

Department
of Impresa and Management

Course of Advanced Corporate Finance

Do ESG goals impact the Spac listing process?

Prof. Rossella Santella

SUPERVISOR

Prof. Pierluigi Murro

CO-SUPERVISOR

ID No.736831 Edoardo Cortopassi

CANDIDATE

Academic Year 2021/2022

(This page is deliberately left blank)

INTRODUCTION	6
1 CHAPTER A multitude of financing instruments: SPACs	8
1.1 Introduction.....	8
1.2 Focus on SME tools of financing.....	8
1.2.1 Definition of SME	8
1.2.2 SME in Italy.....	9
1.2.3 Instrument for financing	11
1.2.3.1 Equity Financing	13
1.2.3.2 Debt capital.....	13
1.2.3.3 Bank loan.....	14
1.2.3.4 Role of the central guarantee fund	14
1.2.3.5 Alternative instruments	16
1.3 The instrument of Special Purpose Acquisition Companies.....	20
1.3.1 Definition of SPAC.....	20
1.3.2 The origins of SPAC go back a long way.....	21
1.3.3 How they work and features	23
1.3.3.1 Company Constitution.....	23
1.3.3.2 Realisation of the IPO (listing).....	24
1.3.3.3 Search of the target company	24
1.3.3.4 Business combination.....	25
1.3.4 Relevant markets	25
1.3.5 Actors and people involved	26
1.3.5.1 Promoters.....	26
1.3.5.2 Gli underwriters.....	27
1.3.5.3 The Investors	27
1.3.5.4 Target company	27
1.4 Scope of application and comparisons	28
1.4.1 Comparison between IPO and SPAC	28

1.4.2	Some data on IPO and SPAC comparison.....	30
1.4.3	Comparing SPAC and Private Equity.....	32
1.4.4	Correlation between SPAC and sustainability.....	34
1.4.5	Market trends.....	36
2	CHAPTER Evolution of the new trend explosion: Sustainability.....	39
2.1	Short Introduction.....	39
2.2	What is meant by sustainability...?.....	39
2.2.1	Historical Excursus Sustainability.....	42
2.3	Different concepts of sustainability (Economic, Environmental & Social).....	45
2.4	The role of sustainability in the enterprise landscape.....	46
2.4.1	A bit of history about financial sustainable.....	48
2.5	Develop of different trending around this concept.....	49
2.5.1	NFR (Non-Financial Statement).....	49
2.5.2	SDG (Sustainable Development Goals).....	50
2.5.3	Sustainable finance.....	52
2.5.3.1	ESG.....	54
2.5.3.2	Stewardship.....	55
2.5.3.3	Sustainable Investment Funds.....	55
2.5.3.4	Climate change actions.....	55
2.5.4	Italians and sustainability.....	56
2.5.5	CSR_Corporate Social Responsibility.....	57
2.5.5.1	Ethical standards.....	58
2.6	The rule of the trend of B-Corporation.....	60
2.6.1	Trend B-Corp and sustainability.....	61
2.7	Green Bond.....	62
2.8	Introduction to empirical analysis.....	63
3	CHAPTER Are the SPACs a tool that allows a better transition in the field of sustainability?.....	66
3.1	Introduction.....	66
3.2	Definition Sample.....	66

3.2.1	How I created the statistical samples.....	68
3.2.2	Choice of variables	70
3.3	Premises or assumptions	70
3.3.1	Independent variable.....	70
3.3.2	Assumption of normality	70
3.4	Hypothesis statement	71
3.4.1	The null hypothesis.....	71
3.4.2	The alternative hypothesis	72
3.5	Methodology	72
3.5.1	Calculate the averages of the two groups	72
3.5.2	Calculating the standard deviations of the two groups	73
3.5.3	Calculate Degrees of Freedom.....	73
3.5.4	Calculate joint variance S2	73
3.5.5	Calculate the standard error of the SE estimate	73
3.5.6	Calculate the value of the T-statistic	73
3.5.7	Find the critical value $t_{\alpha/2}$ on the tables.....	73
3.5.8	Take a decision	74
3.6	Defining research question and panel comparable companies	75
3.7	Comparative analysis of a group of SPACs.....	75
3.7.1	European Market	76
3.7.2	American market	78
3.8	Considerations about the results	80
3.9	Direct correlation between the two themes: SPACs and sustainability	81
3.10	Different conditions in favour of a development of this instrument in correlation with sustainability.....	83
	CONCLUSIONS	85
	FEATURES DIRECTION.....	86
	REFERENCE	87
	APPENDIX.....	89

LIST OF FIGURES, TABLES AND GRAPHS

Table 1-Student's T distribution- website source.....	74
Table 2-Table dataset with main data for analysis- My own creation.....	76
Table 3- Table with quantitative analysis result Europe	77
Table 4- Table with quantitative analysis result America	79
Table 5 - Little part of Dataset.....	89
Table 6- Sample of SPAC with objective ESG in UE.....	90
Table 7- Sample of SPAC without objective ESG in UE.....	90
Table 8- Sample of SPAC with objective ESG in USA	90
Table 9- Sample of SPAC without objective ESG in USA	90
Figure 1- Number of IPOs and SPAC IPOs in America- Source Statista website	31
Figure 2-Distribution of traditional IPOs and SPAC IPOs in America- Source Statista website	32
Figure 3- Sustainable Development Goals	50
Figure 4-Representation of sample data - My elaboration source dataset created	67
Figure 5- Representation of dataset created with date of Refinitiv	68
Figure 6- Three different examples of mission and vision where ESGs are present- sites source.....	69
Graphic 1 - Data representation of ESG sample -UE.....	71
Graphic 2- Box plot NO-ESG date.....	71
Graphic 4-Data representation of ESG sample.....	78
Graphic 3-Box plot of ESG date.....	78
Graphic 6-Box plot NO-ESG date.....	79
Graphic 5-Data representation of NO-ESG sample.....	79

INTRODUCTION

The choice of the title already foreshadows what will be the two main themes of the thesis, that are very much felt and resonate in European markets. The main one is SPACs, or Special Purpose Acquisition Companies, a very common financial instrument in the United States and used to list small and medium-sized companies.

The second topic, which is also important, but which takes a back seat because the central theme is the financial instrument, is sustainability, a very emerging trend that companies and investors are increasingly paying attention to.

The objective of this thesis is to answer to the question title, i.e. to verify through statistical analysis, whether there can be a direct correlation between SPACs and sustainability in the broadest sense, as an opportunity for growth in energy transition, decarbonisation, and the pursuit of ESG objectives.

In order to verify this, it was necessary to create homogeneous samples, by geography and time, after having promptly downloaded from a dataset all SPAC transactions made in world markets.

After this phase of analysis, I have tried to provide a bit of a forecast and formulated a bit of a hypothesis regarding the future developments of the combination of the two trends, also analysing the historical context in which we find ourselves, between COVID-19 and the war in Ukraine.

The thesis is organized in three different chapters, the first two give the theoretical basis for the drafting of the third chapter, which therefore requires important knowledge of the two trends.

The first chapter aims to give a general overview of the instrument of SPACs, how they fit into the global landscape and financial instruments.

This phenomenon saw a complete uncontrolled explosion in 2019, in the pre-pandemic period in the US, only to receive a nice rebound following strong regulation by the SEC.

On the other hand, the Italian market is in a saturation situation, which is why I thought that the phenomenon of sustainability could be considered a lifeline to relaunch SPAC issues.

In this chapter, after clearing the topic of financial instruments for SMEs and the topic of SPACs, I thought I would introduce the topic of sustainability a little. This theme is cleared and explained in Chapter 2, where I will address and analyse every nuance, and above all give the opportunity to explain how this trend has increasingly become a discriminating theme for investment assessment by professional investors.

In fact, I will cover topics such as defining what sustainability is, when one can talk about sustainability, what ESG, B-Corp, Sustainable Development Goals are, what is meant by a Non-Financial Declaration, and, finally, what has been explored by the various conferences, not least the Glasgow conference, COP26. Finally, we find chapter 3, the beating heart of the thesis, in which the most experimental part of the thesis will be carried out, in which I will provide an excel analysis and use the t-test tool, in which I will test the

hypothesis that there is a direct correlation between SPACs and ESGs, i.e., that there is a higher return in the case of SPACs with ESGs.

This chapter is crucial for the whole thesis, in fact we can see how my qualitative analysis is all based on the data and analysis carried out in this chapter.

The hypotheses made and the creation of the samples determined what emerged, so that we can theorise and speculate on what happens soon.

1 CHAPTER

A multitude of financing instruments: SPACs

1.1 Introduction

This chapter is intended to provide an excursus on one of the two themes underlying my dissertation, namely the topic of SPACs.

Another aspect I would like to address is the inclusion of this instrument in the panorama of financing instruments made available to SMEs (Small and Medium-sized Enterprises).

This phenomenon saw a complete uncontrolled explosion in 2019, pre-pandemic in the US territory, only to receive a rebound following strong regulation by the US regulator.

As far as the Italian market is concerned, we are in a saturation phase, which is why I thought that the sustainability phenomenon could be considered an anchor to relaunch the SPAC issues.

For this reason, it could also be considered an important revitalise opportunity following the historical events that occurred, i.e. following the pandemic and the war in Ukraine.

Among many things as stated by notable studies, the sustainability trend nowadays is considered an underlying theme for investors, an entrepreneurial requirement for listing for example.

I repeat and maintain that more and more given the strong growth and need for transformation in the energy and sustainable sphere this can be considered a valid alternative to grow.

The article I took inspiration from for the choice of thesis, namely SPACs, which impressed and fascinated me is an article of Financial Times named *Spac kings lose their touch*. (Nikou Asgari 2022)

1.2 Focus on SME tools of financing

1.2.1 Definition of SME

SMEs are business complexes with statutory size limits; they are defined differently around the world according to qualitative and quantitative parameters. The various definitions have five quantitative parameters in common:

- number of employees
- turnover;
- invested capital;
- market share;
- added value;

and four qualitative parameters:

- coincidence of ownership and management;
- simple organisational structure.

- non-strong position in the markets in which it operates.
- recourse to forms of self-financing.

These limits in their history took on different values as each state applied its own definition of an SME, example, the maximum employee numbers in Italy is 250, while in Germany it is 100.

Recommendation 2003/361/EC of May 6, 2003, effective January 1, 2005, made changes to the rules under which an SME could be defined, stipulating that the number of employees is fundamental in defining the size class of enterprises receiving public aid.¹

With the Decree of the Ministry of Productive Activities dated April 18, 2015, published in the Official Gazette N.238 of October 12, 2005, the Italian legislation implemented the European directive by defining the following size limits for the attribution of SME status:

Like number of employees not exceeding 250 and annual turnover not exceeding 50 million euros and/or total balance sheet annual turnover not exceeding 43 million euros.

Within the SME category, a further distinction must be made in defining what are micro and small enterprises.

The small enterprise is defined as one that employs fewer than 50 employees and achieves an annual turnover and/or an annual balance sheet total not exceeding 10 million euros.

While the other one the micro enterprise is defined as one that employs fewer than 10 employees and an annual turnover and/or an annual balance sheet total not exceeding 2 million euros.

To calculating the business size functional to the attribution of SME status to an enterprise, the participatory relationships that the enterprise holds must also be considered. In fact, investee relationships are functional from a group perspective, as synergies could be created among the various investee companies aimed, for example, at creating an upstream and/or downstream production chain.

SMEs represent one of the prevailing size forms of companies in the European and Italian fabric, forming a strong economic fabric.

SMEs account for 99 percent of the companies in the EU territory, of which 95.8 percent represent microenterprises, i.e., companies with smaller turnover and fewer employees.

1.2.2 SME in Italy

The entrepreneurial fabric of our country is essentially based on SMEs and micro-enterprises. SMEs in Italy are a significant number, in fact we have 130,000 enterprises with between 10 and 49 employees and

¹ Gualandri, Elisabetta; Venturelli, Valeria; Caponcelli, Diego; Caselli, Paolo and Kocollari, Ulpiana. 2016. *Nasce l'impresa. Le startup e le PMI innovative.*

the remaining 26,000 with between 50 and 249 employees, not taking into account the 4 million micro-enterprises, i.e. those with less than 10 employees. .²

Overall, 80% of Italian employees are employed in SMEs and micro-enterprises, while the remaining 20% work in large enterprises. .³

There is research claiming that Italian SMEs generate a turnover of less than EUR 50 million, employ 82 per cent of the workers in Italy, an average above the European average, and at the same time are 92 per cent of the active enterprises. .⁴

These values make us understand a great deal about how relevant and present this reality is in our territory, and how it is necessary to equip ourselves with structures and tools to support its growth and survival.

According to Prometeia's latest estimates, in 2017 we had around 5.3 million SMEs employing more than 15 million people and generating a total turnover of EUR 2 trillion.

This research also shows that SMEs play a fundamental role in many realities, as for example in the South, SMEs account for 83% of production, compared to a national average contribution of 57%.

This evidence emerges from the EY SME Survey, conducted globally on a sample of 5,600 SMEs, 300 of which were Italian, representing a representative sample of the Italian entrepreneurial fabric.

This analysis revealed the weaknesses and strengths of these realities, in the context of the economic recession in which Italy finds itself, first because of the Covid and now because of the war.

As this study shows, the impact has been strong, but in what terms?

What emerges from this study suggests that the negative impact covid has had on companies has been on 74% of SMEs, in the case of Italy it has reached an even more extreme level of 90%. The impact of war and Covid was indeed significant. The balance sheet items of Italian SMEs were among the hardest hit, e.g. revenues decreased by 66% (against a European average of 55%), profit margin -64% (-52% at European level), sales volume -60% (-51% at European level). Many sectors have been severely impacted by the supply chain, with more than 50% of the companies surveyed stating that they had problems receiving and shipping goods and services. But why has this had such a strong impact in Italy? In Italy there was a concomitance of several factors.

Firstly, the fact that we were the first to impose major restrictive measures with the general blockade at the start of the pandemic (March 2020). The second factor is the persistent lack of economic solidity of Italian SMEs. The third factor is the important gap of Italian SMEs with respect to the level of digitalisation that

² Ernest Young . 2021. *Banking Transformation EY SME Survey Italy*.

³ Ernest Young . 2021. Le PMI italiane oltre la pandemia. https://www.ey.com/it_it/financial-services/le-pmi-italiane-oltre-la-pandemia

⁴ Infodata, Prometeia. *Pmi, quanto conta in Italia il 92% delle aziende attive sul territorio?* Sole24ore. <https://www.infodata.ilsole24ore.com/2019/07/10/40229/>

has allowed some foreign competitors to limit the shock of the pandemic with digital solutions such as e-commerce.

Hence the need to find an alternative tool to the most common ones to relaunch SMEs in the wake of this situation.⁵

1.2.3 Instrument for financing

The objective of this sub-chapter is to highlight the different methods of providing capital for SMEs.

Companies can benefit from different sources of financing, both internal and external. All financing in the enterprise is derived either from equity capital or from debt capital.⁶

A financial need does not only arise when a company is established or expanded, but also when demand and turnover increase.

For example, in the event of an economic upturn, a greater financial need is necessary in this situation to finance one's own entrepreneurial activity.⁷

The phase of analysing and assessing the need for capital must be calculated very carefully. It's important to must be chosen the forms of financing and create the right balance between equity and debt capital.

The combination of financing instruments and financiers will have a significant impact on the success or otherwise of the enterprise.

The first source of financing, even in the start-up phase, concerns the use of one's own capital, since the entrepreneur bears the risks and assumes the responsibilities, thus holding the decision-making power.

There are basically three possible avenues of financing available, financing through owners, borrowing of third-part capital, or more particular forms of financing (including factoring, participations and many others).

Each of these possibilities has different characteristics that lead to different expectations of the lenders towards the entrepreneur.

Those who contribute equity to the company expect a return, in an increase in value. The shareholder thus obtains a return in the form of profit and an increase in value if he can sell his shares at a higher price than the purchase price and can also intervene in the destiny of the company and contribute actively to it.

If the equity capacity is not sufficient, it will be necessary to resort to the third-party capital market.

These parties expect a return on their caviar granted in various forms.

⁵ Boyer & Baigent. 2008. *SPACs as Alternative Investments: An Examination of Performance and Factors that Drive Prices*.

⁶ Camera di commercio, industria, artigianato e agricoltura di Bolzano. 2014. *Linea guida Finanziamento alle imprese*.

⁷ Miani, Stefano. 2015. *Strumenti finanziari a supporto dello sviluppo delle PMI*. Franco Angeli

In order to identify the right sources of finance, it is necessary to identify the essential characteristics of a financial structure.

The company's principle is to create a financial structure to reduce the risk of insolvency and illiquidity or at least mitigate them as much as possible.⁸

Access to finance for small and medium-sized enterprises is of paramount importance to foster their growth and innovation, being small companies by establishment and as defined in the previous paragraph, in many cases even start-ups.

Therefore, companies with no or very little historical basis will be financed, as in the case of SPACs, these do not have any information and a consistent historical basis by their very nature, since they have just come into being. In fact, in the case of SPACs, I am going to finance a project and not a company with a history.⁹ As the study found, across the EU, access to finance for SMEs is one of the main problems, or at least it is for 10% of SMEs, although there has been a strong improvement in recent years, reducing from 16% to 9%. This varies from territory to territory, of course, with some countries having a larger problem and others a smaller one. Also very different is the approach to providing finance in different countries, as well as the ease of doing so.¹⁰

Among the most important external sources of finance for SMEs is still the banking channel, although the technological progress affecting the financial field in the last decade has opened new and interesting alternative channels.

Bank credit continues to be the main form of external financing for SMEs. 45% of SMEs only turn to the banking market when they need capital for business development, for restructuring and payment of other debts or as working capital support.

On the other hand, the stock market constitutes an essential source for innovative companies with high growth potential, such as start-ups. Although as a source of funding it is also not one of the most recommended in terms of financial equilibrium and riskiness for the players, it remains one of the few sources for stimulating growth and employment.

At EU level, due to the numerous obstacles these companies face in raising capital on the market, the commission has been working with various financial institutions to boost SMEs' access to available funding. For example, by promoting the Competitiveness of Enterprises and Small and Medium-sized

⁸ L. Anderloni, M.D. Braga. 2019. *Il Finanziamento delle startup e delle PMI. Un antico tema alla ricerca di nuove soluzioni*. Pearson.

⁹ Anna Gervasoni, Valentina Lanfranchi. 2015. *Il modello di finanziamento delle PMI: sistema bancario, minibond, private equity e venture capital*. Quaderni di ricerca sull'artigianato.

¹⁰ European Commission. 2017. *Topic Sheet for the European Semester, Small and Medium-sized Enterprises' Access to Finance*.

Enterprises (COSME) programme, the Horizon 2020 programme, the European Structural and Investment Funds and the European Fund for Strategic Investments.

In addition, SMEs receive funding from the European Investment Bank mostly through selected commercial partner banks and other intermediaries.

Through these operations, the European Union wants to promote greater diversification of financing of the economy and SMEs.

One of the cornerstones underpinning all these projects is the 'Small Business Act' for Europe (SBA), the EU's flagship initiative to implement policy measures to support SMEs.

In general, all the various financial institutions, as well as the financial markets, play an important role in creating a crucial financing ecosystem for all enterprises. In the case of SMEs, although they do not offer direct financing options, they often represent an exit point for investors.

In this way, investors can transfer their investment, freeing up funds to be recycled into new SMEs. While bank loans are still the main source of financing for most SMEs, innovative high-growth companies rely mainly on equity financing.

1.2.3.1 Equity Financing

Share capital represents the value of the contributions made by the owners of the company at the time of incorporation and at a later stage when necessary.

In addition to the share capital, there are reserves, which may consist of additional capital contributed by the shareholders or retained earnings of the shareholders.

The combination of share capital and reserves gives rise to the company's equity.

Paid-in capital increases result in an effective new source of financing for the company. With this transaction, an effective increase in share capital is generated.

Among the characteristics of equity capital, we find that it is permanently available, i.e. it is not subject to maturity, it is subject only to business risk, it also offers variable remuneration and is not subject to any costs.

This source is of primary importance to have greater bargaining power vis-à-vis banks and other lenders. Among the fundamental aspects to be observed and avoided is undercapitalisation, i.e. when a structure is not balanced and external sources exceed internal ones in percentage terms.

1.2.3.2 Debt capital

In addition to its own capital, the company may also resort to third-party capital, in which case it will use an external source to raise liquidity.

Since the functioning of the enterprise cannot depend only on the use of equity capital, it tries to maintain a balance to have a good business performance.

Among the classifications we can make about debt capital, we can divide it into settlement (or financing) debts, which are debts that the entrepreneur enters by purchasing raw materials and deciding to pay them at a later date. Then we find financing debts, that exist because there is a relationship between the company and the entity, these loans are repaid with interest and at a fixed date. Having defined these concepts, we can say and introduce the concept of short-term or medium/long-term debts, the former having a maturity of up to 12 months and the latter more than 12 months.

The company can resort to long-term financing provided by financial institutions, such as credit lines, mortgage-backed loans, or other instruments that I can explain in the other paragraph.

1.2.3.3 Bank loan

Banks, with their bank loans, remain the biggest and best financial intermediaries for SMEs, although their importance varies significantly between countries. In fact, the banks' assets consist mostly of bank loans, although they also invest in capital markets.

Following the decrease in interest rates, which had sanctioned the pre-covid and post-covid period, i.e. years 2019-2021, there had been an increase in loans and consequently an increase in investments.

Then because of the war and the uncertainty of the markets, rates rose, at least in Italy, even by a great deal, and became less favourable.

This recurring difficulty then greatly affected SMEs, which, being small and growing exponentially, need a lot of financial resources.

This remains one of the best and most widely used financing instruments, including mortgages, loans of all kinds, current account credit facilities, credit mobilisation operations, and many other forms.

Among the possibilities for financing oneself, we have the credit facility, which consists of all short-term loans granted by banks to businesses. This is the granting of a bank overdraft, on pre-established conditions, within a defined amount limit. The forms of credit are of two types, for cash, by bringing securities or bills of exchange to the bank in return we obtain liquidity, or for signature which includes personal guarantees. These include the bank overdraft, which is the maximum amount the bank will lend to the customer; it is an agreement between the two, which determines an obligation assumed by the bank vis-à-vis the customer, to grant credit in the future after the customer's creditworthiness has been assessed.

Another form is the opening of a current account credit, in which the bank makes a sum available to the customer, granting him or her a cash loan.

1.2.3.4 Role of the central guarantee fund

The Central Guarantee Fund was established by Law 662/96 (Art. 2, paragraph 100, letter a) and only became operational in 2000. With the Guarantee Fund for Small and Medium-sized Enterprises, the

European Union and the Italian State seek to support businesses and professionals who have difficulty accessing credit because they do not have sufficient guarantees. ¹¹ (Cassa Depositi e Prestiti s.d.)

This allows companies to access banking channels without having to incur costs such as sureties or insurance policies to guarantee financing.

Companies must be considered economically and financially sound based on the evaluation of the last two annual balance sheets, whereas start-ups are evaluated on the basis of a business plan drawn up on behalf of the company or by the company itself.

The Fund's guarantee can only be activated when financing is granted by banks, leasing companies and other financial intermediaries to businesses and professionals. The guarantee can cover up to a maximum of 80% of the amount of the financial transaction and up to a maximum guaranteed amount per beneficiary of EUR 2.5 million. In addition, the Fund may intervene in two different ways: first by directly guaranteeing the financial transaction, thus providing a direct guarantee, or by counter-guaranteeing the guarantor guaranteeing the transaction in the first instance.

Only financial transactions directly aimed at the business activity are considered eligible for direct guarantee, while all transactions that do not have a fixed and certain duration or that are linked to the quantities exported in export activities are excluded.

In fact, only enterprises belonging to any economic sector can be guaranteed, the only exceptions being agricultural enterprises, which can only benefit from the counter-guarantee by applying to the Confidi (Consortium of Collective Fidi Guarantee).

The Fund's guarantee must be requested by the financial intermediary at the time the loan application is made.

The Fund's activity brings great benefits to both the company and the bank, i.e. it leads to a reduction in financing costs.

In fact, only on the part of the capital guaranteed by the Fund does the bank carry out a 0% weighting to be set aside as a capital reserve, which does not depend on the risk class of the financed company, allowed only by the state fund.

After the Italian example, a fund with the same purpose was established by the European Union, called the European Guarantee Fund (EGF).

The EIB Group set up the EUR 24.4bn European Guarantee Fund (EGF) supported by 22 Member States to help companies overcome the economic impact of COVID-19 and get back on track after the shock, as well as to support innovation and transformation.

The EGF is part of the EUR 540 billion EU recovery package agreed in 2020 by European leaders.

In fact it is considered the largest anti-crisis mechanism the EIB Group has put on the market, enabling immediate impact.

¹¹ Analysis of European Investment Bank. 2022. European guarantee fund.

Underlying this is the speed needed to support businesses, in fact the first EGF transaction was signed in December 2020, only nine months after the EGF was approved by the European Council.

It derives from the rich experience of the European Investment Bank Group in responding to the needs caused by the COVID-19 pandemic.

1.2.3.5 Alternative instruments

There are several alternative financing channels to bank credit that have been created over the past decade in response to the need for capital required for the functioning of the global economic system. This new need for alternative financial instruments arose after the financial crisis that started in 2008 and led to a credit crunch for many SMEs, especially in Italy and Europe. Numerous legislative measures and efforts were made by financial market participants to create alternative financing channels and improve the competitiveness of the financial system.

Although Equity capital is the best alternative to debt capital, it presents, as the term implies, a lot of risk, and when it comes to financing companies with a high degree of innovation and therefore high risk, it is no longer the optimal instrument.

To analyse the success of SPACs, and why companies want to use this instrument, it is important to review the financing methodologies, highlighting their advantages and disadvantages.

The first one I would like to analyse is the issuance of bonds that can be considered a good source of financing for the company, as it allows new capital to be raised through the public offering of debt securities. It can be used in the medium to long term by joint stock companies or limited partnerships.

Bonds are debt securities issued by corporations for the purpose of obtaining a medium- to long-term loan from bondholders, without recourse to bank financing.

All conditions relating to the bond must be defined before the issue: the saver has the right to know the price, duration and interest rate. Bonds are bearer bonds and give the holder the right to the payment of periodic interest and the return of the paid-up capital at the bond's maturity.

Bonds may be issued for an amount not over twice the share capital and their issue are approved by the directors.

There are various types of bonds, index-linked bonds, whereby the repayment principal varies with the inflation rate, or bonds with warrants, whereby the bond is attached to a warrant giving the right to buy a certain number of shares and bonds. Another type is the bond convertible into shares, whereby the holder can choose between repayment at maturity or the replacement of the bonds with shares, then finally the

ZCB (zero coupon bond), whereby the zero-coupon bond is characterised by a high repayment price compared to the issue price but no periodic interest payment.¹²

Another widely used method is factoring, which consists of a contract whereby a company assigns its receivables of any kind to a third company in exchange for liquidity and a series of services related to the management of the assigned receivables, including, for example, the collection and advance payment of the receivables before they fall due.

The factoring company is then obliged to collect the amount of the receivables against payment of a fee, at the same time often also providing financing to the client company in the form of advances on outstanding receivables.

Recourse to factoring is a very popular tool among companies operating in sectors where deferring payments to customers is a critical success factor, but also among SMEs that work with the public administration and often must deal with payment schedules that are difficult to reconcile with suppliers' financial needs.

The assigning company receives the amount of the receivables before the due date by deducting a commission, which constitutes the Factor's profit. Behind the factoring contract, therefore, there is a real financing operation for the client company, which in this way will be able to count on cash liquidity useful to pay its suppliers and continue its business activity, thus avoiding incurring bad debts due to late payments by customers.

There are several alternative methods, including invoice trading, which is nothing more than the mobilisation of trade invoices, i.e. the assignment of a trade receivable, usually in the technical form of non-recourse, and the subsequent cash advance. It is not really a means of recovering capital, but rather an instrument to maintain the same level of liquidity. The assignment of a trade receivable is particularly strategic for those companies that have a low degree of liquidity and long payment terms.

On the contrary there is the Crowdfunding that is a collaborative bottom-up fundraising process, realised through an online portal, in which a group of people use their money in common to foster the development of a project or initiative.¹³

¹² Caratelli, M., & Fattobene. 2018. *Strumenti alternativi di finanziamento per le Pmi: mini-bond, crowdfunding e business lending*. *Bancaria*, 11, 60-71.

¹³ Brichese, Silvia. 2021. *Il problema di accesso ai finanziamenti per le PMI: il ruolo dell'equity crowdfunding*. Università Ca' Foscari Venezia

The advantage of crowdfunding lies not only in the possibility of being able to raise capital and act as a financing system, but also in the added value given by the marketing and critical validation action that is carried out by the network.

There are now several crowdfunding platforms based mainly on two different operating models: 'all or nothing' or 'take it all'.

Another opportunity is the direct lending operations are, broadly speaking, direct lending activities carried out by non-banks, typically alternative investment funds that provide medium- to long-term loans to SMEs and large companies for growth projects rather than for mergers or acquisitions.

In the bond category we have mini-bonds, that are bonds with any maturity date, or promissory notes, with a maturity of less than 36 months and issued only in dematerialised form, issued by Italian companies, small and medium-sized companies. Securities are issued on the securities market and can only be subscribed by professional and qualified investors, who, in return for the capital invested, receive a contractually agreed remuneration through the payment of coupons. The rationale behind the established requirements is to facilitate access to credit for small to medium-sized enterprises that generally do not have direct access to the capital market.

An uncommon instrument is the initial coin offerings (ICOs), it's one of the most radical and important innovations has been the introduction of cryptocurrencies, which were initially used as a payment instrument but have now also become a means of raising capital through digital token offerings on the Internet (Initial Coin Offerings or ICOs). These are transactions that aim to raise capital by exploiting blockchain technology. In an Initial Coin Offering (ICO), cryptocurrencies and blockchain technology are used to raise capital for a project, through the Internet, just as in a crowdfunding campaign, but with important differences.

Among the most famous is private equity, it's a financial activity through which a party, generally an institutional investor, acquires the risk capital shares of a target company that is generally unlisted. There are two different methods of acquiring stakes: by acquiring existing shares from its shareholders (buyout) or by subscribing to newly issued shares by bringing new capital into the company.¹⁴

Some lacking financial solidity resort, for example, to venture capital is a special form of medium- to long-term investment in unlisted companies with high development and growth potential (high-growth

¹⁴ Rodrigues and Stegemoller. 2011. *Special Purpose Acquisition Corporations: A Public View of Private Equity*.

companies) that are in the start-up phase, carried out mainly by institutional investors with the aim of obtaining a substantial capital gain from the sale of the stake acquired or from listing on the stock exchange. Venture capital activity does not only entail the injection of risk capital, but also concerns a series of activities connected and instrumental to the realisation of the entrepreneurial idea. The professional contribution of the investor himself in the company's activity is fundamental, in fact, he participates in the company's strategic decisions by contributing his professional knowledge and experience, leaving the entrepreneur and management with the operational management

Business angels or informal investors, for instance, are among those less commonly used. They are private operators, often with high investment potential and professional experience in the sector, whose aim is to directly invest part of their equity in newly established or growing private companies.

