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The consequences of integrating ESG constraints for investors

A case study on the link between extra-financial
and financial performances in times of crisis

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Abstract

The growing threats facing society, such as climate change, are becoming key issues for business to address. The rise of SRI and the increasing importance companies place on stakeholders' expectations demonstrate a common willingness to participate in change. However, much progress regarding sustainable behaviour still needs to be made, particularly by some companies. The aim of this paper is, therefore, to analyse whether companies have a financial interest in integrating sustainability criteria, known as ESG (Environmental, Social and Governance), into their strategy. To this extent, we studied the returns that an investor would have earned from the S&P 500 index in comparison to an index composed solely of the most sustainable companies from the S&P 500 (ESG benchmark) during the Covid-19 crisis. The ESG benchmark has been constructed using a best-in-class strategy, based on companies' sustainable rating provided by MSCI, which is a financial services company. From this study, it appears that the sustainable index provided slightly higher returns than the S&P 500, but it cannot be concluded that the returns delivered by the former are statistically higher than the ones of the latter. However, it seems that the sustainable index is less risky than the S&P 500, leading investors to have an interest in holding investments in more sustainable companies and, therefore, driving businesses towards a more ethical path by integrating ESG criteria into their strategy.

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Introduction

The choice of our thesis topic followed the Corporate Social Responsibility (CSR) and Portfolio Theory classes that we both took two years ago. Indeed, in the first one, we quickly saw the concepts of Socially Responsible Investment (SRI) and Environmental, Social and Governance (ESG) investment and in the second one, we learned how to analyse and interpret the results produced by a portfolio. As we both appreciated these subjects, we wanted to deepen our knowledge in these areas.

After extensive researches on the “ESG” subject, we asked ourselves the following question: **“How does a sub-index, composed solely of ESG leaders, manages to perform in terms of return compared to its initial market index during a crisis period?”**

Indeed, there does not seem to be a broad consensus in the literature regarding the possible positive return that would result from a certain sustainable investment compared to a more conventional one.

We have also decided to answer this question following the current context. Indeed, more and more importance is being attached to this type of investment (Renneboog, Ter Horst and Zhang, 2008). This can be explained in particular by a general awareness of the problems linked to global warming (Bompard, 2020).

We, therefore, would like to know whether it is possible to invest in companies that have adopted an ethical strategy, without compromising investors’ profitability. In other words, is there a cost for investors who want to contribute positively to society by investing in so-called “sustainable” companies?

In order to answer the previous questions, we first conducted a general review of the current literature on the subject. Thus, our theoretical part started with some background information. In the latter, we will define CSR and its concepts as well as SRI. We will then explain how these concepts have evolved in recent years. Indeed, we will analyse the link between the growing importance given to these concepts and the questioning of the current capitalist system.

In the second section, we will focus more on ESG investment. We will thus define the concept, explain its evolution and describe in detail the meaning of the “E” (the environmental aspect), “S” (the social aspect) and “G” (the governance aspect).

After that, we will explain why companies have certain interests in integrating ethical aspects into their strategy. Indeed, more and more investors are looking at this. To be able to attract them, we will explain the importance for companies to disclose their non-financial performance.

Finally, we will close the section by explaining how important ESG rating agencies are in the role of information providers for investors. Indeed, this information is specifically used to create the various existing sustainable indices and also, allows investors to adapt their strategy accordingly. We will, therefore, provide a comparison of some sustainable indices and will also discuss the different types of strategy that an investor can adopt to integrate ESG criteria into his decision-making process.

In the third section, we will discuss the problems that ESG rating agencies face when assigning a score to companies and what they have put in place to try to circumvent these.

The fourth and last section of the theoretical part will be devoted to the description of the model that we will use in our practical part, which will allow us to measure the presence or not of additional profitability, resulting from the integration of ESG constraints in a portfolio.

Then, we will conduct a more precise review of the literature that will allow us to determine our research question, adding to our learnings from the theoretical part. Besides, this part will help us to discover what has already been mentioned or not concerning the impact of the extra-financial performance on the financial performance of companies.

As far as the empirical part is concerned, it will be divided into three sections. In the first one, we will describe the data we will use to apply our model. The second will be dedicated to the application of the model and will thus take up our entire approach. Finally, in the third section, we will outline the results we obtained. These will be further developed using certain financial and statistical models.

Finally, we will close our work with a conclusion in which we will briefly summarize the results obtained. Besides, we will explain the limits we have reached in the writing of this thesis as well as the possibilities to go further in our research.

Theoretical part

1. Context

a. Capitalism rethinking

Nowadays, capitalism is subject to a lot of criticisms. A major critic often encountered is the lack of sense. For instance, the latter was described as “blind” (Piketty, 2014 as cited in Hutton, 2014), or as “increasingly unstable” (Marx, 1867). The critics often gather to point out the moral emptiness and inherent instability behind capitalism (Vercelli, 1985).

The concept of moral emptiness refers to the fact that capitalism grants more importance to profit accumulation than to the virtue of humans. According to Marx (1844), capitalism has a negative psychological effect on people. Capitalism rhymes with materialistic and ethically unfair exchanges. Therefore, “money is the medium of exchange, everything is looked at in terms of how much money it is worth, even if that “object” is a person” (Marx, 1844). Then, we see that the virtue of people is put aside at the expense of how valuable their activities and professions are.

Indeed, this capitalist-oriented society focuses on the minimization of costs and the maximization of profits accompanied by the expansion and acceleration of activities, which remains a fundamental trend (Srnicek, 2017). Therefore, companies are not only generating an excessive amount of cash by sometimes engaging in riskier activities but they are also benefiting from the poorest to expand their wealth. Indeed, we see that « the very dynamics of growth tend to concentrate capital into even larger firms » (Heilbroner, & Boettke, 2019).

Also, the rise of financial capitalism has led to excessive speculations and is being accused of exercising negative influences on social and environmental matters. In this context, since a couple of years, different organizations such as the Organisation for Economic Co-operation and Development (OECD), the United Nations (UN), the European Union (EU), governments, non-governmental organizations (NGO's), firms and trade unions are willing to find an alternative version of capitalism based on the concept of corporate social responsibility (Dutraive & Revest, 2011).

b. CSR and SRI

In fact, before this rethinking, according to Milton Friedman (1970) (cited in Desmedt & Truyens, 2018-2019) “there is one and only one social responsibility of business - to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud”. But the alternative version of capitalism is represented by a more transparent world relying on a more social, environmental and ethical way of doing business, therefore questioning the existing impact of businesses (or deciders) on the society.

In this way, Business Roundtable (2019), which is an association of Chief Executive Officers (CEO) of America’s leading companies working to promote a thriving US economy, gave a new statement on the Purpose of a Corporation. The latter has been signed by 181 CEOs.

Each of these managers, representing a company, commonly agreed on the Purpose of a Corporation’s statement. In this way, they commit to engage with their stakeholders. They made the promise to:

- Deliver values and respond to their stakeholders’ expectations, even above the minimum required.
- Invest in their employees. It means that they ensure to develop, treat, train, educate and support them properly. They support diversity, inclusion, dignity and respect among them.
- Deal fairly and ethically with their suppliers. They want to be good partners for companies that help them achieve their goals.
- Support communities with who they engage. They want to respect and protect them by integrating sustainable activities into their business processes.
- Generate long-term value for shareholders which are the providers of the capital that allow them to invest, grow and innovate. They promise to be transparent and to engage effectively with them.

Each stakeholder is taken into consideration and is essential for the future success of corporations, communities and countries.

Moreover, Mallen Baker (2004) writes that “corporate social responsibility is how companies manage their business processes to produce an overall positive impact on society. It covers sustainability, social impact and ethics, and done correctly should be about core business - how companies make their money - not just add-on extras such as philanthropy”. Or more recently, the European Commission (2020) defines CSR as “the responsibility of enterprises for their impact on society and, therefore, should be company led”.

Furthermore, we are entering a phase which requires a superior level of CSR integration than what was applied before by some firms. Since the 2000s, we noticed some improvements from developed firms in containing local external negative effects emerging from their activity. Meanwhile, for a few years, a drastic change has occurred. What was only applied on a local scale is recently advocated to be executed on a global scale as well (Grandjean, 2014). As a matter of fact, the size of these upcoming CSR challenges is at the scale of our current society which is rooted in this global capitalism (Held, McGrew, Goldblatt & Perraton, 2000).

In conclusion, Bardinet-Evraert (2018) believes that all companies are major actors to overcome global challenges. In fact, all sectors are affected by a more transparent and ethical world and are facing new trends such as the ecological footprint, which appears to be one of the most discussed issues (Oreke, Wittneben & Bowen, 2012). Companies will then have to tackle major challenges which would risk compromising their future if these are not properly managed.

CSR concepts do not aim to remove capitalism but to give a more moral and ethical aspect to it. In recent years, we noticed that CSR has acquired a financial nature with the emergence of SRI. Savers and investors have therefore the possibility to invest more ethically and support projects in line with Environmental, Social and Governance (ESG) criteria.

According to Sparkes (2008), SRI or ethical investment “is an investment discipline that adds concerns about social or environmental issues to the normal ones of risk and return as determinants of equity portfolio construction or activity. SRI has three distinctive techniques, which may overlap or follow sequentially: exclusion, activism, and dialogue or engagement”.

The evolution of SRI never ceased to grow. According to a study released by the Global Sustainable Investment Alliance (2016), SRI accounted for approximately 23 trillion dollars in 2016, in comparison to 18 trillion of dollars in 2014, which represents a significant increase of 25%.

SRI allows investors to be more aligned with their ethical expectations. Banks also have been significant players in the development of SRI, giving increasingly their clients the possibility to use their money for the benefit of responsible investment. For example, in 2008, the Canadian bank Desjardins (Vendette, 2014) made a study among their clients before introducing the SRI option to them. The study revealed that 71% of questioned people were interested in the concept and that 59% were ready to invest their money. Finally, 64% of those believed that financial institutions had a duty to offer SRI to their customers. In fact, after the introduction of SRI, the bank released an increase of \$500 million assets under management invested in SRI from 2011 to 2013. More precisely, they went from \$646 million in 2011 to \$831 million in 2012 and more than \$1.1 billion in 2013.

c. Core characteristics of CSR

(i) Voluntary

Although there is no universally approved definition of CSR, its legal status seems to be more voluntary than mandatory. The term CSR is understandable but not everybody has the same interpretation of the concept. This controversial issue can be explained by the fact that no exclusive definition exists for this concept and, therefore, the introduction of CSR concepts into business activities is based on voluntary acceptance. However, new corporate allegations have been signed and some of them care about the mandatory aspect such as in China, India or Indonesia where companies shall integrate CSR activities (Lin, 2019). The controversy between mandatory or voluntary CSR is still trending. Meanwhile, an increasing number of companies understand the importance of CSR and are voluntarily willing to integrate CSR activities beyond the legal minimum (Hamidu, Haron & Amran, 2015).

(ii) Multiple stakeholder orientation

According to Freeman (1984) (cited in Desmedt & Truyens, 2018-2019), “a stakeholder is any group or individual who can affect, or is affected by, the achievement of a corporation’s purpose”. The multiple stakeholders' character alludes to the fact that stakeholders’ objectives can not be clearly defined, in comparison to shareholders, as their interests differ between them. In this way, it is very complicated for companies to meet all stakeholders’ expectations. Therefore, they are being classified according to their level of power, legitimacy and degree of urgency. The degree attached to each attribute will determine the processes with which the company will consider stakeholders’ demands. It is the extent of CSR to determine which other stakeholders need to be considered.

(iii) Practices and values

Beyond the fact that a controversy holds in between the mandatory or voluntary character of CSR, the integration of sustainable activities requires a strong belief. Practices and values focus on the philosophical aspect of CSR that underpins the processes, strategies and structural changes. Numerous studies examine the correlation between the manager (or CEO) profile and CSR initiatives. Results show a positive relation towards the presence of CSR practices when the manager’s values are more inclined to ethical and sustainable activities (Godos-Díez, Fernández-Gago & Martínez-Campillo, 2011).

(iv) Social and economic responsibilities alignment

Even if integrating CSR activities requires many structural changes in a company, those should not compromise the achievement of a fruitful economic activity. Several scientific articles have been written and many pieces of research have been operated in order to determine the influence of CSR on the profitability of a company. The application of CSR concepts imposes companies to develop mechanisms in their structure to link CSR to economic profitability (Hamidu, Haron & Amran, 2015).

(v) Internalizing or managing externalities

The economic activity is a vector of many positive effects on the society. Meanwhile, due to highly competitive markets, external effects can occur due to the realisation of an activity. CSR concepts point out the importance to identify and to internalize negative externalities. Companies should therefore manage external effects emerging from their continual activity. In fact, health, social and environmental consequences can be very damaging and the question of whether CSR should be voluntary or not is, therefore, one more time brought up (Doku & Appiah-Kubi, 2014). Johnston, Amaeshi, Adegbite and Osuji (2019) wonder if an enterprise should be subject to a legal obligation to internalise their external effects. The European Commission (2020) emphasized the fact that impacts emerging from companies should be company led.

