
			(0.004)				(0.004)	
Sentiment				0.008				0.010^{*}
				(0.006)				(0.006)

Table 5: Continued.

Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
RuleQuality	0.036			0.036	0.033			0.035
	(0.024)			(0.024)	(0.023)			(0.023)
HighvsLow		−0.005	−0.002			−0.004	−0.003	
		(0.012)	(0.012)			(0.011)	(0.011)	
Volatility	0.017**	0.017**	0.016*	0.021**	0.017**	0.016**	0.016**	0.020**
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
VRP			0.024	0.030			0.028	0.033
			(0.022)	(0.021)			(0.021)	(0.020)
DummyCovid	0.047***	0.043***	0.031***		0.048***	0.045***	0.033***	
	(0.012)	(0.011)	(0.011)		(0.011)	(0.011)	(0.011)	
VC	0.021	0.024	0.011	0.036				
	(0.023)	(0.022)	(0.022)	(0.023)				
PE					0.002	0.004	0.005	0.006
					(0.010)	(0.010)	(0.010)	(0.010)
SPACshare_{t-1}	0.150***	0.148***	0.141***	0.157***	0.154***	0.152***	0.144***	0.161***
	(0.045)	(0.045)	(0.043)	(0.046)	(0.045)	(0.044)	(0.043)	(0.046)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	3774	3761	3732	3761	4152	4140	4111	4140

Notes: Robust standard errors are in parentheses. The VIF coefficients of the variables do not exceed 3.47, which is materially below the threshold of 10. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level.

Table 6: Results of the panel regressions in the robustness check analysis: variant with short-term. The dependent variable is the share of SPACs in the total number of IPOs and is calculated on a quarterly basis. It considers only the SPACs that have completed the business combination. We investigate the effect of several variables to account for different market characteristics. In this case, we consider the short-term interest rates instead of the long-term interest rates. The other variables are the same of the main analysis and that are the market valuation and sentiment (market return, price-to-earnings ratio, market-to-book, Investor Sentiment and Consumer Confidence Index), market development (rule quality and high-vs-low), uncertainty (volatility and Variance Risk Premium) and the DummyCovid. Finally, we have also used the one-quarter lag of our dependent. All variables are used considering a quarterly lag, except for DummyCovid, RuleQuality and HighvsLow which are annual variables. RuleQuality and HighvsLow are considered with one year lag.

Variables	**(1)**	**(2)**	**(3)**	**(4)**
Short-term I.R.	-0.289^{*}	-0.363^{**}	-0.566^{***}	-0.652^{***}
	(0.157)	(0.181)	(0.173)	(0.002)
MarketReturn	-0.019	-0.031	-0.042	-0.029
	(0.031)	(0.032)	(0.032)	(0.031)
PriceEarnings	0.004			
	(0.025)			
MarketToBook		0.004^{*}	0.003	0.005^{*}
		(0.003)	(0.002)	(0.003)
Confidence			0.015^{***}	
			(0.004)	
Sentiment				0.018^{***}
				(0.007)
RuleQuality	0.072^{***}			0.083^{***}
	(0.025)			(0.025)
HighvsLow		-0.003	-0.001	
		(0.012)	(0.012)	
Volatility	0.011	0.011	0.011	0.017^{**}
	(0.007)	(0.007)	(0.008)	(0.008)
VRP			0.026	0.046^{**}
			(0.019)	(0.019)
DummyCovid	0.063^{***}	0.062^{***}	0.049^{***}	
	(0.012)	(0.012)	(0.011)	
SPACshare_{t-1}	0.149^{***}	0.150^{***}	0.145^{***}	0.164^{***}
	(0.043)	(0.042)	(0.040)	(0.045)
Country FE	Yes	Yes	Yes	Yes
Sector FE	Yes	Yes	Yes	Yes
Obs.	4534	4517	4488	4517

Notes: Robust standard errors are in parentheses. The VIF coefficients of the variables do not exceed 2.76, which is materially below the threshold of 10. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level.