Business angels can therefore be said to play an important role in the economy, in fact in many countries they are the second largest source of external funding for start-ups.

In fact, business angels are becoming increasingly important as they provide venture capital, thus contributing to economic growth.

Another methodology is securitisation, i.e. the process by which a financial instrument, usually originating from a credit institution such as a bank, is created by the aggregation (e.g. SME loans) of investors. This process facilitates access to the panoply of investors, enabling them to increase liquidity by freeing up capital resources accordingly.

An instrument that is also used in ordinary life is leasing, which is a source of financing based on any type of asset, in fact it is often considered a very attractive source of financing for SMEs.

Leasing is a financing operation put in place by a bank or financial intermediary (lessor) that consists of granting the use of a purchased asset for a certain period and against payment of a periodic fee (rent).

Ownership of the asset remains with the lender; in fact, the company cannot enter the asset in its balance sheet as if it were its own, but it will constitute its commitment to the lender in the memorandum accounts.

At maturity, the company holding the asset can then decide whether to acquire ownership by paying a redemption price.

On the contrary, listing allows SMEs to access a potentially broader range of equity investors. Particularly interesting for SMEs are growth stock markets that provide listing opportunities with very simplified requirements for companies that are unable to list in larger markets.

Such instruments include SPACs, Special Purpose Acquisition Vehicles, companies used to list themselves on the capital market.

1.3 The instrument of Special Purpose Acquisition Companies

The aim of this paragraph is to delineate and focus on the financial instrument that is the subject of my thesis, one of the two trends that I will correlate.

1.3.1 Definition of SPAC

The term SPAC stands for Special Purpose Acquisition Company, we find many definitions given for this instrument.

One of the most important definitions is given by the SEC, which stands for U.S. Securities and Exchange Commission:

“A SPAC is created specifically to pool funds in order to finance a merger or acquisition opportunity within a set timeframe. The opportunity usually has yet to be identified. SPACs are also often structured to avoid being legally subject to the additional requirements described in the last paragraph. However, SPACs often incorporate many of the requirements or some derivation of the requirements in order to attract investors.” (U.S. Securities and Exchange Commission s.d.)

Another definition is given by Marco Fumagalli, an Italian author, that defines it as:

“Companies that raise financial resources through IPOs in order to integrate subsequently with an operating company and thus bring it directly to listing on a stock market.” (Fumagalli 2014)

The last one is given by Borsa Italiana, which defines the SPAC as:

“Investment vehicles, containing exclusively liquidity, with a limited risk profile, with a well-defined time constraint and significant earning potential.” (Borsa Italiana s.d.)

We read more and more of this phenomenon that is certainly growing, even in the United States where the term of "invasion" is generally used.

SPACs have become a popular vehicle for various transactions, including transitioning a company from a private company to a publicly traded company.

About blank-check companies, the SEC as I will mention below has pointed this out:

“A blank check company is a development stage company that has no specific business plan or purpose or has indicated its business plan is to engage in a merger or acquisition with an unidentified company or companies, other entity, or person. These companies typically involve speculative investments and often fall within the SEC’s definition of “penny stocks” or are considered “microcap stocks.” (U.S. Securities and Exchange Commission s.d.)¹⁵

¹⁵ Jog, V., & Sun, C. 2007. *Blank check IPOs: A home run for management*

One of the latest news concerns Jean Pierre Mustier, former CEO of UniCredit, who announced that he just launched one with the aim of investing in promising European companies.

This instrument gives the possibility to an unlisted target to develop quickly and to access the stock market immediately, creating value. It's important to underline the possibility of limited risk profile and the significant earning potential.

It is therefore a very complex tool, as already emerges *prima facie*, but suitable precisely for the development of small and medium-sized enterprises companies with high growth potential because, through the SPACs, the target companies can indirectly access the market equity by becoming a listed company in shorter times and procedures.

As previously reported, blank-check companies are companies that undertake an IPO to raise funds for the purpose of investing those funds to carry out a merger or acquisition with another existing company, an enterprise or an individual, not identified at the time of the IPO.

1.3.2 The origins of SPAC go back a long way

The SPAC phenomenon was structurally born in 1992, has developed significantly in the US since 2003 and is considered a refinement of the blank-check company model.¹⁶

As previously reported, blank-check companies are companies that undertake an IPO to raise funds for the purpose of investing those funds to carry out a merger or acquisition with another existing company, a firm or an individual, not identified at the time of the IPO.¹⁷

This corporate vehicle, during the 1980s, turned out to be a tool used to carry out fraudulent activities. Much emphasis was placed on the liquidity enjoyed by the securities and the significant value creation potential that would result from the acquisition to deceive less experienced investors. These frauds especially targeted the penny stock segment as these shares were not required to be registered and traded on regulated markets.

To put an end to these behaviours, the SEC amended the regulations on blank-check companies contained in the Securities Act of 1934 several times until the introduction, in 1992, of the so-called 'Rule 419' which is applied exclusively to blank-checks that are penny stocks.¹⁸

The structure of SPACs formally came into being in 1992 when the founder of the investment bank EarlyBirdCapital, David Nussbaum, in consultation with a group of lawyers and underwriters devised a corporate vehicle that could be distinguished from the blank-check company, both in terms of reputation

¹⁶ Paoletti Arianna. 2017. *Le Special Purpose Acquisition Companies (SPAC)*. *Rivista Diritto Societario*.

¹⁷ Tran, A. 2012. *Blank check acquisitions*.

¹⁸ Lakicevic, M., Shachmurove, Y. and Vulcanovic, M. 2014. *Institutional changes of Specified Purpose Acquisition Companies (SPACs)*. *Journal of Corporate Accounting and Finance* 28, 149-169.

and operationally since Rule 419 could not be applied. Notwithstanding the need to make this distinction clear, the role that this vehicle was called upon to play was the same as that of the blank-check company. In addition, some of the investor protection requirements imposed by the SEC and the NASD (National Association of Securities Dealers) on blank-check companies were voluntarily adopted.

The SPAC, in fact, provides a dual protection for investors that is expressed in the presence of the right to vote in the shareholders' meeting approving the business combination and the provision of the possibility, for dissenting shareholders or those who did not participate in the decision, to redeem their shares for a cash consideration. In the Italian case, the right of withdrawal is governed by the law, contrary in the American case, this right is granted only to dissenting investors.

In the US experience, the SPAC was created as a vehicle that allows participation in large investments even to types of investors that were previously precluded (in private equity funds, for example, individual investors do not invest directly in the deal but in the fund), including retail investors.

In the Italian experience, however, such investments are still precluded to retail investors, perhaps because the Italian stock market is not as developed as the American market and it is assumed that Italian investors have less experience in similar transactions and, therefore, need more protection from the institutions that regulate the market itself. The first 'operational' SPAC was listed in August 2003 when the investment bank EarlyBirdCapital underwrote the IPO for the company Millstream Acquisition Corporation.

It was the first transaction to qualify under the regulatory changes introduced regarding blank-check companies.¹⁹

This transaction brought SPACs to the attention of the market, so much so that SPAC IPOs made up 23% of the capital market in 2007 and 34% in 2008.

The markets where SPACs tend to list most frequently are New York (OTCBB, AMEX, NASDAQ, NYSE) and London (AIM).

In Italy, the first SPAC operation took place in 2011 with the listing of the "Made in Italy1" SPAC, which in 2012 closed a business combination with the target company SeSa Spa, leader in the field of information technology.²⁰

It is interesting to understand why the SPAC phenomenon has progressively spread from 2003 to today, and it seems to be - both internationally but also in our legal system - rapidly increasing, with more and more transactions concluded through this institute, so much to speak of a boom in SPACs.

¹⁹ Wittlin, F, Ferris, K. and McCutchen, B. 2010. *Can the SPAC Make It Back? Structural Changes, Including Elimination of the Stockholder Vote to Approve an Initial Acquisition, May Help Renew Interest in SPACS*. Bloomberg Law Reports - Mergers & Acquisitions 4, 26.

²⁰ V. Donativi and P. Corigliano. 2010. *Le SPAC (Special Purpose Acquisition Companies): il modello internazionale e la sua compatibilità col diritto italiano*. IPSOA.

Well, the reason is to be found in the crisis that affected and affects the financial markets in the recent years. The financial crisis and credit, the bubble of the new economy, made markets completely irrational and brilliant, representing a huge danger to businesses and the real economy and significantly reducing the availability of risk capital provision from classic private equity.

In this situation of complete market volatility and crisis of the classical banking system, the phenomenon must be framed in the increasing number of SPACs, because they represent vehicles capable of combining a high efficiency profile with a reduced one risk profile.

1.3.3 How they work and features

SPACs are investment vehicles and therefore their establishment takes place through the contribution of capital by the promoters, who generally coincide (in whole or in part) with the members of the board of administration ("management team") in charge of identifying the investment opportunity. The corporate purpose of a SPAC is, in fact, the search and identification of a target company with which to subsequently implement the business combination.²¹

In this paragraph I would like to explain well and thoroughly, the functioning of a SPAC and its life cycle.

The latter is organised in the 4 different phases:

1. Company Constitution
2. Realisation of the IPO (listing)
3. Search of the target company
4. Business combination.

What needs to be emphasised is that only if everything goes well is there all four stages indicated. If the company does not achieve its goal (reaching agreement with the target company), the company is dissolved without having completed all the stages for which it was set up. That said, let us look at the various stages in more detail.

1.3.3.1 Company Constitution

It all begins when the promoters establish the SPAC, and then decide to seek investors for their project.

These promoter individuals must meet specific requirements set by the regulations, in a nutshell these individuals are often finance experts or managers who are experts in extraordinary corporate transactions.

These individuals take on a key role in the whole investment project, as they are the managers who will go on to identify the target company in the market with which to carry out the aggregation transaction.

Moreover, these individuals are crucial because since there is no real company but only a project, indirectly one will finance the promoter, the historical basis and the project is likely to be just words.

²¹ Peveraro, S. 2013. *Adesso mi faccio la SPAC*. Milano Finanza.

Consequently, we can say that on the experience of the management depends on the success of the operation and the return from the investment from the various investors

Another key aspect is that the promoter partners are the ones who take charge of the subsequent IPO phase.

1.3.3.2 Realisation of the IPO (listing)

The second phase or moment in the life cycle is the implementation of the IPO, this involves the company going out to raise the financial resources to support the business combination transaction.

Simply put, through this transaction, the capital of the SPAC is offered to the capital market in the form of shares for subscription. The latter is subscribed by investors and with the IPO is deposited into an escrow account. Often a trust company is engaged as a guarantee for the investors on the paid-up capital and the restriction on its destination, which should be the project they wish to finance, i.e., the one that prompted them to invest. This step is very important since the guarantee that investors can rely on is stipulated. In fact, once the capital has been subscribed, the investor must wait to find out what the target company identified for the transaction will be.

Investors do not bear any kind of risk since they are guaranteed the right of withdrawal. This is both if the target company is not identified, but also if the target is not a company deemed sufficiently compelling. Importantly, investors can get back both the paid-up capital and the interest accrued during the period of capital deposit in the escrow account.

1.3.3.3 Search of the target company

This turns out to be a vitally important phase that establishes the feasibility and credibility of the entire transaction.

The search for the target company with which to carry out the business combination is the most important aspect of the whole operation. The search phase can end in two ways, with the failure of the search resulting in the subsequent liquidation phase of the SPAC, or with the success of the search conducted and the subsequent start of negotiations for the next phase.

Usually, the search phase lasts for a period of 18 to 24 months. The sketch of the target company is a medium-sized company, often a leader in its industry, not yet listed on the stock exchange. Once the company has been identified and the negotiation phase with it has been completed, a letter of intent is signed with the plan for the acquisition transaction. This document must be presented to the SPAC's shareholders' meeting.

1.3.3.4 Business combination

The last step called business combination, is developed with the convening of an extraordinary shareholders' meeting so that management can present the proposed combination with the identified target company. In this situation then the shareholders are asked to cast their votes on the exercise of the corporate merger.

They will then cast their own negative vote, and in that case the investors have the option of exiting the company, regaining possession of all the invested capital.

In case in the merger operation does not obtain favourable votes from 50% plus one of the shareholders representing the capital of the SPAC, it will not be concluded in a positive way.

Otherwise, the merger process between the two companies will come to life: the funds raised in the market will be released, the shareholders who cast negative votes will be liquidated, and the merger operation will be initiated.

1.3.4 Relevant markets

In Italy, SPACs can be listed on two markets: AIM Italia (Alternative Investment Market), now called Euronext Growth Milan (EGM) which was created with the aim of increasing access to the capital market for SMEs, and the MIV (Mercato Telematico degli Investment Vehicles), now called Euronext MIV Milan capital for SMEs. With reference to the latter, it should be noted that on 24 May 2010 changes were made to the amendments were made to the Rules of the Markets Organised and Managed by Borsa Italiana S.p.A., as approved by Consob which provided for the introduction of a new professional segment dedicated to Special Investment Vehicles (SIVs), which also include SPACs.²²

EGM is defined as a multilateral trading facility (MTF), i.e. 'a private trading system offering the possibility to trade financial instruments listed on a stock exchange, without regulatory admission and reporting duties'. It therefore differs from other markets, being characterised by a simple and rapid listing process, which is completed approximately within 10 days of receipt of the application for admission and which is supported by the Nominated Adviser (NOMAD). The latter has the task of assisting the listed company not only in the admission phase, but also throughout the entire listing process. admission, but also for the entire duration of its stay on the market.

Moreover, the market is accessible to both institutional investors - to whom the placement of securities is normally addressed in the admission phase - and retail investors, who can trade the same shares later, on the secondary market.

²² Anna Lambiase and Franco Angeli. 2022. *La quotazione in borsa delle PMI: Esperienze imprenditoriali di successo su Euronext Growth Milan.*

In contrast, the MIV, as defined by Borsa Italiana "is the reference market for the listing of funds and corporate vehicles that invest in Real Economy instruments." (Borsa Italiana s.d.). It is therefore characterised by the presence of many very different vehicles, such as Private Equity, Public and Private Debt, Venture Capital, Real Estate and Multi-Strategy funds.

In fact, it is important that admission is simple and there is a flexible investment policy for issuers, which allows investors to easily identify vehicles and invest in a regulated market.

Given the phenomenon analysed, that of SPACs, it is interesting to analyse the segment of the MIV dedicated to SIVs, as these also include Special Purpose Acquisition Companies. It should be noted that this specific segment is not accessible to retail investors, but only to professional ones.

For a Special Investment Vehicle to be admitted to the MIV they need to absorb to certain requirements in terms of quantity, timing, and necessary features.

In conclusion, as we can see from the volumes, the MIV Milan market is very well adapted and active as far as the operation of SPACs in the Italian context is concerned.

1.3.5 Actors and people involved

As repeatedly stated, one of the main strengths of the SPAC, according to experts, is the alignment of the different interests of all parties.

In fact, the finalisation of the business combination presupposes the involvement of multiple actors, who are necessary for the success of the transaction and whose role remains throughout the life cycle of the SPAC.

1.3.5.1 Promoters

The creation of the SPAC arises when a number of parties called promoters wish to acquire significant stakes in unlisted companies, with the aim of listing them on the securities market. They then provide the SPAC with the necessary capital to be able to bear the costs of the IPO.

In fact, they are offered the subscription of shares that differ from those of investors.

If the transaction in question is successful, the promoters will see the SPAC's securities appreciate in value and will have the opportunity to exercise their sponsor warrants, converting their special shares into ordinary shares.

A very important aspect, which will form the basis of my hypothesis, is that the promoters of a SPAC must be characterised by a high level of experience in the management of M&A or Private Equity transactions, usually being former executives of, for example, major investment companies. The professionalism of these individuals is, moreover, directly related to their reputation: the latter, in fact, is essential to make the SPAC more attractive.

Another fundamental aspect concerns their ability to avoid conflicts of interest with other potential investors by providing the right information.

1.3.5.2 Gli underwriters

The activity of the underwriters consists of managing the IPO, underwriting the securities issued by the SPAC and acting as market makers.

Rodriguez and Stegemoller (2014) identify two main functions performed by these entities: the sales function and the precautionary function. The former includes the activities of evaluating the issuer, and the simultaneous construction of a book and sale of the shares issued in the IPO. Conversely, the precautionary function consists of trying to provide the issuer with sufficient funds to meet the expenses that will be incurred for due diligence.

What happens is the underwriting of the securities to ensure their quality and the subsequent placement on the secondary market, in search of interested parties.

By identifying possible investors, in fact, the underwriter creates a real market for these securities. Thanks to their reputation, these parties are able to

The higher the reputation of the underwriter, the greater the liquidity of the security due to the perceived high quality of the share/share.

Underwriters generally receive a percentage of earnings for their work, which serves to remunerate them for their risk and work.

1.3.5.3 The Investors

Investors are the people the promoters use to finance the IPO, also called 'underwriters' because they subscribe 'in the dark', i.e. in advance, and do not know exactly what they are getting into, they only know what the project will be, i.e. the shares of the SPAC. . Experts say that the operations concluded so far in Italy have seen the participation of national and international investors with characteristics very similar to those of the promoters: think, for example, of private equity funds, banking sector operators, investment banks and hedge funds. This indicates a general mistrust of the instrument on the part of private individuals. The reason for this can easily be traced back to the very high minimum fee required at the time of subscription, since it corresponds to a high risk and depends primarily on the skill of the promoters.

1.3.5.4 Target company

The identification of the target company is one of the most important steps in the entire life cycle of an SPAC; in fact, if deemed suitable by the board of directors, it will determine the business combination. As a result, promoters carry out an in-depth analysis of the market, focusing their attention on small or medium-

sized, family-controlled, obviously unlisted companies, leaders in their sector and, above all, with a high potential for sustained growth.

This phase is very important because it determines the success of the transaction and the subsequent market placement.

At this stage, SPACs specify the main requirements that a company must meet to be considered suitable for the business combination, some of which relate to growth prospects, others to competitive positioning.

1.4 Scope of application and comparisons

The scope of this paragraph is to train and give the necessary tools to analyse the SPAC phenomenon in comparison to the nearest available market instruments.

Focusing on the reference context, on the very similar other instruments such as IPOs and Private Equity.

Giving an initial analysis, as an anticipation of the central theme of my thesis, that of sustainability, then arguing how these two trends can intersect.

Furthermore, I would like to provide further basis for my analysis by providing the latest market trends regarding the SPAC phenomenon in Europe and the US, making my thesis more solid.

1.4.1 Comparison between IPO and SPAC

The two different instruments, i.e. SPACs and IPOs, have many differences and similarities. I would start by saying that they have one objective in common, which is that both are admitted to listing on a regulated market.

As we shall see, the listing markets are different because the two instruments have different requirements, even though they achieve the same objective.²³

First of all, it should be noted that SPACs are instruments specifically created to obtain the listing of a target company on the regulated market, i.e. to allow access to the capital market, which would otherwise not be possible for SMEs, since for medium-sized companies access to the regulated market is allowed simply through listing.²⁴

SPACs in Italy are listed on the Euronext Growth Milan market, which used to be called AIM or Alternative Investment Market, while the others are listed on larger markets.

The first difference between the two is that an IPO is a market transaction, in which the role of the investment banker is to meet investors and enable better exchange of information.

²³ Kimberly C. Gleason, Ravi Jain and Leonard Rosenthal, 2006. *Alternatives for Going Public: Evidence from Reverse Takeovers, Self-Underwritten Ipos, and Traditional Ipos.*

²⁴ Kolb, J., Tykvova, T. 2014. *Special Purpose Acquisition Companies – Are they an alternative to IPOs?.*

In contrast, the Spac is envisaged in two phases, a private one in which the promoters raise capital and then move on to a public one in which they try to place themselves on the market, finding a target company with which to merge.

It is an instrument in which sponsors play a fundamental role in acquiring new investors.²⁵

The obligations that a company normally has to fulfil in the case of SPACs are fulfilled by the target company already listed on the market.

This simply translates into lower costs and less time for the listing of SPACs than in a traditional IPO.

Furthermore, the IPO of a SPAC has as its object a company with no operational processes or activities other than cash contributions, in essence an empty box, whereby only a project is ultimately financed.

Whereas the traditional IPO has as its object a structured and functioning company, which is not a container for a future operation, but which has, for example, various operational processes within it.

Another aspect concerns the information available at the time of subscription and listing. In a traditional IPO, investors have a history on which they can build projections and base their decisions, as they do not only have to invest in the capabilities of the management team, as in the case of SPACs, but can make use of economic and financial data and countless other pieces of information.

A further aspect of differentiation from ordinary IPOs is the under-pricing that shares in SPACs experience at the time of IPO. Under-pricing, as I mentioned earlier, is the phenomenon whereby a security is offered on the market at the time of listing at a price below its possible fair market value. This is identified as the measure of the discount that the issuer has to incur, in order to make the security attractive to the public, compared to the fair market value at the time of listing.

By contrast, when we speak of traditional IPOs, the latter are characterised by substantial under-pricing, the latter being generally zero because of the presence of information asymmetries and the uncertainty as to how the proceeds of the listing will be used.

As far as the liquidity factor is concerned, the SPAC allows for a higher cash-out at the time of exit from the investment, as it offers the managers of the target, or the promoters of the SPAC, the opportunity to exit the investment without having to sell their shares on the market, a condition that could negatively affect the market's perception of the company.

Another key aspect, which was also confirmed by the interviewee, is that the IPO of a SPAC takes place in a much shorter time than the ordinary IPO process, which greatly favours the use of this instrument.

About all technical aspects, the companies argue that in an ordinary IPO process, they charge fees ranging from 4% to 7% of the capital raised, whereas in the case of a SPAC, the merger significantly reduces costs. Taking company-specific factors into account, considerable studies have shown that 'better' and thus more established and solid companies prefer to go the IPO route rather than the listing route through SPACs.

²⁵ Murray, J. 2014. *The Regulation and Pricing of Special Purpose Acquisition Corporation IPOs*.

In fact, this instrument is most useful for SMEs that need to enter the market to raise financial resources, but do not have the means to go through the lengthy and costly IPO process, nor can they meet the much more stringent requirements, which are addressed through this instrument.

In fact, an investor counting on a SPAC as opposed to a traditional IPO runs several risks.

First of all, one does not know what the target company will be; in fact, if one buys shares in a SPAC before the merger is announced, one is in fact making an investment 'in the dark', putting one's trust in the team that created the SPAC.

Among the many problems we find that the SPAC might not find a company to merge with, because if after two years it had not found a target company, it would return the paid-up capital to its shareholders.

In that specific case, therefore, it would be an unprofitable investment, a waste of capital and time. Another risk they take is to invest 20 euros for a stock today and that in two years will yield little more than 15 euros, since for example as many studies report stocks often fluctuate even before the target company is announced.

The reasons may be multiplicity these we find investor confidence in the SPAC team and promoters which I have repeatedly mentioned as key points.

Moreover, if it happens that SPAC fails to find the target company, the shareholder will be returned only the 15 euros, even if he had paid 20 euros per share, so not as much as invested.

As a transaction in fact it is less regulated than a traditional IPO, in fact the amount of information available to the investor is less than that of an IPO, lack of historicity.

Among other things, we can identify a potential conflict of interest between the founders of the SPAC and its shareholders. To prevent this from happening and the two years go by without completing a merger, sometimes the team that created the SPAC ends up paying a higher price than the real value of the target company.

1.4.2 Some data on IPO and SPAC comparison

The purpose of this section is to provide a more complete analysis and make a more concrete comparison, using numbers, between IPO and SPAC transactions.

I retrieved a statistic from the portal "Statista", comparing the number of traditional IPOs and the number of SPACs in the American market.

What emerged? First, that most IPOs completed in the US in 2021 were SPAC IPOs, a marked change from previous years.

In the past year, only 42% of IPOs were traditional IPOs, down completely from 74% in 2019.

The number of US SPAC IPOs accelerated in 2020 compared to previous years, growing by almost 190 since 2019, and is expected to increase further in 2021 depending only on market conditions.

However, what emerges in general is that the number of overall IPOs typically follows the health of the economy, i.e., we find a high number of IPOs in times of economic growth and a decreasing number of IPOs in times of economic recession.

This is what emerged from the graph and the data provided by the website “Statista”, which I will also confirm with my analysis in chapter three.

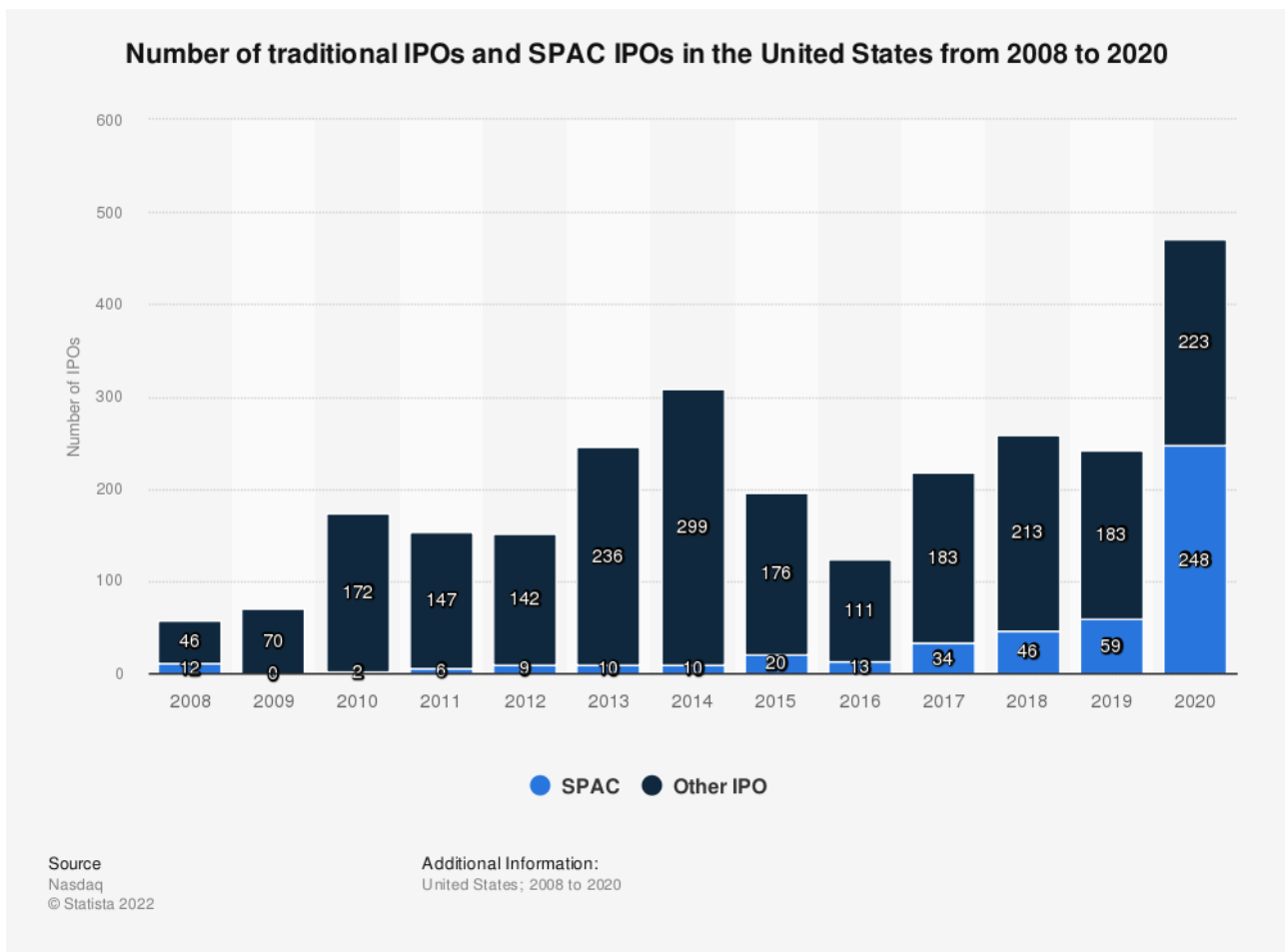


Figure 1- Number of IPOs and SPAC IPOs in America- Source Statista website

I would like to reinforce what has been said with a further analysis of the same lead, in which instead the distribution of the number of IPOs and SPACs in the US market from 2016 to 2021 is highlighted.

In fact, the total number of IPOs in the US fluctuated considerably between 2008 and 2020. There has been an increase in the number of SPAC IPOs over the past five years, from 13 SPACs in 2016 to 248 SPACs in 2020. Until 2020, the IPO scene was largely dominated by traditional IPOs, in fact, the percentages were always above 75 per cent and then dropped to around 40 per cent between 2020 and 2021.

As can be seen in the graph, the trend of SPACs has increasingly taken hold in the American, and European, market.