(vi) Beyond philanthropy

CSR is slowly shifting from a simple belief to a strategic tool. Nowadays, CSR is heading beyond a simple philanthropy because it is now considered as more and more instrumentalist and strategic over the years. Moreover, CSR activities have proven to act directly on business achievements and to fulfil stakeholders' expectations. CSR is about leading the core business of a firm towards a more sustainable path (Desmedt & Truyens, 2018-2019; Hamidu, Haron & Amran, 2015).

2. ESG investing

a. Definition

As mentioned previously, companies are starting to feel social pressures from consumers, governments and communities to act more responsibly (Kneipe, 2013). As a consequence, these are starting to integrate more and more ESG criteria in their strategy.

According to Armstrong (2020), “environmental, social and governance (ESG) measures describe the environmental, social and governance issues that are considered to influence corporate behaviour in their investment decisions”.

Also, for Ho (2013), ESG criteria refer to the indicators adopted by SRI funds and indices to select companies to be included in their investment universe.

Another definition is given by the MSCI (Morgan Stanley Capital International) (2020), which is an investment adviser firm. For the latter, ESG investing is “a term that is often used synonymously with sustainable investing, socially responsible investing, mission-related investing, or screening. At MSCI ESG Research, we define it as the consideration of environmental, social and governance factors alongside financial factors in the investment decision-making process”.

Because of the three examples given above, it can be understood that there is a lack of standardisation in the definition of ESG criteria. Indeed, it seems that none of these is universal and accepted by all. However, for the purpose of this thesis, we decided to refer to the definition given by Ho (2013) every time we allude to the term “ESG”.

b. “E”, “S” and “G” dimensions

Today, the ESG criteria are put together in order to encompass the different aspects composing a business. As a matter of fact, considering all three criteria at once allows to evaluate the performance of companies’ socially responsible management and not just their charitable activities.

Thus, the “E” refers to environmental matters. According to Kocmanová & Dočekalová (2013), it may allude to the environmental management systems, and the level of efficiency and compliance. It is also linked to climate change (e.g. gas emissions) or environmental issues (e.g. toxic emissions). For Armstrong (2020), this aspect refers to the growing awareness of climate change, population growth and their adverse effect on the environment.

Then, the “S” alludes to social issues, not only within the workplace but also to every person or community outside the organisation taking part in the activity. The concept is thus applied to every stakeholder in addition to its traditional shareholders. It aims to address concepts such as diversity and quality of the employment, working conditions, staff training and development, human rights, health and safety (Tarmuji, Maelah & Tarmuji, 2016).

Finally, the “G” points out all aspects composing and affecting the corporate governance system of a company. It allows to meet stakeholders’ expectations through the organizational objectives by limiting agency costs and pursuing a long-term strategy. It focuses on practices such as board diversity and equal treatment given to shareholders. Added to that, the strategy and vision should be shared by all stakeholders (Tarmuji, Maelah & Tarmuji, 2016).

c. Evolution

The beginning of ESG investing can be dated back to the 1960s as previously named socially responsible investment. Indeed, at that time, investors began to be aware of the social impact of their investment as a couple of social campaigns (e.g. anti-war, anti-racist, civil rights and feminist movements) emerged. In the 80s, social investors began to eliminate certain stocks and industries from their portfolios. As a result, for instance, business activities involved in the South African apartheid regime were excluded (Renneboog, Ter Horst & Zhang, 2008; Schueth, 2003).

This method of SRI seems very similar to what we know today as "Exclusion" or "Negative Screening". According to Philippe Grégoire (2019), the latter consists of excluding certain countries, sectors or companies from portfolios based on specific criteria (the arms

industry for example). Today, some indexes, such as the MSCI socially responsible investing, take these exclusion criteria into account and, therefore, limit the investment universe.

For the past sixty years, ESG consideration has been growing amongst both institutional and individual investors. The growth has been accelerating in recent years and can be explained by several reasons, but MSCI (2020) has focused on three main key factors.

The first one is the introduction of new risk factors for investors linked to global sustainability challenges such as deforestation, mass migration or privacy and data security. In fact, these challenges can increase the complexity that companies face on a global scale, leading to a reassessment of the investment approaches by investors today.

Secondly, the expansion can be explained by the willingness of Millennials and women to participate in ESG investments. In fact, the millennial generation could invest a significant amount of money in the next two to three decades. MSCI (2020) even talks of \$15 to \$20 trillion only into US-domiciled ESG investments.

The third and final key reason is linked to the evolution of data and analytics. Indeed, more data are available regarding companies as well as better ESG researches and analytic capabilities, numerous studies started to explore ESG investing.

d. ESG reporting

In addition to having an interest (among others financial) in integrating sustainable features in their values and strategy (as we will explain in the "literature review" part), companies should have an interest to report on how they integrate ESG factors within their strategy and business and how significant they are for the latter. In fact, investors are increasingly asking for credible and standardized information in order to support companies' long-term risk assessments. Actually, they want to understand the long-term value creation plan.

However, according to PWC (2019), many companies do not know what data investors are asking for, what form they should use to present the data and why investors want it.

As a result, Habek (2017) and Fernandez-Feijoo, Romero & Ruiz (2014), as cited in Berber, Slavic & Aleksic (2018), suggest that companies should report on ESG topics. In fact, CSR reporting is used by companies as a tool to be more transparent towards stakeholders who want to be informed regarding the impact of the business on the society and environment. In addition to being useful for stakeholders, it also allows managers to continuously evaluate the progress of their companies in non-financial areas.

In this way, several standards have been developed to help companies reporting on sustainable issues. As an example, we can cite the Global Reporting Initiative (GRI) Sustainability Reporting Standards, the EFFAS Standard and the International Integrated Reporting Framework.

In **Table 1**, we will provide a comparison between these three frameworks regarding who made them, to whom they apply, how they should be disclosed and what they advise to companies. The information related in this table come from different official organizational reports, which are the GRI standards for sustainability reporting (n.d.), the International Integrated Reporting Framework Requirements (2013 & 2019) and EFFAS Key Performance Indicators for Environmental, Social & Governance Issues (2014).

Table 1: Sustainable report standards: comparison

	GRI Standards	EFFAS Standards	International Integrated Reporting Framework
By who?	The GRI Standards are issued by the Global Sustainability Standards Board (GSSB), an independent operating entity of GRI.	The standards are developed by the Deutsche Vereinigung für Finanzanalyse und Asset Management (DVFA) committee on non-financials and the European Federation of Financial Analysts Societies (EFFAS).	The International Integrated Reporting Council (IIRC) is a coalition gathering broad communities, accounting professionals, investors, businesses, NGOs, regulators, academia and standard setters. This council has developed the International Integrated Reporting Framework.
For who?	“Any organization – large or small, private or public, regardless of sector, location and reporting experience – can use the GRI Standards to report on its impacts in a standardized, comparable way” (GRI, n.d.).	Companies from all sectors and industries wherever they are.	The main beneficiaries from this sustainable reporting are investors, the society and other key stakeholders such as customers, employees and regulators. The International Framework “is written primarily in the context of private sector, for-profit companies of any size but it can also be applied, adapted as necessary, by public sector and not-for-profit organizations” (Integrated Reporting, 2013). IIRC was adopted by over 2,000

			organizations in over 70 markets globally.
How?	They believe that integrated reporting will give a better view on company's risk because they are convinced that incorporating sustainability performances alongside financial statements provides innovative insights and helps companies to integrate sustainability issues into their business strategy.	The DVFA committee on non-financials suggests to include ESG information as a relevant part of the financial statement as it allows more visibility for investors while expressing clearly the risk profile of the company. Moreover, ESG data should be featured on companies' website and at meetings with investors and financial analysts.	They believe that integrated reporting is relevant nowadays as it allows us to redefine our understanding of value creation to ensure it is inclusive of all the drivers of performance.
What?	The GRI Standards cover a wide range of sustainability topics. From anti-corruption to water, biodiversity to occupational health and safety, the Standards address relevant topics across the economic, environmental and social dimensions. Organizations select from among these are subject to report on their significant impacts. Relevant topics are those that reflect the organization's significant economic, environmental,	The gain in visibility will occur if companies start to be more transparent while continually giving up to date and relevant ESG information. In this view, it is requested for companies to ensure the completeness of the information by divulging time-series data such as previous years results and future objectives, as well as benchmark data by sharing the score of peers. To determine what is a relevant information, nine	The purpose of the International Framework is to establish Guiding Principles and Content Elements to be applied to an integrated report, and to explain the fundamental concepts that underpin them. In this way, Guiding Principles foster concepts such as strategic focus and future orientation, connectivity of information, stakeholder relationships, materiality, conciseness, reliability and completeness, consistency and comparability. The

	and social impacts and which are important to its stakeholders. The relevancy of a topic might be related to enterprises' activities and operations. Data privacy, for instance, might be relevant for a telecommunication company to report on, while child labour might be relevant for a garment company with extensive supply chains. The topic-specific GRI Standards contain disclosures that an organization can use to report on its impact in relation to its material. The GRI Standards are regularly reviewed to include new issues as they evolve and update existing topics. This helps organizations to respond to emerging demands from stakeholders and regulators for sustainability information.	topical areas have been defined (e.g. energy efficiency and staff turnover) constituting a standardized framework. For each topical area, from one to four KPI's were defined. For five sectors (Industrial Transportation, Automobiles, Electricity Utilities, Banks and Nonlife Insurance), "comprehensive lists of sector-specific ESGs and KPIs have been defined and sets of ESGs and KPIs for additional sectors are currently in the process of development" (EFFAS, 2014). Besides, EFFAS mentions that companies can raise the reliability of their ESG reporting by subcontracting an independent audit organization. As a result, the quality of their ESG reporting and management could be accepted among stakeholders and improved by following auditors' practices.	Content Elements focus on organizational overview and external environment, governance, business model, risks and opportunities, strategy and resource allocation, performance, outlook, basis of preparation and presentation. The IIRC's vision aims to align "capital allocation and corporate behaviour to wider goals of financial stability and sustainable development through the cycle of integrated reporting and thinking" (IIRC, 2019).
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Source: Personal realisation

An increasing number of standards appear in order to guide companies on how to report on CSR matters. We only gave the example of three standards in **Table 1** but many others exist (e.g. Sustainability Accounting Standards Board and Delphi Framework). This expansion is leading more and more companies to publish on CSR topics. However, as explained by Habek (2017), the quality of these reports varies a lot. In fact, it seems that companies which use GRI Standards generally publish higher quality and more transparent reports than the others as the information they publish seem to be more relevant, complete and credible. It, therefore, appears to be one of the best approaches for sustainability reporting (Berber, Slavic & Aleksic, 2018). This is particularly reflected in the number of large organizations using GRI standards. Indeed, 80% of the world's 250 largest companies used GRI guidelines as a basis for reporting on sustainability in 2014 (Folkens & Schneider, 2019).

Moreover, the latter provides some flexibility to companies. Indeed, they do not have to report with the same level of details on the same topics as the framework provides different levels of compliance to companies and depending on it, the company has to disclose more or less (Buhr, Gray & Milne, 2014).

However, the GRI standards still have their problems and disadvantages. Indeed, it seems that the standards are not suitable for all companies and users of the reports as smaller companies find the guidelines too complex and challenging, while readers of GRI reports find them insufficiently specific or standardised (Brown, de Jong & Lessidrenska, 2009).

As far as the International Integrated Reporting Framework document is concerned, the latter also contains serious problems. First, accountability and sustainability are hardly ever discussed and are not examined, which is incoherent for a document that wants to integrate financial and sustainability reporting. Secondly, the framework almost only focuses on the needs of the investors, which are not particularly linked to the need for accountability and sustainability information. In fact, Flower (2015) supports the idea that what is valued by investors is not specifically valued by society and vice versa. Thirdly, the document fails to explain how to integrate financial, social and environmental information (Buhr, Gray & Milne, 2014). Finally, as the GRI Standards, the framework hardly suits every organisation as it can be less applicable for some types of organisational forms or countries (Reuter & Messner, 2015 as cited in De Villiers, Venter & Hsiao, 2016).

Finally, not much has been published regarding EFFAS standards. However, as the two previous frameworks, the latter is not meant to be used by all organizations. In fact, the list of complex indicators is intended exclusively for profit-oriented enterprises and is addressed, in particular, to publicly traded groups. In this way, “EFFAS is countering the growing interest in non-financial indicators, which can influence the profitability of a company” (Berthold & Lingenfelder, 2014 as cited in Folkens & Schneider, 2019).

As a conclusion, based on **Table 1**, it can be seen that the integrated reporting appeared to be more relevant nowadays in comparison to the standalone reporting. In fact, integrated sustainability reports, developed by GRI, EFFAS and IIRC, work in a way that will help companies to assess their practices on sustainable issues and to set goals for further ethical implications. “Integrated thinking and reporting is often promoted as a practice that leads to better internal decision-making, lower reputational and regulation risk, and greater corporate transparency, simultaneously strengthening financial stability and contributing to a more sustainable society” (Eccles & Krzus, 2010; Eccles & Saltzman, 2011; Krzus, 2011 as cited in De Villiers, Venter & Hsiao, 2016).