Table 7: Results of the panel regressions in the robustness check analysis: variant without the United States in the sample. The dependent variable is the share of SPACs in the total number of IPOs and is calculated on a quarterly basis. It considers only the SPACs that have completed the business combination. We investigate the effect of several variables to account for different market characteristics, including long-term interest rates, market valuation and sentiment (market return, price-to-earnings ratio, market-to-book, Investor Sentiment and Consumer Confidence Index), market development (rule quality and high-vs-low), uncertainty (volatility and Variance Risk Premium) and the DummyCovid. Finally, we have also used the one-quarter lag of our dependent. All variables are used considering a quarterly lag, except for DummyCovid, RuleQuality and HighvsLow which are annual variables. RuleQuality and HighvsLow are considered with one year lag.

Variables	**(1)**	**(2)**	**(3)**	**(4)**
Long-term I.R.	-1.153^{***}	-1.322^{***}	-1.389^{***}	-1.356^{***}
	(0.257)	(0.287)	(0.286)	(0.259)
MarketReturn	-0.033	-0.039	-0.052^{*}	-0.047
	(0.029)	(0.030)	(0.031)	(0.030)
PriceEarnings	0.014			
	(0.021)			
MarketToBook		0.001	0.001	0.001
		(0.002)	(0.002)	(0.002)
Confidence			0.009^{***}	
			(0.003)	
Sentiment				0.012^{**}
				(0.006)
RuleQuality	0.048^{*}			0.055^{**}
	(0.025)			(0.026)
HighvsLow		-0.001	0.000	
		(0.012)	(0.012)	
Volatility	0.005	0.006	0.008	0.010
	(0.007)	(0.008)	(0.007)	(0.008)
VRP			0.042^{**}	0.046^{***}
			(0.018)	(0.018)
DummyCovid	0.030^{***}	0.029^{***}	0.016^{*}	
	(0.010)	(0.010)	(0.009)	
SPACshare_{t-1}	0.084^{**}	0.085^{**}	0.083^{**}	0.086^{***}
	(0.042)	(0.043)	(0.042)	(0.043)
Country FE	Yes	Yes	Yes	Yes
Sector FE	Yes	Yes	Yes	Yes
Obs.	4076	4060	4045	4060

Notes: Robust standard errors are in parentheses. The VIF coefficients of the variables do not exceed 3.03, which is materially below the threshold of 10. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level.

6 Conclusions

The recent wave of SPACs listing has once again focused public attention on these instruments. SPACs are an alternative to the traditional IPO process and provide several advantages for the parties involved. Previous studies investigated the characteristics of companies that have decided to go public through SPACs or IPOs. However, SPAC's tendency to happen in waves and their structural characteristics offer fertile ground for new research on the impact of macroeconomic factors on the choice of listing through a SPAC vs going for a traditional IPO.

Among the few papers that investigated whether macroeconomic factors impact SPAC's share over total listings, Blomkvist and Vulanovic (2020) analysed the first and the second wave of SPACs, focusing on those listed in the US. They find that the SPAC share is negatively correlated with volatility and the Variance Risk Premium. The first paper to focus on the most recent SPAC wave is Bui and Hwang (2024), that investigate a sample of US SPACs listed between 2003 and 2021, finding a positive relationship between market sentiment and SPAC activity. Nevertheless, their results were limited by a single country focus and by considering all the SPACs independently of their business combination status.

We extend this literature, including some elements representative of the economic environment when choosing between IPOs and SPACs, and, at the same time, we have used a global sample of SPACs. We have also considered the business combination status of the SPACs.

We demonstrate a negative correlation between the SPAC share and the value of the long-term interest rate, consistent with the fact that when the cost of debt is lower, there is a higher probability to conclude the business combination successfully. We also find that the market return, the price-earnings ratio and the market-to-book do not influence the share of SPACs. The market sentiment, instead, represented by the Investor Sentiment and the Consumer Confidence Index, shows a positive correlation with the SPAC share, confirming the findings of Bai *et al.* (2021) and Bui and Hwang (2024). During periods of elevated market sentiment, investors are more inclined to invest in speculative instruments like SPACs. Although we would expect that more developed marked (HighvsLow) and better regulated environment positively influence the share of SPACs, we do not find strong empirical evidence in support of our hypothesis. In particular, while the development of the markets is not statistically significant, the regulation quality is positive and partially significant in our main analysis (at 10%).