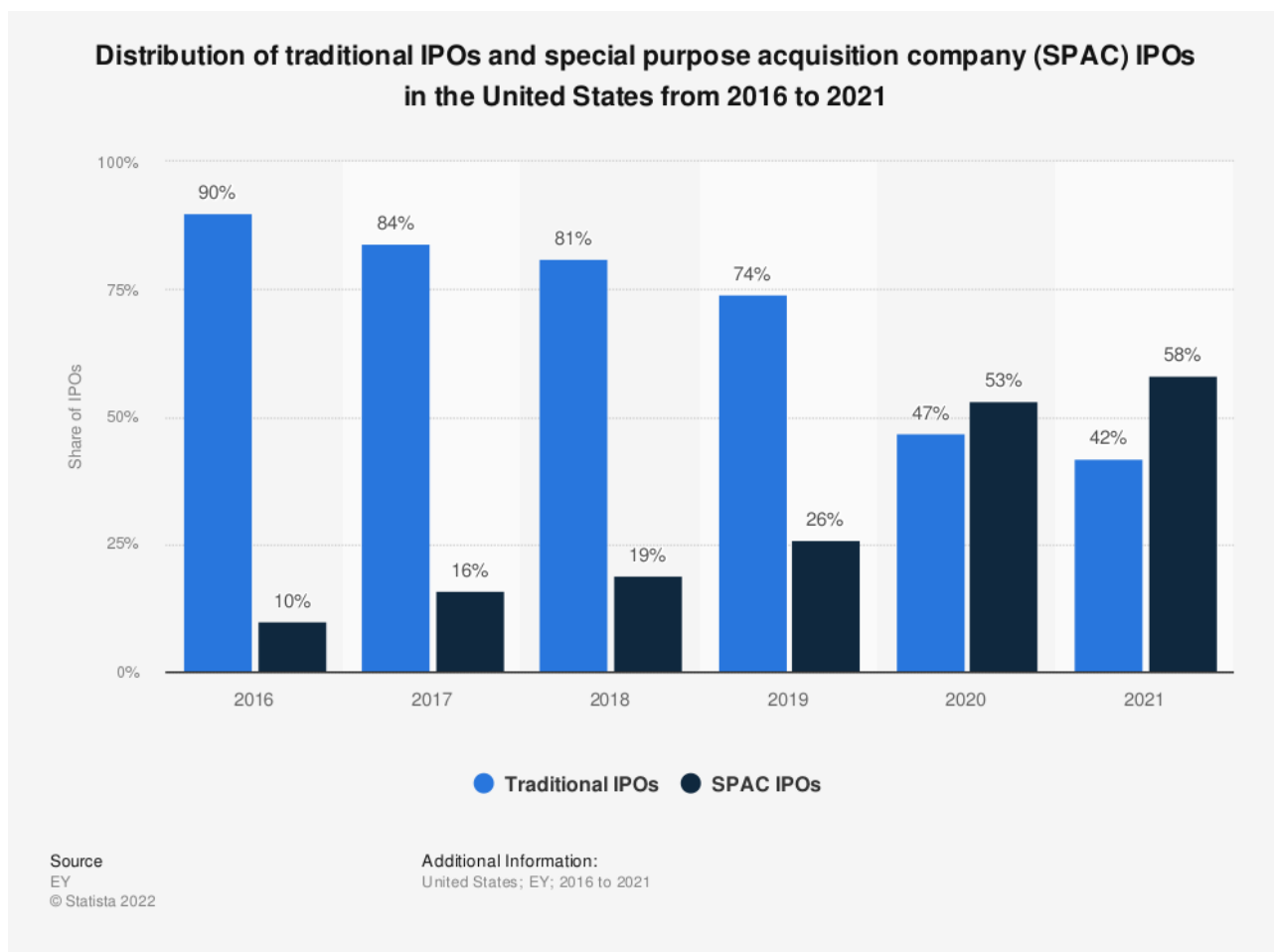


Figure 2-Distribution of traditional IPOs and SPAC IPOs in America- Source Statista website

1.4.3 Comparing SPAC and Private Equity

In this section I would like to compare the structure of private equity and SPACs, since, as the academic literature has shown, these two instruments have remarkable similarities in the way the company invests in the target.

The private equity fund, as mentioned above, is a mutual fund that primarily targets small and medium-sized companies that are unlisted or in the process of delisting. This investment is made through the venture capital of the target company. Depending on the characteristics and size of the target, there are different types of private equity. These include funds that specialize in large companies or others that target smaller companies. Then for example depending on the status of the target, we find others that on the contrary invest in healthy companies or in companies that are in crisis or have initiated bankruptcy proceedings in order to reorganize. A particular fund is the venture capitalist who instead have the goal of investing in technology and start-ups. There are further distinctions depending on the target sector or geographic area.

These include venture capital, which invests in companies in the early stages of their life cycle, such as start-up, development, and expansion, while buy-out invests in mature companies, and finally, other numerous types exist according to the life stage of the company.

The fund tends to be established according to the structure of a limited partnership and is managed by "limited partners," who are responsible for the investments made, acting as managers of the fund.

This type works that investors who contribute capital to the private equity fund indirectly become owners of a share in the fund. These are typically institutional investors and are referred to as "limited partners" because they do not hold any liability.

Private equity funds is characterized by the fact that it is a medium- to long-term investment and consequently illiquid, because as mentioned above, these are companies that are not listed on regulated markets, so finding a buyer to sell the share and exit the fund is more difficult. In the case of early exit this is often not allowed, and, in any case, this option is subject to the consent of the managing director or unanimous consent of the fund managers. In a possible case of early transfer before maturity, the holding is taken over by a particular type of fund and traded on the secondary market, where its value is heavily discounted.

This is a first distinction from SPACs, whose securities are traded on regulated markets, so exiting the investment is much easier. In private equity, the main objective is to generate a capital gain on the share held, seeking to increase the value of the company, to make a profit when the share is sold. Although both structures, they seek to invest in companies with the goal of increasing the value of the investors' initial investment, and this is a common point.

Another difference relates to the raising of financial resources, in private equity funds this is done through a private placement, while a SPAC is done through the offering of securities to institutional investors and the simultaneous listing.

On the up of highlighting differences, we find that in SPACs it is the public shareholders of the company who invest in the target, in investment funds this is not the case, as the fund itself owns the stake in the target and the investors in the fund can only claim rights to the share in the fund that they have subscribed to, thus lacking control.

In private equity, the investment is differentiated because we are faced with a situation where the fund invests in several companies at once, which is very rare for SPACs.

Right that the shareholder of the SPAC holds is to have a voting right in the meeting that approves the business combination, against all the disadvantages and risks he or she enjoys and the possible right to redeem the shares in case of disapproval.

In contrast, in private equity funds the type of investment is known, in the sense that the strategy that the fund will implement is made explicit, but investors do not have the right to intervene or to have their shares redeemed in case of disagreement with the fund's decisions. The only way to exit the investment is to alienate the share.

We find many other differences in structures, among them the remuneration of the management team.

We can identify some points of contact between the two structures for example that both initiatives are promoted by professionals whose experience is critical to the success of the operation. These individuals, then, in both types of investment, are called upon to participate personally with their own capital in the initiative.

Investors in funds such as SPACs, at the time of investment, have no information about where their capital is going, being empty boxes or project-like.

Among the things in common we find how both SPACs and private equity funds have an expiration date and cannot have an indefinite duration. SPACs have a maximum maturity of 36 months, while private equity funds have a default duration of 8-10 years, but can be extended by two or three years (grace period) if the disinvestment process has not been completed and if most investors agree.

In addition, scholars argue that SPACs are more transparent than alternative types of investments because they are required to have more disclosure requirements, among them compliance with the regulations of the markets where the securities are listed. The level of financial disclosure is lower in private equity funds because they usually target companies that are not listed on regulated markets and therefore do not have to comply with the stringent requirements imposed by these markets.

This is also an expression of how I would theorize that this instrument of SPACs can be the perfect springboard to stimulate sustainable projects.

1.4.4 Correlation between SPAC and sustainability

As reported by the article of James Hester, “Various SPACs have sprung up to target environmental, social, and governance (ESG) opportunities with strong investor appetite.” (Hester s.d.)

This statement has a strong meaning and represents the issue to talk about.

The pandemic and the boom received from the new rediscovery of this tool, makes it a cutting-edge tool and perspective, although in reality it came into force about ten years ago.

The use of this tool has been growing more and more until covering in the first quarter of 2021 30% of the acquisitions of all the United States of America.

A considerable number of SPACs have arisen with the aim of environmental, social and governance opportunities with strong investor support.

An Example of a sustainable company is the Sustainable Opportunities Acquisition Corporation (SOAC) listed on the New York Stock Exchange in a \$300 million IPO in May 2020, claiming to be the first ESG special purpose acquisition company specifically to drive carbon dioxide reduction.

The company Deep green Metals subsequently announced a merger with the company SOAC, with the aim of develop electric vehicle (EV) battery metals to address a looming shortage in the EV supply chain by using polymetallic nodules found unattached on the seafloor in the Pacific Ocean.

Another example of SPAC with supporting objectives is Sustainable Development Acquisition I Corp. (SDAC) completed a \$316 million IPO in February of this year, forming a SPAC to target companies in water, food and agriculture, renewable energy, and environmental resource management.

With a demand for ESG investment opportunities that seems to outstrip supply, the special acquisition company model has shifted from a quick and economic way of raising funds to a significant feature of the sustainable investment landscape.

As also confirmed by the article of the investment bank of Nomura with the investors increasingly looking at environmental, social and governance (ESG) factors along with financial considerations when making decisions, deals in this space are growing.²⁶

Companies with environmental, social and governance (ESG) credentials have been high on the list of merger targets for U.S. special purpose acquisition companies (SPACs) so far in 2021, data from Nomura Greentech showed.

As reported by the Nomura article, which shows how in the first months of 2021, out of a total of 306 SPAC done in USA, 49 of these, then about 16% concern the area of sustainability, then ESG and energy transition.

By contrast, in the second half of 2020, there were only 40 SPACs with ESG targets, although a 25.3% growth in 2020 emerged.

Global SPAC volumes hit \$286 billion in the first four months of this year, versus \$163 billion in 2020, Refinitiv data showed. Sustainable bond issuance, meanwhile, hit a record high of \$264 billion in the first quarter.

As we can certainly see investors will continue to finance high growth ESG companies, possibly making use of the SPAC tool.

As has been highlighted by many studies, one of KPG, named "SPAC Insights", at this time there are two trends that are having a strong common interest, the theme of the SPAC and ESG.

Share prices show that SPACs with strong ESG-related programs and operations often perform better than non-ESG SPAC combinations.²⁷

If the trend remains as shown, and sustainability will continue to take over, as it is already doing, the ESG will guide mergers that will lead to a strengthening of the SPAC instrument in the long term.

²⁶ Simon Jessop and Patturaja Murugaboopathy. 2021. *SPACs target more ESG companies in 2021*. Nomura Greentech.

²⁷ Pace, Roberta. 2012. *Vincoli e sostenibilità finanziaria delle PMI e nuovi strumenti di sostegno dell'Unione europea: JEREMIE*. Franco Angeli

As reported in the KPMG report between January 1, 2020, and August 27, 2021, there have been 292 announced SPAC mergers; of those, only 65 had an ESG theme, according to KPMG analysis. However, the ESG-focused SPAC combinations' share prices outperformed those of non-ESG ones by a big margin. There are recent analyses of this study by KPMG, which highlight how the mergers following the ESG theme SPAC have ended with a reduction of 18 times higher than those with non ESG theme.

From my intuition it came out this possible correlation. So, my objective would be just to deepen this.

Among the different ESG-oriented SPAC targets linked to climate change are electric vehicles, battery manufacturers and renewable energy companies.

Even more this study can confirm my thesis, that is greater sustainability, oriented to the achievement of ESG objectives, can be achieved through the instrument of the SPAC, allowing a more performant and rapid energy transition.

1.4.5 Market trends

The objective of this sub-section is to analyse the trend of the Special Purpose acquisition company phenomenon within the world market and the Italian market.²⁸

To see how this trend has developed, highlighting the salient points, analysing the upward and downward phases.

As reported by numerous studies, SPACs had their exposition in late 2020 early 2021, when the market inflated out of all proportion, with blind purchases, turning into a bubble. Hence the Sec's intervention, concerned about the impact on retail investors, attracted by an asset class that had become too attractive to ignore.

The Sec has put a brake on the market for spacings, causing a collapse in quotations. In fact, a few days later the Wall Street Journal devoted an article to the deflation of the bubble. Analysing a sample of 137 SPAC that announced that they had identified the target company for the business combination as of mid-February, they lost about \$75 billion compared to their listing values, leaving 25% of their capitalisation on the street. In August, the loss in value peaked at \$100 billion.

This is, for example, the famous British article, which reports that about 75 per cent of the Wall Street-listed corporations that have not yet announced a target are trading below their debut price.

This leads to a fall in stock prices, which in turn increases the risk that vehicle shareholders will sell before the business combination is reached, taking cash away from the target companies and putting the deals at risk.

Despite what has happened, the value of SPACs in the US may be around \$250 billion in 2021, up from \$100 billion a year earlier, according to a recent study. In fact, active SPACs can bring companies to Wall

²⁸ Neuhauser, S. and Lee, B. 2008. *SPACs Special Purpose Acquisition Companies continue to surge in popularity*. Equities Magazine pp. 40-41.

Street through deals worth around USD 800 billion, despite the storm at the end of 2020, the market is five times larger than in 2019.

The phenomenon exploded in 2020 and literally took off in the first half of 2021. The deals announced, according to Dealogic's data, totalled USD 525 billion.

We are talking about a market of 570 active spacers, of which almost 400 are looking for business combinations and 130 have announced targets.

In fact, we can say that the market is alive and well. The Sec continues the fund manager, the latter rightly intervened to calm a market that was seeing proposals at crazy prices. In fact, the aim is to avoid making proposals that are too tempting to attract investors. According to what has been gathered, those businesses linked to green activities and environmental sustainability, start-ups with zero turnover and only futuristic ideas, ended up in the crosshairs.

In this paragraph is the whole explanation of why I want to use the instrument of SPACs to promote clear and defined projects in the sustainable sphere, and how sustainability is the anchor for this instrument.

As the most recent trends report, there has been a strong growth from 2020, when a number of around 250 SPACs was recorded, to a much higher number of around 420 in 2021, considering that the average volumes in previous years stood at 50 SPACs.

We can therefore say that the IPO market closed in the first part of 2020 due to the uncertainty over the pandemic, and then reopened with enthusiasm in the second half of the year, even though the risks associated with the virus and its economic impact remained high.

These fears were compounded by a surge in IPOs through Special Purpose Acquisition Companies (SPACs), public company investment vehicles created to merge with a company and take it public, which accounted for more than half of US IPOs in 2020.

What has been analysed by the most recent studies, not least the one by Goldman Sachs, published on 28 January 2021, explains how 2020 was the year of the SPAC in USA, and explains why this trend will continue throughout 2021.²⁹

Over the past 25 years, the number of publicly traded companies in the US has declined from a peak of 8,090 in 1996 to 4,713 today. What has happened is a series of events that have dramatically changed the availability of capital, increased reporting, and standards in governance.

The downward trend in the number of public companies has in recent years has been reversed, albeit only modestly. We estimate that the number of US publicly traded companies in 2012 fell to 4,102 and is now about 4,713.

²⁹ Goldman Sachs Website- Report: The IPO SPAC-Tacle

<https://www.goldmansachs.com/insights/pages/the-ipo-spac-tacle.html>

More than 1,800 companies have completed IPOs in the US since 2012. I have identified and analysed that there are three factors that explain what has happened.

Firstly, the necessity for certain companies to have to resort to the capital markets to survive; secondly, a listed company also has the flexibility to finance acquisitions using shares as currency, in addition to drawing on cash reserves or borrowing to finance debt. Finally, there is the increase in regulation, which has led to a reduction in the creation of companies.

In addition to this crisis, the effects caused by COVID-19 and the resulting lockouts highlighted a key advantage of being listed: access to capital, essential for maintaining solvency and liquidity.

As the spectre of a prolonged battle with COVID-19 enveloped the world in the first half of 2020, many companies were faced with the terrible collapse of cash flow.

Listed companies had access to the public debt and equity markets, generally unavailable to private companies.

In fact, more than \$86 billion worth of shares were issued during the first half of the 20th century, while public debt offerings totalled \$1.2 trillion

during the same period. The much-needed liquidity allowed companies to avoid bankruptcy and the investors who provided the life-saving capital benefited from the rebound in share prices from the lows of the pandemic.

While 2020 was a strong year for traditional IPOs, SPAC IPOs shone even brighter.

Last year, 161 traditional IPOs raised \$67 billion in capital, according to the Goldman Sachs study. During the same period, 229 US SPACs completed IPOs, raising \$76 billion - a five-fold increase over the previous year's record and representing 53% of the total capital raised by IPOs. Takeover announcements and deal closures by SPACs also reached record levels in 2020. In 2020, 99 SPACs, representing \$30 billion of IPO capital, announced M&A targets, while 55 SPACs closed acquisitions totalling \$79 billion of company value.

We expect the activity level of SPACs to continue to be high in 2021. Indeed, 56 SPACs completed IPOs worth \$16 billion in the first three weeks of 2021 alone. In short, the situation outlined above is likely to remain in place.

Moreover, the most recent wave of issuances has expanded the universe of SPAC sponsors and lent institutional credibility to the SPAC process.

2 CHAPTER

Evolution of the new trend explosion: Sustainability

2.1 Short Introduction

Following on from all the groundwork laid in the first chapter about SPACs, which is one of the two main themes underpinning the drafting of this thesis, we find this understanding that will take care of defining the theme of sustainability

The main objective of this chapter and the previous one is to provide the tools to be able to answer the research question I have developed, which will be exemplified in the third chapter.

In short, this chapter deals with defining what sustainability is, what are the elements that allow us to talk about sustainability, what are ESGs, B-Corp, Sustainable Development Goals, what is meant by Non-Financial Statement, and finally, what has been deepened by the various conferences, not least the one in Glasgow, COP26.

No less important, I wanted to delve into what sustainability means in the financial sphere, and what are the latest trends in this field.

2.2 What is meant by sustainability...?

Before defining sustainability, I would start by defining, the term sustainable, as given in the Treccani dictionary, sustainable means something that can be sustained, can be addressed or is compatible with environmental needs.

We come here in fact to the concept of sustainable development, the historical excursion of how this concept has changed and evolved, has its roots in the definition given in 1987 given by the World Commission on Environment and Development of the United Nations Environment Programme.³⁰

Sustainable development refers to development in which it is possible to ensure the so-called satisfaction of the needs of the present generation without compromising the ability of future generations to realise their own.

This concept as reported by the Treccani library, has a very profound meaning since it connects the compatibility between the development of economic activities and the preservation of the environment.³¹

In order to ensure the satisfaction of essential needs determines, therefore, the realisation of an economic development that as its main purpose has respect for the environment, but that at the same time also sees richer countries adopt production processes and lifestyles compatible with the capacity of the biosphere to

³⁰ Enzo Tiezzi, Nadia Marchettini. 1999. *Che cos'è lo sviluppo sostenibile?: le basi scientifiche della sostenibilità e i guasti del pensiero unico*. Donzelli Editore.

³¹ Valera, Luca. 2012. *La sostenibilità : un concetto da chiarire*. Firenze University Press.

absorb the effects of human activities and developing countries grow in demographic and economic terms at rates compatible with the ecosystem. (Treccani s.d.)

This definition turns out to be rather general it basically ties the concept of sustainability to one principle: intergenerational equity.

In other words, the main goal of development is not merely the growth and satisfaction of the needs of the present but imposes the condition in which these needs are acquired without harming and compromising the ability of future generations to provide for their own.

This concept is something that the community is very attached to and tends to pay a lot of attention to.

It is a shrewd orientation aimed at promoting a particular kind of growth that will enable the next generation to have a quality of life that is not inferior to the previous generation.

The concept of sustainability is a trend that is gradually growing and increasingly attracting the interest of most countries even with global manoeuvres aimed at promoting its spread.³²

I would start by saying that this concept of sustainable development was first elaborated by the Brundtland Commission (in 1987) based on two basic elements: the environment as an essential dimension of economic development and intergenerational responsibility in the use of natural resources.

After that, in 1992 in Rio de Janeiro, with United Nations Conference on Environment and Development (UNCED) reaffirmed the importance of the principle of sustainable development through its formalisation in the acts adopted at the conclusion of the summit: the Rio Declaration on Environment and Development, Agenda 21, and the Declaration on the Management, Conservation and Sustainable Development of Forests.

In fact, in an ecosystem in equilibrium the latter is implicitly sustainable; moreover, the greater its stability the greater its capacity for self-regulation with respect to internal, and especially external, factors that tend to alter its equilibrium state.

The notion of sustainable development has also been embraced in environmental treaties and conferences since the 1992 conference in Rio, numerous treaties have come into force, one for example in 1994, namely the Convention on Climate Change, and then later in 1993 the Convention on Biological Diversity, Specifically, the Convention on Biological Diversity contains the notion of 'sustainability,' defining 'sustainable' as the use of biological resources in a manner and at a rate that does not result in their long-term reduction and that preserves their capacity to meet the needs of present and future generations.

³² Judd F. Sneirson. 2009. *Green is Good: Sustainability, Profitability, and a New Paradigm for Corporate Governance*. 94 Iowa L. Rev. 987.

The Rio Acts and subsequent UN-sponsored world conferences, especially the 2002 Johannesburg Conference, confirm a configuration of the principle of sustainable development based on three interdependent factors: environmental protection, economic growth and social development.

Since UNCED, sustainable development has been consolidated as a principle of international law and has contributed to the evolution of international environmental law through the conclusion of global environmental treaties and numerous regional agreements.

Within the European Union, sustainable development underpins the Union's environmental actions and policies (Environment. European Union Law).

The concept of sustainability has varied greatly since its beginnings, registering a profound evolution. It started from a vision centred only on ecological aspects and then moved toward a more global meaning, which included in addition to the environmental dimension the economic and social dimensions.

The three aspects, however, must be considered as in a synergistic and systemic relationship, combining with each other to varying degrees, were employed to arrive at a definition of progress and well-being that went somewhat beyond the traditional GDP-based measures of wealth and economic growth.

Later I will address these three different dimensions of sustainability, namely economic, social and environmental, in more detail.

In this regard, on September 25, 2015, the Global Agenda for Sustainable Development was approved by the 193 constituent countries of the United Nations in which 17 SDGs "sustainable development goals," broken down into 169 targets and 240 indicators, to be achieved by 2030, are individual.³³

These are goals with a universal character that affect all countries involved and the poor people of the global south.

The approval of the Agenda was greeted with great enthusiasm: it represents a significant step forward in the way sustainable development is dealt with by promoting a sense of global responsibility in its implementation. A clear judgment emerged about the unsustainability of the current model and the serious risks it composes for the present and especially for the future.

The Agenda is a decisive response to the need for integrated action to address the challenge of sustainability in its three dimensions: economic, social and ecological

However, there is an awareness that achieving the SDGs will be a far from simple challenge and that this requires the involvement of all components of societies: of businesses, institutions, universities, and so specially of individual citizens.

³³ Niloufar Fallah Shayan, Mohammad Ali Zahed, Nasrin Mohabbati-Kalejahi, Sepideh Alavi. 2022 *Sustainable Development Goals (SDGs) as a Framework for Corporate Social Responsibility (CSR)*. Andrea Appolloni.

They argue that ending poverty and other deprivations must go hand in hand with strategies that improve health and education, thereby reducing inequality and ensuring a better stimulus for economic growth, thus addressing climate change and stimulating the preservation of oceans and forests.

Underlying the concept of sustainability we find a report by scholar Charles V. Kidd, this is found in his work "The Evolution of Sustainability." (Kidd 1992)

This theorizes that modern concepts of sustainability, would have originated from six separate but interrelated lines of thought, and identifiable in such topics as: population growth rates, resource use and pressure on the environment. Precisely because of its many different roots, it would be a mistake, according to Kidd, to speak of a single type of sustainability.

2.2.1 Historical Excursus Sustainability

Although the importance and centrality of the topic of sustainability at the global level has always been clear, there have been many steps that have led us to the line pronounced by the 2030 agenda adopted by the members of the United Nations in 2015.

It all began when the United Nations Conference on the Human Environment was held in Stockholm in 1972, where 113 nations participated for the first time and where three documents were adopted: the Declaration on the Human Environment, a Resolution containing financial and institutional issues, and a Plan of Action on the Human Environment.

In 1992, 20 years later, the concept was revived in the U.N. Conference on Environment and Development, held in Rio de Janeiro, the largest conference by number of participants, with 183 countries participating.

The focus there was on finding the solution to the most important environmental issues. In fact, the purpose of this conference was to develop a single Plan of Action leading to a Sustainable Development Path. Thus, the three Rio Conventions were signed at that occasion: United Nations Framework Convention on Climate Change, an international treaty with the aim of limiting the increase of carbon dioxide in the atmosphere as much as possible. And finally, a convention on combating Desertification and Convention on Biological Diversity, to protect biodiversity.

All these agreements gradually lead countries to commit to a common goal, which is to make the country increasingly sustainable.

Their Agenda 21 was created, a document that addresses the need for nations to work together, to preserve the environment and ecosystems on which the maintenance of life on earth depends.

It is a document signed by 170 countries, consisting of 40 chapters, divided into 4 sections, in which it deals with the economic and social dimension, then the need for international cooperation to accelerate sustainable development in developing countries, the fight poverty, and changing consumption habits. It deals with the conservation and management of resources for development, in which the protection of the

atmosphere, combating deforestation, the management of various ecosystems, the protection of the oceans and all the seas are all leveraged.

The next step forward was taken at the time of the World Summit on Sustainable Development (WSSD), in Johannesburg from August 26 to September 4, 2002, which relaunched the commitment of local governments.

Here, in fact, climate change issues were addressed in depth for the first time and the need to adopt concrete policies to regulate CO2 emissions emerged, even if it does not go as far as imposing binding limits on signatories.

The latter only became operational in 1992, which was the basis for the Kyoto Accords.

These protocols were signed at the third session of the Conference of the Parties to the Framework Convention on Climate Change, which had the querebrae goal of reducing major greenhouse gas emissions by 5.2 percent between 2008 and 2012. It finally entered into force in 2005, after the 55 most industrialised countries signed it, as these were considered responsible for 55 percent of global emissions in 1990.

Despite all the efforts put forth by countries, in the successes initiated the issue increased and did not decrease as required is necessary, so the common goal was to renew a commitment to solve these issues.

As a result of this failure to meet the Kyoto Protocol targets and the time-limited intervention, it has been shown necessary to adopt binding instruments even for a later period at the international level.

There were disparate applications, theories, and strategies, leading up to the Conference of the Parties held in Paris in 2015, whose goal was to reach an agreement for the post-2020 period.

This agreement called for keeping the temperature below 2 degrees in the long term and continuing to limit the increase to 1.5 degrees. Agreement known as the Paris Agreement, in which each country was expected to report its national contribution i.e., INDC- Intended Nationally Determined Contribution. There is also recognition of limiting losses and damages related to climate change, the need to collaborate and refine understanding for interventions and support in various fields. It only entered into force in 2016 after at least 55 countries representing 55 percent of global emissions deposited their instruments of ratification. Meanwhile in the United States under the new presidency of Joe Biden, the re-entry of the in the Paris Climate Agreement was signed, the international understanding had been negotiated by 'former President Barack Obama in December 2015 as America was, and is, the second most polluting nation in the world after China and therefore had committed to reduce emissions by 26%-28% by 2025.

Then in June 2017 President Trump, who was never convinced about global warming, signed the U.S. out of the agreement claiming that he: "hope to find a new, fairer agreement" as he argued that the Paris Agreement benefited other countries and left the U.S. with the decrease in American jobs and production. A very important step toward the implementation of sustainable conduct was the signing by 190 countries of the world of the United Nations Millennium Declaration in 2000. This declaration which originated from the Stockholm Declaration, contains principles and values such as freedom, equality, solidarity, tolerance,

respect for nature and shared responsibility. These principles then translated into the 8 "Millennium Goals" to be achieved by 2015, the most ambitious ever set.

Following the stagnation and severe recession caused by the 2007 crisis, the Millennium Development Goals despite what happened led to achievements that provided the base from which to start again.

In fact, the 2009 report focused on the need to increase efforts to create jobs especially for women and youth, continue the fight against hunger, increase efforts to bring all children to school and eliminate inequalities in education.

In addition, on January 14, 2020, the Green Deal, literally 'New Green Deal,' was approved in Parliament, which consists of a 1 trillion-euro investment plan for the next 10 years to support the fight against climate change. A 7.5 billion Equitable Transition Fund was also provided for all spending on decarbonization of heavy industry, that is, to subsidize all those countries whose economies and industries depend on the use of coal.

This new agreement, therefore, is primarily aimed at promoting resource efficiency by moving to a clean and circular economy and restoring biodiversity and reducing pollution.

This agreement sets out what investments are needed and financing instruments available and how to ensure an equitable and inclusive transition. The European Union aims to achieve climate neutrality in 2050

The European Union will also aim to provide financial support and technical assistance to help those most affected by the transition to the green economy. This is the so-called Just Transition Mechanism, which will help mobilise at least 100 billion euros for the period 2021-2027 in the most affected regions.

Twenty years after the 1992 Rio Summit took place Rio+20, United Nations Conference on Sustainable Development (UNCSD) held January 20-22, 2012. The main objective of the conference was to renew the political commitment to sustainable development, assess the status of international commitments made over the past two decades. A 10-year policy framework on sustainable production and consumption patterns was adopted at Rio+20. Crucial was the establishment of new global Sustainable Development Goals, (SDGs), to be framed within the Post-2015 Agenda that would take the place of the Millennium Development Goals. The latter have enabled the achievement of important results, have improved the lives of millions of people but not all targets have been met and from this partial failure comes the need to do better. In January 2015, the General Assembly adopted the 2030 Agenda consisting of 17 goals, representing 169 targets to be achieved by 2030.

It represents an action agenda, first and foremost universal addressed to different words enclosed by 5 P's: People, Planet, Prosperity, Peace and Partnership.

This program stems from a critique of the unsustainable development models of the time, aims to fully realise the human rights of all and balances the three dimensions of sustainable development: the economic, social, and environmental dimensions

2.3 Different concepts of sustainability (Economic, Environmental & Social)

I would start by defining what sustainable development is, the latter being the pursuit of sustainability along three closely related dimensions, which are economic, social, and environmental.

This concept was first set out in 1997 by John Elkington in his famous article 'Partnerships from cannibals with forks: the triple bottom line of 21st-century business'.

With the 'triple bottom line', Elkington wants to support the measurement of a company's performance in relation not only to economic results, but also to social and environmental ones.

In fact, sustainable development encompasses the continuous improvement of business performance along all three dimensions, listed above.

In the article, Elkington identifies three aspects to focus on in line with the TBL approach: profit, people and planet.

- Profit: this is considered the traditional measure for assessing the economic performance of a company. The underlying assumption is clear, that if the company is not able to produce profit, it is not destined to survive over time. Therefore, it must create value in the long run and therefore make a profit.
- People: it is necessary for the company to assess not only its economic results but also its impact on people and thus on the society with which it interacts. In this sense, the objective is to promote socially responsible business.
- Planet: it concerns the company's impact on the environment.

The concept of the three dimensions makes it possible to go beyond the system of measuring corporate performance only with reference to economic-financial results; on the other hand, it tells us how sustainability is no longer just an environmental dimension.

As far as the latter is concerned, this is not to the detriment of the environmental dimension, but results in the adoption of an integrated approach. In fact, the environmental factor continues to be at the centre, since it is the one that presents the greatest risks and requires concrete and immediate responses. In this regard, several economic trends in favour of eco-sustainability have developed in recent years, including the green economy.³⁵

The green economy is a very broad concept that contains a variety of phenomena united by the objective of improving the environmental impact of economic activities.

The latter is thus a concrete representation of the drive for sustainable development, which at the same time promotes the realisation of economic value while protecting the environment.

Underlying this economic approach is the principle of “doing better with less”.

³⁵ Marucci M. 2022. *Finanza sostenibile e tassonomia europea: una spinta verso l'economia verde*. Inapp Paper n.35.

This consists in the realisation of better efficiency in production processes, through the use of innovative technologies and processes that ensure a higher quality of production through the use of fewer or equal inputs while reducing and improving the environmental impact.

The increasing attention paid to this issue is encouraged by the increasing attention paid by consumers to environmental problems and risks, resulting in an ever-increasing focus on the requirement of eco-sustainability when purchasing.