These standards providers commonly agree to say that integrating sustainability topics alongside financial measures provides an appropriate risk assessment of the company. In addition, as explained by Mervelskemper and Streit (2016), integrated reporting delivers superior results compared to a stand-alone reporting for composite ESG and corporate governance performances.

Overall, ESG performance is more valorised when companies published on it, regardless of the type of the report i.e. integrated or stand-alone (Mervelskemper and Streit, 2016). Moreover, sustainability reports foster more transparency and allow to maintain a trust relationship between companies and their stakeholders over time. In this way, Murphy & McGrath (2013) explain that ESG reporting allows to avoid or reduce the risk to face class-action suits and the associated financial penalties.

Finally, the importance of sustainability reporting can be understood through the ratings assigned by the ESG rating providers. In fact, even if some rating providers consider that companies proceed in compliance with regional and industry norms when companies publish

little or no information on ESG topics (e.g. MSCI), some providers will consider that the worst is to be feared (e.g. FTSE Russell) (Grégoire, 2019). It can then be understood that ESG reporting is important as it could be used by ESG rating providers to collect the data points they need.

e. ESG rating agencies

The data provided by companies is used by ESG rating agencies in order to inform institutional investors, asset managers, financial institutions and other stakeholders. In fact, these apply ESG ratings to better assess and measure companies' ESG performance (Huber & Comstock, 2017).

The example of the MSCI ESG research can be given. The latter provides a rating for 8,300 companies (or more precisely 13,500 issuers including subsidiaries), depending on their level of exposure to industry-specific ESG risks and their ability to manage these, going from AAA (highest) to CCC (lowest). According to the rating given, the company will be classified as Laggard, Average or Leader. The rating aims to measure a company's resilience to long-term financially relevant ESG risks and in turn, helps investors identify ESG risks and opportunities within their portfolios.

In order to establish the rating and to keep it up-to-date, MSCI collects thousands of data points for each company. However, only 37 ESG key issues are determined as financially relevant by the agency.

To illustrate, we provide an example of the ESG rating given to GlaxoSmithKline (GSK) by MSCI. The final rating given by MSCI is "A". GSK is considered as an "average" company in comparison to 95 firms in the pharmaceuticals industry. The UK company's rating has been upgraded in September 2019, as the company was rated "BBB" before that.

In addition, more details are given regarding the key issues related to the pharmaceutical industry. In fact, regarding the environmental dimension, GSK is considered as an "ESG leader" on the issues of waste and toxic emissions. On the social dimension, GSK is an "ESG laggard", based on the quality and safety of their products. Adding to that, they are rated

“Average” on their capacity to attract, retain and develop their human capital and “Leader” with regards to the efforts provided by the company to improve access to healthcare. Finally, the company is a “Leader” on both corporate governance and corruption matters.

Betty Moy Huber and Michael Comstock (2017) have established a list of the most well known ESG report and rating providers. The list includes the MSCI ESG Research and other ones such as the Bloomberg ESG data service, the Corporate Knights Global 100 or the Sustainalytics Company ESG report. However, these do not cover such a wide range of companies than the MSCI, as they focus on companies with a medium or large market capitalisation only, and are more difficult to access.

In recent years, we have also begun to see data and rating suppliers using artificial intelligence (AI) in order to rate companies' ESG involvement. An example is Sensefolio (2020), which uses Natural Languages Process algorithms (NLP) and machine learning techniques to rate 30,000 companies' ESG implication. At MSCI (2020), they also use AI and alternative data in order to “increase the timeliness and precision of data collection and analysis, and to check and validate data”.

f. ESG Strategies

Once the investor has a better view on the extra-financial performance of companies through ESG data provided by the latter or ratings provided by agencies, he might adopt different strategies to integrate ESG considerations into its investment process. Several alternatives can be considered in order to determine whether to buy or to sell specific securities (Eccles & Viviers, 2011). Meanwhile, each investment practice will depend upon the beliefs and expectations of the actor making decisions. In fact, there is no specific path while integrating ESG information into the decision-making.

Nowadays, many different strategies could be used when considering ESG investment. Given that it is not possible to list all of them, here is a non-exhaustive list of the most well-known ones:

- “Negative screening” reflects the exclusion of some sectors, companies, countries or practices from the investment selection based on specific ESG criteria (e.g. tobacco, weapons, pornography and gambling industries). Some indices excluding criteria for which there is broad consensus have even been created (e.g. MSCI Socially Responsible Investing) (Grégoire, 2019; Amel-Zadeh & Serafeim, 2018).
- Another commonly used strategy is the "Positive screening". It refers to the inclusion of some sectors, companies, countries or practices in the investment selection based on the integration of specific minimum ESG criteria. Indeed, this strategy implies that companies that have integrated these criteria are more efficient in the long term (Grégoire, 2019).
- The “Best-in-Class” strategy consists of selecting the companies that are best ranked in terms of ESG criteria in their sector, asset class or other groupings (Grégoire, 2019). As mentioned above, the “positive screening” will focus on the degree of ESG integration. In other words, a minimum level of ESG criteria is expected by the investor. The “Best-in-Class” strategy works in a positive screening framework by determining which of those companies have the best performing ESG criteria (Eccles & Viviers, 2011).
- The “Normative screening” sorts companies according to their compliance towards international standards (Grégoire, 2019).
- The “Full integration” strategy integrates ESG factors alongside traditional financial analysis (Amel-Zadeh & Serafeim, 2018; Grégoire, 2019).
- The “Engagement/Active ownership” strategy involves a direct implication on the company’s ESG strategy by the use of shareholders’ power (e.g. meeting with the board of directors and emphasizing the importance of good ESG activities and disclosure) (Van Duuren, Plantinga & Scholtens, 2016; Amel-Zadeh & Serafeim, 2018).
- The “Thematic” strategy aims at investing in securities according to Environmental, Social and Governance criteria or any others linked to sustainable investment (e.g. green energy and clean technology) (Grégoire, 2019).
- The “risk premium” strategy includes ESG factors in the analysis of systematic risks (e.g. smart beta and factor investment strategies) (Amel-Zadeh & Serafeim, 2018).

Amel-Zadeh and Serafeim (2018) surveyed investors in order to understand how they integrate ESG considerations into their investment strategy. It appeared that the most predominantly strategies used are the “Full integration” and “Active ownership/Engagement” with 34% and 37% respectively. “Negative screening” is also well used (30%) compared to

“Positive” and “Best in class” screenings (respectively 13 and 9%). Finally, the “Thematic investment” is also a commonly used method that allows the integration of ESG matters (21%).

g. Socially responsible indices

With the rise of SRI, different socially responsible indices have been created during the past few years. This way, the Domini 400 social index, which was proposed by Kinder, Lydenberg, Domini & CO (KLD) and the South Africa Safe Equity (SAFE) index, which aimed to exclude companies that engage in trade with the country, were the only indices of this kind before the emergence of other ones in the 90s. Amongst these, we can cite ASPI from the French company VIGEO, the Dow Jones Sustainability Group Index (DJSI) and the European index “Stoxx Sustainability” that are both from the SAM cabinet, and the FTSE4good which is the result of the collaboration between the Financial Times, the EIRIS agency and the London Stock Exchange (Le Saout & Le Maux, 2003).

As described by El Khamlichi (2019), these indices offer investment opportunities that match investors' social, environmental and governance orientations. They follow the evolution of a portfolio made up solely of listed companies that comply with ethical requirements, and are subsets of investment universes because they are obtained after a screening process. As a result, Singh, Murty, Gupta & Dikshit (2009) explained that these indices allow to understand the trends in the ESG dimensions i.e. if these are improving or declining.

However, some questions can be raised regarding the legitimacy of these indices. In fact, there is a lack of standardization between the index providers as each of these will propose an index that depends on their vision of ethics and on the weighting they gave to each criterion (El Khamlichi, 2019).

We decided to illustrate the problem by providing a comparison of two sustainable indices in **Table 2**. The information gathered come from the Stoxx ESG Index Methodology Guide (2020), the MSCI Global Socially Responsible Indexes Methodology (2016) and the MSCI World SRI Index report (2020).

Table 2: Sustainable indexes: comparison

	Stoxx Global ESG Leaders	MSCI World SRI
Index size	Stoxx Global 1800 Index (1.800 companies).	MSCI World, an index that includes the large and mid-cap companies in 23 developed market countries (1.640 companies).
Strategies	Best-in-class, Negative Screening and Normative screening.	Best-in-class, Negative Screening and Normative Screening.
Exclusion criteria	Hence, companies that are involved in controversial weapons, as defined by Sustainalytics, are excluded from the Stoxx Global ESG Leaders index. Moreover, Stoxx excludes companies that are non-compliant with the Sustainalytics Global Standards Screening assessment. The latter identifies companies that do not respect or may not respect commonly accepted international standards, such as the UN Global Compact Compliance Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.	Companies that are involved in alcohol, gambling, tobacco, military weapons, civilian firearms, nuclear power, adult entertainment, thermal coal and genetically modified organisms are excluded from the index. In order to spot the companies involved in these activities, MSCI ESG Business Involvement Screening Research is used. Moreover, companies that do not comply with high human right standards and international normative standards such as the ones of the UN Global Compact, are excluded as well.
Index elaboration	First, an index is created for each of the criteria (Environmental, Social and Governance). Respectively, the first includes companies that are leaders in the environmental field, the second in the social field and the last in the governance field. In addition to being a leader in one of the three criteria, a company must also	The index is constructed by the aggregation of four MSCI Regional SRI Indexes which are the MSCI Pacific SRI Index, MSCI Europe & Middle East SRI Index, MSCI Canada SRI Index and MSCI USA SRI Index. Each of these indexes targets 25% of the market capitalization in each sector and region of

	be ranked above average regarding the two other criteria, to be included in the index. So to be included in the Stoxx Global ESG Environmental Leaders, for example, a company must be classified as an environmental leader and must be ranked above average regarding social and governance criteria. Finally, The Stoxx Global ESG Leaders index is constructed from these three indices through a weighted sum of the component weights.	the underlying parent index, respectively the MSCI Pacific Index, the MSCI Europe & Middle East Index, the MSCI Canada Index and the MSCI USA Index.
Data collection	The scores attributed to each of the three CSR criteria by the Sustainalytics agency were retained.	The index uses companies' ratings provided by MSCI ESG Research and MSCI ESG Controversies.
Scoring method	Each of the three criteria that measure CSR is based on a set of indicators defined by Sustainalytics. Each of these indicators will receive a score between 0 and 100 by the rating agency. It is also possible that the agency has not awarded a CSR score to a company, which will, therefore, be excluded from the Stoxx Global ESG Leaders index. The sector classification is also performed by Sustainalytics.	Companies are thus given a score ranging from AAA to CCC (with AAA being the top-rated) by MSCI ESG Research regarding their overall ESG performance. They are also rated from 0 to 10, regarding their compliance with international norms represented by the UN Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work and the UN Global Compact, with 0 being attributed to the most controversial companies.
Selection method	Finally, ESG criteria are normalized using percentile ranking, which will allow the selection of the component in the Stoxx Global ESG Environmental	The companies that received a high ESG rating from MSCI ESG Research compared to their peers (companies from the same sector) will be included in the

	Leaders, Stoxx Global ESG Social Leaders and Stoxx Global ESG Governance Leaders. Thus, Stoxx Global ESG Environmental Leaders includes companies that have a score that is greater than or equal to the 75th percentile (Best 25%) in the environmental field and that are also among the top 50% in the social and governance rankings. The method used is the same for the two other indices. Using this method, a company can be in more than one of the indices. Finally, companies that are eligible for at least one of the three indices above are integrated into the Stoxx Global ESG leaders index. In the end, 413 companies out of the 1.800 companies from Stoxx 1.800 index are included in the socially responsible index, representing 23.94% of the parent index.	index. Among the 7 points scale, companies already embodied in MSCI SRI Indexes need to be rated “BB” or higher to stay in it. Regarding companies that are not constituent of the indexes, they need to be rated “A” or above to be eligible for integration. Secondly, these companies need to perform well regarding MSCI ESG Controversies Scores. Therefore, those that are included in the MSCI SRI indexes need to have a score higher than 0, while companies that are not included in the indexes need to receive a rating above 3 to be eligible for addition. In the end, approximately 25% of the starting index is included in the MSCI Global Socially Responsible Indexes as they meet both of the above criteria.
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Source: Personal realisation

Through this example, we illustrated the lack of consistency among the socially responsible indices. In fact, it can be seen that the exclusion criteria vary a lot between them, as MSCI uses much more criteria than Stoxx. The way both are constructed and the selection process are very different as well.

3. The measurement of extra-financial performance

a. The difficulty of measurement

The sustainability market has grown mainly due to the appearance of new metrics in line with modern stakeholders' expectations. These allow to determine the degree of sustainability of companies' activities.