Regarding the volatility, our findings are weakly consistent with Kolb and Tykvová (2016) and Papathanasiou *et al.* (2022), which shows that SPACs are less vulnerable to market turbulence. Nevertheless, this result has a higher statistical significance only in the specification without the DummyCovid. As

one might expect, these results reflect the increased volatility in the pandemic period that captures the effect of this variable. At the same time, the Variance Risk Premium also shows a positive coefficient that is weakly statistically significant.

Finally, we find that the coefficient of the Dummy Covid is positive and statistically significant. The growing popularity of SPACs during the pandemic period suggests that companies have decided to use different financing modes that enable them to raise capital more quickly and with less uncertainty on the price of acquisition, and investors have seen SPACs as an investment alternative.

Our results hold to several robustness checks: adding all SPACs with a pending business combination, adding the impact of the venture capital and the private equity, considering the short-term interest rates instead of the long-term interest rates, and considering a sample without the United States. The results of the various specifications are confirmed.

Our study is not without some limitations. Most importantly, results should be interpreted as correlational rather than causal. Although we implement methodologies to reduce and control for simultaneity and heterogeneity, including panel fixed effects analysis, we cannot rule out the possibility of endogeneity issues, included omitted variables that might be influencing our result. Furthermore, we acknowledge and investigate the role of VC and PE investments in determining the propensity to list through a SPAC rather than through an IPO. Our results suggest that the intensity of VC and PE investments is not a significant driver of such listing decisions. However, previous literature explored the heterogeneity existing in these capital providers, including previous work experience and educational background (e.g., Fuchs *et al.*, 2022; Hansen, 2025). Although we cannot control for these characteristics in our analysis due to data availability, it is reasonable to expect that such heterogeneity might impact companies' listing choices. At this regard, future studies based on individual firm data should look at indicators related to VC and PE educational subjects and the quality of the institution where the VC and PE team studied, investigating whether they are significant determinant of the decision to list through a SPAC or an IPO.

In summary, our research shows that macroeconomic conditions, in particular interest rates and market sentiment, play a crucial role in influencing the preference for SPACs over traditional IPOs. The pandemic has accelerated this shift, demonstrating that SPACs offer a compelling alternative for companies seeking quick access to public capital.

References

Achleitner, A.-K., B. Reiner, E. Lutz, and U. Reiner. 2014. "Industry relatedness in trade sales and venture capital investment returns". *Small Business Economics*. 43: 621–637. DOI: 10.1007/s11187-014-9557-5.

Angelini, E. and M. Foglia. 2018. "The relationship between IPO and macroeconomics factors: An empirical analysis from UK market". *Annals of Economics and Finance*. 19(1): 319–336.

Arif, S. and C. M. Lee. 2014. "Aggregate investment and investor sentiment". *The Review of Financial Studies*. 27(11): 3241–3279. DOI: 10.1093/rfs/hhu054.

Bai, J., A. Ma, and M. Zheng. 2021. "Segmented going-public markets and the demand for SPACs". *SSRN*. DOI: 10.2139/ssrn.3746490.

Baig, A. S. and M. Chen. 2022. "Did the COVID-19 pandemic (really) positively impact the IPO market? An analysis of information uncertainty". *Finance Research Letters*. 46: 102372. DOI: 10.1016/j.frl.2021.102372.

Baker, M. and J. Wurgler. 2006. "Investor sentiment and the cross-section of stock returns". *The Journal of Finance*. 61(4): 1645–1680. DOI: 10.1111/j.1540-6261.2006.00885.x.

Block, J. H., M. G. Colombo, D. J. Cumming, and S. Vismara. 2018. "New players in entrepreneurial finance and why they are there". *Small Business Economics*. 50: 239–250. DOI: 10.1007/s11187-016-9826-6.

Blomkvist, M. and M. Vulanovic. 2020. "SPAC IPO Waves". *Economics Letters*. 197. DOI: 10.1016/j.econlet.2020.109645.

Brau, J. C., B. Francis, and N. Kohers. 2003. "The choice of IPO versus takeover: Empirical evidence". *The Journal of Business*. 76(4): 583–612. URL: https://doi.org/https://www.jstor.org/stable/10.1086/377032.