This phenomenon, also known as 'green consumerism', combined with economic and historical factors is an important starting point for this trend.³⁶

Within the theme of sustainability, the need to promote a circular approach has arisen, the latter meaning an economic model that focuses on production and consumption patterns, through the promotion of the system's ability to regenerate itself and ensure eco-sustainability. This contrasts with the traditional system that consists of the extraction, production, consumption and waste generation phases. The latter is characterised by a high dispersion of resources, estimated at between 60 and 80 per cent of the inputs used. The circular approach aims to drastically reduce waste by introducing two stages in the production system: recycling and reuse. This creates a virtuous circle upstream and downstream of the production process: lost materials, such as waste and scrap, are, as far as possible, reused and reintroduced into the economic cycle. This approach aims to extend the life cycle of products, thereby improving in terms of waste reduction and reuse of resources.

The circular economy is one of the tools to achieve the goals of sustainable development because through it we can extract social economic value.

2.4 The role of sustainability in the enterprise landscape

The overriding thought is to be concerned in the area related to sustainability, in fact the current urgency is to have to find solutions that are immediate but give lasting feedback by now this need is already evident in everyone's eyes.³⁷

This term of sustainability has become a commonly used term and a common concern of human beings. Sustainability is used and observed from very different perspectives and in different contexts, this permits to have a different perspective.

As mentioned earlier the term starting only from a definition in the ecological sphere has undergone a gradual shift by increasingly trying to relate the economy and society.

³⁶ Tenuta, Paolo. 2009. *Indici e modelli di sostenibilità*. Franco Angeli.

³⁷ Joana Chiavari, Franco Rizzi and Luca Rizzi. 2004. *I requisiti di sostenibilità e il concetto di addizionalità*. Il Mulino.

The whole industrial, economic, social world has increasingly focused on issues such as greenhouse gas, greenhouse effect, hole in the ozone, because of intensive exploitation of natural resources.

As a direct consequence, we began to study development models that would bring back to life the relationship that existed before between man and the environment.

So, the focus has shifted completely to these issues, in fact the concept of sensibility, is increasingly constituted on the global balance between man and the ecosystem. The goal is to give rise to a form of development that safeguards the environment and ensures current and future needs.

In this area that is increasingly developing, we must include the context of reference as well, which is changing rapidly, getting worse by the day and consequently worrying all scientists.

A theme that goes hand in hand is to find, develop, implement concrete actions that will bring about sustainable benefits and consequently lead to reducing this climate change.

Climate change is very much on our minds as an issue, as it increasingly exposes us to violent weather phenomena.

Being in a situation that affects us very closely, we need to be able to find solutions to prevent this change counts to be so wanted and harmful to us. It is increasingly urgent to put in place all initiatives to mitigate the effects of climate change, starting with the responsibility of each individual citizen.

The chance to save the world and deliver to future generations a liveable planet is in the hands of each one of us: reuse, recycle, avoid waste, choose environmentally sustainable mobility, are solutions within everyone's reach.

To save the world, we need to start applying the concept of sustainability starting with ourselves and our homes, such as choosing clean energy produced from alternative sources.

For example, in energy resources, it is necessary to choose renewable energy sources, as these are inexhaustible and do not impair the consumption of natural resources.

Another distinction in the sphere of energy, is in the sphere of clean energy, which is cheap and accessible to all. There are energies such as wind power and photovoltaics that are increasingly replacing fuel-generated energy.

Renewable energy for the home makes it possible to reduce the ecological footprint-that is, human consumption of the earth's resources relative to its ability to regenerate them. Sustainability is an act of responsibility and commitment that each of us can take to save the environment and take care of the people who will come after us.

This was an introductory part to describe sustainability, now we will see how closely it affects companies and their clients what day they must put in place to counter it.

For companies, the concept of sustainability all revolves around the concept of Responsibility. This concept is no longer solely related to the concept of ethics, but rather can be understood as a true business lever, such must be integrated into a long-term vision.

To do so, it has now become imperative to adopt what economists call stakeholder theory, that is, to set as the purpose of the enterprise the satisfaction of the expectations of all stakeholders, from investors to employees to the territorial context in which it operates.

That said, investments such as those aimed at reducing environmental impacts, including those related to corporate welfare, communication activities, energy impact scope, and CO2 emissions, can become cornerstones for one's business.

These interests that are met bring benefits not only ethically, but also from a future perspective, as mentioned earlier. In fact, it is said that a company that does not have motivated workers, not at the forefront for example in reducing energy consumption, that does not hold a shared value is bound to have a decline in its economic performance sooner or later.

Sustainability, broadly understood therefore, has become a critical issue for many businesses, but not a strategic issue because it is still experienced more as a threat than an opportunity to spur radical innovation, both technological and cultural, and to create competitive advantage. Yet, sustainability is a potentially transformative force in the enterprise itself and is poised to become the main driver of innovation in the 21st century.

2.4.1 A bit of history about financial sustainable

The Global Sustainable Investment Alliance has defined the financial scope of sustainable development as follows: Sustainable finance is the set of investment strategies that consider environmental, social and governance (ESG) factors in portfolio composition and management.³⁸

Like sustainable development, sustainable finance also has a long history behind it and confronts the goals and objectives of the financial system in a new way.³⁹

As already mentioned, in 1928 the ethical Pioneer Fund was born in the United States and in the 1970s religious funds and American University Foundations refused to invest in companies involved in the war effort in Vietnam.

Here too, the United Nations played a key role. In 2005, in fact, UN Secretary Kofi Annan convened the world's leading investors to draw up the six principles of responsible investment.

The first principle calls for the incorporation of environmental, social and governance issues into investment analyses and decisions. This is the famous ESG (Environmental, Social, Governance) paradigm that still guides the entire global financial industry today. Basically, the financial world is asked to invest not only with a view to risk/return, but also considering instances and limits related to respect for the environment, society and good governance.

³⁸ Del Giudice, A. 2019. *La finanza sostenibile*. Giappichelli Editore.

³⁹ Jasmina Bogicevic, Violeta Domanovic and Bojan Krstic. 2016. *The Role of Financial and Non-Financial Performance Indicators in Enterprise Sustainability Evaluation*. Ekonomika, Vol 62, Issue 3.

Between the great financial crisis of 2008 and the Covid-19 pandemic, the principles of sustainability have become increasingly widespread in the corporate reporting and regulatory corpus of major national and international jurisdictions. Europe's most important response to the pandemic has been the NextGenerationEU, a pact of responsibility towards future generations and European society that also aims to establish the development megatrends of the coming decades, while already the financial universe of sustainability reaps several tens of trillions of dollars globally.

2.5 Develop of different trending around this concept

2.5.1 NFR (Non-Financial Statement)

The Barnier Directive 2014/95/EU of the European Parliament and Council of 22/10/2014 amending Directive 2013/34/EU imposed the obligation for certain companies and large groups to provide an individual non-financial statement to supplement the information typically contained in financial statements.

This directive was transposed into Italian law through Legislative Decree 254/2016 and came into force on 25 January 2017. The obligation of non-financial end-accounting concerns all companies listed on Italian and regulated Italian and European markets, also including banks and insurance companies.

Specifically, the obligation applies to large public interest companies, i.e., those that: had, on a consolidated basis, more than 500 employees during the financial year, and had, at the balance sheet date, a balance sheet of more than €20 million or net revenue from sales and services exceeding €40 million.

About the required disclosures, the principle of materiality is applied so the materiality of the information in relation to the specific characteristics of individual companies is emphasised.

Article 3, first and second paragraphs of Legislative Decree 254/2016 identifies which non-financial information must be disclosed in the Declaration. The information concerns: the business model of management and organisation of the company's activities; the policies practised by the company, including those of due diligence, the results achieved through them and the relevant key performance indicators of a non-financial nature; the main risks, generated or suffered, related to these issues and arising from the company's activities, its products, services or business relationships, including, where relevant, supply chains and subcontracting.

Finally, certain financial penalties are provided for against directors in the event of non-compliance with the disclosure obligation or non-compliance with the deadlines prescribed for filing the Declaration.

Delays in publication are sanctioned with fines ranging from 20 to 100 thousand euros, while if the information provided does not reflect the truth, a sanction ranging from 50 to 150 thousand euro.

2.5.2 SDG (Sustainable Development Goals)

The Sustainable Development Goals (SDGs) are a set of 17 interconnected goals defined by the United Nations as a strategy to achieve a better and more sustainable future for all.

They are also known as the 2030 Agenda, named after the document whose title is Transforming Our World. The 2030 Agenda represents the true knowing the close link between human well-being, the health of natural systems and the presence of common challenges for all countries.



Figure 3- Sustainable Development Goals

The Sustainable Development Goals aim to address a wide range of economic and social development issues, which include poverty, hunger, the right to health and education, access to water and energy, jobs, inclusive and sustainable economic growth, climate change and environmental protection, urbanisation, production and consumption patterns, social and gender equality, justice and peace.

The goals, enumerated in UN Resolution A/RES/70/1 passed by the UN General Assembly on September 25, 2015, are 169 in total, these to be achieved by 2030. They were agreed upon from the principles included in Resolution A/RES/66/288, entitled "The Future We Want," a non-binding document drafted after the 2012 UN Conference on Sustainable Development, to replace the Millennium Development Goals, which had 2015 as their time horizon. While the latter addressed developed and developing countries in different ways, the Sustainable Development Goals are universal in nature and are based on the integration of the three dimensions of sustainable development (environmental, social, and economic) as a prerequisite for eradicating poverty in all its forms.

All 193 member states of the United Nations have ratified the 2030 Agenda and have thus committed themselves to declining the envisaged Sustainable Development Goals (SDGs) in their policy. Each year, states can present the status of implementation of the seventeen MDGs in their country through the preparation of Voluntary National Reviews (Voluntary National Reviews). The 2030 Agenda identifies the High-Level Political Forum (HLF) as the global forum to monitor, evaluate, and guide the implementation of the Sustainable Development Goals (SDGs). To support this activity and ensure comparability of assessments, the United Nations Statistical Commission established the Inter Agency Expert Group on SDGs (IAEG-SDGs) to define a set of indicators for monitoring the implementation of the 2030 Agenda at the global level.

The 17 goals of the 2030 Agenda are as follows:

- End all forms of poverty in the world;
- End hunger, achieve food security, improve nutrition and promote sustainable agriculture;
- Ensure health and well-being for all people and all ages;
- Provide quality, equitable and inclusive education and learning opportunities for all;
- Achieve gender equality and empower all women and girls;
- Ensure the availability and sustainable management of water and sanitation and hygiene;
- Ensure access for all to affordable, reliable, sustainable and modern;
- Fostering lasting, inclusive and sustainable economic growth, full and productive employment full and productive employment and decent work for all;
- Build a resilient infrastructure and promote innovation and an equitable, responsible and sustainable industrialization;
- Reduce inequality within and among nations;
- Make cities and human settlements inclusive, safe, durable and sustainable;
- Ensure sustainable patterns of production and consumption;
- Promote actions, at all levels, to combat climate change;
- Conserve and sustainably use the oceans, seas and marine resources for sustainable development;
- Protect, restore and promote sustainable use of the Earth's ecosystem;
- Promote peaceful and inclusive societies for sustainable development;
- Strengthen the means of implementation and renew the global partnership for development sustainable development.

A peculiarity of the 2030 Agenda, as mentioned above, is Universality, so each country is required to align with its own strategy. In Italy, the path toward achieving the goals is guided by the National Strategy for Sustainable Development (SNSvS). Broadening the perspective of the "Environmental Action Strategy for Sustainable Development in Italy 2002-2010," the SNSvS becomes a strategic framework to refer to for territorial sectoral policies in Italy. The result of the collaboration between the Ministry of the Environment,

the Presidency of the Council of Ministers, the Ministry of Foreign Affairs and the Ministry of Economy, the SNSvS is structured in the five areas of the "5Ps" with the addition of a sixth area related to vectors for sustainability. Each area contains strategic choices to be put in place to achieve the goals of sustainable development.

Italy's spokesperson for Agenda 2030 was ASviS, the Italian Alliance for Sustainable Development. It was founded on February 3, 2016, launched by the Unipolis Foundation and the University of Rome "Tor Vergata" with the aim of raising awareness of the importance of the 2030 Agenda and to achieve the Sustainable Development Goals. ASviS, therefore, seeks through the development of sustainability at all levels, the analysis of the implications and opportunities for Italy related to the agenda, the contribution to the definition of an Italian strategy aimed at achieving the SDGs. In addition, its commitment can be found in Education for Sustainable Development, as it is explicitly contained in Target 4.7 of the agenda, which deals with the commitment in ensuring quality education by 2030 in which all students acquire, through sustainable lifestyles, knowledge and skills useful to promote sustainable development, and intends to promote a program of education for sustainable development, with particular attention to the younger generation. Proposals/projects put forward and carried out in the past and currently by ASviS have been numerous, including the Festival of Sustainable Development, i.e., the largest Italian initiative to raise awareness of sustainability issues among citizens, businesses and associations, between May and June of 17 days duration.

The making available, of "A Sustainable World in One Hundred Photos," a book explaining sustainability and explaining the possible impact of human activities on the Earth. A key initiative was the signing of a three-year Memorandum of Understanding with Miur- Ministry of Education, University and Research- to "foster the dissemination of the culture of sustainable development in view of the implementation of the Goals of Agenda 2030" (Memorandum of Understanding, 2019). The objectives of this protocol are to support the progressive inclusion of sustainable development education for each grade of education so what concerns the inclusion of civic education.

2.5.3 Sustainable finance

Sustainable finance is the application of the concept of sustainable development to financial activity.

The objective is to secure the future, i.e. the rational use of resources in a way that does not compromise the ability of the resources themselves to continue producing value over time. Sustainable finance, therefore, aims to create value in the long term, i.e. when it directs capital towards activities that not only generate economic surplus value, but at the same time are useful to society and do not exceed the carrying capacity of the environmental system. This makes it different from purely financial operations.

Sustainable and responsible investments are often referred to using the acronym SRI, which stands for Sustainable and Responsible Investments.

These are investments that aim to create value and generate a return through a strategy that integrates financial analysis with that of attention to the environment, social balances and good governance when assessing the companies in which one wants to invest. This implies that a low or non-existent level of attention in this respect can become one of the indicators of potential risk.

In a general way, sustainable finance falls within the broader field of ethical finance, i.e. finance that makes economic choices not on the basis of profit, but on the basis of a future perspective.

Ethical finance is, however, a more general notion, which also includes 'ethical' investments other than those related to sustainable development. In fact, ethical finance also includes investment choices based on religious, ideological, political motivations, which cannot necessarily be rationally judged as 'sustainable' and in the interest of new generations.

In fact, in 2016 in Italy, the Consolidated Banking Act was enriched with Article 111-bis, which regulates 'Ethical and sustainable finance operators', a very important article as it is one of the first sources in the field of sustainability recognised by the legal system.

One of the practices to implement sustainability in finance is to make responsible investment (IR). The latter is a practice whereby environmental, social or governance (ESG-environmental, social, governance) considerations are added to the typical objectives of financial management, i.e. optimising the relationship between risk and return over a given time horizon.

There are numerous studies that tend to show, such as the Finer study, which analyses a sample of 49% of mass market clients and 42% of affluent and upper affluent clients, believe that sustainable investments are essentially those 'not-for-profit', zero-profit investments that put environmental care, respect for gender and race equality and human rights, and good and transparent corporate governance first, while sacrificing remuneration and returns for shareholders and bondholders.

Responsible investment does not necessarily entail giving up returns, especially when it is not achieved by applying heavy sectoral exclusions. It should be borne in mind, however, that responsible investment is 'patient' investment, not speculative in nature and therefore looking to the medium to long term. They are therefore likely to give better returns in the medium to long term.

Here we find different opportunities ranging from ESG integration, stewardship, investment funds, to climate change actions.

For example, all these actions are undertaken by banks such as JP Morgan Asset Management.

2.5.3.1 ESG

Environmental, social and governance (ESG) factors are a set of parameters that can influence investment performance. When companies and other issuers of securities manage these factors better, they are more efficient, more aligned with consumer preferences and less exposed to regulatory risk.⁴⁰

As a result, I believe that incorporating ESG considerations into investment decisions makes for more robust risk management and can contribute to returns over the long term.

For example, at J.P. Morgan Asset Management, financially relevant ESG factors are incorporated into analysis and investment decisions, in all active investment processes, with the goal of improving long-term risk-adjusted returns.⁴¹

ESG stands for Environmental, Social and Governance and refers to three central factors in measuring the sustainability of an investment.

Environmental, social and governance (ESG) factors are a set of parameters, not always systematically considered in the past, that can influence the performance of companies and other issuers of securities.

In the environmental sphere, this means issues related to the quantity and functioning of the environment and natural systems, while in the social sphere, it means issues related to the rights, welfare and interests of people and communities. The last sphere concerns governance, i.e. it concerns issues related to the world in which companies are managed and supervised.

Now, there are companies that provide sustainability analysis of companies, real sustainability rankings and different classes.

Examples of ethical standards are corporate welfare policies, gender comparison, air pollution, community health and safety, money laundering.

Investing sustainably and responsibly according to ESG criteria means strictly excluding securities issued by companies whose business is linked to the arms, tobacco, alcohol, pornography, and gambling sectors. Which is less and less a niche concern: Finer's research tells us that, compared to a few years ago, investors appear to be more sensitive to SRI issues, mainly due to the increasingly evident effects of climate change. These are just a few examples concerning ESG policies, which I will use as a reference for the development and inclusion of parameters in chapter three, in which I will analyse sustainability as a tool for the development of SPACs.

⁴⁰ Armstrong, Anona. 2020. Ethics and ESG. *Australasian Accounting, Business and Finance Journal*, 14(3) 6-17.

⁴¹ JP Morgan Asset Management. 2022. *Integrazione ESG*. <https://am.jpmorgan.com/it/it/asset-management/adv/investment-themes/sustainable-investing/ESG-integration/>

2.5.3.2 *Stewardship*

Stewardship literally means ethical and therefore responsible management of resources. What is meant by resources at this point is common goods such as water, land, forests, health, people, savings and products. Stewardship is therefore a model, a strategy for the ethical management of common goods and products. It therefore engages in different areas to achieve specific standards, policies and practices, so that resources are valued and conserved.

Stewardship is the responsible allocation, management and supervision of capital to create long-term value for clients and beneficiaries more generally, leading to sustainable benefits for the economy, environment and society. For example, in the case of JP Morgan, the goal is to create active engagement with the companies they invest with, making long-term investors feel their voice in the industry's participation thereby harnessing their influence to bring about positive business changes and beneficial industry developments for clients and the community.

In fact, it is possible to identify five sustainable priorities to follow, which are ESG issues that pose the most significant risks and opportunities for long-term investment.

2.5.3.3 *Sustainable Investment Funds*

Based on how companies manage environmental, social and governance factors, i.e. ESG, we can see how they influence financial performance.

Indeed, sustainable investment funds enable investors to pursue their financial goals while supporting a better future for us all.

Therefore, this instrument, like investment sources, gives investors the opportunity to contribute proactively to climate change.

In fact, all these elements just mentioned, between climate change, ESG, Stewardship and Investment Funds, tend to come together in a positive perspective.

Sustainable investment funds are simply funds that invest in sustainable projects or have a strong focus on issues such as ESG indices.

ETFs, or Exchange Traded Funds, are a category of mutual funds or SICAVs that replicate the performance of the index to which they refer (benchmark) through passive management. The ETF is traded like a share on the Mercato Telematico Azionario (MTA) in the MTF segment of Borsa Italiana. Being a middle way between a share and a fund, the ETF has the advantages of both instruments: high transparency and flexibility of real time trading and, at the same time, diversification, and reduction of investment risk.

2.5.3.4 *Climate change actions*

Climate change is the epoch-making change of our century. It poses significant risks to our society, but also creates unprecedented opportunities for long-term, successful investment. We are witnessing a growing

momentum towards ambitious low-carbon transition policies that will create winners and losers in every company, sector and market.

The transition to a low-carbon economy could be based on the 'stick strategy', with governments mandating sustainable behaviour, or it could be based on the 'carrot strategy', with governments incentivising sustainable behaviour through subsidies.

During the transition, significant geographical and sectoral differences will emerge. An active approach to stock selection can be valuable.

Investors can take advantage of climate-related opportunities before they are discounted in prices by building transition-ready equity portfolios.

2.5.4 Italians and sustainability

As the most recent studies show, 37.5 million Italians consider sustainability to be a key factor for the future.⁴²

This is a trend that has only grown in our country by 3% since last year, but if we look even further back, we find that it has increased by 32% compared to 2015. This was revealed by the study of the National Observatory on Sustainable Lifestyle, through research conducted annually by LifeGate in collaboration with the Eumetra Institute Mr. Eumetra.⁴³

The subjects most sensitive to this change and most proactive are young people, the so-called Generation Z, between 18 and 34 years of age. Geographically, the leading city is Milan, which has risen from 69% in 2021 to 74% this year.

How does this translate into practice, i.e. how do we behave?

Certainly, the pandemic has been a major booster. Since the outbreak, 15% have started to use city bike lanes more and use bicycles more (42%), 75% buy Made in Italy products and eat healthier (69%). After the emergency, 86% plan to change their lifestyle by preferring Italian products, sustainable (67%), organic (63%) and 83% by choosing Italian destinations for their holidays.

In terms of topics, 77% of the population is informed about the issue of global warming (this rises to 85% in Gen Z) and the climate crisis (61%), knows about the ecological transition (32%), Cop26 (32%) and carbon neutrality (20%). 87% believe it is necessary to stop climate change by adapting their lifestyle. But how? Food is one of the areas where the efforts of those who want to make their lifestyle greener and less impactful are most concentrated: 50% of Italians (and 59% of Gen Z) know and know how to describe sustainable food, choosing to limit meat (25%) but also preferring a vegetarian or vegan diet (5%). Support

⁴² Caterina Maconi. 2021. *Sostenibilità, aumenta l'interesse degli italiani rispetto allo scorso anno*. La Repubblica.

⁴³ Life Gate <https://www.lifegate.com/>

for organic farming reaches 79%, with organic food consumption at 14%. 33% are willing to spend more to buy organically grown products.

Then there are numerous front on which the Italians and the world population in general can and does intervene, starting with the energy transition that we are experiencing and that increasingly affects us also because of the recent crisis.

The topics of attention include, as mentioned above, the theme of food, organic is added to this the theme of sustainable mobility, with the energy transition as far as Co2 emissions are concerned.

In addition, we find topics such as renewable energy, sustainability in the area of fashion and fashion not to mention investments (37% pay attention to the topic and 59% Gen Z) and products and services to buy, 35% take into account transparent information, the presence of sustainable certifications (24%).

2.5.5 CSR_Corporate Social Responsibility

As reported in the Digital 4 article, 9 out of 10 citizens globally wish to live in a more sustainable and equitable world in the post-Covid 19 The focus of customers is now very high, and companies know it well: there is no business without ethics and the creation of shared value. CSR is more important than ever, and CEOs are the standard-bearers of the new business paradigm.⁴⁴

Corporate social responsibility, as reported by leading sources in business and finance, concerns ethical implications within the strategic business vision. It is the manifestation of the willingness of large, small and medium-sized enterprises to effectively manage social and ethical impact issues within their business and business areas.⁴⁵

Another definition is given by the European Union, which defines Corporate Social Responsibility as: voluntary integration of social and ecological concerns of companies in their business operations and in their relations with stakeholders.

Then with a communication in 2011, following the previous definition, the European Commission, after ten years, re-examines and goes beyond the notion expressed in the previous Green Paper and offers a new definition of CSR:

“The responsibility of enterprises for their impacts on society.” (European Commission s.d.)

The new definition brings significant novelties to the discussion around the topic, the objective is to reduce the burden of a subjective approach of companies and calls for greater adherence to the principles promoted by international organisations such as the OECD and the UN.

⁴⁴ Digital4. 2021. Corporate Social Responsibility (CSR): cos'è e perché è strategica per le aziende oggi. <https://www.digital4.biz/executive/corporate-social-responsibility-csr/>

⁴⁵ Ricci A. 2022. *Responsabilità sociale di impresa, lavoro e sindacato, Intervento a Seminari INAPP.* Inapp.

As will be understood, this shift in focus introduces an important innovation and determines a new position historically promoted by the Brussels-based ethical rating agency Standard Ethics, close to European circles. This new approach is certainly bound to profoundly change what is defined here.

As for the state definition, we can refer to what the constitution says in Article 41:

"Private economic initiative is free. It may not be carried out in conflict with social utility or in such a way as to damage security, freedom and human dignity. The law determines the programmes and appropriate controls so that public and private economic activity may be directed and coordinated for social purposes."

(Senato della Repubblica italiana s.d.)

The notion of Corporate Social Responsibility is set in a historical cultural and economic context in which a company is asked to adopt socially responsible behaviour, monitoring and responding to the economic, environmental, and social expectations of all stakeholders with the aim of also gaining a competitive advantage and maximising long-term profits.

In fact, it is considered and hoped that a product is not only appreciated for its external or functional qualitative characteristics, but also for its non-material characteristics, such as supply conditions, assistance and customisation services, image and finally the history of the product itself.

In a manner related to what has been defined above, the role played by companies is becoming increasingly important, because although they are an existence, they are entities that live and act in a social fabric that includes various subjects, among which a civil society that is very attentive to entrepreneurial activity certainly stands out.

In fact, their role in the production context is to make consumers and producers aware of the centrality of these aspects in competitive dynamics and the concept of 'historical traceability' of the process chain. It is therefore evident how a company's 'ethical' commitment has entered directly into the so-called value chain, thus envisaging the use of new paths and competitive levers consistent with 'sustainable development' for the community.

2.5.5.1 Ethical standards

These ethical standards have been of considerable importance throughout history, and since they have enabled sustainability to take hold, one is a direct consequence of the other and vice versa. In fact, innovative business management models have been developed in relation to the concept of social responsibility, which is linked to the topic of ethics.

One of the first ethical standards is the SA 8000 standard, issued by Social Accountability International (SAI), an international organisation founded in 1997. This standard was created to ensure that companies have working conditions that respect social responsibility, a fair supply of resources and an independent control process to protect workers.

The SA 8000 standard (i.e., SA stands for Social Accountability) is the world's most widely used standard for corporate social responsibility and it's applicable to companies in any sector, to assess companies' compliance with minimum requirements in terms of human and social rights. In particular, the standard includes eight specific requirements related to the main human rights and one requirement for a company's social accountability management system.

Another standard is AA1000 (or Account Ability 1000), this is a process standard developed to assess the performance of companies in the field of ethical and social investment and sustainable development.

It was created in 1999 by the British ISEA (Institute of Social and Ethical Accountability) and it's a standard created to enable organisations that wish to adopt it to promote the quality of their 'social and ethical accounting, auditing and reporting' processes to guarantee the improvement of corporate social responsibility.

Through this standard, commitment to ethical values can be demonstrated through objective, impartial and transparent means. The benefits that the company obtains by adopting this standard consist above all in strengthening the relationship with stakeholders, improving participation, trust, accountability and maintaining good relations over time.

In September 2005, a new standard was created in Bangkok, ISO 26000, at which considerable progress was made towards a new standard on social responsibility.

In fact, the ISO group reached an agreement on the organisation of the content of the standard, the final publication of which took place in November 2010.

For the standard to be the result of the contribution of all stakeholders in social responsibility, the process of defining ISO 26000 involves the collaboration of representatives of as many as six categories of stakeholders: business, government, workers, consumers, non-governmental organisations and others.

The future standard is also a response to the European Economic and Social Committee's (EESC) call for 'measurement and information tools for corporate social responsibility in a globalised economy': corporate social responsibility should become a driving force within the framework of a global strategy on sustainable development.

Unlike the other standards, ISO 26000 is not certifiable: it is an explicitly stated in the text that it is not possible to certify the compliance of a management system with ISO 26000. However, there are certification and responsible labelling schemes that take the principles and recommendations of the standard and use them as a reference to assess the implementation of a social responsibility management system in an organisation.

2.6 The rule of the trend of B-Corporation

The B Corporation (or B Corp) is a certification, which has developed in 78 countries and 155 different sectors, this is issued by B Lab a U.S. non-profit.⁴⁶

To obtain and maintain this certification, companies must achieve a minimum score on a questionnaire analysing their environmental and social performance and integrate their commitment to stakeholders into their statutory documents, for example, by adopting the legal status of Benefit Corporation, in Italy society benefit. The annual cost of B Lab certification varies between €1,000 and €50,000. As of February 2022, there are more than 4500 certified B Corp's in 155 sectors and 78 different countries, this is what is reported by various statistics.

The purpose of the B Corp movement is to make sure that the environmental and social performance of companies is measured as robustly as their economic performance.⁴⁷

B Corp certification is a third-party recognised standard that requires companies to meet high social and environmental sustainability performance and to make their score publicly transparent through the B Impact Assessment protocol. B Corp certification applies to the entire company, includes all product or service lines and all business areas. Any company is potentially eligible for certification.

To fully define the B-Corporation phenomenon, it is necessary to analyse what are the merits and demerits of this adoption.

As for the merits these are numerous, such as:

- Getting a benchmark of one's environmental and social performance against other companies
- Gaining access to global conventions, discounts and campaigns for the company and employees.
- It is easier for the company to obtain B Corp® certification than to obtain the legal status of Benefit corporation where it exists
- Differentiate in the marketplace
- Attract talent
- Have access to technology and expertise
- Save money and improve the bottom line
- Attract investment
- Protect the corporate mission

⁴⁶ Certificazione B Corporation. 2022. *Cambiare il mondo è un'impresa possibile, Il primo report delle B Corp. italiane.*

⁴⁷ Matthew G. Grimes, Joel Gehman, KeCao, 2018. *Positively deviant: Identity work through B Corporation certification.* Journal of Business Venturing.

B-Corp (Certified B Corporation) companies are committed to certain standards to ensure a positive impact on their employees, society, and the environment, reconciling economy and profit with ethics, sustainability and well-being.

Often the term B-Corp is associated with Benefit Corporation (or Benefit Corporation), but these are not really the same thing.

'Benefit Corporation' is a legally recognised legal form that a company can take, while the term 'B-Corp' indicates an official voluntary certification issued through the measurement of certain performances.

Italy is, after the United States, the first state to have formalised the meaning of Benefit Corporation, introducing an ad hoc regulation in the 2015 Stability Law, which defines them as follows: 'In carrying out an economic activity, in addition to the purpose of sharing profits, they pursue one or more purposes of common benefit and operate in a responsible, sustainable and transparent manner towards persons, communities, territories and the environment, cultural and social goods and activities, bodies and associations and other stakeholders'.

2.6.1 Trend B-Corp and sustainability

With the pandemic, there was a widespread fear that the sustainability trend and consequently the severe economic crisis caused by the pandemic might be reversed.

However, this study does not consider the crisis that is also ongoing because of the war in Ukraine and rising inflation.