However, there is no standardized way to measure the level of sustainability. In fact, it is difficult to determine scoring standards. A first problem encountered is related to the multidimensional aspect of CSR. Indeed, including ESG criteria in the investment process ensures that companies take into account the interests of the different stakeholders in addition to those of shareholders. This relates to the multiple stakeholders' orientation concept. As a result, the criteria (ESG), to be taken into account in the assessment of a company's societal impact, should satisfy the different interests of the stakeholders (Capelle – Blanchard & Petit, 2013).

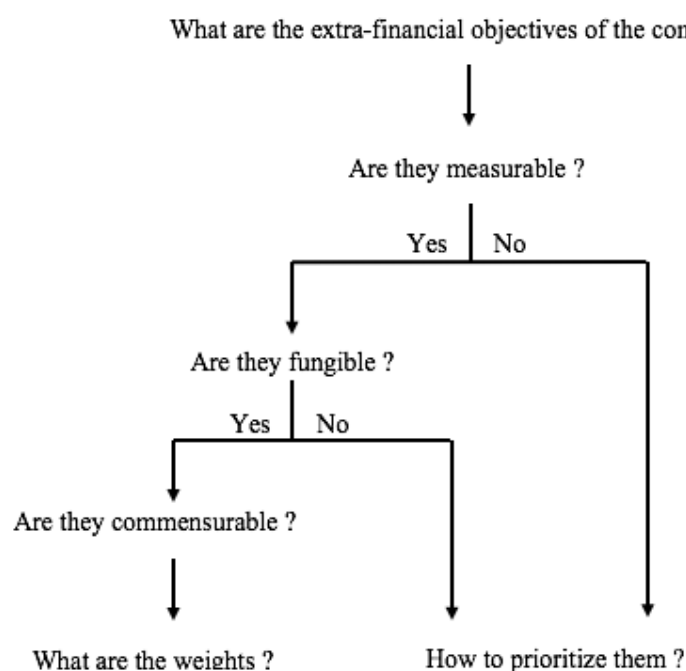
Nevertheless, it is complicated to consider the interests of all stakeholders because these are numerous, sometimes divergent and even contradictory. In particular, this multiplicity of criteria makes the management of companies more complex. Indeed, it is going to be complicated for the managers to satisfy all these interests, leading the latter to choose which ones to meet or not. It is therefore understood that "it is in the very nature of CSR to be multidimensional" (Carroll, 1979 as cited in Capelle-Blanchard & Petit, 2013).

Secondly, measuring the extra-financial performance of companies is a real challenge because of the qualitative aspect of corporate social responsibility. ESG criteria, therefore, leave little scope for a quantitative assessment.

On top of that, it is not the multiplicity of criteria that is problematic from the investors' perspective, but rather how these are aggregated. In other words, it is difficult to provide an overall score that measures a company's extra-financial performance. Indeed, it is necessary to take into account a plurality of criteria when assessing it and rating agencies, among others, often simply aggregate these criteria. In doing so, they make the implicit assumption that ESG criteria are both fungible and commensurable, which is largely questionable.

Fungible criterion means that a good practice can compensate a bad one. Regarding the commensurability aspect, this hypothesis means that the different ESG factors can be combined, as they would be of equal importance (Crifo & Mottis, 2013). The difficulty of measuring extra-financial performance can be summarised using **Figure 1**.

Figure 1: Decision tree illustrating the difficulty to quantify extra-financial performance



Source: Personal realisation based on Capelle-Blancard, G. & Petit, A. (2013). Mesurer les performances extrafinancières.

We can, therefore, see that there is, first of all, a problem in quantifying the extra-financial performance of companies. Rating agencies are trying to solve this problem by granting scores or rankings that depend on the social and environmental performance of companies. However, it is important to note that these are based on questionable assumptions of fungibility and commensurability. Therefore, anyone using the data provided by these agencies, such as SRI fund managers or researchers, should be careful.

The fungibility hypothesis is questionable because « positive and negative social actions are both empirically and conceptually distinct constructs » (Mattingly & Berman, 2006). These should therefore not be mixed.

If we consider that criteria are fungible, we now need to determine if they are commensurable. As stated earlier, the assumption that the criteria are commensurable is highly questionable. Indeed, it is impossible to directly compare the volume of toxic substances emitted by a company with the diversity of the board, for example. In order to validate this hypothesis, an exchange rate system would have to be put in place to express criteria in the same unit of measurement.

According to Capelle-Blancard & Petit (2013), it is possible to partially reduce the problems linked to the measurability of the extra-financial performance through the use of weighted averages instead of simple averages. In fact, the method of granting the same importance to each ESG indicator, i.e. simple average, does not allow to overcome the problem of fungibility and commensurability assumptions.

However, the use of weighted averages can reduce the problem. Indeed, some indicators are given more weight than others depending on the business of the company. The weighted average approach is used among others by MSCI to give a global score that measures the extra-financial performance of companies, as mentioned in **Table 2**.

When weighted averages are used, the way in which weights are assigned to each indicator also varies in the literature. Indeed, Waddock and Graves (1997) and Ruf & al. (1998) (as cited in Capelle-Blanchard & Petit, 2013), for example, send questionnaires to a panel of experts in order to assign weights, whereas Capelle-Blancard & Petit (2013) propose to use press articles as a basis. Thus, according to the latter, if a lot of articles concern diversity within boards in the banking system, for instance, this indicator will be given more importance than others that are not often tackled in the press.

For all these reasons, we understand that we must remain vigilant and critical when using the ratings granted by the agencies.

b. ESG agencies methodologies

These issues are still too often ignored today. MSCI ESG research, for instance, assesses the societal impact of a company by considering a variety of criteria, which are themselves the aggregation of different indicators. The company will give a score to each criterion, based on a weighted average approach, and these will be added together to give an overall score to the company being evaluated. However, this method only makes sense if the criteria are commensurable, i.e. expressed in the same unit.

It can also be pointed out that there is a lack of standardization between ESG rating providers. Although each agency has developed a scoring methodology while considering the same ESG issues, Dorfleitner, Halbritter & Nguyen (2015) concluded that it exists significant differences between the ratings given by different agencies.

There exists no universal methodology in order to determine the ESG performance, as explained above. We saw that the multidimensional aspect of CSR and the multiplicity of ESG criteria represent real barriers to achieve standardized measurements. Adding to that, Chatterji and Levine (2006) report that some concerns can be identified regarding the measurement of CSR activities as it appeared that managers encounter difficulties to decide which KPIs are suitable to be reported.

Meanwhile, the lack of ratings' standards represents a real problem regarding the existing divergence in methodological researches. In this view, ESG agencies appear to present different approaches while assessing the ESG performance of a company.

In order to be the most reliable as possible, ESG agencies are gathering raw data from diverse sources. In general, they rely on data from financial and sustainable reports, academic and governmental data, interviews, NGO's researches, media, interviews, webinars, etc. Those sources of information allow ESG agencies to raise proper data collection. From this point, it is easily understandable that ESG agencies will not hold the same data to assess companies. Not every agency has the same interpretation of data and the same access to it. Therefore, agencies already differ in the aggregation of data. Added to that, it is in the processing of the data that ESG agencies will significantly diverge.

Table 3 aims at analysing the different approaches used by ESG agencies to establish ESG ratings. For the first two rating agencies, the information are taken from official reports obtained on MSCI and RobecoSAM websites, published in September 2019 and 2020 respectively. In 2020, RobecoSAM has been acquired by S&P (Standard & Poor's) Global and is now responsible for the ESG rating used to build the Dow Jones Sustainability Indices and S&P Global ESG Index. Regarding the data collected for Sustainalytics, these can be found on Sustainalytics' website and in the Stoxx ESG Index Methodology Guide (2020).

Table 3: Methodologies applied by rating providers: comparison

	MSCI	RobecoSAM	Sustainalytics
Key metrics	37 key issues reviewed every year.	44 criteria overall, reviewed annually to include/modify some industry-specific criteria.	20 material ESG issues.
Rating scale	AAA-CCC	0-100	0-100
Aggregation of data	Data are collected based on financial and sustainable disclosures, governments reports, companies weekly updates, shareholders meetings, more than 1.600 media sources monitored daily, over 100 specialized datasets, NGOs, academic data, etc.	Data are collected based on CSR reports, NGOs websites, annual reports, companies' websites, stock exchange filings, media, research analysts trained to collect ESG data, etc. Moreover, they present to each company an industry-related questionnaire.	The rating agency uses company data, media reports, sector studies and public institutions to measure CSR.
Evaluation	Framework mapping is based on a risks and opportunities assessment which combines exposure and management scores on a scale from 0 to 10 for each ESG criteria. The benchmark is the	The SAM Corporate Sustainability Assessment (CSA) focuses on an evaluation of the industry's risk and opportunity profile. 1) Materiality analysis The objective is to determine which long-	The rating agency uses a two-dimensional materiality framework to provide ESG risk ratings to companies. In fact, the company's exposure to industry-specific risks and the ability of the company to manage those risks are both measured.

	industry group for all criteria. 1) Risks and opportunities materiality: A risk would be material to an industry whenever a company could incur substantial costs emerging from it (e.g. the signing of a new law about the carbon emissions requiring structural modifications). An opportunity is described as material to an industry when a company could potentially benefit from it (e.g. clean energy for the aviation industry). MSCI ESG model focuses only on issues that are determined as material for each industry.	term economic ESG factors are likely to have the most significant impact on a company's business value and growth, costs or risks and the future financial performance. 2) Weighting method Therefore, the weight given to each factor is calculated according to its likelihood and magnitude of impact in the industry. The factors having a greater impact on the long-term financial assumption would be weighted more. 3) Scoring Robeco is convinced that factors influencing industry-specific opportunities and risks play a key role in a company's long-term success. In this way,	It is important to mention that there is often a part of the risk that cannot be eliminated or managed (e.g. an oil company can not fully eliminate risks related to carbon emissions). Therefore, only for the portion of risk that is manageable, the performance of companies is assessed through their policies, practices, programs and quantitative performance measures. In this way, controversies have a reduction effect on the company's management score. In the end, "the ESG risk rating is calculated by adding the amount of unmanaged risk for each material ESG issue" (Sustainalytics, 2020). The ESG risk ratings can be classified in five risk levels: negligible, low, medium, high and severe, with the lowest score (0) signaling no unmanaged ESG risks.
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	MSCI ESG Ratings calculates each company's exposure to key ESG risks and opportunities based on a profound analysis of its business (e.g. its core products or business segments, the location of its operations, and other relevant measures such as outsourced production or reliance on government contracts). 2) Framework mapping (weighting method): The weight of each criterion within an industry is predefined. Key issues where a specific industry is a major contributor to environmental and social impacts on the short-term period will be three times higher weighted than key issues where this	Robeco can establish a ranking between companies and their peers in order to identify sustainability leaders in the sector.	In order to give a total score to each ESG criterion (Environmental, Social and Governance), the single indicator scores are combined. The score is obtained by using a weighted sum. The weights of the indicators depend on the type of industry of the company. In fact, an indicator regarding the level of carbon dioxide emitted will not have the same importance between a bank and an oil company. Therefore, companies that are not from the same sector cannot be compared.
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	particular industry is a minor contributor on the long-term run. 3) Scoring In order to give a final letter, the weighted averages of the Key Issues Scores are aggregated and companies' scores are normalized by their industries. The incentive is to explicitly pronounce the ESG performance of a company in comparison to its industry peers.		
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Source: personal realisation

From this table, we can conclude that some significant differences exist, emphasizing the fact that this table gathers only three examples. Firstly, we can mention that the number of criteria used seems to fluctuate from an agency to another (e.g. only 20 for Sustainalytics and 37 for MSCI) as well as the type of criteria retained. Another noticeable difference stands in the data collection. Not every agency will detain the same data because their approaches to harvest them vary. In this example, RobecoSAM mainly uses questionnaires while MSCI and Sustainalytics focus mostly on shareholder meetings or specialized datasets.

Then, a major difference appears in the weight attached to each criterion. For instance, RobecoSAM will give more weight on issues where the industry has a large impact on the long-term run while MSCI will put more weight on issues where the sector is a major contributor in the short-term assumption. However, we can highlight that the three agencies have the

willingness to compare companies against their peers in the sector, therefore establishing a rank within each industry.

We also wanted to determine whether these differences in methodologies lead to differences in the ratings provided by the agencies. We, therefore, decided to take three sectors randomly (Energy, Utilities and Communication services) and to look at the ratings provided by the agencies for 10 companies in each of these sectors (see **Table 4**).

The ratings provided in the table below (**Table 4**) come from MSCI and S&P Global websites. However, for Sustainalytics, we were able to find the ratings granted by the agency on Yahoo Finance. In fact, we did not manage to find these on the agency's website as a subscription is needed.