Bui, Y. and H. D. Hwang. 2024. "Market Sentiment and SPACs". *Applied Economics Letters*: 1–6. DOI: 10.1080/13504851.2023.2301479.

Chemmanur, T. J., A. Signori, and S. Vismara. 2023. "The exit choices of European private firms: A dynamic empirical analysis". *Journal of Financial Markets*. 65: 100821. DOI: 10.1016/j.finmar.2023.100821.

Coben, C. and H. Fischer. 2023. "The special purpose acquisition company fallout is going to be Spac-Tacular". *Financial Times*. URL: https://www.ft.com/content/65b96216-afc0-40c2-b763-da4f3ebd4535.

Cruz, E., N. Stabinsky, R. Faery, C. Sharma, R. Kelley, A. Rutherford, D. Bahri, and Y. Krasner. 2020. "Making Waves: The Evolution of SPACs". *Credit Suisse Corporate Insights*. URL: https://www.creditsuisse.com/media/assets/investment-banking/docs/corporate-insights/csci-2020-q4-making-waves-spacs.pdf.

Cumming, D., L. H. Haß, and D. Schweizer. 2014. "The Fast Track IPO - Success Factors for Taking Firms Public with SPACs". *Journal of Banking and Finance*. 47(1): 198–213. DOI: 10.1016/j.jbankfin.2014.07.003.

Cumming, D., S. Kumar, W. M. Lim, and N. Pandey. 2023. "Mapping the venture capital and private equity research: a bibliometric review and future research agenda". *Small Business Economics*. 61(1): 173–221. DOI: 10.1007/s11187-022-00684-9.

D'Alvia, D. 2020. "The international financial regulation of SPACs between legal standardised regulation and standardisation of market practices". *Journal of Banking Regulation*. 21(2): 107–124. DOI: 10.1057/s41261-019-00100-5.

Datar, V., E. Emm, and U. Ince. 2012. "Going public through the back door: A comparative analysis of SPACs and IPOs". *Banking and Finance Review*. 4(1).

Del Giudice, A. and A. Signori. 2024. "Sponsor reputation and agency conflicts in SPACs". *International Review of Financial Analysis*. 92. DOI: 10.1016/J.IRFA.2023.103054.

Dimic, N., J. W. Goodell, V. Piljak, and M. Vulanovic. 2024. "Green SPACs". *European Financial Management*. 30(2): 770–799. DOI: 10.1111/eufm.12453.

Erickson, D., I. Drechsler, N. Roussanov, and J. F. Gomes. 2021. "Why SPACs are booming, and is there the SPAC bubble". *Review of Business and Economics Studies*. 9(2): 38–45. DOI: 10.26794/2308-944x-2021-9-2-38-45.

Fuchs, F., R. Füss, T. Jenkinson, and S. Morkoetter. 2022. "Should investors care where private equity managers went to school". *Review of Corporate Finance*. 2(3): 451–492. DOI: 10.1561/114.00000021.

Furstenthal, L., M. Hirt, and E. Roth. 2021. "Innovation: Your Launchpad out of the COVID-19 Crisis". *McKinsey & Company*. March.

Gahng, M., J. R. Ritter, and D. Zhang. 2023. "SPACs". *The Review of Financial Studies*. 36(9): 3463–3501. DOI: 10.1093/rfs/hhad019.

Goodell, J. W. 2020. "COVID-19 and Finance: Agendas for Future Research". *Finance Research Letters*. 35. DOI: 10.1016/j.frl.2020.101512.

Groh, A. P., J. Proelss, A. Sannajust, and D. Schweizer. 2022. "Leave No Money on the Table: Venture Capitalists' SPAC Exits". *SSRN Electronic Journal*. DOI: 10.2139/ssrn.4182131.

Hansen, C. 2025. "Which companies go public via SPACs? The role of private equity and venture capital financing". *Review of Corporate Finance*. 5(3–4): 451–501. DOI: 10.1561/114.00000079.

Huang, R., M. J. Coles, J. R. Ritter, D. Zhang, and D. Moore. 2023. "IPOs and SPACs: Recent Developments". *Annual Review of Financial Economics*. 15(1): 595–615. DOI: 10.1146/annurev-financial-111021-100657.