Unlock the change's report shows how in 2021 B-Corp companies in Italy reached 140, up 26% on the previous year, with a turnover of 8 billion and 15 thousand employees, according to data released by B-Corp Italia, the Italian B-Corp movement. A trend that is confirmed internationally: at the end of 2021, there were 4,600 B Corporations worldwide, 1,400 in Europe with a turnover of 155 billion (438 thousand employees) and 45 billion (120 thousand employees) respectively.

The report tells how in the year of the pandemic and subsequent recession, 2020, 66% of B-Corp companies saw their turnover grow and 52% reported an increase in employees. Interesting numbers also for financial operators and investment funds, which are increasingly attentive to long-term sustainability prospects. Indeed, B-Corp are companies that are committed to the highest standards of social and environmental performance, transparency, and accountability and that operate in a way that optimises their positive impact on employees, communities and the environment. The results are certified by the non-profit organisation B Lab, represented in Italy by Nativa. In 2021, companies such as Reti and Illy Caffè were certified in Italy. Now the B-Corp movement, born some fifteen years ago in the United States, aims to spread the paradigm to as many companies as possible to stimulate real change. Starting with the more than 200,000 companies in the world that measure their social and environmental performance through the Bia - B Impact Assessment tool, created by B Lab and used by all B Corporations.

The report, in addition to tracing the work of measuring social and environmental impact, also shows three different areas of interest for which certified companies are developing shared policies and good practices. The working groups focus on Education, Gender Equality and Net Zero: key issues from the B Corp perspective and indispensable elements for the sustainable development of any company, to generate shared knowledge and identify guidelines to "unlock the change", as the campaign with which B Corp themselves tell the world: #UnlockTheChange.

"We are at a turning point, reached through the realisation that sustainability is not a practice or a process. It is not something other than the company, but it is the company itself, it is everything it is and everything it does: it is quality, research and development, product, communication, human resources, the relationship with partners, suppliers and with the territories in which they operate," says Eric Ezechieli and Paolo Di Cesare, co-founders of Nativa, country partner of B Lab.

All this is to show how this trend is becoming increasingly popular in the world of corporate finance, and how important education, gender equality, climate, all very relevant issues, are. In fact, this report and movement aims to raise awareness of these issues, which then materialise in movements such as #UnlockTheChange. The latter aims to show how B Corporations have developed an innovative Stakeholder Company model, which goes beyond the old Shareholder Company and looks at the interest of the community, measuring and improving social and environmental performance as well as profit objectives.

2.7 Green Bond

Green Bonds are recent financial instruments that have had an absurd growth rate since 2007. We talk about bonds as the most common, but these are linked to projects that have a positive impact on the environment, for example energy efficiency, energy production from clean sources, these are just a few examples, there are many others.

These make it possible to finance various types of projects with environmentally sustainable characteristics, including water and waste treatment, pollution prevention and control initiatives, transport infrastructure, including wind farms, and more generally initiatives related to the sustainable use of water or environmentally friendly construction, giving a few examples..⁴⁹

The European Commission itself recently underlined the potential and functioning of the green bond market by presenting a package of measures entitled 'Clean Energy for All Europeans' to achieve the 2030 climate

⁴⁹ AdviseOnly. 2019. *Cosa sono gli investimenti sostenibili? Dagli ESG ai Green Bonds*. Banco BPM.

<https://www.bancobpm.it/magazine/privati/investi-risparmia/cosa-sono-gli-investimenti-sostenibili-dagli-esg-ai-green-bonds/>

and energy targets. Stating how an additional EUR 177 billion per year will be needed from 2021 onwards, these new financing and investment mechanisms could play an essential role. The World Bank or the European Investment Bank are the main institutions that have issued the bonds for now, although later they will also be issued by individual companies.

The increase in the sustainability trend is also due to the entry of large companies from emerging countries into the green bond market, on the one hand, and the growing attention of supranational institutions to the topic of environmental sustainability, on the other.

About the number of issues, recent statistics show that the volume of business has been conspicuous. In fact, in the second quarter of 2022 alone, USD 225 billion was issued, down 19% compared to the second quarter of last year, but a modest increase of 2% compared to the USD 221 billion issued in the first quarter of this year. This was reported in an analysis conducted by Moody's ESG Solutions.

More and more attention is being paid by international organisations to the issue of environmental sustainability. Every year, all major development banks renew their commitment to sustainability by launching new Green Bond issuance plans. On the other hand, investors are paying more attention to climate change issues and financial inclusion, two central topics on the global agenda.

Yet, there is no global standard that certifies a particular bond as 'green', but there are guidelines developed by the International Capital Market Association (ICMA) and guidelines developed by the European Commission.

There are four principles dictated by ICMA; first, the issuer of a bond must clearly identify the destination of the proceeds. Second, it must follow special procedures in the evaluation and selection of the project.

The bond issuer must ensure a fundamental aspect, namely maximum transparency in the disclosure of the management of proceeds. Not least, reports must be made available to update investors on the progress of the financed projects.

The issue of Green Bonds only adds to the previous innovations of Social Bonds and Sustainable Bonds.

2.8 Introduction to empirical analysis

In order to best approach the empirical analysis and answer the research question that I developed, I will introduce a very interesting study in my opinion that allowed me to correlate the two trends.

As also confirmed by the article of the investment bank of Nomura with the investors increasingly looking at environmental, social and governance (ESG) factors along with financial considerations when making decisions, deals in this space are growing.

Companies with environmental, social and governance (ESG) credentials have been high on the list of merger targets for U.S. special purpose acquisition companies (SPACs) so far in 2021, data from Nomura Greentech showed.

As reported by the Nomura article, which shows how in the first months of 2021, out of a total of 306 SPAC done in USA, 49 of these, then about 16% concern the area of sustainability, then ESG and energy transition.

By contrast, in the second half of 2020, there were only 40 SPACs with ESG targets, although a 25.3% growth in 2020 emerged.

Global SPAC volumes hit \$286 billion in the first four months of this year, versus \$163 billion in 2020, Refinitiv data showed. Sustainable bond issuance, meanwhile, hit a record high of \$264 billion in the first quarter.

As we can certainly see investors will continue to finance high growth ESG companies, possibly making use of the SPAC tool.

I would like to consider the recent phenomenon of B-corp (Certified B Corporation) are committed to meet certain standards to ensure a positive impact on their employees, society, and the environment, reconciling the economy and profit with ethics, sustainability, and well-being.

Another very hot topic that I would like to talk about in relation to these two phenomena is the issue of standards of ethics and ESG.

Regarding the issue of Standard ethics, there are companies that deal with providing ratings on sustainability, being a very popular topic.

As has been highlighted by many studies, one of KPMG, named "SPAC Insights"⁵⁰, at this time there are two trends that are having a strong common interest, the theme of the SPAC and ESG.

Share prices show that SPACs with strong ESG-related programs and operations often perform better than non-ESG SPAC combinations.

If the trend remains as shown, and sustainability will continue to take over, as it is already doing, the ESG will guide mergers that will lead to a strengthening of the SPAC instrument in the long term.

As reported in the KPMG report between January 1, 2020 and August 27, 2021, there have been 292 announced SPAC mergers; of those, only 65 had an ESG theme, according to KPMG analysis. However, the ESG-focused SPAC combinations' share prices outperformed those of non-ESG ones by a big margin. There are recent analyses of this study by KPMG, which highlight how the mergers following the ESG theme SPAC have ended with a reduction of 18 times higher than those with non ESG theme.

From my intuition it came out this possible correlation. So, my objective would be just to deepen this.

Among the different ESG-oriented SPAC targets linked to climate change are electric vehicles, battery manufacturers and renewable energy companies.

⁵⁰ Dean Bell. 2014. "*SPAC insights: ESG and SPACs*". KPMG.

Even more this study can confirm my thesis, that is greater sustainability, oriented to the achievement of ESG objectives, can be achieved through the instrument of the SPAC, allowing a more performant and rapid energy transition.

This paragraph will allow me to give a little more credibility to what I thought I was developing due to my intuition.

3 CHAPTER

Are the SPACs a tool that allows a better transition in the field of sustainability?

3.1 Introduction

The aim of this third chapter, having dealt in detail in the previous two chapters with the two trends underlying my experimental thesis, is to answer the research question.

In fact, I would start from the very question I posed as the title of the chapter, which encapsulates part of the research question.

Are SPACs a tool that can lead to a more effective energy transition, encouraging small projects to grow and develop in this area? I will answer this question during my dissertation. In fact, in this chapter I start by defining the reference variables, the research question, formulating my hypotheses, and then move on to give an analysis of what has been said and what can be realised, based on historical data, paying attention also to the historical context of reference and the events that can and will influence this growth.

The fundamental theme is to formulate a future hypothesis for the relaunch of the SPAC instrument, both in the Italian market and as an instrument for regulating the American market, through the trend that is before everyone's eyes and that is becoming increasingly important, namely sustainability.

3.2 Definition Sample

This section will provide an analysis of the SPACs currently present on the Italian and American markets and their target companies.

The aim is to investigate whether this type of instrument could represent the turning point for financing projects in the field of sustainability in a broad sense, but strictly speaking energy transition projects, paying attention to the current historical situation.

Before getting to the heart of the empirical analysis, it is also necessary to provide an overview of the context, including the time frame, in which these SPACs were listed and in which some of them completed the business combination. To this end, it was deemed necessary to set out in the following paragraphs the most significant qualitative characteristics on which I would like to base my analysis.

In fact, in defining all qualitative characteristics, I will define the methodology according to which I have constructed and analysed the sample.

What I have done so far is to create a database of SPAC operations, extrapolating the data from the Refinitiv Workspace database.

From this database, I was able to filter and extrapolate all SPACs, and then filter them only on the US and Italian markets.

First, I would like to define the two variables according to which I organised and skimmed the database, as I would like to focus on certain areas, sectors.

The first variable is the geographic area, I decided to analyse the American and European markets, because I consider the American market to be the reference point for the SPAC phenomenon, in fact, as the database shows, SPACs boomed in America in the year 2021.

In fact, out of a sample of 844 SPAC transactions, extrapolated from Refinitiv, 744 transactions were made in the American market and the remaining 100 in Europe.

In 2021 alone, 264 transactions were carried out in the two markets. Considering that I have extrapolated all successful SPAC transactions since the first SPAC carried out in the UK in 2002, the SPACs carried out in 2021 represent 31% of the transactions carried out since their inception, a very long-time horizon, and therefore a high incidence.

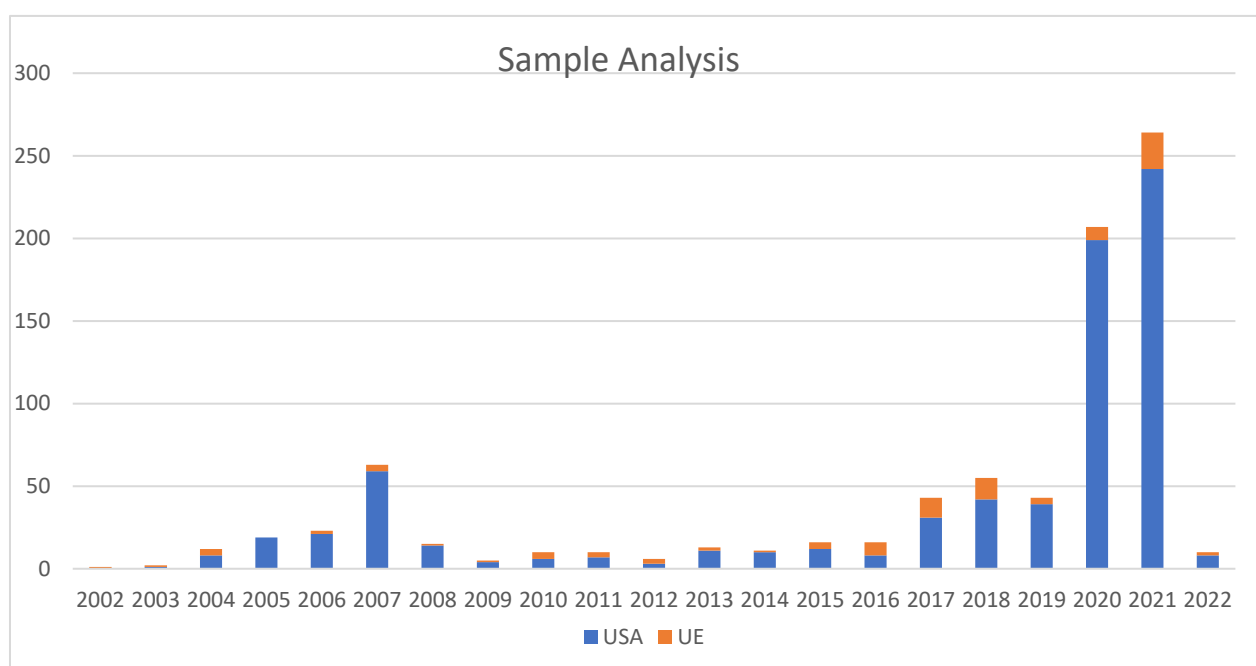


Figure 4-Representation of sample data - My elaboration source dataset created

Certainly, as can be seen from this graph, the number of SPACs has always been higher in the US market, which, as mentioned in the previous chapters, is the birthplace of this instrument. While the European market continues to be limited in its use, as it lacks the necessary structures for development.

The years, as mentioned before, in which there were more SPACs remain the years 2020 and 2021, as then in 2022 there was a strong regulation by the SEC, which imposed a reduction because it was too risky for investors.

In fact, in 2021, there were 264 SPACs, which raised well over 100 billion, so with all the uncertainty caused by the pandemic, SPACs have become a good option for entering the market as opposed to the more difficult and time-consuming path of traditional IPOs.

In fact, as SPACs were gaining in popularity, the US Securities and Exchange Commission (Sec) is stepping up its scrutiny and has opened an investigation into the frenzied interest on Wall Street.

The other variable I have taken as a reference besides geographical area is if SPAC pursuit of ESG or no-ESG objectives.

I skimmed a significant number of SPAC transactions to extrapolate a range of data including execution date, share price at 180 days after the offer, whether they found the target company, geographic area, and country.

Issue Date	Issuer/Borrower Name Full	Transaction Status	Issuer/Borrower Nationality	Offer Price (t=Co)	Issuer/Borrower Stock Exchange Name ('T')	Domicile Nation Sub Region	Domicile Nation Reg	Book Or Co-Managers ('T')	Stock Price 90 Days After Offer (USD)	Stock Price at Close of Issue Dr (USD)	Stock Price 180 Days After Offer (USD)	Related M&A Target Name (Short) ('T')
10/12/2021	Spacett AB	Live	Sweden	0.55	Aktietorget	Western Europ	Europe	Not Applicable	0.53	0.05	0.60	Tura Scandinavia AB
1/7/2021	Anisz Acquisition Corp	Live	United Stab	10.00	Nasdaq	North America	Americas	Chardan Capital Markets LLC	10.05	10.15	10.02	Ethereal Tech Pte Ltd
10/17/2021	VMG Consumer Acquisition Corp	Live	United Stab	10.00	Nasdaq	North America	Americas	Credit Suisse Securities (USA) LLC Moelis & Co	10.04	10.06	10.06	Trump Media & Tech Grp Corp
3/31/2021	Digital Health Acquisition Corp	Live	United Stab	10.00	Nasdaq	North America	Americas	Alliance Global Partners	10.14	10.24	10.25	VSee Lab Inc Doc Telehealth Solution
1/10/2021	Athena Consumer Acquisition Corp	Live	United Stab	10.00	New York Stock Ex	North America	Americas	Citigroup Global Markets Incl Ladenburg Thalmann & Co	10.11	10.07	10.10	Next.e.GO Mobile SE
14/10/2021	Founder SPAC	Live	United Stab	10.00	Nasdaq	North America	Americas	Jefferies LLC Northland Securities Inc	10.34	10.01	10.25	Rubicon Tech Lic
2/9/2021	Artemis Strategic Investment Corp	Live	United Stab	10.00	Nasdaq	North America	Americas	Barclays Capital Incl BMO Capital Markets	10.03	10.03	10.03	Novibet Ltd
14/05/2021	Endurance Acquisition Corp	Live	United Stab	10.00	Nasdaq	North America	Americas	Canor Fitzgerald & Co Trust Securities Inc	9.93	9.85	9.86	Saltify Communications Ltd
08/09/2021	Net Zero Infrastructure PLC	Live	United King	0.94	London	Western Europ	Europe	Axis Capital Markets Ltd	0.95	0.95	0.94	Taylor Construction Plant Ltd Solar H
12/08/2021	Armada Acquisition Corp I	Live	United Stab	10.00	Nasdaq	North America	Americas	Northland Capital Markets B Riley FBR	9.99	9.80	9.92	Rezolve Ltd
10/08/2021	10X Capital Venture Acquisition Corp II	Live	United Stab	10.00	Nasdaq	North America	Americas	Canor Fitzgerald & Co	10.22	10.22	10.13	Prime Blockchain Inc
2/9/2021	Software Acquisition Group Inc III	Live	United Stab	10.00	Nasdaq	North America	Americas	Jefferies LLC	10.20	10.00	10.10	Nigin Inc
14/07/2021	CleanTech Acquisition Corp	Live	United Stab	10.00	Nasdaq	North America	Americas	Chardan Capital Markets LLC B Riley & Company	10.03	10.08	10.49	Nauticus Robotics Inc
07/07/2021	Agrico Acquisition Corp	Live	Cayman Isl	10.00	Nasdaq	Caribbean	Americas	Maxim Group LLC	10.00	10.00	10.22	Kaleva AS
2/9/2021	Mountain Crest Acquisition Corp IV	Live	United Stab	10.00	Nasdaq	North America	Americas	Network Financial Securities, Inc Maxim Group LLC Alexa	10.06	9.93	10.04	CH-AUTO Technology Co Ltd
2/9/2021	Social Capital Suvretta Holdings Corp I	Live	United Stab	10.00	Nasdaq	North America	Americas	Morgan Stanley & Co LLC SoFi Securities LLC	9.88	10.11	9.90	Akili Interactive Labs Inc
2/9/2021	Social Capital Suvretta Holdings Corp III	Live	United Stab	10.00	Nasdaq	North America	Americas	Morgan Stanley & Co LLC SoFi Securities LLC	9.78	10.13	9.87	ProKidney LLC
2/3/2021	1bd30 AB	Live	Sweden	11.80	OMX Stock	Western Europ	Europe	Carnegie Investment Bank AB DNB Markets AS	11.56	11.81	10.95	Spolargruppen Sverige AB
2/3/2021	Dee Tech SA	Live	France	11.53	Euro Paris	Western Europ	Europe	Societe Generale Securities SAI Deutsche Bank	11.50	11.89	11.29	Colis Prive SAS
08/09/2021	Iron Spark I Inc	Live	United Stab	10.00	Nasdaq	North America	Americas	Morgan Stanley & Co LLC	9.94	9.93	10.03	Hypebaast Ltd
2/5/2021	Dynamics Special Purpose Corp	Live	United Stab	10.00	Nasdaq	North America	Americas	JP Morgan Securities LLC	9.75	9.98	9.98	Senti Biosciences Inc
2/0/2021	Revo SpA	Live	Italy	12.23	AIM Italia	Western Europ	Europe	IMI - Intesa Sanpaolo UBS Investment Bank Equita SIM SpA	11.81	11.81	11.12	Elba Assicurazioni SpA
10/05/2021	Aries I Acquisition Corp	Live	Cayman Isl	10.00	Nasdaq	Caribbean	Americas	Wells Fargo Securities LLC Kingswood Capital Markets LLC	10.15	9.96	10.32	Infinite Assets Inc
12/05/2021	Artisan Acquisition Corp	Live	Cayman Isl	10.00	Nasdaq	Caribbean	Americas	Credit Suisse Securities (USA) LLC UBS Securities LLC Futu Securities Int	9.96	10.22	9.96	Peretics Ltd
2/9/2021	468 Spac I SE	Live	Luxembourg	12.12	Frankfurt	Western Europ	Europe	Joh Berenberg Gossler & Co KG London Branch	11.75	11.75	11.28	Boxine GmbH
2/8/2021	TradeUP Global Corp	Live	United Stab	10.00	Nasdaq	North America	Americas	Tiger Brokers R. F. Lafferty & Co., Inc Ingalls & Snyder	9.86	10.28	9.86	SAITECH Ltd
0/04/2021	TPG Pace Solutions Corp	Live	United Stab	10.00	New York Stock Ex	North America	Americas	Deutsche Bank Securities Incl JP Morgan Securities LLC Gol	10.00	10.11	10.05	Vacasa LLC
2/3/2021	Decarbonization Plus Acquisition Corp III	Live	United Stab	10.00	Nasdaq	North America	Americas	Credit Suisse Securities (USA) LLC Citigroup Global Market	11.40	9.88	10.62	Solid Power Inc
2/3/2021	Kheda Ventures Acquisition Co II	Live	United Stab	10.00	Nasdaq	North America	Americas	Citigroup Global Markets Incl Goldman Sachs & Co	10.03	10.00	10.27	Aurora Innovation Inc
2/2/2021	Gores Guggenheim Inc	Live	United Stab	10.00	Nasdaq	North America	Americas	Deutsche Bank Securities Incl Citigroup Global Markets Incl	10.00	10.00	10.25	Polestar Performance AB
1/10/2021	American Acquisition Opportunity Inc	Live	United Stab	10.00	Nasdaq	North America	Americas	Kingswood Capital Markets LLC Ameriv Securities Inc	9.97	9.97	10.29	Royal Management Corp
1/10/2021	Athena Technology Acquisition Corp	Live	United Stab	10.00	New York Stock Ex	North America	Americas	Citigroup Global Markets Incl CastleOak Securities LP Siebe	9.90	9.93	10.38	Heligen Inc
1/10/2021	Reinvent Technology Partners Y	Live	United Stab	10.00	Nasdaq	North America	Americas	Morgan Stanley & Co LLC Academy Securities Incl Ameriv	10.24	10.11	10.04	Aurora Innovation Inc
1/10/2021	Silver Spike Acquisition Corp II	Live	United Stab	10.00	Nasdaq	North America	Americas	Credit Suisse Securities (USA) LLC Stifel Nicolaus & Co Inc	10.04	10.03	9.93	Eleusis Holdings Ltd
1/10/2021	Archimedes Tech SPAC Partners Co	Live	United Stab	10.00	Nasdaq	North America	Americas	Earlybirdcapital Incl Bankers Securities Inc	9.96	9.93	9.86	Soundfound Inc
1/10/2021	Pine Technology Acquisition Corp	Live	United Stab	10.00	Nasdaq	North America	Americas	Canor Fitzgerald & Co Deon Capital Group LLC	9.91	9.97	9.90	The Tomorrow Cos Inc
04/03/2021	First Reserve Sustainable Growth Corp	Live	United Stab	10.00	Nasdaq	North America	Americas	Barclays Capital Incl Goldman Sachs & Co	9.95	10.02	9.99	Juuce Ltd
04/03/2021	VFC Impact Acquisition Holdings II	Live	United Stab	10.00	Nasdaq	North America	Americas	Citigroup Global Markets Incl Jefferies LLC	9.90	10.00	10.15	Finnacel Pte Ltd
04/03/2021	InterPrivate III Financial Partners Inc	Live	United Stab	10.00	New York Stock Ex	North America	Americas	Morgan Stanley & Co LLC Earlybirdcapital Inc	9.92	10.01	10.04	Aspiration Partners Inc
04/03/2021	InterPrivate II Acquisition Corp	Live	United Stab	10.00	New York Stock Ex	North America	Americas	Morgan Stanley & Co LLC Earlybirdcapital Inc	9.88	10.02	9.96	Getaround Inc
04/03/2021	Dmp Technology Group Inc IV	Live	United Stab	10.00	New York Stock Ex	North America	Americas	Goldman Sachs & Co Needham & Co LLC	10.03	10.28	10.16	Planet Labs Inc
04/03/2021	Atlantic Coastal Acquisition Corp	Live	United Stab	10.00	Nasdaq	North America	Americas	BTIG LLC Academy Securities Incl con Capital Market Siel	9.92	9.96	9.91	Eseanium Inc

Figure 5- Representation of dataset created with date of Refinitiv

Here in the screenshot, you can see a small portion of my database, how I set up the extrapolation of the Refinitiv data, and how I cleaned up the data, and then set up the two statistical samples I created.

3.2.1 How I created the statistical samples

In this sub-section, I would like to analyse how I made up the four samples that formed the basis of my quantitative analysis.

First, I used my two variables, namely the reference markets and whether they were ESG or no-ESG, thus creating two samples that were statistically as reliable as possible.

I analysed more than 100 SPAC transactions in the European market, from which I drew 2 samples about 32 SPAC operation, a sample pursuing ESG Objectives, covering the field of energy transition, sustainability, decarbonisation, and Co2 Emissions and the other one that no pursues ESG.

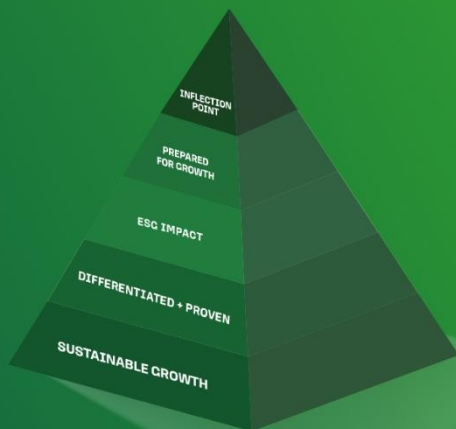
Then I created two other homogeneous samples about 35 companies in the US, one with SPACs pursuing ESG objectives, and one with NO ESG objectives.

Here there are a couple of examples of Mission and Vision from which I derived whether a company pursued ESG goals or not, I performed this analysis for each company belonging to the two samples.

American energy and infrastructure value chain and contiguous industries that we believe will fundamentally change the current energy landscape by accelerating a shift to a low-carbon future, an objective we call "Disruptive Decarbonization."

Our sponsor is ESGEN LLC, a portfolio company and affiliate of Energy Spectrum, a leading venture capital firm with extensive investment experience and a successful track record of identifying and building high-quality operating assets and businesses across the energy infrastructure value chain.

Additionally, ESGEN LLC has formed a relationship with client accounts of Salient Capital Advisors, LLC, a leading energy-focused public investor and alternative investment firm with ~\$4bn of assets under management. Salient Capital Advisors, LLC has a vast experience of public investing and is an experienced SPAC IPO and PIPE investor.



Our business strategy is to identify, acquire and maximize the value of a business in the energy and infrastructure sector focused on Disruptive Decarbonization that meets the following criteria:

EXPERTISE

At an inflection point and requires expertise

PREPARED FOR GROWTH

Fundamentally sound and prepared for growth

ESG IMPACT

Positive ESG impact

DIFFERENTIATED + PROVEN

Differentiated tech, proven operations and attractive market dynamics



Our Vision

GigCapital team is committed to work with exceptional teams of late stage private companies to orchestrate the transition to the public markets under our mission of Mentor Investors.

As a \$230M PPE fund, GigCapital5 seeks exceptional companies, that are addressing the global mega-trends with focus on TMT, A&D and Intelligent Automation. We focus on target's differentiation points of sustainable business, solid corporate governance, and high impact on the world's Sustainable Development Goals.



Our Mission Statement: To produce the critical battery materials required to support the clean energy revolution

Battery Future Acquisition Corp. is a newly formed blank check company targeting critical battery minerals and related supply chains.

The company plans to target assets or companies along the battery value chain from raw materials mining and processing to midstream refining and battery input manufacturing and recycling. The company will have a strong focus on projects highly leveraged to the transition to a low carbon economy, particularly electric vehicles, and will target strategic assets which contribute to western supply chains. Strong ESG credentials with pathways to low carbon production are a fundamental part of our screening process.

The company has a uniquely qualified team comprised of mining and metals sector executives and bankers to execute on its strategy. The company is supported by heavyweight industry partners, global mining private equity firm Pala Investments and leading global commodities trader and financier, Traxys. Each are represented on the company's board of directors and will provide access to their unique insights and deal flow.

Figure 6- Three different examples of mission and vision where ESGs are present- sites source

3.2.2 Choice of variables

After determining my samples, I proceeded to answer the assumptions to carry out a statistical analysis on the two samples so that I could answer my research question and be able to draw conclusions and make predictions on the evolution of this phenomenon in the two markets.

The dependent variable I chose to carry out my analysis is the return of the share price 180 days after the offer compared to the offer price.

This is because my quantitative analysis involves analysing a measure of the return of the operation for the shareholder. In fact, my determinant remains the return of the share price, from which I can derive the standard deviation in statistical terms, i.e. the volatility of the share prices of the sample in example, so as to verify any correlations between ESG and SPAC return.

3.3 Premises or assumptions

In this section, I would like to explain and formulate several assumptions necessary for the correct execution of the model to satisfy all hypothesis and my research question.

3.3.1 Independent variable

A first aspect to consider on which the entire analysis is based is that the two samples must be independent because the uncorrelated samples represent the two categories of the independent variable in which the cases are different.

This therefore represents a first key aspect of the independent variables and the two samples, which are ESG and NO-ESG, i.e. they are two diametrically opposed categories.

Consequently, a SPAC cannot be in both an ESG and a NO-ESG group, and vice versa, so they are binary yes-or-no considerations.

I would now like to address the assumption underlying my analysis, determinants to carry out the quantitative and statistical part.

In this condition, the independent variable must be binomial, i.e. a yes or no variable, such as SPAC YES and SPAC NO.

3.3.2 Assumption of normality

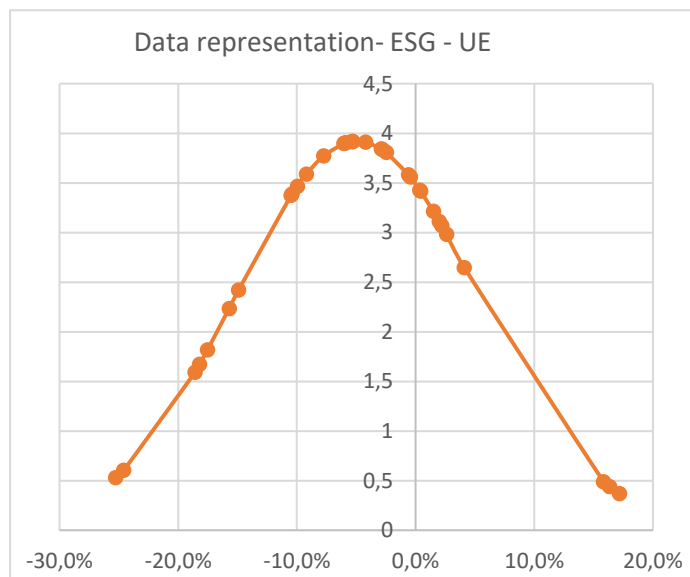
The independent-samples t-test requires that the dependent variable be distributed approximately normally within each group and that the variances of the two groups are different.