Table 4: ESG rating examples: comparison

		MSCI	RobecoSAM	Sustainalytics
Energy	Exxon Mobil Corporation	BBB	37	32(High)
	Chevron Corporation	BBB	40	40 (Severe)
	ConocoPhillips	AA	67	29 (Medium)
	Pioneer Natural Resources Company	BB	26	45 (Severe)
	EOG Resources Inc.	BB	25	47 (Severe)
	Kinder Morgan Inc Class P	BB	26	24 (Medium)
	Valero Energy Corporation	BBB	19	37 (High)
	ONEOK Inc.	A	43	27 (Medium)
	Hess Corporation	AA	67	29 (Medium)
	Marathon Petroleum Corporation	BB	45	28 (Medium)
Utilities	NextEra Energy Inc.	AAA	28	30 (Medium)
	Dominion Energy Inc	A	35	32 (High)
	Duke Energy Corporation	BBB	73	33 (High)
	Southern Company	AA	25	32 (High)
	American Electric Power Company Inc.	A	33	35 (High)
	Exelon Corporation	AA	78	24 (Medium)
	Sempra Energy	A	76	30 (Medium)
	Xcel Energy Inc.	AA	34	29 (Medium)
	WEC Energy Group Inc	A	51	33 (High)
	Eversource Energy	AA	30	23 (Medium)
Communication Services	Facebook Inc. Class A	BBB	15	31 (High)
	Alphabet Inc. Class A	AA	38	30 (Medium)
	Crown Castle International Corp	BBB	7	20 (Medium)
	Verizon Communications Inc.	BBB	31	20 (Medium)
	Activision Blizzard Inc.	BBB	13	17 (Low)
	Walt Disney Company	BBB	25	16 (Low)
	Netflix Inc.	B	9	18 (Low)
	Comcast Corporation Class A	BB	48	20 (Medium)
	American Tower Corporation	A	18	18 (Low)
	Charter Communications Inc. Class A	B	10	20 (Medium)

Source: personal realisation

From this table, we can see that differences between methodologies can lead to significant differences in the ratings given by the agencies. Indeed, we see a lot of irregularities in the scores given to companies. For example, in the Energy sector, Valero Energy Corporation has the lowest score according to RobecoSAM, while it is rated BBB by MSCI and other companies have received a lower score (e.g. EOG Resources and Kinder Morgan). The same company received a score of 37 (High) by Sustainalytics, which is a poor score. However, other companies received a higher score, stating that there are more unmanaged ESG risks (e.g. Pioneer Natural Resources and Chevron).

These irregularities are also present in the two other sectors. For example, in the Utilities sector, Nextera Energy received the highest score by MSCI (AAA) while it has one of the lowest scores awarded by the RobecoSAM agency (28) and received a medium score (30) by Sustainalytics. In the communication services sector, Googl (Alphabet Inc.), for instance, received a very good score from MSCI (AA) while the ratings given by RobecoSAM and Sustainalytics are much worse, respectively 38 and 30 (Medium).

In order to quantify the differences in agencies ratings, some researchers have determined the level of correlation between agencies' scores. Thus, for example, MSCI and Sustainalytics hold a correlation of 0,32 regarding ESG ratings (Wigglesworth, 2018). RobecoSAM and MSCI showed a higher correlation at 0,48 and RobecoSAM and Sustainalytics have a correlation of 0,76 (Chao & al., 2020).

Through this table, it can then easily be understood that there are significant inconsistencies in the ratings given by the agencies. A company that performs well from a sustainable point of view by one agency may not be considered "performing" by another. Therefore, an investor who would like to invest ethically would not have the same portfolio of securities if he or she relies on the information provided by one agency rather than another.

In relation to the table observed above, according to a study carried out by Berg, Koelbel & Rigobon (2020) which aimed at identifying discrepancies between rating agencies, it appears that variations impact the final decision of investors and these could potentially affect the price of shares and the management of ethical measures. Indeed, it seems that the presence of good ethical behaviours would not be properly reflected within the price of a share. The study explains that it would come from the fact that investors do not know how to position themselves clearly when they look at the different ratings. As a result, a large majority of investors would have to follow the same approach in order to perhaps play positively on the share price of leading ESG companies.

The role played by rating agencies is also institutional for companies. They inform them about points that need to be addressed in greater depth and others that need to be improved. However, companies face a dilemma when they use ratings from several agencies. Opinions diverge and companies find it difficult to position themselves in the market as they cannot compare with their peers (Berg, Koelbel & Rigobon, 2020; LaBella, Russell & Novikov,

2019). According to Muñoz-Torres, Fernández-Izquierdo, Rivera-Lirio & Escrig-Olmedo (2019), agencies are not key players in the development of sustainable business models within companies. In fact, ratings given by agencies may limit the progress of research in the sense that the results obtained by a study may vary when using the ratings given by one or another agency (Muñoz-Torres & al, 2019; Berg, Koelbel & Rigobon, 2020). Meanwhile, rigorous and standardised ratings could positively influence corporate behaviour (Escrig-Olmedo, Muñoz-Torres, Fernández-Izquierdo & Rivera-Lirio, 2014; Dillenburg, Greene & Erikson, 2003).

In their study, Berg, Koelbel & Rigobon (2020) realised that it exists three main dimensions where ESG rating agencies can diverge: “(1) the scope, which denotes all the attributes that together constitute the overall concept of ESG performance; (2) indicators that yield numerical measures of the attributes; and (3) the aggregation rule that combines the indicators into a single rating”.

The first possibility of divergence regards the scope. The scope can differ between agencies when these take different attributes (e.g. carbon emissions, toxic emissions and access to health care) in consideration when analysing companies' actions. In **Table 3**, we already saw that the number of considered ESG issues differ with 37 for MSCI, 44 for RobecoSAM and 20 for Sustainalytics. In addition to the fact that discrepancies may emerge in the choice of attributes, there is also the potential for not finding information about these. Faced with this situation, some agencies will consider that the non-disclosure of information implies that the company follows the code of conduct while other agencies will severely penalize the company for disclosing little or no information, assuming that the company does not respect the average practices of the sector (LaBella, Russell & Novikov, 2019).

The second possibility is the measurement difference. In this case, even if agencies have determined the same attributes to analyse, it exists several possibilities to assess them by choosing different indicators. For example, the packaging materials & waste attributes can be evaluated in terms of quantity of waste, or regarding the specific materials used. Also, we can mention the fact that indicators may relate to the outcome such as the frequency of the problem, or it can be based on the presence of a code of conduct. Agencies also differ in the number of indicators taken into consideration. The ESG metrics vary from 250 (Sustainalytics, 2020) to 1,000 (MSCI, 2018) for example. These different indicators can lead to different assessments.

Another possible divergence that might emerge is the weight difference. In fact, agencies may attach different importance on an attribute. For instance, a rating agency can consider toxic emissions issue as more important than board diversity. Also, we know that agencies claim to analyse ESG implication industry-specific. Agencies will determine E, S and G weights in comparison to the industry without considering companies' risk profile. In fact, companies ranked in the same industry are compared, yet some of them do not provide the same risk profile and structure (Doyle, 2018). For example, we cannot compare a company having 100\$ billion of revenue through the activity of sales of goods and services with a 10\$ billion company, generating revenue by providing services from the treatment of waste and recycling activities. This can lead to a biased result and a need for a more tailored approach.

In this view, agencies may obtain differences in ratings by considering these three factors altogether. In **Table 3**, it can be seen that MSCI will put more weight to issues where the sector is a major contributor in the short-term assumption while RobecoSAM will do the opposite and give more weight on issues where the industry has a large impact on the long-term run. Sustainalytics will compute the weight attached to each attribute by evaluating the capability of the company to manage industries' specific risks.

To overcome this problem, the question regarding the lack of standardisation with ESG rating agencies is often raised. As we saw above, there is a multiplicity of approaches which lead to various ESG performance assessments. According to Hawley (2017), there are already many variations in the definition of what CSR is, but also a multitude of strategies to measure its performance drivers. The author goes on to explain that even if a common definition existed, the problem of measurement would still arise, coupled with the problem of information collection (e.g. some agencies use questionnaires and interviews and some use external information or sustainable reports only). These phenomena complicate the standardisation of rating methods. Several types of research allude to the potential development of standardised structures in the future with the creation of structure providers (Schäfer, 2005), through mergers or increased market concentration, or through mandates signed by the state (Hawley, 2017; Escrig-Olmedo & al., 2014).

However, the concentration of ratings in the hands of a single agency, in the case of a merger, does not please everyone. Indeed, some investors prefer to keep this wide choice as to

which agency to follow because, in their view, competitiveness pushes agencies to maintain their position and forces them to do better quality work (Avetisyan & Hockerts 2017).

4. ESG investment strategies models

In this section, we will explain a model allowing to interpret the impact of integrating ESG constraints on the return while investing. As we mentioned earlier, it exists several ESG investment strategies and investors have diverse preferences in application.

Among others, investors and asset managers have the opportunity to determine a standard benchmark while applying strategies based on indisputable ESG criteria. In fact, these strategies are excluding specific sectors, practices or categories (e.g. gambling and tobacco). In other words, these are allocation decisions. Therefore, the exclusion criteria are considered as common to every investor and no personal preferences are influencing the decision process. On the contrary, it is more complicated to create indices that would apply to every strategy when the investors are limiting the investment universe based on ESG ratings. The reason is that ratings are built depending on the aggregation of data by agencies and data are originated from several sources, as we saw in the ESG agencies methodologies section.

In this way, this model will apply a “best-in-class” strategy which aims at investing in assets that are best ranked, regarding their ESG score, in their sector or country for example. This investment process alludes to stock-picking decisions.

This model was developed by Mr. Grégoire who is a professor at the University of Louvain. The model appears in the Journal of Performance Measurement and was published during spring 2019. According to Grégoire (2019), the model “measures the contribution of decisions associated with ESG process. As these decisions have the effect of limiting the eligible universe, the model will separately identify decisions that involve a change in allocation from those that lead to stock picking”.

Indeed, the eligible investment universe while using a “best-in-class” strategy will fluctuate from a portfolio manager to another. In fact, the determination of a threshold of inclusion depends on the preferences of the asset manager or investor. We can also mention the fact that ESG ratings, given by ESG agencies, are varying because these ratings are particularly sensitive to the methodology used by rating providers, as said earlier.

The emergence of more standards in terms of ESG and the increase of transparency regarding ESG agencies' methodologies allow investors to evolve in their investment decision process. Although it does not exist a universal methodology to measure ESG performance, the following model will assume that ESG scores and ratings are consistent across all providers, as it is expected in the near future.

a. First model

A passive portfolio (i.e. described by Poincelot as optimal and diversified, relatively stable and encompassing lots of securities) or market index will constitute the basis of this model. The return of the standard index is presented as follow:

$$R_B = \sum_{Securities} w_{B,i} \times r_{B,i}$$

i = security

R_B = return of the benchmark

$w_{B,i}$ = weight of the security in the benchmark

$r_{B,i}$ = return of the security

The ESG criteria integration will limit the starting index standard (initial benchmark) to an adjusted index (ESG benchmark). Therefore, performance in terms of return will surely differ from one to another. The difference will represent the contribution of ESG integration. The “ESG effect” (the active return) from the standard index benchmark to the adjusted ESG benchmark index is described as follow:

$$R_F = R_{ESG} - R_B$$

R_F = active return

R_{ESG} = return of the ESG benchmark

R_B = return of the initial benchmark

This formula implies that we have built a synthetic ESG benchmark from limiting the investment universe of the initial one. Therefore, we have determined the eligibility of assets throughout a “best-in-class” strategy. In the process, an inclusion threshold will be fixed and securities will be ranked according to companies’ ESG performance. The “best-in-class” strategy is often considered as the most relevant and innovative regarding SRI. In fact, the latter allows to provide some sectorial diversification within the portfolio (Capelle-Blancard & Petit, 2013).

After having restricted the initial universe through the integration of ESG criteria, the allocation of weights within the ESG benchmark needs to be constant. This implies that the sectorial weights in the ESG benchmark - $W_{ESG,k}$ - are equal to the initial benchmark’s sectorial weights - $W_{B,k}$ -. Although weights are equal, which reflects that the ESG benchmark is neutral in terms of sectorial allocation, returns between the ESG and initial benchmarks will differ. One of the reasons explaining the variation in returns comes from the fact that securities’ weights within sectors are different in the two benchmarks. In fact, the equal weight allocation only applies at the sectorial level. This is the reason why we need to determine the weights of the ESG benchmark’s securities in order to calculate the ESG benchmark returns. Those can be computed as follow:

$$W_{ESG,i} = \begin{cases} \frac{W_{B,i}}{\sum_{i \in ESG \text{ Universe}} W_{B,i}} \times C_k, & i \text{ included in ESG Universe} \\ 0, & i \text{ excluded in ESG Universe} \end{cases}$$

k = sector

C_k = coefficient ensuring the equality between the ESG benchmark’s weights and the initial benchmark’s weights. The formula of this coefficient is:

$$C_k = \frac{W_{B,k}}{W_{Best-in-class,k}}$$

with,

$$W_{Best-in-class,k} = \sum \frac{W_{B,i}}{\sum_{i \in ESG \text{ Universe}} W_{B,i}}$$

We decided to illustrate this through an example:

Let us assume that the sector **k** is composed of three assets and one of them does not reach the minimum threshold to be included in the ESG benchmark, that the minimum threshold is equal to 80 (ESG Metrics), that the sector **k** is weighted 10% of the initial benchmark and finally that 20% of the securities in the initial benchmark is eligible for the ESG benchmark.