Jenkinson, T. and M. Sousa. 2011. "Why SPAC investors should listen to the market". *Journal of Applied Finance (Formerly Financial Practice and Education)*. 21(2). URL: https://ssrn.com/abstract=1331383.

Kaufmann, D., K. Aart, and M. Massimo. 2011. "The worldwide governance indicators: Methodology and analytical issues". *Hague Journal on the Rule of Law*. 3(2): 220–246. DOI: 10.1017/S1876404511200046.

Kiesel, F., N. Klingelhöfer, D. Schiereck, and S. Vismara. 2022. "SPAC Merger Announcement Returns and Subsequent Performance". *European Financial Management*. 29(2): 399–420. DOI: 10.1111/eufm.12366.

Klausner, M., M. Ohlrogge, and E. Ruan. 2022. "A sober look at SPACs". *Yale Journal on Regulation*. 39(228).

Kleinert, S. and M. Hildebrand. 2024. "Venture capitalists' decision-making in hot and cold markets: The effect of signals and cheap talk". *Entrepreneurship Theory and Practice*. DOI: 10.1177/1042258724126831.

Kolb, J. and T. Tykvová. 2016. "Going public via special purpose acquisition companies: Frogs do not turn into princes". *Journal of Corporate Finance*. 40: 80–96. DOI: 10.1016/j.jcorpfin.2016.07.006.

Kovalev, A. 2021. "IPO, Private Capital? Not! SPAC!" *Review of Business and Economics Studies*. 9(2): 29–37. DOI: 10.26794/2308-944x-2021-9-2-29-37.

Lee, C. M. C., A. Shleifer, and R. H. Thaler. 1991. "Investor sentiment and the closed-end fund puzzle". *The Journal of Finance*. 46(1): 75–109. DOI: 10.1111/j.1540-6261.1991.tb03746.x.

Lewellen, S. M. 2009. "SPACs as an asset class". *SSRN*. DOI: 10.2139/ssrn.1284999.

Lowry, M. 2003. "Why does IPO volume fluctuate so much?" *Journal of Financial Economics*. 67(1): 3–40. DOI: 10.1016/S0304-405X(02)00230-1.

Pagano, M. and J. Zechner. 2022. "COVID-19 and corporate finance". *The Review of Corporate Finance Studies*. 11(4): 849–879. DOI: 10.1093/rcfs/cfac025.

Papathanasiou, S., D. Koutsokostas, and G. Pergeris. 2022. "Novel alternative assets within a transmission mechanism of volatility spillovers: The role of SPACs". *Finance Research Letters*. 47. DOI: 10.1016/j.frl.2021.102602.

Passador, M. L. 2022. "In vogue again: The re-rise of SPACs in the IPO market". *Brooklyn Journal of Corporate, Financial & Commercial Law*. 16: 105–162. URL: https://perma.cc/YSL9-RRCJ.

Passador, M. L. 2023. "Finding an alternative to IPOs: Direct listing and SPACs". In: *Research Handbook on Global Capital Markets Law*. Edward Elgar Publishing. 94–106. DOI: 10.4337/9781800379305.00013.

Ritter, J. R. 1991. "The long-run performance of initial public offerings". *The Journal of Finance*. 46(1): 3–27. DOI: 10.1111/j.1540-6261.1991.tb03743.x.

Röell, A. 1996. "The decision to go public: An overview". *European Economic Review*. 40(3): 1071–1082. DOI: 10.1016/0014-2921(95)00114-X.

Schill, M. J. 2004. "Sailing in rough water: market volatility and corporate finance". *Journal of Corporate Finance*. 10(5): 659–681. DOI: 10.1016/S0929-1199(03)00045-2.

Suzuki, H., S. Miyashita, and S. Sengoku. 2024. "A comprehensive review of factors influencing mergers and acquisitions in technology startups". In: IEEE. 1–11. DOI: 10.23919/PICMET64035.2024.10653150.

Zhou, H. 2018. "Variance risk premia, asset predictability puzzles, and macroeconomic uncertainty". *Annual Review of Financial Economics*. 10(1): 481–497. DOI: 10.1146/annurev-financial-110217-022737.