To verify this assumption, one must perform tests, there are two possibilities, a Shapiro-Wilks normality test, or one must perform the Q-Q plot.

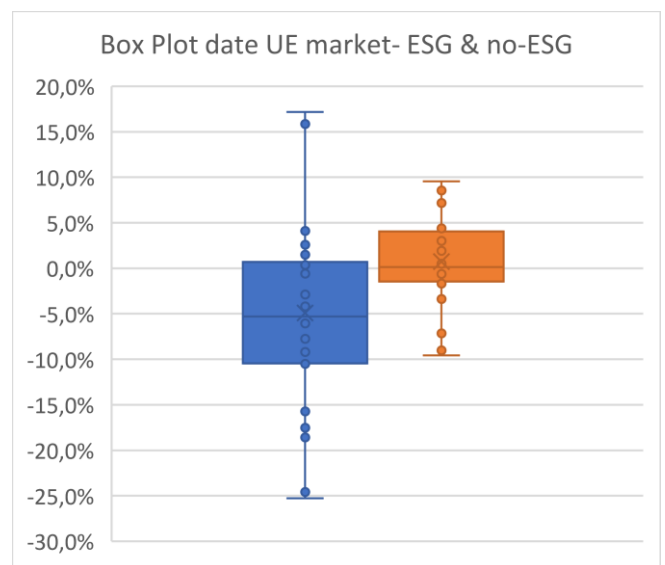
The former is the most powerful normality test, especially in the case of small samples. It is based on evaluating the null hypothesis that the dependent variable comes from a normal distribution. Therefore, the hypothesis of normality can be assumed true if the test is not significant (p-value > 0.05).

The second is through the graphical representation of the quantiles of a distribution, by means of the Boxplot, a statistical graph that is used for quantitative variables. It is very useful to understand whether the distribution is symmetrical or asymmetrical and to compare the shape of several distributions. But above all, it allows you to identify outliers quickly and accurately.

In fact, we will see that there are no outliers in the two representations of the box plots, in the American and European markets respectively, as we can see in the figure below.



Graphic 1 - Data representation of ESG sample -UE



Graphic 2- Box plot NO-ESG date

So, we can conclude in our case that the distributions are normal and therefore we can perform a t-test, because I used this methodology to check whether the values respected the assumption of normality.

3.4 Hypothesis statement

Within an independent-samples t-test you will find two different types of hypotheses: the null hypothesis and the alternative hypothesis.

3.4.1 The null hypothesis

The null hypothesis states that the population averages of the two groups are equal:

$$H_0: \mu_1 = \mu_2$$

or similarly that the difference between the two averages is zero:

$$H_0: \mu_1 - \mu_2 = 0$$

3.4.2 *The alternative hypothesis*

According to the alternative hypothesis, different types of tests can be distinguished. In particular, we can find the a-test: *Bilateral alternative hypothesis*

$$H1: \mu_1 - \mu_2 \neq 0$$

i.e. the difference between the averages is non-zero.

One-sided alternative hypothesis right

$$H1: \mu_1 - \mu_2 > 0$$

i.e. the difference between the averages is greater than zero.

Alternative left-handed hypothesis

$$H1: \mu_1 - \mu_2 < 0$$

i.e. the difference between the averages is less than zero.

3.5 Methodology

I decided to conduct an independent sample t-test, for the two pairs of samples, according to the two independent variables, geographical area and ESG and NO-ESG. The independent-samples t-test, also called the two-samples t-test, or Student's t-test, is an inferential statistical test that determines whether there is a significant difference between the averages of two uncorrelated groups.

Here we want to analyse whether there is a significant difference and in favour of which sample whether ESG or no ESG, based on return on share prices, so that correlation assumptions can be made.

In fact, two variables are needed to perform an independent-samples t-test, a qualitative independent variable with two modes, namely the presence or absence of ESG targets, and a quantitative dependent variable, which is return on stock price.

The groups must be independent because the uncorrelated groups represent the two categories of the independent variable in which the cases are different.

Indicating with n_1 and n_2 respectively the sample sizes of the two groups, the procedure for an independent-sample t-test can be summarised in 6 steps, this analysis to be repeated twice, once for the US sample and once for the EU sample.

3.5.1 *Calculate the averages of the two groups*

As a first step, I added up all the prices of the 4 samples and divided them by the number of SPACs, so that I had 4 averages. I indicated these averages with x_1 and x_2 , for each geographical area.

3.5.2 Calculating the standard deviations of the two groups

At this point, I have called s_1 and s_2 respectively the standard deviation of the first and second group, i.e. I repeat everything for the two geographical samples. The latter, the standard deviation of a variable is a summary index of the differences of the values of each observation from the mean of the variable.

3.5.3 Calculate Degrees of Freedom

Use the following formula to calculate the degrees of freedom:

$$d = n_1 + n_2 - 2$$

This tells us how the degrees of freedom correspond to the sum of the two samples being compared minus two.

3.5.4 Calculate joint variance S^2

Variance is used to express the average of the quadratic (squared) distances of the individual returns of a portfolio from their mean value, in this case the average of the quadratic distances of the individual share prices within the ESG and NO-ESG sample.

In addition, the variance can also express the volatility of the latter, and thus the risk.

This is a kind of weighted variance, the denominator of which includes the degrees of freedom calculated in the previous point:

$$S^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}$$

3.5.5 Calculate the standard error of the SE estimate

At this point, do the square root of the multiplication between the joint variance and the quantity $(1 / n_1 + 1 / n_2)$.

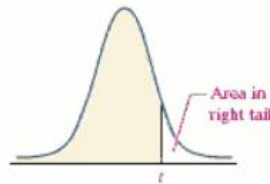
3.5.6 Calculate the value of the T-statistic

Now divide the difference of the averages by the standard error:

$$T = \frac{x_1 - x_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

3.5.7 Find the critical value $t_{\alpha/2}$ on the tables

Having set a significance level α , and $n-1$ degrees of freedom (as calculated in step 3), I consulted the statistical table of Student's t-distribution to find the critical value, as Student's t-test is another way of calling the independent-samples t-test.



Degrees of Freedom	<i>t</i> -Distribution Area in Right Tail											
	0.25	0.20	0.15	0.10	0.05	0.025	0.02	0.01	0.005	0.0025	0.001	0.0005
1	1.000	1.376	1.963	3.078	6.314	12.706	15.894	31.821	63.657	127.321	318.309	636.619
2	0.816	1.061	1.386	1.886	2.920	4.303	4.849	6.965	9.925	14.089	22.327	31.599
3	0.765	0.978	1.250	1.638	2.353	3.182	3.482	4.541	5.841	7.453	10.215	12.924
4	0.741	0.941	1.190	1.533	2.132	2.776	2.999	3.747	4.604	5.598	7.173	8.610
5	0.727	0.920	1.156	1.476	2.015	2.571	2.757	3.365	4.032	4.773	5.893	6.869
6	0.718	0.906	1.134	1.440	1.943	2.447	2.612	3.143	3.707	4.317	5.208	5.959
7	0.711	0.896	1.119	1.415	1.895	2.365	2.517	2.998	3.499	4.029	4.785	5.408
8	0.706	0.889	1.108	1.397	1.860	2.306	2.449	2.896	3.355	3.833	4.501	5.041
9	0.703	0.883	1.100	1.383	1.833	2.262	2.398	2.821	3.250	3.690	4.297	4.781
10	0.700	0.879	1.093	1.372	1.812	2.228	2.359	2.764	3.169	3.581	4.144	4.587
11	0.697	0.876	1.088	1.363	1.796	2.201	2.328	2.718	3.106	3.497	4.025	4.437
12	0.695	0.873	1.083	1.356	1.782	2.179	2.303	2.681	3.055	3.428	3.930	4.318
13	0.694	0.870	1.079	1.350	1.771	2.160	2.282	2.650	3.012	3.372	3.852	4.221
14	0.692	0.868	1.076	1.345	1.761	2.145	2.264	2.624	2.977	3.326	3.787	4.140
15	0.691	0.866	1.074	1.341	1.753	2.131	2.249	2.602	2.947	3.286	3.733	4.073
16	0.690	0.865	1.071	1.337	1.746	2.120	2.235	2.583	2.921	3.252	3.686	4.015
17	0.689	0.863	1.069	1.333	1.740	2.110	2.224	2.567	2.898	3.222	3.646	3.965
18	0.688	0.862	1.067	1.330	1.734	2.101	2.214	2.552	2.878	3.197	3.610	3.922
19	0.688	0.861	1.066	1.328	1.729	2.093	2.205	2.539	2.861	3.174	3.579	3.883
20	0.687	0.860	1.064	1.325	1.725	2.086	2.197	2.528	2.845	3.153	3.552	3.850
21	0.686	0.859	1.063	1.323	1.721	2.080	2.189	2.518	2.831	3.135	3.527	3.819
22	0.686	0.858	1.061	1.321	1.717	2.074	2.183	2.508	2.819	3.119	3.505	3.792
23	0.685	0.858	1.060	1.319	1.714	2.069	2.177	2.500	2.807	3.104	3.485	3.768
24	0.685	0.857	1.059	1.318	1.711	2.064	2.172	2.492	2.797	3.091	3.467	3.745
25	0.684	0.856	1.058	1.316	1.708	2.060	2.167	2.485	2.787	3.078	3.450	3.725
26	0.684	0.856	1.058	1.315	1.706	2.056	2.162	2.479	2.779	3.067	3.435	3.707
27	0.684	0.855	1.057	1.314	1.703	2.052	2.158	2.473	2.771	3.057	3.421	3.690
28	0.683	0.855	1.056	1.313	1.701	2.048	2.154	2.467	2.763	3.047	3.408	3.674
29	0.683	0.854	1.055	1.311	1.699	2.045	2.150	2.462	2.756	3.038	3.396	3.650

Table 1-Student's T distribution- website source

In this paragraph, I have explained in a standardised way what I did statistically for the two samples, i.e. America and Europe, and I will discuss the results in the following paragraphs.

3.5.8 Take a decision

The last step to perform an independent-samples t-test is to compare the test statistic calculated in step 6) with the critical value obtained in step 7), to see whether the t-test is significant. We will have two hypothetical situations:

If $|T| > t_{\alpha/2}$ then the test is significant and you can reject H_0 , saying that the two averages differ significantly.

If $|T| > t_{\alpha/2}$ then you cannot reject H_0 , and you conclude by saying that you do not have sufficient evidence to say that the two averages differ significantly.

An alternative method to determine the outcome of the test may be to calculate the p-value and then say:

If $p\text{-value} < \alpha$ the test is significant and therefore rejects H_0 .

If $p\text{-value} > \alpha$ the test is not significant and you cannot reject H_0 .

In general, p-values larger than 0.05 represent non-significant tests.

3.6 Defining research question and panel comparable companies

Given this theoretical spectrum, I created this set of comparable so that I could answer my research question. First, I would like to outline what were the questions that inspired me to formulate my research question, and thus influence the direction in which I moved when writing my thesis.

Are SPACs actually a tool able to allow a sustainable ecological transition? or are they just a financing tool like the others?

Can Special Purpose Acquisition Companies (SPACs) be an effective alternative to more traditional listing methods in a market dominated by SMEs and so boost sustainability, after the COVID-19 outbreak?

These two questions are kind of the essence of the writing of my thesis, as I am precisely verifying and answering the research question of whether there is a direct correlation between sustainability, as represented by the ESG objectives in the mission or vision of SPACs, and the SPACs themselves.

After clearly defining how I have decided to act and what my objective is, I have created these statical samples or groups, respectively belonging to two categories, geographical areas, the Europe and America markets, as they are considered by me to be more significant, one being the reference market as far as the SPAC market is concerned, and the other a market that is fairly quiet and flat as far as the use of this financial instrument is concerned.

I collected about 65 transactions for the European market, and about 70 transactions for the American market, which in turn were divided into two distinct groups one pursuing ESG objectives, and a NO-ESG group.

The objective of the research is to see if there is a substantial difference in terms of outperformance in the case of SPACs with ESG objectives compared to the other group, using the return of 180-day stock price as a discriminate, and to check the volatility.

I was forced to do such an analysis because the analysis on financial ratios, i.e. ROE, ROI, ROS, or other multiples is not available due to the lack of financial statements, as we deal with SPAC instruments that have no data history, in fact they are considered empty boxes before listing.

3.7 Comparative analysis of a group of SPACs

In this paragraph, I will represent what emerged from my quantitative analysis and verify my thesis.

The aim of this section is to give a clear interpretation of my quantitative analysis, which emerged as a result of the creation and processing of these samples.

3.7.1 European Market

The European sample, is represented by 66 SPAC transactions, executed across Europe, I analysed the return on stock price after 180 days to the offer , I found that the average of the ESG sample is -4,92%, a negative return, due probably to the volatility of the stock price, and due to the sample that it's significant , as we can see from the result of T-test.

The are several reasons one explanation it the number of SPAC operation in UE is lower about 8 times than USA, contrary the average NO-ESG of 0,74%.

I can explain this result in the subchapter because the reasons for this deserve further explanation and investigation.

The database is organised showing the date of issue, the company that is the subject of the SPAC, the offer price, the region of domicile, the return of stock price at the closing date of the offer and after 180 days, then we have a column with the other coordinate to represent the graph and the boxplot, to check if the distribution is normal, and finally the last column one of the most important as it contains the ESG and NO-ESG discriminant.

This can be seen in the figure below.

Issue Date	Issuer/Borrower Name Full	Offer Price (Σ=Com)	Domicile Nation Region	Stock Price at Close of Issue Date (USD) (Σ=Median)	Stock Price 180 Days After Offer X (USD) (Σ=Median)	Return of Stock Price 180 days after the Offer Price	Y	ESG (true or False)
26/01/2018	Spaxs SpA	12,42	Europe		11,67	-6,0%	3,897023065	True
31/01/2018	Alpi SpA	12,42	Europe	12,57	11,46	-7,8%	3,771808044	True
10/03/2022	New Energy One Acquisition Corp PLC	13,08	Europe	12,95	11,88	-9,2%	3,589686468	True
05/03/2018	Life Care Capital SpA	12,34	Europe	12,04	11,11	-10,0%	3,467649579	True
08/09/2021	Net Zero Infrastructure PLC	0,04	Europe		0,04	-10,4%	3,387895344	True
25/05/2021	Aligro Planet Acquisition Co AB	12,11	Europe	11,87	10,84	-10,5%	3,375645703	True
15/10/2021	GfJ ESG Acquisition I SE	11,60	Europe	11,62	9,87	-14,9%	2,420448747	True
16/07/2021	Energy Transition Partners BV	11,80	Europe	11,78	9,95	-15,7%	2,233668185	True
18/06/2021	Transition SA	11,86	Europe		9,78	-17,5%	1,817284926	True
29/06/2021	Climate Transition Capital Acquisition I Bv	11,89	Europe	9,73	9,73	-18,2%	1,672671329	True
08/01/2016	Rockrose Energy Plc	0,73	Europe	0,74	0,59	-18,6%	1,592587668	True
17/06/2011	Vallares PLC	16,19	Europe	16,03	12,21	-24,6%	0,605098961	True
10/02/2017	Emmerson PLC	0,04	Europe	0,04	0,03	-25,3%	0,530745592	True
29/04/2021	468 Spac I SE	12,12	Europe	11,75	13,28	9,5%	1,778637225	False
28/07/2017	EPS Equita PEP SPAC SpA	11,75	Europe	12,28	12,81	9,1%	2,088460657	False
17/07/2017	Glenalta SpA	11,48	Europe	11,99	12,50	8,9%	2,166101528	False
05/08/2020	Kismet Acquisition One Corp	10,00	Europe	9,98	10,87	8,7%	2,330892607	False
10/12/2021	Spacett AB	0,55	Europe		0,60	8,6%	2,434093191	False
15/03/2018	Safe Harbour Holdings PLC	1,67	Europe	1,71	1,79	7,2%	3,554168166	False
21/07/2017	Sprintitaly SpA	11,66	Europe	11,91	12,24	4,9%	5,561688832	False
25/09/2017	Spactiv SpA	11,85	Europe	11,75	12,37	4,4%	6,03023687	False
03/02/2021	Centricus Acquisition Corp	10,00	Europe	10,37	10,30	3,0%	7,058659137	False
18/08/2016	Stellar Acquisition III Inc	10,00	Europe		10,25	2,5%	7,333882692	False
12/02/2018	Leo Holdings Corp	10,00	Europe		10,23	2,3%	7,427156666	False
28/04/2015	Atlantic Alliance Partnership Corp	10,00	Europe	10,06	10,19	1,9%	7,582597374	False
18/10/2012	Collabrium Japan Acquisition Corp	10,00	Europe		10,10	1,0%	7,769555961	False
09/02/2010	Horizon Acquisition Co PLC	15,70	Europe	15,56	15,81	0,7%	7,779387894	False
08/12/2021	Genesis Growth Tech Acquisition Corp	10,00	Europe	10,05	10,06	0,6%	7,776848434	False
08/12/2021	Emerging Markets Horizon Corp	10,00	Europe	10,05	10,05	0,5%	7,771280957	False
19/10/2018	Summerway Capital PLC	1,31	Europe	1,34	1,30	-0,2%	7,642304023	False

Table 2-Table dataset with main data for analysis- My own creation

After calculating the mean, standard deviation, and other indices, I calculated the T-test using the excel function. The value that emerged concerning the T-stat is 2.88, while the probability $P(T \leq t)$ of the two tails is 0.003.

We can see that the T-stat is smaller than $P(T \leq t)$ of the two T-critical tails, which allows us to conclude that H_0 can be rejected, and accepted the H_1 , I can therefore state that there is a significant difference between the two averages, there is a difference whether we are talking about SPACs with ESG or without. The hypotheses are as follows:

H_0 : The stock price return averages of the two samples are equal, there is no significant difference.

H_1 : The stock price return averages of the two samples is different, there is significant difference

I analyse this to see if there is a significant difference when ESGs are present.

This can be tested with a special function in excel, found in the Data window, Data Analysis, Test-t: two samples assuming different variances, what emerges can be observed in the table.

t-Test: Two-Sample Assuming Unequal Variances_ Europe

	Variable 1	Variable 2
Mean	0,049199272	0,007383246
Variance	0,010352033	0,002629643
Observations	34	32
Hypothesized Mean Difference	0	
df	49	
t Stat	2,877560367	
$P(T \leq t)$ one-tail	0,002960678	>
t Critical one-tail	1,676550893	
$P(T \leq t)$ two-tail	0,005921355	
t Critical two-tail	2,009575237	

Table 3- Table with quantitative analysis result Europe

Summing up, then, what emerged from this first t-test; there is a significant difference between the two averages, which is confirmed by the absolute value of the t-stat being greater than the t-critical, at a significance level of 5%.

Then it emerges that the average of the returns of the ESG sample is lower and negative than the average of the NO-ESG sample, this shows that in the case of the European market, we find a more unstable and volatile market, and that perhaps we are not yet ready about sustainability.

3.7.2 American market

After having carried out the analysis for the sample of SPACs made in Europe, I analysed the other sample of 69 companies, 33 pursuing ESG objectives and 36 not pursuing ESG objectives in the American market. As can be seen, I was able to draw from a much larger pool of transactions than in Europe, since the American market, as explained above, has experienced a boom and an abuse in certain situations of SPAC transactions.

Coming to the numbers I was able to extrapolate and one by one check whether they had ESG goals or not by reading their mission or vision or objectives, the pool was about 720 operations.

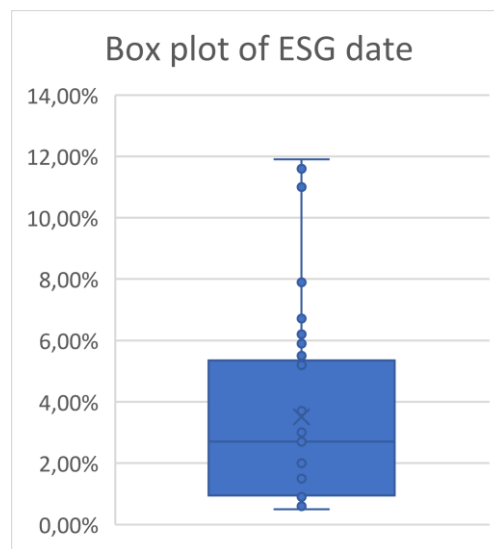
What I did for the European sample, I repeated for the American market, and it turned out exactly what I expected from the European market, my H1 hypothesis was accepted and confirmed by the t-test.

I started by taking the return of the stock price at 180 days after the offer of the SPACs in question and set up my analysis on the execution of a t-test, using excel.

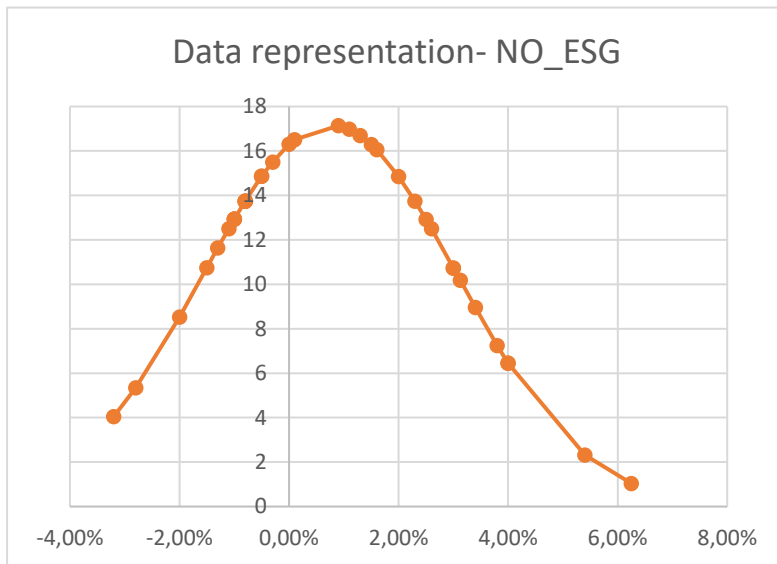
One of the first things, however, was to check the normalisation of the prices I had extrapolated, so I created two boxplots to check for outliers, and graphically represented the two normal, as can be seen here in the figure. At this stage, I created from a much larger sample a smaller, statistically more significant sample, since without the so-called outliers, all using the boxplot.



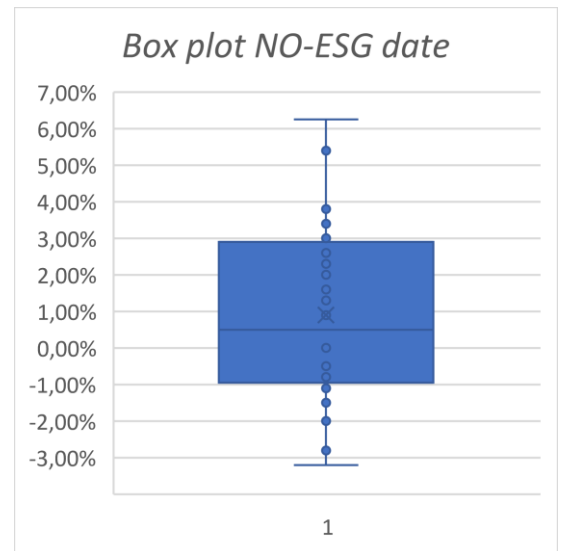
Graphic 4-Data representation of ESG sample



Graphic 3-Box plot of ESG date



Graphic 6-Data representation of NO-ESG sample



Graphic 5-Box plot NO-ESG date

After making this representation, I was able to confirm what I had said about distribution, about the normality of distribution.

The value that emerged for the T-stat is 3.85 while the probability $P(T \leq t)$ of the two tails is 0,013%.

At this point, after having calculated these probabilities, I formulated the hypotheses to be able to develop and interpret what emerged from the results, they are as follows:

H0: The stock price return averages of the two samples are equal, there is no significant difference.

H1: The stock price return averages of the two samples is different, there is significant difference

We can see that the T-stat is smaller than the $P(T \leq t)$ of the two critical tails, which allows us to conclude that H1 can be accepted.

As previously mentioned, this confirms what was predicted, I have listed here in the table what emerged from the analysis.

t-Test: Two-Sample Assuming Unequal Variances_
America

	Variabile 1	Variabile 2
Mean	0,035066667	0,009020833
Variance	0,001055352	0,000539723
Observations	33	36
Hypothesized Mean Difference	0	
df	67	
t Stat	3,854893918	
P(T<=t) one-tail	0,000131061	>
t Critical one-tail	1,667916114	
P(T<=t) two-tail	0,000262121	
t Critical two-tail	1,996008354	

Table 4- Table with quantitative analysis result America

3.8 Considerations about the results

What emerged from the empirical analysis was a surprise compared to what I expected from the EU sample. As in the US sample, the average stock price returns 180 days after the offering are higher in the case of SPACs with ESG objectives, so my thesis is confirmed.

Whereas in the European market the exact opposite happens, probably for various reasons.

A first reason is the case, i.e., given the small number of SPAC transactions from which I could draw for my analysis, as out of a total sample of 744 SPACs, only 100 were European.

So, the difficulty was at first to create a sample as the number of SPACs with sustainable targets out of these 100 was a small number, moreover by removing all outliers, the circle became even smaller.

I had to eliminate operations until I reached several 66 SPAC operations.

So, as far as the sample is concerned, surely not too many operations can cause what emerged from the results, perhaps distorting them a little.

Then surely on average the returns of these were influenced by the reference market in which they were quoted, in fact the most recent academic studies and literature shows that the Covid-19 pandemic and the war in Ukraine are giving a lot of instability in the European markets.

A well-known financial newspaper says that states that the European market will not surpass the US market. All of this confirms that the European market probably needs more time to settle down about the average yield, which is negative.

We know how the European market has underperformed the US market several times in recent years, this again highlights the weak correlation between the real economy and the financial markets, it is however useful to understand and identify the reasons for such performance deviations.

According to Goldman Sachs analysts, this discrepancy in the relative performance of the stock markets of the two continents is mainly due to the gap between the profits achieved by American and European companies. This gap would explain why the relative performance of the Stoxx600, the index that includes the best European companies in terms of capitalisation, has always been lower than that of the S&P500, except for the period relating to the global crisis of 2009.

What has been said so far confirms that it is probably the European market that suffers most in financial terms from changes and situations of uncertainty, in fact looking at the returns of the sample we see that the returns of the SPACs made in the years 2021-2022 had a negative return of -9%.

In fact, as reported in the article, "Earnings per share growth was 87% for the US and 2% for Europe. This wide gap is first due to the sector composition of the index: if we weighted the European and US earnings over their respective sectors, the former would see an increase of 45%. In addition, the various buybacks have helped push up the value of US earnings per share: if we looked solely at net income growth, this gap would narrow to 75% and further narrow the Europe-US gap". (Milano Finanza 2020)

What is more, these samples do not consider the series of favourable or unfavourable events that can play a key role in favour of the American continent and against the European continent.

What we need to be able to do prospectively is to take stock prices and check returns over a longer time horizon so that we can accommodate and smooth out any differences between the two markets, which could be a viable alternative but to be done in a few months or even years, given the uncertainty of the moment and the affectivity of the data to such events.

Currently, according to the Morningstar Global Market Barometer, US equities are overvalued by 7% relative to the Price/Fair value ratio (relative to stocks covered by the Morningstar analysis. Data in dollars as of 11 June 2021), this may be another explanation for a different valuation of the US market compared to the European one.

Another aspect is the US stock market, which grew beyond all expectations. The Standard & Poor's 500, one of the most important and indicative indices of the American stock market, grew by 76 per cent between 23 March 2020 and the same day in 2021.

These are all indications that we are being given about the American market, which is increasingly and as it is always stratum is the focus of all discussion.

In fact, we can consider this to be a very active and always up-to-date market, probably also in terms of sustainability.

In fact, we can say that it is the largest financial market in the world, the American one with the New York Stock Exchange, so in short, it is a leading marketplace.

As the statistical data in the thesis also confirms, the latter was the springboard for the SPAC phenomenon, and this instrument is still widely used in America to list new projects, start-ups and fast-growing companies with ambitious projects such as those in the sustainable sphere.

In fact, I much believe in the results that emerged from the analysis of the American market, and I believe that what emerged instead from the results of the European sample, is only because it is considered a very immature market and is very much affected by what happens in the American market, especially what happened in the current historical period.

3.9 Direct correlation between the two themes: SPACs and sustainability

In this paragraph, I would like to summarise and explain how the correlation between these two topics came about, and especially that as the quantitative analysis showed, this was confirmed.

I would like to start right away with a question that I have been asking myself since the development of the thesis.

Can sustainability be considered as the revival tool for SPACs given the great impasse and partial saturation of the Italian market and the abuse in the US?

Given the historical moment, the covid 19 pandemic and the war in Ukraine, can the instrument of SPACs be used to promote sustainability projects?

The current situation is very peculiar given the great uncertainty in the markets and the rise in interest rates, the increase in the price of primary sources and goods, I will mention a few such as wheat, gas, petrol. This situation should spur and accelerate all those projects in the field of sustainability, which more reason now to be concluded, both in the energy field, a sector in great crisis and undergoing strong change.

I expect that there will be a facilitation of these projects perhaps promoted by SPACs, an aspect that should not be overlooked is the promoter of the SPAC, it is necessary to be a person who has a certain notoriety in the managerial or entrepreneurial sphere, or rather I would say reputation. Since investing in a closed box, i.e. the SPAC, requires a certain amount of trust and a feasible project, if there are too many uncertainties the investor will not do it.

It emerged from the analysis that there is a direct correlation between these two trends and that we can say that ESG goals tends to increase the value for the SPAC operation, in short, these are important signals, the value and return of the share is higher in a situation where a SPAC pursues sustainable goals.

When highlighted, this is an excellent signal in view of the pursuit of the sustainable goals adopted in the US in 2015, i.e. the targets to be reached by 2030.

At this stage I would like to specify how we find ourselves in a situation like in the European market, in particular the Italian market, how there is no material possibility of being able to carry out this type of SPAC operation in general because there is no structure and propensity like in the American market.

All this is in fact confirmed by the number of operations carried out in the American market, in fact the European market represents a miserable part.

This as explained so far, supported by my analysis shows how this instrument has so much potential because of the need to finance small projects in energy transition, and in the area of sustainability in general.

Here I would like to give two examples of operations that have been listed on the capital market through IPOs, such as the case of Eni and Livestream to raise \$230 mln in green SPAC listing in London, and the case of Sustainable Ventures.

As quoted in the Bebeez article:

A new SPAC is coming to the Italian market, the one promoted by Carlo Calabria (founder of CMC Capital and former head of Credit Suisse m&a, former vice chairman investment banking BofA Merrill Lynch and then former head m&a Barclays for the Emea area), Franco Bernabè (former managing director of Eni) and Manfredi Lefebvre (president of Heritage Group and former owner of the group of luxury cruises Silversea).