Sector k	ESG metrics	$W_{B,k}$	(1)	$W_{Best-in-classe,k}$	$W_{ESG,k}$
Asset 1	85	3	3	15	6
Asset 2	72	5	0	0	0
Asset 3	81	2	2	10	4
		10	5	25	10

Source: personal realisation

As we can see, **Asset 2** is not eligible to be part of the ESG benchmark. Its weight is therefore valued to “0”. For the sector to be weighted the same as in the initial benchmark, we need to reallocate the weight of **Asset 2** to the two others.

$$W_{Best-in-class,k} = \frac{3}{0,2} + \frac{2}{0,2} = 25$$

$$C_k = \frac{10}{25} = 0,4$$

$$W_{ESG,asset\ 1} = \frac{3}{0,2} \times 0,4 = 6$$

After having measured the sectorial weights, we can now estimate the return by sector in the ESG and initial benchmarks:

$$R_{ESG,k} = \sum_{i \in k} w_{ESG,i} \times r_{B,i}$$

$$R_{B,k} = \sum_{i \in k} w_{B,i} \times r_{B,i}$$

Now that we know how to calculate the weights and the returns of both benchmarks, we can quantify the “ESG effect” which is represented by the difference in return, as computed hereafter:

$$ESG\ Effect = R_{ESG} - R_B = \sum_{Sectors} CR_{B\ to\ ESG,k}$$

where,

$$CR_{B\ to\ ESG,k} = CR_{ESG,k} - CR_{B,k}$$

and,

$$CR_{ESG,k} = \frac{w_{ESG,k} \times R_{ESG,k}}{100}$$

$$CR_{B,k} = \frac{w_{B,k} \times R_{B,k}}{100}$$

$CR_{ESG,k}$ and $CR_{B,k}$ = the contribution of the sector k in the total return of the ESG and the initial benchmark respectively.

The “ESG effect” can also be computed by replacing R_b and R_{ESG} in the formula :

$$R_B = \sum_{Sectors} w_{B,k} \times r_{B,k}$$

$$R_{ESG} = \sum_{Sectors} w_{ESG,k} \times r_{ESG,k}$$

As said earlier, the variation in securities’ weight explains the difference of return between both benchmarks. In fact, the result of this model demonstrates and emphasizes the impact of the “ESG effect” within each sector. Therefore, we can measure the contribution of each security to the sector. Furthermore, the creation of an ESG benchmark can be used as a basis for further implications such as with the creation of a portfolio.

b. Second model

The model described above applies a “best-in-class” strategy. Meanwhile, an adaptation of this model is possible in order to apply a “negative screening” strategy followed by a “best-in-class” approach.

In this way, the active return - R_F - between the ESG and initial benchmarks is decomposed into the **Screening effect** and the “**ESG effect**”. It can be written as follow:

$$R_F = (R_{NS} - R_B) + (R_{ESG} - R_{NS})$$

$$Screening\ Effect = R_{NS} - R_B = \sum_{Sectors} Screening\ Effect_k$$

$$ESG\ Effect = R_{ESG} - R_{NS} = \sum_{Securities} CR_{NS\ to\ ESG,i}$$

In fact, negative screening consists of the first step of this second model. It reflects the exclusion of some sectors for which there is a broad consensus regarding their boycott from the investment universe. This exclusion is exercised by setting the weights of sectors not considered in the eligible investment selection to “0”. In order to keep the parity of weight constant between the initial benchmark and the negative screening benchmark, an allocation of the weights on each sector is performed.

The screening effect calculates the contribution of not investing in some sectors by reallocating proportional weights to other industries. The screening effect per sector can be represented by this formula:

$$Screening\ Effect_k = \sum_{i \in k} (W_{NS,i} - W_{B,i}) \times R_{B,k}$$

The weights are reallocated in order to maintain the total weight of the initial benchmark:

$$W_{NS,i} = \begin{cases} \frac{W_{B,i}}{\sum_j W_{B,j}}, & j \in \text{eligible industries} \\ 0, & \text{prohibited industries} \end{cases}$$

It is important to mention that negative screening corresponds to an allocation decision only which guaranteed that sectorial returns between the negative screening benchmark and the initial benchmark are equal. However, the total return of both benchmarks will differ as the weight of each sector changes. The screening effect follows the Brinson, Hood and Beebower (BHB) allocation model and gives the opportunity cost of not investing in some sectors (Grégoire, 2019).

To illustrate, the sector of oil is removed from the ESG benchmark. Its weight is now “0” and was originally 5%. This industry delivered 10% over a specific period. The opportunity cost or the sectorial screening effect is equal to:

$$(0 - 0,05) \times 10 = -0,5\%$$

In this case, the opportunity cost is -0,5% which means that we gave up 0,5% return by not investing in this area. The computation of all sectorial screening effect will give us the total screening effect.

The second step, as explained in the first model, is to determine which assets have acquired the minimum ESG criteria required and will be eligible. The strategy allowing us to calculate the “ESG effect” is the “best-in-class” strategy.

Within the eligible industries, assets are ranked based on their ESG ratings and the ones failing to meet the required level will be eliminated of the ESG benchmark i.e. the investment universe. Thus, the creation of the ESG benchmark is based on the negative screening benchmark.

Therefore, the formula of the weights differs from the first model:

$$W_{ESG,i} = \begin{cases} \frac{W_{NS,i}}{\sum_{ESG \text{ metrics} > \text{Threshold}} W_{NS,i}} \times C_k, & ESG \text{ Metrics} > \text{Threshold} \\ 0, & ESG \text{ Metrics} < \text{Threshold} \end{cases}$$

C_k can be computed the same way as previously described in model 1. However, the formula is based on the negative screening benchmark, for this model, instead of the initial benchmark. The same comment applies to $-W_{Best-in-class}$ - as well.

Then, the “ESG effect” can be obtained as follow:

$$ESG \text{ Effect} = R_{ESG} - R_{NS} = \sum_{Securities} CR_{NS \text{ to } ESG,i} = \sum_{Sectors} CR_{NS \text{ to } ESG,k}$$

$$CR_{NS \text{ to } ESG,i} = (w_{ESG,i} \times r_{B,i} - w_{NS,i} \times r_{B,i})/100$$

$$CR_{NS \text{ to } ESG,k} = (w_{ESG,k} \times r_{ESG,k} - w_{NS,k} \times r_{B,k})/100$$

After having computed the Screening and the “ESG effect”, investors and asset managers would be able to determine the active return emerging from their strategy. Whether the result will be a positive difference meaning that a good ESG performance has favoured better returns than the initial benchmark or on the opposite, it will result in a negative difference emerging from bad ESG benchmark’s performances.

In conclusion, these models were built to measure the impact of our decisions on an investment universe, especially when the threshold of securities inclusion depends on the attachment of the investor or asset manager to the ethical cause.

Although these models have used different strategies, both methodologies directly influence the investment universe through the integration of ESG criteria. Furthermore, we have

presented two approaches in order to measure the return coming from the integration of ESG constraints.

The first model assumed that restrictions were based on a required minimum ESG score. The second model offers a limitation of the eligible universe through the inclusion of investors or managers' preferences. Therefore, these approaches have allowed managers and investors to include their expectations in their investment strategies. In fact, these are based solely on indisputable criteria (e.g. gambling and controversial weapons) and allow to obtain a standard index that can serve as a standard benchmark for many investors.

5. Conclusion

To conclude, we are at the dawn of a new turning point in the financial world. The reality is that new emerging phenomena are impacting the society in general and more particularly, the investment aspect. The emergence of these new trends implies profound transformations within our society's performance vectors.

New organisms and models are emerging to meet the needs of consumers, investors and organizations. Meanwhile, we are at the beginning of the test phase and many contradictions are still present in the literature and in practice. Questions regarding the mandatory or non-mandatory aspect of CSR or the different methodologies used to determine companies' ESG performance are examples of such conflicts.

Everything is still to be built, but much progress has already been made, notably with the emergence of rating agencies that follow their methodology based on companies' data, financial statements, interviews, etc. These agencies allow companies to evaluate themselves and improve their deficiencies from an ethical point of view. On the other hand, these agencies enable investors to meet their new expectations. Indeed, one of the major trends we are currently facing is the change in stakeholders' behaviour which accord increasing importance on the ethical aspect throughout their consumer journey or decision-making authority. Meanwhile, we need to stay critical when using these ratings since these differ a lot between agencies.

In this view, we see that investors are becoming less tolerant regarding ESG incidents and are demonstrating a growing willingness to act. More studies are emphasizing potential benefits from ESG investment and agencies are now succeeding to measure what was considered as unmeasurable, despite the application of certain non-negligible assumptions (e.g. fungibility and commensurability).

Literature review: the link between extra-financial and financial performances

The consideration of ESG factors within companies is not new. Nevertheless, there seems to be an increasing attention devoted to the benefits that these factors can generate as a result of their incorporation into the business model. The literature on the subject is growing in abundance. Although, results differ between the different researches.

In particular, some researches tend to investigate the relationship between good ESG performances and the returns that may result from it. It appears that most of these find a positive impact on the financial performance arising from a good extra-financial performance.

In fact, in 2015, Friede, Busch and Bassen made a review study from over 2,200 academic studies that tackled the link between ESG criteria and the financial performance of companies. They found out that around 90% of these studies discovered a non-negative relation between ESG criteria and the corporate financial performance (CFP), meaning that ESG and CFP are not negatively correlated. On top of that, a majority of these studies even speaks of a positive link which appeared to be stable over time. In addition, S&P Global (2020) also made a review from over 2,000 studies regarding the impact of ESG considerations on the return while investing. It resulted that in 90% of the studies, this strategy allowed an average or above-average return for investors.

Another empirical study realised by Clark, Feiner and Viehs (2015) showed that for over 200 researches made in this area, 90% were convinced of a positive link between ESG activities and stock returns. The authors continued by mentioning that ESG indicators such as board diversity and human capital development were positively correlated to company performance measures as the operating income and cost of capital. Indeed, ESG factors (e.g. carbon emissions) cannot be denied any more considering the growing attention, in terms of regulation and social pressure, arising from the threats (e.g. climate change) (Verheyden, Eccles and Feiner, 2016). Accordingly, ESG factors, if they are well managed, could benefit the company in the long-run (Escrig-Olmedo & al., 2014; Dillenburger, Greene & Erikson,

2003). Also, it appears that ESG universes maintain a real correlation with initial benchmarks and foster positively the achievement of both managerial and financial performance vectors (Eccles, Ioannou & Serafeim, 2014).

Then, Haanaes & al. conducted a study in 2012 among 4,000 managers. Two-third of them believed that sustainability is a necessity to stay competitive in the market and a third of the respondents mentioned that sustainability was contributing to the benefit of the company. Moreover, these respondents were convinced of the growing importance accorded to sustainability in the future. According to Eccles, Ioannou and Serafeim (2014), companies that are more committed to sustainable development achieve higher equity returns than companies that have made less effort in this regard. These statements continually praise many tests and studies to confirm them. Indeed, for many, it is not only a deep belief in sustainable development but also a future opportunity that cannot be denied.

Finally, Verheyden, Eccles and Feiner (2016), carried out a study over five years to determine whether an asset manager is at a disadvantage when starting with an investment universe compliant with ESG criteria compared to an investment universe not affected by ESG criteria. Results provide no evidence that ESG screening (e.g. Best-In-Class) affect negatively the returns as they were even slightly higher. In fact, ESG screening provided 0,16% more returns annually compared to the non-screening universe.

Some other specialists do not emphasize the positive return that an ESG investing strategy might provide. For instance, Swiss Re (as cited in Banque Cantonale Vaudoise, 2018), one of the biggest institutional investors from Switzerland has found in its portfolios that an ESG investment strategy or an ESG index does not provide additional returns over a non-ESG index.

The same observation has been made by El Khamlichi (2019). In fact, he made a comparison of profitability between the S&P 500 and its socially responsible counterpart (S&P 500 Environmental and Socially Responsible) over a period of about six years (2010-2016) and found that the returns were globally similar between the two indices.

Finally, Halbritter & Dorfleitner (2015) also wanted to study the impact on the return of integrating ESG constraints while investing by using ESG data from ASSET4,

Bloomberg and KLD for the US market between 1991 and 2012. They observed that there were no return differences between high and low ESG rated companies.

Given these results, it seems that there is no broad consensus regarding whether or not there is a positive link between extra-financial and financial performances. It is therefore difficult to draw some conclusions. Indeed, even if a majority of the studies seem to demonstrate the existence of a positive link, for another part of the literature reviewed, this positive link does not exist. It can then be understood that SRI may allow to over-perform the market, or at least, would not negatively impact the portfolio's performance, giving people an attractive reason to integrate social and environmental factors while investing. However, it would take the SRI away from its intrinsic logic if the only purpose is to generate higher returns (Capelle-Blancard & Petit, 2013).

Meanwhile, it appeared that the existing literature emphasizes the fact that environmental, social and governance factors allow the reduction of the long-term risk. In fact, it seems that incorporating ESG constraints helps to reduce risk, and thus the volatility of investments. For instance, as cited in Banque Cantonale Vaudoise (2018), Swiss Re, who mentioned that there were no higher returns provided through SRI, confirms that the risk arising from ESG investments will not increase compared to a non-ESG index as the volatility is considered as lower. Another example that can be given is the one of Sudha (2015) who compared the volatility of the S&P ESG India Index (the sustainability index of India) with two broad market index (the Nifty and the CNX 500) and found out that the first one was less volatile. Verheyden, Eccles and Feiner (2016) came to the same conclusion as they affirm: "from a risk perspective, we find volatility...to be lower than for the unscreened universe". In fact, the latter explain that ESG efficient companies are less likely to suffer from a severe negative daily return.

Besides, as explained by de Salies (n.d.), the greater the volatility of a company, the greater the risk that the latter lose more value during a crisis period. Therefore, we can deduct that low-rated ESG companies should lose more value than high-rated ESG companies during a period of fall in stock prices as the first ones have a more significant volatility.

We then decided to investigate whether some academics have tried to specifically analyse the impact of extra-financial performance on financial performance in times of crisis.

We managed to find two articles from academics that tackled the relation between both performances during market crises. The first one, from Nofsinger & Varma (2014), affirms that “compared to matched conventional mutual funds, socially responsible mutual funds outperform during periods of market crises. This dampening of downside risk comes at the cost of underperforming during non-crisis periods”. The second one, from Lins, Servaes & Tamayo (2017), analysed the relation between both performances during the 2008 financial crisis. The authors explain that:

“during the 2008–2009 financial crisis, firms with high social capital, as measured by corporate social responsibility (CSR) intensity, had stock returns that were four to seven percentage points higher than firms with low social capital. High-CSR firms also experienced higher profitability, growth, and sales per employee relative to low-CSR firms...” (Lins, Servaes & Tamayo, 2017).

We can conclude that the two studies we found on the subject seem to be in line with the expectations we have. However, since the literature does not seem to be abundant on this subject, we also decided to study the impact of extra-financial performance on financial performance in times of crisis.

Empirical part

1. Introduction

As we saw previously, attitudes in society are changing. More and more pressure is put on companies by stakeholders (e.g. shareholders and governments) to act more responsibly. In fact, the rise of SRI is an illustration of this trend with investors who are only willing to invest in companies that have integrated ESG constraints within their core values and global strategy.

The main goal for investors is to support companies that have a positive impact on society while meeting their personal expectations. Speaking of expectations, these might be linked to greater returns which could occur from investing in companies performing well from an extra-financial perspective.

In fact, lots of studies have been published regarding the presence of a positive link between the integration of ESG constraints within an investment strategy and the return associated with it. However, there is no broad consensus among the literature. According to some, there is in fact a positive link but for others, we can only talk of a non-negative link.

In addition, it seems that an ESG investment strategy would not increase the risk of the portfolio as it will even reduce its volatility.

For these different reasons, we asked ourselves the following question: **“How does a sub-index, composed solely of ESG leaders, manages to perform in terms of return compared to its initial market index during a crisis period?”**

Indeed, in the event of a fall in prices, the greater the volatility of the security, the greater the risk that it will lose value. We can then expect a greater return for our ESG leaders sub-index as the volatility should be lower for the companies that will compose the latter, as explained in the literature review.

In order to answer the question, we will divide our empirical analysis into different sections. Firstly, we will build our reference sample by gathering several initial data. In the data

description section, we will thus describe and analyse our initial benchmark while explaining how we constructed our ESG leaders sub-index (ESG benchmark).

In the second section, we will apply the model of Grégoire P. explained in the fourth section of the theoretical part. In fact, the latter “makes it possible to attribute the return associated with the integration of ESG constraints into portfolio management” (Grégoire, 2019). In other words, it will allow us to measure the difference of profitability between both benchmarks by computing the “ESG effect”.

Finally, we will conclude by giving the results of our research. Moreover, we will provide a deeper analysis of our results through financial ratios and statistical tests.

2. Data description

a. Initial benchmark

For the seek of our thesis, we needed to select an index that will serve for the construction of the ESG benchmark and for the comparison of returns between both. We decided to choose the S&P 500 as our reference index. The S&P 500 is a stock market index composed of the 500 largest companies listed on the US stock exchanges, which are the NYSE and the NASDAQ (Cafe de la Bourse, n.d.).

To be more precise, there are even 505 components within the S&P 500. Indeed, some companies have two share classes. For example, Alphabet (parent company of Google) has class A (GOOGL) and class B (GOOG) shares in the index.

Our choice can be explained by several reasons. First, as the latter is composed of many companies (505 securities), it allows to decrease the influence of companies doing extremely good or bad on our analysis. A second reason is the accessibility of the data. In fact, with the Covid-19 crisis, we were not able to get access to a Bloomberg terminal. We thus had to find the weights and historical data of each asset online, which was possible by using the S&P 500 as our initial benchmark. A third and final reason is also linked to the accessibility of the data. In fact, the ESG rating provider we use in our research (MSCI) does not provide a rating for each company. As a reminder, MSCI provides a rating for 8,300 companies (or more precisely 13,500 issuers including subsidiaries) of different sizes and from different countries. However, we have noticed that it is easier to find a rating when the company is American and of significant size.

In addition to the rating, MSCI also provides the industry in which the company belongs to. As a matter of fact, MSCI classifies companies into 69 industries in order to give an industry-based rating. These 69 industries can be clustered in 11 sectors using the Global Industry Classification Standard (GICS) which was designed by MSCI and S&P in 1999.

We decided to divide the S&P 500 companies according to the 11 sectors given by MSCI and S&P. This allowed us to have a significant number of companies by sector. In fact,

if we had divided the index into 69 industries, there would sometimes have been only one or two companies per industry, which is not very relevant for our analysis.

However, for five companies, we could not allocate them to an industry. In fact, the ESG rating agency does not provide an industry as it does not provide an ESG rating. For these five assets, we directly used the sectors given by Yahoo Finance.

Moreover, in order to compute the “ESG effect”, we needed to collect the share prices for the research period. As explained earlier, we decided to focus our analysis during a crisis period. Therefore, we decided to extract the share prices of the 505 assets covering the Covid-19 crisis period on a weekly basis. In the end, we obtained 15 weekly share prices for each asset, from the 17th of February until the 25th of May 2020, which will allow us to compute the return on 14 periods or weeks.

We have taken the share prices available on Yahoo Finance. On the website, we could extract the weekly closing prices or the weekly adjusted closing prices. We decided to base our analysis on the adjusted closing prices. In fact, it appears that:

“an adjusted closing price will include any adjustments that need to be made to the price. The adjustments made are to compensate for anything that could have affected the stock’s value, such as a corporate action. The corporate actions can include dividends or stock splits. The adjustment made to the closing price will display the true price of the stock or security because certain outside factors could have altered the true price.” (Corporate Finance Institute, 2020).

Meanwhile, we did not manage to find the prices for two enterprises which are Carrier Global Corporation and Otis Worldwide Corporation. In fact, these two companies arise from the split of United Technologies Corporation that occurred on the 4th of April 2020. This separation was accompanied by the initial public offering of the two companies on the 3rd of April 2020 (Le Monde du Droit, 2020).

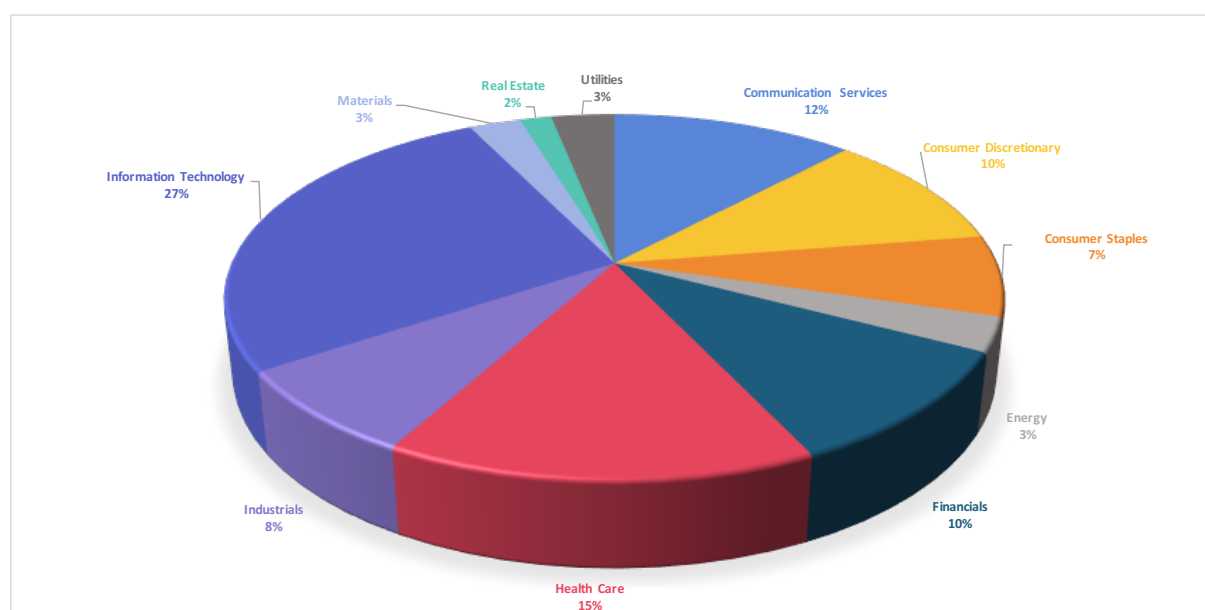
Finally, we needed to determine the weight of each security within the index and we managed to find those on Slickcharts (2020).

However, for the two companies with missing data, we decided to set their weight to 0%. Therefore, we were forced to recalculate the weight of the 503 remaining securities, for the

total weight of the benchmark to be equal to 100%. To do so, we divided each asset weight by the sum of the 503 remaining assets' weight (99,8428%) and multiplied each by 100. Therefore, we considered the new weights as our initial weights.

Thanks to the data collected, we were able to provide a sectorial split of the S&P 500. **Figure 2** illustrates this sectorial allocation on the date of May 25th, 2020:

Figure 2: S&P 500 sectorial distribution



Source: Personal realisation

An important consideration that needs to be taken into account is that we assumed the weight of each asset (and therefore of each sector) as constant during the whole period of our analysis. In fact, it allows to simplify the application of the model.

Finally, we would also like to point out that the lack of access to Bloomberg terminals (due to Covid-19) has made the data collection process more complicated. Indeed, this controversy led us to collect the prices of the 505 companies manually, one by one, while reworking the Excel sheets to establish our final list. This constraint, therefore, limited our analysis in the sense that the time we took to collect these data could have been used, for instance, to study daily adjusted closed prices (instead of weekly) or to increase the period of our analysis.

b. ESG benchmark

I. MSCI ESG Research

We have described MSCI's operations all along with our theoretical part, mainly to give a proper overview of its activities and processes but also because we decided to consider their ESG ratings as a reference in order to determine companies' ESG performance.

We can cite several reasons why we chose the MSCI agency. The first one, the most important in order to put our research into practice, is the accessibility to ESG ratings. As a matter of fact, MSCI's website provides ESG ratings for many companies and in particular the ratings for our initial sample, the S&P 500. This was not the case for some other agencies where the ratings remain private provided you have a subscription. Secondly, we can not overlook the fact that MSCI is a reputable agency in its area. In 2019, SustainAbility, a sustainability advisory services company, published its annual review of "Rating the Raters" aiming to influence and improve the quality and transparency of corporate sustainability ratings. In this report, MSCI was ranked second after Sustainalytics, in terms of quality and usefulness. Moreover, the MSCI agency has been voted as the best for SRI and Governance research from 2015 to 2019 by The Extel & SRI Connect Independent Research in Responsible Investment (IRRI) survey (MSCI, 2020). Today, MSCI is perceived as one of the leading rating agencies and it was already the case several years ago according to SustainAbility's analysis. The third reason is the clarity of explanations and processes given by MSCI. This can relate to the accessibility aspect. In fact, MSCI delivers a high level of clearness and transparency that allows us to assimilate and interpret the information in the most efficient way.

In order to apply the models described in the theoretical part, we had to look at the ESG ratings provided by MSCI to establish our ESG benchmark. MSCI based its ESG ratings by focusing on the most relevant ESG factors per industry. For example, some criteria may be given more emphasis than others in the financial sector and vice versa in the pharmaceutical sector. In this view, MSCI's evaluation criteria are split into 10 thematics which gather in total an amount of 37 key issues. The environmental and social issues are rated according to industry-specific criteria while the governance aspect will be treated the same way among industries as it is considered as a universal aspect. The repartition of the 37 key issues among specified thematics is described below (MSCI, 2020).

Environment aspect

Climate Change

- **Carbon Emissions:** this issue evaluates whether companies may face increased costs due to carbon pricing or regulations.
- **Product Carbon Footprint:** this issue evaluates the potential for higher production costs for carbon-intensive products and their ability to reduce the carbon footprint in their supply chain.
- **Financing Environmental Impact:** this issue evaluates potential credit or reputational risks companies may face from indirect exposure to the environmental concerns facing borrowers.
- **Climate Change Vulnerability:** specific to insurance companies, this issue evaluates the risks to insured assets or individuals posed by the physical effects of climate change.