The MF Milano Finanza writes, specifying that the vehicle has been christened Sustainable Ventures, that it will have a focus on technological solutions dedicated to the environmental transition and that it points to a collection of 200 million euros and to the quotation next March.

These two transactions are two clear examples of how this instrument with strong promoter guidance can recover capital to finance projects of a certain size.

So, in summary I would say that the key elements for a successful SPAC operation are definitely the power of the sponsor, since the more reliable it is the more confident an investor is in investing, dealing with empty boxes.

Another key aspect could be the possibility of pursuing sustainable goals, and thus having ESG goals in one's mission or vision or having sustainable finance.

Certainly, there are markets and sectors more inclined, like in the U.S. market, the tool of SPACs is used a lot for listing start-ups, and sectors such as energy, carbon reduction, decarbonization, or just dealing with companies that deal with their own ESG goals.

Other key aspect remains to be an analysis of the Italian market, instrument the SPACs been in fashion between 2017 and 2019, there has always been a problem though, companies that do an IPO are bought by institutional investors, large equity investors, while the SPAC being an empty vehicle that until it buys a target does not trade, has no market volumes.

SPACs are only project oriented, so here difficulty to go and sell shares of an illiquid vehicle (that doesn't trade) to investors, so here 90% Italian SPACs were made by Intesa Sanpaolo. Made by them why? Because they sold the shares of the vehicle to their private banking, SPACs in Italy are dead because we had sold everything to private banking, and it has a maximum absorption capacity that segment, so we have reached saturation.

In the SPAC it is critical to have an ESG focus guy or an entity that has a focus in a project that believes in the sponsors of the SPAC, because an equity fund is not going to park your money two years in the hope that you will find a target, because the equity fund buys and sells today and tomorrow especially in markets like these that are very volatile.

So, these latest analyses further enhance my thesis exemplified thus far.

3.10 Different conditions in favour of a development of this instrument in correlation with sustainability

To summarise, we can see that there are several concourses and events that lead to a particularly favourable situation for the SPAC trend sluggishness directly related to the sustainability trend.

Among these is certainly the event of the war in Ukraine that broke out in February 2022, which is causing not only a large-scale energy crisis for the European market, but also much uncertainty in markets including the US.

What emerged and was caused by this situation led not only to uncertainty, but also to a real crisis with considerable increases in gas and electricity prices.

Therefore, I believe that the SPAC instrument can indeed be used to lift and resolve this problem, even if it will take a long time to have the desired effects.

So we can describe this context as strongly influenced by the geopolitical situation caused by the clash between these two fronts, West and East.

Another strongly influencing aspect is the strong willingness to invest following the large accumulation of liquidity caused by the COVID-19 pandemic.

The covid-19 produced a reduction in consumption and an increase in liquidity because of the sharp economic downturn, then the reopening led to a sudden increase in consumption and production, but a surplus of liquidity remained, which can be invested in a sustainable way.

This combo can lead to a strong push in the financing of sustainability projects to combat the war-induced energy price, more energy from renewable sources leads to a strong price correction, as well as sustainability benefits so that the goals of the 2030 Agenda can be reached faster.

The last key aspect that needs to be emphasised concerns the strong regulation that took place after the 2020-2021 boom on US soil, which can also be seen as a phase of abuse.

In fact, the SEC, the Securities and Exchange Commission, has had to intervene in the further regulation of the SPAC phenomenon, so that there will no longer be situations of abuse of this instrument, which is very useful and at the same time, being very new, is little regulated.

So, in conclusion I would like to say that these two trends, come together in a more than unique way, they will drive the near future, both in the financial and sustainable sphere.

CONCLUSIONS

From the analysis conducted, these two trends are very much connected, and it has become a surplus to have sustainable targets to have higher returns.

In fact, this is more explained by the direction in which investors are going, increasingly demanding the presence of ESG objectives in the mission and vision, or at least at the basis of the companies' business.

This is also confirmed by the trend of green bonds and sustainable finance as a whole, as more and more attention are being paid to these issues.

I believe that the analysis conducted in the last chapter gives a clear demonstration of how this instrument can serve to increasingly promote ESG objectives, and how the SPAC instrument, by its very nature, is a suitable tool for use in promoting sustainable projects.

So, in short, the importance of both trends has emerged in this thesis, and I believe we will see the exploitation of SPACs in the future in the sustainable sphere, given what has been analysed.

In fact, considering what has emerged as a result of historical events and recent crises, such as COVID-19 and the War in Ukraine, there will be an increasing focus on sustainability.

Therefore, an important aspect remains the historical context in which we find ourselves, and the current economic situation, because with the increases and the energy crisis, there will be more and more opportunities to solve problems through, for example, new projects financed through the instrument of SPACs in the sustainable sphere.

FEATURES DIRECTION

This paper focuses mainly on two themes, that of SPACs and that of sustainability. These two topics are in the process of becoming and developing, and although the analysis carried out tends to provide considerable insight into the overperformance that companies tend to want to achieve through the use of policies aimed at the pursuit of ESG objectives, it is not possible to arrive at a completely certain answer as to the nature of this phenomenon in the European and American markets, but it certainly provides us with a basis for future analysis.

In the future, in fact, we may be able to state with certainty what this research has just outlined, also considering the new regulation in the US market imposed by the SEC.

In the light of new factors such as the war in Ukraine and the ensuing European energy crisis that is affecting it, in the light of the new technological progress and energy transition in which the whole world is involved, and in the light of future developments in the COVID 19 pandemic that is still underway.

The differences in performance that emerged are to be considered significant as the sample shows, but to have a complete certainty of this phenomenon we should just wait until we have more data available, because as explained, the difference in results between the American and European markets shows an acerbity of the European market and a lower openness to change and the need for more time.

Consequently, it would be interesting to further investigate the findings and consider what future developments they might lead to. In fact, most studies, including this paper, are based entirely on quantitative analyses that are subject to further implementation and better non-biasing of results.

Obviously, what has been outlined so far will have to be revised in the light of the new international American and European regulations on SPACs, and the focus from my point of view will be even more on sustainability.

In conclusion, I would like to say how this analysis is reliable, but if resumed in the future, it could only lead to further confirmations because the highlighted trend leads us in that direction.

We should always respect the environment more, in fact as Sir Paul McCartney said, “There must be a better way to do the things we want, a way that does not pollute the sky, or the rain, or the earth”. (McCartney 1989)

REFERENCE

- AdviseOnly. 2019. *Cosa sono gli investimenti sostenibili? Dagli ESG ai Green Bonds*. Banco BPM. <https://www.bancobpm.it/magazine/privati/investi-risparmia/cosa-sono-gli-investimenti-sostenibili-dagli-esg-ai-green-bonds/>
- Analysis of European Investment Bank. 2022. *European guarantee fund*.
- Anna Gervasoni, Valentina Lanfranchi. 2015. *Il modello di finanziamento delle PMI: sistema bancario, minibond, private equity e venture capital*. Quaderni di ricerca sull'artigianato.
- Anna Lambiase and Franco Angeli. 2022. *La quotazione in borsa delle PMI: Esperienze imprenditoriali di successo su Euronext Growth Milan*.
- Armstrong, Anona. 2020. Ethics and ESG. *Australasian Accounting, Business and Finance Journal*, 14(3) 6-17.
- Boyer & Baigent. 2008. *SPACs as Alternative Investments: An Examination of Performance and Factors that Drive Prices*.
- Bricchese, Silvia. 2021. *Il problema di accesso ai finanziamenti per le PMI: il ruolo dell'equity crowdfunding*. Università Ca' Foscari Venezia
- Camera di commercio, industria, artigianato e agricoltura di Bolzano. 2014. *Linea guida Finanziamento alle imprese*.
- Caratelli, M., & Fattobene. 2018. *Strumenti alternativi di finanziamento per le Pmi: mini-bond, crowdfunding e business lending*. *Bancaria*, 11, 60-71.
- Caterina Maconi. 2021. *Sostenibilità, aumenta l'interesse degli italiani rispetto allo scorso anno*. *La Repubblica*
- Certificazione B Corporation. 2022. *Cambiare il mondo è un'impresa possibile, Il primo report delle B Corp. italiane*.
- Dean Bell. 2014. *"SPAC insights: ESG and SPACs"*. KPMG.
- Del Giudice, A. 2019. *La finanza sostenibile*. Giappichelli Editore.
- Digital4. 2021. *Corporate Social Responsibility (CSR): cos'è e perché è strategica per le aziende oggi*. <https://www.digital4.biz/executive/corporate-social-responsibility-csr/>

- Enzo Tiezzi, Nadia Marchettini. 1999. *Che cos'è lo sviluppo sostenibile? le basi scientifiche della sostenibilità e i guasti del pensiero unico*. Donzelli Editore.
- Ernest Young . 2021. *Banking Transformation EY SME Survey Italy*.
- Ernest Young . 2021. *Le PMI italiane oltre la pandemia*.
https://www.ey.com/it_it/financial-services/le-pmi-italiane-oltre-la-pandemia
- European Commission. 2017. *Topic Sheet for the European Semester, Small and Medium-sized Enterprises' Access to Finance*.
- Fumagalli, Marco. 2014. *Lo sviluppo della SPAC (Special Purpose Acquisition Company) in Italia. Un nuovo modo di fare private equity e di quotare le imprese in Borsa*. Egea.
- Georgios Chatzichristos and Nikolaos Nagopoulos. 2020. *Social Entrepreneurship and Institutional Sustainability: Insights from an Embedded Social Enterprise*. International Journal of Voluntary and Nonprofit Organizations volume 31, pages 484–493
- Goldman Sachs Website- Report. *The IPO SPAC-Tacle*
<https://www.goldmansachs.com/insights/pages/the-ipo-spac-tacle.html>
- Gualandri, Elisabetta; Venturelli, Valeria; Caponcelli, Diego; Caselli, Paolo and Kocollari, Ulpiana. 2016. *Nasce l'impresa. Le startup e le PMI innovative*.
- Hester, James. s.d. *The Impactivate*. Consultato il giorno 2021.
<https://www.theimpactivate.com>.
- Infodata, Prometeia. *Pmi, quanto conta in Italia il 92% delle aziende attive sul territorio?* Sole24ore.
<https://www.infodata.ilsole24ore.com/2019/07/10/40229/>
- Jasmina Bogicevic, Violeta Domanovic and Bojan Krstic. 2016. *The Role of Financial and Non-Financial Performance Indicators in Enterprise Sustainability Evaluation*. Ekonomika, Vol 62, Issue 3.
- Joana Chiavari, Franco Rizzi and Luca Rizzi. 2004. *I requisiti di sostenibilità e il concetto di addizionalità*. Il Mulino.
- Jog, V., & Sun, C. 2007. *Blank check IPOs: A home run for management*

- Josué Banga. 2018. *The green bond market: a potential source of climate finance for developing countries*. Taylor e Francis Online.
- JP Morgan Asset Management. 2022. *Integrazione ESG*.
<https://am.jpmorgan.com/it/it/asset-management/adv/investment-themes/sustainable-investing/ESG-integration/>
- Judd F. Sneirson. 2009. *Green is Good: Sustainability, Profitability, and a New Paradigm for Corporate Governance*. 94 Iowa L. Rev. 987.
- Kidd, Charles V. 1992. «*The evolution of sustainability*.» Journal of Agricultural and Environmental Ethics (Journal of Agricultural and Environmental Ethics).
- Kimberly C. Gleason, Ravi Jain and Leonard Rosenthal, 2006. *Alternatives for Going Public: Evidence from Reverse Takeovers, Self-Underwritten Ipos, and Traditional Ipos*.
- Kolb, J., Tykvoval, T. 2014. *Special Purpose Acquisition Companies – Are they an alternative to IPOs?*.
- L. Anderloni, M.D. Braga. 2019. *Il Finanziamento delle startup e delle PMI. Un antico tema alla ricerca di nuove soluzioni*. Pearson.
- Lakicevic, M., Shachmurove, Y. and Vulanovic, M. 2014. *Institutional changes of Specified Purpose Acquisition Companies (SPACs)*. Journal of Corporate Accounting and Finance 28, 149-169.
- Life Gate <https://www.lifegate.com/>
- Marucci M. 2022. *Finanza sostenibile e tassonomia europea: una spinta verso l'economia verde*. Inapp Paper n.35.
- Matthew G. Grimes, Joel Gehman, KeCao, 2018. *Positively deviant: Identity work through B Corporation certification*. Journal of Business Venturing.
- Miani, Stefano. 2015. *Strumenti finanziari a supporto dello sviluppo delle PMI*. Franco Angeli
- Murray, J. 2014. *The Regulation and Pricing of Special Purpose Acquisition Corporation IPOs*
- Neuhauser, S. and Lee, B. 2008. *SPACs Special Purpose Acquisition Companies continue to surge in popularity*. Equities Magazine pp. 40-41.

- Nikou Asgari, Patrick Mathurin and Chris Campbell. 2022. Financial times.
<https://www.ft.com/content/af62d6b2-daad-44a2-9aa2-73f91c744d28>.
- Niloufar Fallah Shayan, Mohammad Ali Zahed, Nasrin Mohabbati-Kalejahi, Sepideh Alavi. 2022
Sustainable Development Goals (SDGs) as a Framework for Corporate Social Responsibility (CSR).
Andrea Appolloni.
- Pace, Roberta. 2012. *Vincoli e sostenibilità finanziaria delle PMI e nuovi strumenti di sostegno dell'Unione europea: JEREMIE*. Franco Angeli
- Paoletti Arianna. 2017. *Le Special Purpose Acquisition Companies (SPAC)*. Rivista Diritto Societario.
- Peveraro, S. 2013. *Adesso mi faccio la SPAC*. Milano Finanza.
- Ricci A. 2022. *Responsabilità sociale di impresa, lavoro e sindacato, Intervento a Seminari INAPP*.
Inapp.
- Rodrigues and Stegemoller. 2011. *Special Purpose Acquisition Corporations: A Public View of Private Equity*
- s.d. Borsa Italiana. <https://www.borsaitaliana.it/>.
- s.d. European Commission. <https://ec.europa.eu>.
- s.d. Milano Finanza
<https://www.milanofinanza.it/news/goldman-sachs-il-mercato-europeo-non-sovraperformerà-quello-usa-202006231455348310>
- s.d. Senato della Repubblica italiana. <https://www.senato.it>.
- s.d. Treccani. <https://www.treccani.it/>.
- s.d. U.S. Securities and Exchange Commission.
<https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-bulletins/what-you>.

- s.d.Cassa Depositi e Prestiti.
[https://www.cdp.it/sitointernet/page/it/fondo di garanzia per le pmi legge 66296?contentId=PRD22484](https://www.cdp.it/sitointernet/page/it/fondo_di_garanzia_per_le_pmi_legge_66296?contentId=PRD22484).
- Simon Jessop and Patturaja Murugaboopathy. 2021. *SPACs target more ESG companies in 2021*. Nomura Greentech.
- Statista database <https://www.statista.com/>
- Tenuta, Paolo. 2009. *Indici e modelli di sostenibilità*. Franco Angeli.
- Tran, A. 2012. *Blank check acquisitions*.
- V. Donativi and P. Corigliano. 2010. *Le SPAC (Special Purpose Acquisition Companies): il modello internazionale e la sua compatibilità col diritto italiano*. IPSOA
- Valera, Luca. 2012. *La sostenibilità: un concetto da chiarire*. Firenze University Press
- Wittlin, F, Ferris, K. and McCutchen, B. 2010. *Can the SPAC Make It Back? Structural Changes, Including Elimination of the Stockholder Vote to Approve an Initial Acquisition, May Help Renew Interest in SPACS*. Bloomberg Law Reports - Mergers & Acquisitions 4, 26.

APPENDIX

A	B	C	D	F	H	K	L	O	P	Q	R	S
Issue Date	Issuer/Borrower Name Full	Transaction Status	Issuer/Borrower Nation	Offer Price (€=Com)	Issuer/Borrower Stock Exchange Name ('I')	Domicile Nation Sub Region	Domicile Nation Region	Book Or Co-Managers ('I')	Stock Price 90 Days After Offer (USD) (Σ=Median)	Stock Price at Close of Issue Date (USD)	Stock Price 180 Days After Offer X (USD)	Related M&A Target Name ('I')
05/04/2022	Aura Renewable Acquisitions PLC	Live	United Kingdom	0,13	London	Western Europe	Europe	Shard Capital Partners LLP		0,22	0,12	
10/03/2022	New Energy One Acquisition Corp PLC	Live	United Kingdom	13,08	London	Western Europe	Europe	Merrill Lynch International Ltd JP Morgan Securities Plc		12,95	11,88	
17/02/2022	Powerup Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	Citigroup Global Markets Inc Odeon Capital Group LLC	10,05	10,01	10,10	
08/02/2022	Counter Press Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	BTIG LLC Earlybirdcapital Inc	10,04	10,02	10,02	
03/02/2022	Kimbell Tiger Acquisition Corp	Live	United States	10,00	New York Stock Exchange	North America	Americas	UBS Securities LLC	10,16	10,08	10,18	
20/01/2022	HCM Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	Cantor Fitzgerald & Co	10,08	9,99	10,01	
20/01/2022	Knightswan Acquisition Corp	Live	United States	10,00	New York Stock Exchange	North America	Americas	RBC Capital Markets LLC	10,02	9,95	10,00	
13/01/2022	Papaya Growth Opportunity Corp I	Live	United States	10,00	Nasdaq	North America	Americas	Cantor Fitzgerald & Co	10,09	10,02	9,98	
11/01/2022	Gores Holdings IX Inc	Live	United States	10,00	Nasdaq	North America	Americas	Deutsche Bank Securities Inc Goldman Sachs & Co	9,95	10,00	9,77	
05/01/2022	Screaming Eagle Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	Goldman Sachs & Co Citigroup Global Markets Inc	9,91	9,90	9,71	
14/12/2021	Battery Future Acquisition Corp	Live	United States	10,00	New York Stock Exchange	North America	Americas	Cantor Fitzgerald & Co Roth Capital Partners Inc		10,01	10,01	
14/12/2021	Pearl Holdings Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	Morgan Stanley & Co LLC		9,97	9,92	
10/12/2021	Spacett AB	Live	Sweden	0,55	Aktietorget	Western Europe	Europe	Not Applicable	0,53		0,60	Tura Scandinavia AB
09/12/2021	Power & Digital Infrastructure Acquisition II Corp	Live	United States	10,00	Nasdaq	North America	Americas	Barclays Capital Inc BofA Securities Inc		10,06	9,90	
09/12/2021	Growth For Good Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	Credit Suisse Securities (USA) LLC Barclays Capital Inc	9,95	10,00	9,88	
09/12/2021	Southport Acquisition Corp	Live	United States	10,00	New York Stock Exchange	North America	Americas	BofA Securities Inc		10,00	10,45	
08/12/2021	Genesis Growth Tech Acquisition Corp	Live	Switzerland	10,00	Nasdaq	Western Europe	Europe	Nomura Securities International Inc		10,05	10,06	
08/12/2021	Emerging Markets Horizon Corp	Live	Cyprus	10,00	Nasdaq	Western Europe	Europe	Citigroup Global Markets Inc VTB Capital Ladenburg Thalmann & Co	9,96	10,05	10,05	
08/12/2021	Jackson Acquisition Co	Live	United States	10,00	New York Stock Exchange	North America	Americas	BofA Securities Inc	9,95	10,00	9,90	
08/12/2021	Target Global Acquisition I Corp	Live	Cayman Islands	10,00	Nasdaq	Caribbean	Americas	UBS Securities LLC BofA Securities Inc	9,97	9,95	9,95	
08/12/2021	Inception Growth Acquisition Ltd	Live	United States	10,00	Nasdaq	North America	Americas	EF Hutton US Tiger Securities Inc Ingalls & Snyder Brookline Capital Markets Joseph Gunnar & Co., L		10,03	9,94	
02/12/2021	St Energy Transition I Ltd	Live	Bermuda	10,00	KONEX	Caribbean	Americas	Morgan Stanley & Co LLC DNB Markets Inc	10,00	10,01	9,95	
02/12/2021	BioPlus Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	Cantor Fitzgerald & Co	9,97	10,01	9,97	
01/12/2021	ROC Energy Acquisition Corp	Live	United States	10,00	New York Stock Exchange	North America	Americas	Earlybirdcapital Inc Revere Securities Corp	10,02	10,02	10,04	
30/11/2021	Hydrogen Future Industries PLC	Live	United Kingdom	0,13	Unknown	Western Europe	Europe	Peterhouse Capital Ltd	0,14		0,09	
23/11/2021	Beard Energy Transition Acquisition Corp	Live	United States	10,00	New York Stock Exchange	North America	Americas	Citigroup Global Markets Inc		10,08	10,00	
17/11/2021	bleuacacia ltd	Live	United States	10,00	New York Stock Exchange	North America	Americas	Credit Suisse Securities (USA) LLC Citigroup Global Markets Inc Rice Financial Products Co		10,05	10,05	
17/11/2021	Arisz Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	Chardan Capital Markets LLC	10,05	10,15	10,02	Ethereal Tech Pte Ltd
16/11/2021	Nabors Energy Transition Corp	Live	United States	10,00	New York Stock Exchange	North America	Americas	Citigroup Global Markets Inc Wells Fargo Securities LLC		10,17	10,11	
11/11/2021	Integrated Rail & Resources Acquisition Corp	Live	United States	10,00	New York Stock Exchange	North America	Americas	Stifel Nicolaus & Co Inc Roberts & Ryan Investments	9,92	10,01	10,03	
10/11/2021	VMG Consumer Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	Credit Suisse Securities (USA) LLC Moelis & Co	10,04	10,06	10,06	Trump Media & Tech Grp Corp
09/11/2021	Chain Bridge I	Live	United States	10,00	Nasdaq	North America	Americas	Cowen & Co Wells Fargo Securities LLC	10,03	10,06	10,13	
09/11/2021	Blockchain Coinvestors Acquisition Corp I	Live	Cayman Islands	10,00	Nasdaq	Caribbean	Americas	Cantor Fitzgerald & Co Moelis & Co	10,14	10,18	10,16	
08/11/2021	Hunt Cos Acquisition Corp I	Live	United States	10,00	New York Stock Exchange	North America	Americas	Jefferies LLC Imperial Capital LLC	10,06	10,08	10,11	
04/11/2021	7 Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	Goldman Sachs & Co	10,11	10,08	10,15	
04/11/2021	Intelligent Medicine Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	Cantor Fitzgerald & Co	10,09	10,10	10,09	
03/11/2021	Mercato Partners Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	BofA Securities Inc	10,04	10,03	10,02	
03/11/2021	Digital Health Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	Alliance Global Partners	10,14	10,24	10,26	VSee Lab Inc iDoc Telehealth Sol
02/11/2021	Circle Acquisition Corp	Live	United States	10,00	Nasdaq	North America	Americas	Cantor Fitzgerald & Co	10,05	10,05	10,07	

Table 5 - Little part of Dataset

	A	B	F	L	Q	R	S	U	V	V
	Issue Date	Issuer/Borrower Name Full	Offer Price (Σ=Com)	Domicile Nation Region	Stock Price at Close of Issue Date (USD) (Σ=Median)	Stock Price 180 Days After Offer X (USD) (Σ=Median)	Return of Stock Price 180 days after the Offer Price	Y	ESG (true or False)	
1										
2	05/04/2022	Aura Renewable Acquisitions PLC	0,13	Europe	0,22	0,12	-5,9%	3,903705183	True	
3	10/03/2022	New Energy One Acquisition Corp PLC	13,08	Europe	12,95	11,88	-9,2%	3,589686468	True	
4	15/10/2021	GFJ ESG Acquisition I SE	11,60	Europe	11,62	9,87	-14,9%	2,420448747	True	
5	08/09/2021	Net Zero Infrastructure PLC	0,04	Europe		0,04	-10,4%	3,387895344	True	
6	16/07/2021	Energy Transition Partners BV	11,80	Europe	11,78	9,95	-15,7%	2,233668185	True	
7	06/07/2021	Industrial Stars of Italy 4 SpA	11,82	Europe	11,84	11,12	-6,0%	3,900098422	True	
8	01/07/2021	Odyssey Acquisition SA	11,85	Europe	11,83	11,80	-0,4%	3,559963978	True	
9	29/06/2021	Climate Transition Capital Acquisition I Bv	11,89	Europe	9,73	9,73	-18,2%	1,672671329	True	
10	23/06/2021	Dee Tech SA	11,93	Europe	11,89	11,29	-5,3%	3,917890587	True	
11	18/06/2021	Transition SA	11,86	Europe		9,78	-17,5%	1,817284926	True	
12	25/05/2021	Aligro Planet Acquisition Co AB	12,11	Europe	11,87	10,84	-10,5%	3,375645703	True	
13	24/03/2021	ACQ Bure AB	11,62	Europe	11,80	11,66	0,4%	3,427844153	True	
14	10/02/2021	ESG Core Investments BV	12,12	Europe	12,20	11,77	-2,9%	3,843686433	True	
15	10/12/2020	EdtechX Holdings Acquisition Corp II	10,00	Europe	10,06	10,15	1,5%	3,213235039	True	
16	07/12/2020	2MX Organic SA	12,11	Europe	12,75	12,16	0,4%	3,41630999	True	
17	30/09/2020	AEA-Bridges Impact Corp.	10,00	Europe	10,01	10,26	2,6%	2,983855492	True	
18	10/09/2020	Broadstone Acquisition Corp	10,00	Europe	9,86	10,41	4,1%	2,646891066	True	
19	17/07/2019	Mustang Energy PLC	0,12	Europe		0,14	15,8%	0,489134395	True	
20	21/11/2018	Hertsford Capital PLC	0,13	Europe	0,15	0,13	-0,6%	3,581085838	True	
21	05/10/2018	Edtechx Holdings Acquisition Corp	10,00	Europe		10,20	2,0%	3,111368576	True	
22	17/05/2018	ARCHIMEDE SpA	11,79	Europe	12,50	11,16	-5,3%	3,917761923	True	
23	05/03/2018	Life Care Capital SpA	12,34	Europe	12,04	11,11	-10,0%	3,467649579	True	
24	31/01/2018	Alpi SpA	12,42	Europe	12,57	11,46	-7,8%	3,771808044	True	
25	26/01/2018	Spaxs SpA	12,42	Europe		11,67	-6,0%	3,897023065	True	
26	17/10/2017	Industrial Stars of Italy 3 SpA	11,77	Europe	11,71	12,02	2,2%	3,070895535	True	
27	05/10/2017	J2 Acquisition Ltd	10,00	Europe	10,70	9,47	-5,3%	3,9182689	True	
28	10/02/2017	Emmerson PLC	0,04	Europe	0,04	0,03	-25,3%	0,530745592	True	
29	08/01/2016	Rockrose Energy Plc	0,73	Europe	0,74	0,59	-18,6%	1,592587668	True	
30	21/07/2015	Energy 3 SpA	10,00	Europe	10,00	10,00	0,0%	3,917761923	True	

Table 6- Sample of SPAC with objective ESG in UE

	A	B	F	L	Q	R	S	U	V
1	Issue Date	Issuer/Borrower Name Full	Offer Price (Σ=Com)	Domicile Nation Region	Stock Price at Close of Issue Date (USD) (Σ=Median)	Stock Price 180 Days After Offer X (USD) (Σ=Median)	Return of Stock Price 180 days after the Offer Price	Y	ESG (true or False)
36	10/12/2021	Spacett AB	0,55	Europe		0,60	8,6%	2,434093191	False
37	08/12/2021	Genesis Growth Tech Acquisition Corp	10,00	Europe	10,05	10,06	0,6%	7,776848434	False
38	08/12/2021	Emerging Markets Horizon Corp	10,00	Europe	10,05	10,05	0,5%	7,771280957	False
39	06/10/2021	IX Acquisition Corp	10,00	Europe	9,88	9,89	-1,1%	7,295505009	False
40	23/06/2021	tbd30 AB	11,80	Europe	11,81	10,95	-7,1%	2,388825185	False
41	22/06/2021	Creaspac AB	11,80	Europe	11,64	10,96	-7,1%	2,416486917	False
42	20/05/2021	Revo SpA	12,23	Europe		11,12	-9,0%	1,267773549	False
43	29/04/2021	468 Spac I SE	12,12	Europe	11,75	13,28	9,5%	1,778637225	False
44	07/04/2021	Tio Tech A	10,00	Europe	10,00	9,87	-1,3%	7,188742756	False
45	03/02/2021	Centricus Acquisition Corp	10,00	Europe	10,37	10,30	3,0%	7,058659137	False
46	05/08/2020	Kismet Acquisition One Corp	10,00	Europe	9,98	10,87	8,7%	2,330892607	False
47	09/08/2019	Bespoke Capital Acquisition Corp	10,00	Europe		9,83	-1,7%	6,948103329	False
48	19/10/2018	Summerway Capital PLC	1,31	Europe	1,34	1,30	-0,2%	7,642304023	False
49	15/03/2018	Safe Harbour Holdings PLC	1,67	Europe	1,71	1,79	7,2%	3,554168166	False
50	12/02/2018	Leo Holdings Corp	10,00	Europe		10,23	2,3%	7,427156666	False
51	25/09/2017	Spactiv SpA	11,85	Europe	11,75	12,37	4,4%	6,03023687	False
52	22/09/2017	Baskerville Capital PLC	0,07	Europe		0,06	-9,6%	1,031570994	False
53	28/07/2017	EPS Equita PEP SPAC SpA	11,75	Europe	12,28	12,81	9,1%	2,088460657	False
54	21/07/2017	Sprintitaly SpA	11,66	Europe	11,91	12,24	4,9%	5,561688832	False
55	17/07/2017	Glenalta SpA	11,48	Europe	11,99	12,50	8,9%	2,166101528	False
56	08/03/2017	Ocelot Partners Ltd	10,00	Europe	10,20	9,85	-1,5%	7,072776139	False
57	13/10/2016	Innova Italy 1 SpA	11,06	Europe		10,70	-3,2%	5,775716048	False
58	18/08/2016	Stellar Acquisition III Inc	10,00	Europe		10,25	2,5%	7,333882692	False
59	20/04/2016	Mediawan SA	11,29	Europe	11,23	11,16	-1,2%	7,23653306	False
60	31/07/2015	Capital For Progress 1 SpA	10,99	Europe	10,51	10,62	-3,4%	5,638383278	False
61	28/04/2015	Atlantic Alliance Partnership Corp	10,00	Europe	10,06	10,19	1,9%	7,582597374	False
62	13/12/2013	Space SpA	13,74	Europe		13,57	-1,2%	7,235153553	False
63	25/10/2012	Aquasition Corp	10,00	Europe		9,90	-1,0%	7,345288166	False

Table 7- Sample of SPAC without objective ESG in UE

	A	B	F	L	Q	R	T	U	V
	Issue Date	Issuer/Borrower Name Full	Offer Price (Σ=Com)	Domicile Nation Region	Stock Price at Close of Issue Date (USD) (Σ=Median)	Stock Price 180 Days After Offer (USD) (Σ=Median)		Y	ESG (true or False)
1									
2	04/02/2021	Sustainable Development Acquisition I Corp	10,00	Americas	10,07	11,19	11,90%	0,436200377	True
3	21/01/2021	European Sustainable Growth Acquisition Corp	10,00	Americas	10,05	11,16	11,60%	0,551383763	True
4	03/02/2021	Decarbonization Plus Acquisition Corp II	10,00	Americas	10,06	11,10	11,00%	0,858774047	True
5	04/01/2021	Benessere Capital Acquisition Corp.	10,00	Americas	10,29	10,79	7,90%	4,921187712	True
6	24/11/2020	Forest Road Acquisition Corp	10,00	Americas	10,20	10,67	6,71%	7,552242102	True
7	23/03/2021	Decarbonization Plus Acquisition Corp III	10,00	Americas	9,88	10,62	6,20%	8,708703914	True
8	23/09/2021	GigCapital5 Inc	10,00	Americas	10,14	10,59	5,90%	9,361645798	True
9	02/11/2017	Sentinel Energy Services Inc	10,00	Americas	10,05	10,55	5,50%	10,17316027	True
10	20/10/2021	GoGreen Investments Corp	10,00	Americas	10,05	10,52	5,20%	10,7204429	True
11	14/12/2021	Battery Future Acquisition Corp	10,00	Americas	10,01	10,39	3,90%	12,1906828	True
12	30/01/2007	NTR Acquisition Co	10,00	Americas	9,94	10,37	3,70%	12,25863909	True
13	30/11/2017	Regalwood Global Energy Ltd	10,00	Americas		10,32	3,20%	12,22577213	True
14	15/06/2021	Rice Acquisition Corp II	10,00	Americas	10,14	10,30	3,01%	12,13768166	True
15	28/04/2021	Big Sky Growth Partners Inc	10,00	Americas	9,96	10,30	3,00%	12,13191333	True
16	17/03/2021	American Acquisition Opportunity Inc	10,00	Americas	9,97	10,29	2,90%	12,0680896	True
17	26/01/2021	Fortistar Sustainable Solutions Corp	10,00	Americas	9,99	10,29	2,90%	12,0680896	True
18	05/05/2020	Sustainable Opportunities Acquisition Corp	10,00	Americas	9,93	10,27	2,70%	11,90755048	True
19	19/10/2021	Esgen Acquisition Corp	10,00	Americas	10,05	10,22	2,20%	11,32610707	True
20	01/12/2021	ROC Energy Acquisition Corp	10,00	Americas	10,02	10,22	2,20%	11,32610707	True
21	23/11/2021	Beard Energy Transition Acquisition Corp	10,00	Americas	10,08	10,20	2,00%	11,02816722	True
22	11/02/2020	Greenrose Acquisition Corp	10,00	Americas	10,07	10,20	2,00%	11,02816722	True
23	04/11/2021	7 Acquisition Corp	10,00	Americas	10,08	10,15	1,50%	10,14748715	True
24	16/11/2021	Nabors Energy Transition Corp	10,00	Americas	10,17	10,11	1,10%	9,333302755	True
25	28/10/2021	AltEnergy Acquisition Corp	10,00	Americas	10,05	10,10	1,00%	9,118549802	True
26	28/06/2018	HI Acquisitions Corp	10,00	Americas		10,10	1,00%	9,118549802	True
27	11/12/2007	United Refining Energy Corp	10,00	Americas		10,09	0,90%	8,900300683	True
28	27/10/2021	Perception Capital Corp II	10,00	Americas	10,07	10,08	0,80%	8,67904754	True
29	09/08/2018	Spartan Energy Acquisition Corp	10,00	Americas		10,08	0,80%	8,67904754	True
30	03/11/2021	Mercato Partners Acquisition Corp	10,00	Americas	10,03	10,07	0,70%	8,455278939	True

Table 8- Sample of SPAC with objective ESG in USA

	A	B	F	L	Q	R	T	U	V
1	Issue Date	Issuer/Borrower Name Full	Offer Price (Σ=Com)	Domicile Nation Region	Stock Price at Close of Issue Date (USD) (Σ=Median)	Stock Price 180 Days After Offer (USD) (Σ=Median)		Y	ESG (true or False)
35	17/03/2006	Echo Healthcare Acquisition Corp	8,00	Americas		8,50	6,25%	1,041015172	False
36	08/09/2020	Cohn Robbins Holdings Corp	10,00	Americas	10,01	10,54	5,40%	2,315352119	False
37	19/03/2019	Insurance Acquisition Corp	10,00	Americas	10,11	10,40	4,00%	6,451722542	False
38	27/10/2016	GTY Technology Holdings Inc	10,00	Americas	10,05	10,40	4,00%	6,451722542	False
39	16/03/2021	Athena Technology Acquisition Corp	10,00	Americas	9,93	10,38	3,80%	7,250715965	False
40	04/10/2018	Collier Creek Holdings	10,00	Americas		10,34	3,40%	8,956438909	False
41	01/03/2007	Churchill Ventures Ltd	8,00	Americas		8,25	3,13%	10,18001222	False
42	05/10/2021	Parsec Capital Acquisitions Corp	10,00	Americas	10,12	10,30	3,00%	10,74027123	False
43	25/08/2021	Minority Equality Opportunities Acquisition Inc	10,00	Americas	10,03	10,30	3,00%	10,74027123	False
44	03/11/2021	Digital Health Acquisition Corp	10,00	Americas	10,24	10,26	2,60%	12,50318149	False
45	15/10/2018	Graf Industrial Corp	10,00	Americas	10,00	10,25	2,50%	12,92737067	False
46	14/03/2019	Trine Acquisition Corp	10,00	Americas	10,00	10,23	2,30%	13,74281017	False
47	07/04/2017	Forum Merger Corp	10,00	Americas	10,02	10,20	2,00%	14,85554539	False
48	09/11/2021	Blockchain Coinvestors Acquisition Corp I	10,00	Americas	10,18	10,16	1,60%	16,05858967	False
49	04/03/2021	VPC Impact Acquisition Holdings II	10,00	Americas	10,00	10,15	1,50%	16,29860543	False
50	09/11/2021	Chain Bridge I	10,00	Americas	10,06	10,13	1,30%	16,69638879	False
51	21/10/2021	M3-Brigade Acquisition III Corp	10,00	Americas	10,03	10,11	1,10%	16,97758852	False
52	29/09/2021	Artemis Strategic Investment Corp	10,00	Americas	10,03	10,09	0,90%	17,13605351	False
53	10/09/2015	Double Eagle Acquisition Corp	10,00	Americas	10,05	10,01	0,10%	16,51442843	False
54	14/10/2021	PepperLime Health Acquisition Corp	10,00	Americas	9,90	10,00	0,00%	16,30184126	False
55	24/10/2017	Haymaker Acquisition Corp	10,00	Americas	10,01	9,97	-0,30%	15,50700849	False
56	20/10/2021	Newhold Investment Corp II	10,00	Americas	9,95	9,95	-0,50%	14,86046128	False
57	01/09/2021	Insight Acquisition Corp	10,00	Americas	9,86	9,95	-0,50%	14,86046128	False
58	14/12/2021	Pearl Holdings Acquisition Corp	10,00	Americas	9,97	9,92	-0,80%	13,7484495	False
59	22/07/2021	Belong Acquisition Corp	10,00	Americas	9,90	9,92	-0,80%	13,7484495	False
60	10/03/2021	Silver Spike Acquisition Corp II	10,00	Americas	10,03	9,92	-0,80%	13,7484495	False
61	11/01/2021	Global Partner Acquisition Corp II	10,00	Americas	10,30	9,92	-0,80%	13,7484495	False
62	08/12/2021	Jackson Acquisition Co	10,00	Americas	10,00	9,90	-1,00%	12,93336002	False
63	04/10/2021	Crixus BH3 Acquisition Corp	10,00	Americas	9,93	9,90	-1,00%	12,93336002	False

Table 9- Sample of SPAC without objective ESG in USA

(This page is deliberately left blank)

INTRODUCTION

The choice of title suggests what will be the two main themes of the thesis, which are very much felt and resonate in European markets. The main one is that of SPACs, or Special Purpose Acquisition Companies, a financial instrument that is very popular in the United States and used to list small and medium-sized companies.

The second topic, which is also important, but which takes a back seat because the financial instrument is the central theme, is sustainability, an emerging trend to which companies and investors are paying increasing attention.

The aim of this thesis is to answer the title of the question, i.e. to verify, through a statistical analysis, whether there might be a direct correlation between SPACs and sustainability in the broadest sense, as an opportunity for growth in energy transition, decarbonisation and the pursuit of ESG goals.

In order to test this, it was necessary to create homogeneous samples, by geography and time, after promptly downloading from a dataset all SPAC transactions made on world markets.

After this analysis phase, I tried to provide a bit of a forecast and formulate some hypothesis on the future developments of the combination of the two trends, also analysing the historical context in which we find ourselves, between COVID-19 and the war in Ukraine.

The thesis is organised in three different chapters, the first chapter aims to provide a general overview of the instrument of SPACs, how they fit into the global landscape and the financial instruments.

This phenomenon saw a complete uncontrolled explosion in 2019, in the pre-pandemic period in the United States, only to receive a nice rebound following strong regulation by the SEC.

On the other hand, the Italian market is in a saturation situation, which is why I thought that the sustainability phenomenon could be considered a lifeline to relaunch SPAC issuances.

In this chapter, after clarifying the topic of financial instruments for SMEs and that of SPACs, I thought I would introduce the topic of sustainability a little. This theme is clarified and explained in Chapter 2, where I will address and analyse every nuance, and above all explain how this trend has increasingly become a discriminating theme in the evaluation of investments by professional investors.

Finally, we find chapter 3, the beating heart of the thesis, in which the most experimental part of the thesis will be carried out, in which I will provide an excel analysis and use the t-test tool, in which I will test the hypothesis that there is a direct correlation between SPAC and ESG, i.e., that there is a higher return in the case of SPAC with ESG.

This chapter is fundamental to the entire thesis, in fact we can see how my qualitative analysis is all based on the data and analysis carried out in this chapter.

1 CHAPTER

A multitude of financing instruments: SPACs

1.1 Introduction

This chapter is intended to provide an excursus on one of the two themes underlying my dissertation, namely the topic of SPACs.

Another aspect I would like to address is the inclusion of this instrument in the panorama of financing instruments made available to SMEs (Small and Medium-sized Enterprises).

The article I was inspired by for the choice of thesis, namely SPACs, that struck and fascinated me is an article in the Financial Times entitled Spac kings lose their touch. (Nikou Asgari 2022)

1.2 Focus on SME tools of financing

In this section I have dealt with what concerns small and medium-sized enterprises, first giving a definition and listing all the characteristics that this particular company possesses, and then taking a look at the Italian market.

In fact, we can say that a the small enterprise is defined as one that employs fewer than 50 employees and achieves an annual turnover and/or an annual balance sheet total not exceeding 10 million euros.

In Italy SMEs are a significant number, in fact we have 130,000 enterprises with between 10 and 49 employees and 26,000 with between 50 and 249 employees, not to mention the 4 million micro-enterprises, i.e. those with less than 10 employees.

Within this chapter, I have managed to highlight the different methods of providing capital for SMEs.

Companies can benefit from different sources of financing, both internal and external. All company financing comes from equity or debt capital.

Everything revolves around the need for finance, which arises not only when a company is founded or expanded, but also when demand and turnover increase.

In fact, this need covers a large part of the companies' work, among the many sources we find equity financing, debt capital, bank loan and a lot of alternative instruments.

Access to finance for small and medium-sized enterprises is of paramount importance to foster their growth and innovation, being small companies by establishment and as defined in the previous paragraph, in many cases even start-ups.

Although Equity capital is the best alternative to debt capital, it presents, as the term implies, a lot of risk, and when it comes to financing companies with a high degree of innovation and therefore high risk, it is no longer the optimal instrument.

To analyse the success of SPACs, and why companies want to use this instrument, it is important to review the financing methodologies, highlighting their advantages and disadvantages.

In fact, the aim of the sub-chapter is precisely that, namely, to give an initial overview of alternative instruments, and then to focus on SPACs.

1.3 The instrument of Special Purpose Acquisition Companies

The aim of this paragraph is to delineate and focus on the financial instrument that is the subject of my thesis, one of the two trends that I will correlate.

SPACs are investment vehicles and therefore their establishment takes place through the contribution of capital by the promoters, who generally coincide (in whole or in part) with the members of the board of administration ("management team") in charge of identifying the investment opportunity. The corporate purpose of a SPAC is, in fact, the search and identification of a target company with which to subsequently implement the business combination.

The SPAC phenomenon was structurally born in 1992, has developed significantly in the US since 2003 and is considered a refinement of the blank-check company model.

The blank-check companies are companies that undertake an IPO to raise funds for the purpose of investing those funds to carry out a merger or acquisition with another existing company, a firm or an individual, not identified at the time of the IPO.

In Italy, the first SPAC operation took place in 2011 with the listing of the "Made in Italy1" SPAC, which in 2012 closed a business combination with the target company SeSa Spa, leader in the field of information technology.

The latter is organised in the 4 different phases:

- 1. Company Constitution**
- 2. Realisation of the IPO (listing)**
- 3. Search of the target company**
- 4. Business combination.**

What needs to be emphasised is that only if everything goes well is there all four stages indicated. If the company does not achieve its goal (reaching agreement with the target company), the company is dissolved without having completed all the stages for which it was set up.

There are different actors that revolve around the IPO process of the SPAC, among the most relevant are the promoters, the underwriters, the investors and the target company, the result of the business combination.

Indeed, the finalisation of the business combination presupposes the involvement of multiple actors, who are indispensable for the success of the transaction and whose role remains throughout the life cycle of the SPAC.

1.4 Scope of application and comparisons

The objective of this section is to train and provide the necessary tools to analyse the SPAC phenomenon in comparison to the closest available market instruments, comparing SPACs with other similar instruments such as IPOs and Private Equity.

Giving an initial analysis, as a foretaste of the central theme of my thesis, that of sustainability, and then arguing how these two trends may intersect.

The main difference between the IPO and SPAC IPOs, tells us that the first mentioned is a completely market transaction, i.e. where the merchant bank's role is to meet investors and facilitate their exchange of information; contrary the second one, involves two phases, a almost-private phase in which the promoters are gathered, and then a more public phase in which it seeks to place itself on the market, finding a target company with which to merge.

I then made another comparison with private equity, as already mentioned, it is a mutual fund that mainly targets small and medium-sized companies that are unlisted or in the process of delisting.

I would like to provide some numbers to bolster my thesis of the sudden growth of the SPAC trend, in fact what emerges from most IPOs completed in the US in 2021 were IPOs of SPACs, a marked change from previous years. In the last year alone, 42 per cent of IPOs were traditional IPOs, down sharply from 74 per cent in 2019.

As reported by the article of James Hester, *“Various SPACs have sprung up to target environmental, social, and governance (ESG) opportunities with strong investor appetite.”* (Hester s.d.)

This statement has a strong meaning and represents the issue to talk about.

The pandemic and the boom received from the new rediscovery of this tool, makes it a cutting-edge tool and perspective, although it came into force about ten years ago.

An Example of a sustainable company is the Sustainable Opportunities Acquisition Corporation (SOAC) listed on the New York Stock Exchange in a \$300 million IPO in May 2020, claiming to be the first ESG special purpose acquisition company specifically to drive carbon dioxide reduction.

As reported by the Nomura article, which shows how in the first months of 2021, out of a total of 306 SPAC done in USA, 49 of these, then about 16% concern the area of sustainability, then ESG and energy transition.

Another article reporting similar numbers is the KPMG report between January 1, 2020, and August 27, 2021, there have been 292 announced SPAC mergers; of those, only 65 had an ESG theme, according to KPMG analysis.

In this paragraph, therefore, after a careful analysis of all possible comparisons with financial instruments and after providing a bit of data to accompany my thesis, I have provided the correlation that I have noticed and from which I have taken my cue for the drafting of my thesis, overro the correlation between SPAC and sustainability.

2 CHAPTER

Evolution of the new trend explosion: Sustainability

2.1 Short Introduction

Following on from all the groundwork laid in the first chapter about SPACs, which is one of the two main themes underpinning the drafting of this thesis, we find this understanding that will take care of defining the theme of sustainability

2.2 What is meant by sustainability...?

This definition turns out to be rather general it basically ties the concept of sustainability to one principle: intergenerational equity.

I would start by saying that this concept of sustainable development was first elaborated by the Brundtland Commission (in 1987) based on two basic elements: the environment as an essential dimension of economic development and intergenerational responsibility in the use of natural resources.

After that, in 1992 in Rio de Janeiro, with United Nations Conference on Environment and Development (UNCED) reaffirmed the importance of the principle of sustainable development through its formalisation in the acts adopted at the conclusion of the summit: the Rio Declaration on Environment and Development, Agenda 21, and the Declaration on the Management, Conservation and Sustainable Development of Forests.

In fact, in an ecosystem in equilibrium the latter is implicitly sustainable; moreover, the greater its stability the greater its capacity for self-regulation with respect to internal, and especially external, factors that tend to alter its equilibrium state.

2.3 Different concepts of sustainability (Economic, Environmental & Social)

Sustainable development is realised in the pursuit of sustainability along three closely interrelated dimensions interrelated: economic, social, and environmental dimensions This concept was first proposed in 1997 by John Elkington in the now famous article 'Partnerships from cannibals with forks: the triple bottom line of 21st-century business'.

With 'the triple bottom line', Elkington intends to promote the measurement of the performance of a company in relation not only to economic performance but also to include social and environmental results. Sustainable development therefore encompasses the continuous improvement of company performance along all three dimensions.

2.4 The role of sustainability in the enterprise landscape

The overriding thought is to be concerned in the area related to sustainability, in fact the current urgency is to have to find solutions that are immediate but give lasting feedback by now this need is already evident in everyone's eyes.

This term of sustainability has become a commonly used term and a common concern of human beings. Sustainability is used and observed from very different perspectives and in different contexts, this permits to have a different perspective.

As mentioned earlier the term starting only from a definition in the ecological sphere has undergone a gradual shift by increasingly trying to relate the economy and society.

Between the great financial crisis of 2008 and the Covid-19 pandemic, the principles of sustainability have become increasingly widespread in the corporate reporting and regulatory corpus of major national and international jurisdictions. Europe's most important response to the pandemic has been the NextGenerationEU, a pact of responsibility towards future generations and European society that also aims to establish the development megatrends of the coming decades, while already the financial universe of sustainability reaps several tens of trillions of dollars globally.

2.5 Develop of different trending around this concept

We find several related topics around the topic of sustainability, among them NFR (Non-Financial Statement), which has been made mandatory for some companies and large groups to provide this individual statement to supplement the information typically contained in financial statements.

Among these themes are SDG (Sustainable Development Goals), that are a set of 17 interconnected goals defined by the United Nations as a strategy to achieve a better and more sustainable future for all.

They are also known as the 2030 Agenda, named after the document whose title is Transforming Our World. We also have sustainable finance, which is the application of the concept of sustainable development to financial activity, among which environmental, social and governance (ESG) factors are a set of parameters that can influence investment performance.

Finally, we find the whole topic of corporate social responsibility, as reported by authoritative sources in business and finance, concerns ethical implications within the strategic business vision. It is the manifestation of the willingness of large, small and medium-sized enterprises to effectively manage social and ethical impact issues within their activities and business areas.

2.6 The rule of the trend of B-Corporation

The B Corporation (or B Corp) is a certification, which has developed in 78 countries and 155 different sectors, this is issued by B Lab a U.S. non-profit.

To obtain and maintain this certification, companies must achieve a minimum score on a questionnaire analysing their environmental and social performance and integrate their commitment to stakeholders into their statutory documents, for example, by adopting the legal status of Benefit Corporation, in Italy society benefit.

The purpose of the B Corp movement is to make sure that the environmental and social performance of companies is measured as robustly as their economic performance.

Unlock the change's report shows how in 2021 B-Corp companies in Italy reached 140, up 26% on the previous year, with a turnover of 8 billion and 15 thousand employees, according to data released by B-Corp Italia, the Italian B-Corp movement.

2.7 Green Bond

Green Bonds, or Green Bonds, are recent financial instruments that have had an absurd growth rate since 2007. They are bonds like any other, linked to projects that have a positive impact on the environment, such as energy efficiency, energy production from clean sources, sustainable land use, etc.

In fact, Green Bonds make it possible to finance different types of projects with environmentally sustainable characteristics, such as water and waste treatment, initiatives related to pollution prevention and control, transport infrastructure, including wind farms, and more generally initiatives related to the sustainable use of water or eco-friendly construction, to name a few examples

A more significant expansion has been seen over the years, thanks in part to the impetus provided by the 2021 Paris UNFCCC Conference of the Parties and climate agreements. Many countries, including China, are trying to balance the weight of fossil fuels in the energy mix with new investments to reduce greenhouse gas emissions.

2.8 Introduction to empirical analysis

As To introduce the theme of my thesis well, I decided to rely on the numbers from the study of the Nomura article, which shows how in the first months of 2021, out of a total of 306 SPAC done in USA, 49 of these, then about 16% concern the area of sustainability, then ESG and energy transition.

By contrast, in the second half of 2020, there were only 40 SPACs with ESG targets, although a 25.3% growth in 2020 emerged.

As has been highlighted by many studies, one of KPG, named "SPAC Insights" , at this time there are two trends that are having a strong common interest, the theme of the SPAC and ESG.

Share prices show that SPACs with strong ESG-related programs and operations often perform better than non-ESG SPAC combinations.

If the trend remains as shown, and sustainability will continue to take over, as it is already doing, the ESG will guide mergers that will lead to a strengthening of the SPAC instrument in the long term.

3 CHAPTER

Are the SPACs a tool that allows a better transition in the field of sustainability?

3.1 Introduction

The aim of this third chapter, having dealt in detail in the previous two chapters with the two trends underlying my experimental thesis, is to answer the research question.

In fact, I would start from the very question I posed as the title of the chapter, which encapsulates part of the research question.

3.2 Definition Sample

This section will provide an analysis of the SPACs currently present on the Italian and American markets and their target companies.

Before getting to the heart of the empirical analysis, it is also necessary to provide an overview of the context, including the time frame, in which these SPACs were listed and in which some of them completed the business combination.

What I have done so far is to create a database of SPAC operations, extrapolating the data from the Refinitiv Workspace database.

The first variable is the geographic area, I decided to analyse the American and European markets, because I consider the American market to be the reference point for the SPAC phenomenon, in fact, as the database shows, SPACs boomed in America in the year 2021.

The other variable I have taken as a reference besides geographical area is if SPAC pursuit of ESG or no-ESG objectives.

3.3 Premises or assumptions

A first aspect to consider on which the entire analysis is based is that the two samples must be independent because the uncorrelated samples represent the two categories of the independent variable in which the cases are different.

This therefore represents a first key aspect of the independent variables and the two samples, which are ESG and NO-ESG, i.e. they are two diametrically opposed categories.

Consequently, a SPAC cannot be in both an ESG and a NO-ESG group, and vice versa, so they are binary yes-or-no considerations.

The independent-samples t-test requires that the dependent variable be distributed approximately normally within each group and that the variances of the two groups are different.

3.4 Hypothesis statement

Within an independent-samples t-test you will find two different types of hypotheses: the null hypothesis and the alternative hypothesis.

The null hypothesis states that the population averages of the two groups are equal or similarly that the difference between the two averages is zero.

According to the alternative hypothesis, different types of tests can be distinguished. In particular, we can find the a-test, the *Bilateral alternative hypothesis* i.e. the difference between the averages is non-zero.

One-sided alternative hypothesis right i.e. the difference between the averages is greater than zero.

Alternative left-handed hypothesis i.e. the difference between the averages is less than zero.

3.5 Methodology

I decided to conduct an independent sample t-test, for the two pairs of samples, according to the two independent variables, geographical area and ESG and NO-ESG.

The independent-samples t-test, also called the two-samples t-test, or Student's t-test, is an inferential statistical test that determines whether there is a significant difference between the averages of two uncorrelated groups.

Here we want to analyse whether there is a significant difference and in favour of which sample whether ESG or no ESG, based on share prices, so that correlation assumptions can be made.

Indicating with n_1 and n_2 respectively the sample sizes of the two groups, the procedure for an independent-sample t-test can be summarised in 6 steps, this analysis to be repeated twice, once for the US sample and once for the EU sample.

The last step to perform an independent-samples t-test is to compare the test statistic calculated in step 6) with the critical value obtained in step 7), to see whether the t-test is significant.

3.6 Defining research question and panel comparable companies

Given this theoretical spectrum, I created this set of comparable so that I could answer my research question. First, I would like to outline what were the questions that inspired me to formulate my research question, and thus influence the direction in which I moved when writing my thesis.

Are SPACs actually a tool able to allow a sustainable ecological transition? or are they just a financing tool like the others?

Can Special Purpose Acquisition Companies (SPACs) be an effective alternative to more traditional listing methods in a market dominated by SMEs and so boost sustainability, after the COVID-19 outbreak

These two questions are kind of the essence of the writing of my thesis, as I am precisely verifying and answering the research question of whether there is a direct correlation between sustainability, as represented by the ESG objectives in the mission or vision of SPACs, and the SPACs themselves.

3.7 Comparative analysis of a group of SPACs

In this paragraph, I will represent what emerged from my quantitative analysis and verify my thesis.

The European sample, is represented by 66 SPAC transactions, executed across Europe, I analysed the share prices, I found that the average of the ESG sample is -4.92%, against a NO-ESG average of 0.74%. After calculating the mean, standard deviation, and other indices, I calculated the t-test using the excel function.

The value that emerged concerning the T-stat is 2.88, while the probability $P(T \leq t)$ of the two tails is 0.003. We can see that the T-stat is smaller than $P(T \leq t)$ of the two T-critical tails, which allows us to conclude that H_0 can be rejected and accepted the H_1 (*The stock price return averages of the two samples is different, there is significant difference*).

After having carried out the analysis for the sample of SPACs made in Europe, I analysed the other sample of 69 companies, 33 pursuing ESG objectives and 36 not pursuing ESG objectives in the American market. As can be seen, I was able to draw from a much larger pool of transactions than in Europe, since the American market, as explained above, has experienced a boom and an abuse in certain situations of SPAC transactions. The value that emerged for the T-stat is 3.85 while the probability $P(T \leq t)$ of the two tails is 0,013%. We can see that the T-stat is smaller than the $P(T \leq t)$ of the two critical tails, which allows us to conclude that H_1 can be accepted. (*The stock price return averages of the two samples is different, there is significant difference*).

3.8 Considerations about the results

The aim of this section is to provide new insights and clarification, providing hypotheses to justify the negative performance in the European market situation.

As it turns out, the average return of companies with ESG objectives is negative and lower than the return of SPAC operations that do not pursue ESG objectives.

In conclusion, I believe in the results that emerged from the analysis of the American market, and I believe that what emerged instead from the results of the European sample, is only because it is considered a very immature market and is very much affected by what happens in the American market, especially what happened in the current historical period.

3.9 Direct correlation between the two themes: SPACs and sustainability

The current situation is very peculiar given the great uncertainty in the markets and the rise in interest rates, the increase in the price of primary sources and goods, I will mention a few such as wheat, gas, petrol. This situation should spur and accelerate all those projects in the field of sustainability, which more reason now to be concluded, both in the energy field, a sector in great crisis and undergoing strong change.

It emerged from the analysis that there is a direct correlation between these two trends and that we can say that ESG goals increase the value for the SPAC operation, in short, these are important signals, the value and return of the share is higher in a situation where a SPAC pursues sustainable goals.

3.10 Different conditions in favour of a development of this instrument in correlation with sustainability

To summarise, we can see that there are several concourses and events that lead to a particularly favourable situation for the SPAC trend sluggishness directly related to the sustainability trend.

Among these is certainly the event of the war in Ukraine that broke out in February 2022, which is causing not only a large-scale energy crisis for the European market, but also much uncertainty in markets including the US.

CONCLUSIONS

From the analysis conducted, these two trends are very much connected, and it has become a surplus to have sustainable targets to have higher returns.

In fact, this is more explained by the direction in which investors are going, increasingly demanding the presence of ESG objectives in the mission and vision, or at least at the basis of the companies' business.

This is also confirmed by the trend of green bonds and sustainable finance as a whole, as more and more attention are being paid to these issues.

I believe that the analysis conducted in the last chapter gives a clear demonstration of how this instrument can serve to increasingly promote ESG objectives, and how the SPAC instrument, by its very nature, is a suitable tool for use in promoting sustainable projects.

So, in short, the importance of both trends has emerged in this thesis, and I believe we will see the exploitation of SPACs in the future in the sustainable sphere, given what has been analysed.

In fact, considering what has emerged as a result of historical events and recent crises, such as COVID-19 and the War in Ukraine, there will be an increasing focus on sustainability.

Therefore, an important aspect remains the historical context in which we find ourselves, and the current economic situation, because with the increases and the energy crisis, there will be more and more opportunities to solve problems through, for example, new projects financed through the instrument of SPACs in the sustainable sphere.

FEATURES DIRECTION

This paper focuses mainly on two themes, that of SPACs and that of sustainability. These two topics are in the process of becoming and developing, and although the analysis carried out tends to provide considerable insight into the overperformance that companies tend to want to achieve through the use of policies aimed at the pursuit of ESG objectives, it is not possible to arrive at a completely certain answer as to the nature of this phenomenon in the European and American markets, but it certainly provides us with a basis for future analysis.

In the future, in fact, we may be able to state with certainty what this research has just outlined, also considering the new regulation in the US market imposed by the SEC.

In the light of new factors such as the war in Ukraine and the ensuing European energy crisis that is affecting it, in the light of the new technological progress and energy transition in which the whole world is involved, and in the light of future developments in the COVID 19 pandemic that is still underway.

The differences in performance that emerged are to be considered significant as the sample shows, but to have a complete certainty of this phenomenon we should just wait until we have more data available, because as explained, the difference in results between the American and European markets shows an acerbity of the European market and a lower openness to change and the need for more time.

Consequently, it would be interesting to further investigate the findings and consider what future developments they might lead to. In fact, most studies, including this paper, are based entirely on quantitative analyses that are subject to further implementation and better non-biasing of results.

Obviously, what has been outlined so far will have to be revised in the light of the new international American and European regulations on SPACs, and the focus from my point of view will be even more on sustainability.

In conclusion, I would like to say how this analysis is reliable, but if resumed in the future, it could only lead to further confirmations because the highlighted trend leads us in that direction.

We should always respect the environment more, in fact as Sir Paul McCartney said, “There must be a better way to do the things we want, a way that does not pollute the sky, or the rain, or the earth”. (McCartney 1989)