Natural Resources

- **Water Stress:** this issue evaluates companies' exposure to and preparedness for potential water shortages, which may affect their ability to operate, their access to markets in the case of stakeholder water conflicts, or their water costs.
- **Biodiversity & Land Use:** this issue evaluates the potential for liabilities associated with pollution, contamination, and the emission of toxic or carcinogenic substances.
- **Raw Material Sourcing:** this issue evaluates the reputational risk companies may incur by sourcing or utilizing raw materials with high environmental impacts.

Pollution & Waste

- **Toxic Emissions & Waste:** this issue evaluates the potential for liabilities associated with pollution, contamination, and the emission of toxic or carcinogenic substances.
- **Packaging Material & Waste:** this issue evaluates the potential for lost market access or compliance costs related to new regulations on product packaging and end-of-life recycling or disposal.
- **Electronic Waste:** this issue evaluates exposure to and preparedness for regulatory risks associated with recycling or disposal of end-of-life electronic products.

Environmental Opportunities

- **Opportunities in Clean Technology:** this issue evaluates a company's cleantech innovation capacity, strategic development initiatives, and revenue generation.
- **Opportunities in Green Building:** this issue evaluates companies' efforts to take advantage of opportunities to develop or refurbish buildings with green property initiatives.
- **Opportunities in Renewable Energy:** this issue evaluates companies' efforts to take advantage of opportunities linked to developing renewable power production.

Social aspect

Human Capital

- **Labor Management:** this issue evaluates the potential for workflow disruptions due to labour unrest or reduced productivity due to poor job satisfaction.
- **Health & Safety:** this issue evaluates the potential for employee accidents that can lead to production disruptions, litigations, and liabilities.
- **Human Capital Development:** this issue evaluates companies' capacity to attract, retain and develop their human capital.
- **Supply Chain Labor Standards:** this issue evaluates the potential for reputational risks or production disruptions due to substandard treatment of workers in the company's supply chain.

Product Liability

- **Product Safety & Quality:** this issue evaluates the potential for liabilities associated with pollution, contamination, and the emission of toxic or carcinogenic substances.
- **Chemical Safety:** this issue evaluates the potential for lost market access or product reformulation costs due to the presence of chemicals of concern in company products.
- **Financial Product Safety:** this issue evaluates the potential for unanticipated credit losses, litigations, or regulatory changes related to financial products that lack transparency or are unsafe to the end-user.

- **Privacy & Data Security:** this issue evaluates the potential for regulatory risks, cost increases or reputational damages from a data breach or controversial use of personal data.
- **Responsible Investment:** this issue evaluates the extent to which companies may face potential competitive disadvantages in attracting ESG-related assets.

Stakeholder Opposition

- **Controversial Sourcing:** this issue evaluates the potential for regulatory risks, reputational damages, or supply chain disruptions due to sourcing raw materials from areas associated with human rights and labour abuses.

Social Opportunities

- **Access to Communications:** this issue evaluates companies' efforts to take advantage of opportunities for growth in communication products and services in developing countries and underserved markets (e.g. rural and elderly).
- **Access to Finance:** this issue evaluates companies' efforts to take advantage of opportunities for growth in financial products and services in developing countries and underserved markets (e.g. rural and small businesses).
- **Access to Health Care:** this issue evaluates the potential for liabilities associated with pollution, contamination, and the emission of toxic or carcinogenic substances.
- **Opportunities in Nutrition & Health:** this issue evaluates companies' efforts to take advantage of growth opportunities in the market for healthier products.

Governance aspect

Corporate Governance

- **Board:** Is there misalignment between managers and shareholders?
- **Pay:** Are the right compensation incentives in place for executives?
- **Ownership:** Is there a controlling shareholder or unusual voting rights?
- **Accounting:** Do the company's financial statements properly reflect the state of the business?

Corporate Behaviour

- **Business Ethics:** this issue determines if companies' rules, principles, and standards are morally right or wrong.
- **Anti-Competitive Practices:** this issue claims that legal or natural monopolies should not abuse their position by imposing anti-competitive clauses in their provision of stock market data or it should not result in global or regional financial products becoming in breach of local market rules, regulations or other restrictions.
- **Tax Transparency:** this issue evaluates the level of corporate tax transparency and fights erosion in the tax base.
- **Corruption & Instability:** this issue evaluates the potential for liabilities associated with pollution, contamination, and the emission of toxic or carcinogenic substances.
- **Financial System Instability:** this issue evaluates the potential for unanticipated credit losses, litigations, or regulatory changes related to financial products that lack transparency or are unsafe to the end-user.

II. Construction

The first step in order to build our ESG benchmark was to determine the ESG rating of each company in the S&P 500. We, therefore, used the ratings provided by MSCI and integrated these into our excel.

Once the importation of data into our excel was made, we were able to construct our ESG benchmark. We decided to keep companies rated “AA” and “AAA”. By doing so, we applied a “Best-in-class” strategy. In fact, companies in this range are considered as ESG “Leaders” by MSCI. We decided to not take into consideration the companies rated “A”, which are “Average”, in order to be more selective. In fact, taking companies rated “A” would have slim down the effect of excellent ESG performance. Hence, companies listed in our ESG benchmark are only leaders in terms of ESG integration.

In addition, we have noticed that the existing sustainable sub-indexes generally do not include more than 30% of the companies of their respective initial index (MSCI World SRI includes 25% of the companies of the MSCI World, Stoxx Global ESG Leaders includes 24% of the companies of the Stoxx Global 1800 Index and the Dow Jones Sustainability World Index

includes 10% of the S&P Global Broad Market Index companies). However, we noted that if we had included companies rated “A” and above, our ESG benchmark would have consisted of 209 out of the 505 stocks, or 41% of the original index. Yet, we believe that this percentage is too high to make a meaningful comparison between an index composed of the best companies in terms of ESG and the initial index.

Furthermore, we removed businesses having controversial practices by applying a “negative screening” strategy. In this way, we excluded companies that MSCI have clustered in the following industries: casinos & gaming, tobacco and oil & gas. In fact, there is a broad consensus in the literature regarding the exclusion of these industries from sustainable indexes.

In **Table 5** is displayed the number of companies composing the initial index (S&P 500) and the number of companies considered in the sub-index (ESG benchmark). The latter are classified according to their respective sectors.

Table 5: Sectorial repartition within the initial and the ESG benchmarks

Sectors	Initial benchmark		ESG benchmark		
	$W_{B,k}$	# Companies	Weight eligible ESG	# Companies	$W_{ESG,k}$
Communication Services	12,03	29	3,4381	2	12,03
Consumer Discretionary	10,48	60	1,3495	8	10,48
Consumer Staples	7,14	32	3,4064	10	7,14
Energy	3,01	26	0,0535	2	3,01
Financials	10,28	67	1,2718	8	10,28
Health Care	15,14	61	1,9917	12	15,14
Industrials	7,60	71	1,6961	14	7,60
Information Technology	27,05	75	11,5768	18	27,05
Materials	2,57	29	0,4167	4	2,57
Real Estate	1,56	27	0,3657	3	1,56
Utilities	3,13	28	1,3580	9	3,13
Total	100	505	26,9242	90	100

Source: personal realisation

The construction of our ESG benchmark resulted in the selection of 90 enterprises out of 505. In other words, this represents around 18% (or more precisely 17,82%) of the original benchmark. This percentage is consistent with what we said earlier regarding the share of companies generally listed in sustainable indexes. Another observation we can make is that there exists no equal distribution between sectors. In fact, the number of companies retained differs from a sector to another. For instance, 18 companies from the information technology

sector are included in the ESG benchmark (representing 24% of the number of companies from the initial benchmark) while only two from the communication services sector meet the criteria for eligibility (representing 6,90% of the number of companies from the initial benchmark).

After having applied ESG rules to every company from the initial benchmark, we ended up with a new eligible ESG universe for investment. We, therefore, computed all the weights of the retained assets $-\sum_{i \in ESG \text{ Universe}} W_{B,i}$ - and the total represents around 27% (precisely 26,92%) of the S&P 500's weight, i.e., the sum of the excluded assets' weight is equal to 73,08%.

3. Methodology

a. Model application

This section is dedicated to the application of the model we described in the “ESG investment strategies models” section. For further details about our constructed database, we provide in **Appendix 1**, a list gathering the 505 enterprises’ names, their respective ESG rating, their weight, their sector and industry as well as the evolution of stock prices for the period observed.

The first step, in order to apply the model, was to identify the ESG ratings given by MSCI. Using the “Best-in-class” strategy including companies from “AA” to “AAA”, we were able to identify companies that are eligible for our ESG benchmark. For example, in the energy sector, ESG “Leaders” are highlighted in green in **Table 6**. In this way, we can see that there exist four eligible companies registered in this sector. All of the other companies rated lower were excluded from the eligible investment universe, meaning that their weight is equal to “0” in the ESG benchmark.

The second step was to check on companies involved in controversial activities. In fact, we applied a “negative screening” approach. Out of the four eligible companies rated “AA” or “AAA”, we saw that two of them are part of the oil & gas industry. In this case, we are talking about ConocoPhillips and Hess Corporation. Just as for the best-in-class step, we addressed a weight of “0” for these two ineligible companies. This step is represented by the two orange boxes in **Table 6**.

Table 6: S&P 500 “Energy” sector, assets’ initial weight and ESG weight

Sector "Energy"							
Company	Rating	Sector	Industry	$W_{B,k}$	(1)	$W_{Best-in\ class,k}$	$W_{ESG,k}$
Exxon Mobil Corporation	BBB	Energy	Integrated Oil & Gas	0,7710	0,00	0,00	0,00
Chevron Corporation	BBB	Energy	Integrated Oil & Gas	0,7117	0,00	0,00	0,00
ConocoPhillips	AA	Energy	Oil & Gas Exploration & Production	0,1963	0,00	0,00	0,00
Phillips 66	BBB	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,1404	0,00	0,00	0,00
EOG Resources Inc.	BB	Energy	Oil & Gas Exploration & Production	0,1245	0,00	0,00	0,00
Kinder Morgan Inc Class P	BB	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,1217	0,00	0,00	0,00
Valero Energy Corporation	BBB	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,1107	0,00	0,00	0,00
Schlumberger NV	BBB	Energy	Energy Equipment & Services	0,1010	0,00	0,00	0,00
Williams Companies Inc.	BB	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,0960	0,00	0,00	0,00
Marathon Petroleum Corporation	BB	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,0951	0,00	0,00	0,00
Pioneer Natural Resources Company	BB	Energy	Oil & Gas Exploration & Production	0,0631	0,00	0,00	0,00
ONEOK Inc.	A	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,0607	0,00	0,00	0,00
Occidental Petroleum Corporation	BB	Energy	Integrated Oil & Gas	0,0521	0,00	0,00	0,00
Hess Corporation	AA	Energy	Oil & Gas Exploration & Production	0,0501	0,00	0,00	0,00
Concho Resources Inc.	B	Energy	Oil & Gas Exploration & Production	0,0464	0,00	0,00	0,00
Halliburton Company	BBB	Energy	Energy Equipment & Services	0,0431	0,00	0,00	0,00
Baker Hughes Company Class A	AAA	Energy	Energy Equipment & Services	0,0410	0,0410	0,1524	2,3092
Cabot Oil & Gas Corporation	B	Energy	Oil & Gas Exploration & Production	0,0311	0,00	0,00	0,00
Diamondback Energy Inc.	B	Energy	Oil & Gas Exploration & Production	0,0283	0,00	0,00	0,00
Noble Energy Inc.	BBB	Energy	Oil & Gas Exploration & Production	0,0198	0,00	0,00	0,00
Marathon Oil Corporation	BBB	Energy	Oil & Gas Exploration & Production	0,0196	0,00	0,00	0,00
Devon Energy Corporation	BBB	Energy	Oil & Gas Exploration & Production	0,0195	0,00	0,00	0,00
National Oilwell Varco Inc.	A	Energy	Energy Equipment & Services	0,0189	0,00	0,00	0,00
HollyFrontier Corporation	BB	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,0188	0,00	0,00	0,00
Apache Corporation	BBB	Energy	Oil & Gas Exploration & Production	0,0184	0,00	0,00	0,00
TechnipFMC Plc	AA	Energy	Energy Equipment & Services	0,0125	0,0125	0,0464	0,7025
Total				3,0117	0,0535	0,1988	3,0117

Note: numbers have been restricted to four decimals to improve the understanding and presentation. Therefore, the results presented in the table can slightly differ from their true value.

Source: personal realisation

In this specific sector, we only integrated two companies into our ESG benchmark (Baker Hughes Company and TechnipFMC Plc). Originally, the energy sector is composed of 26 businesses. In the S&P 500 index, the energy sector’s weight - $W_{B,k}$ - is equal to 3,01%.

We wanted to keep the same sectorial weight in our ESG benchmark as it allows to keep sectorial allocation neutral (Grégoire, 2019).

We therefore firstly recalculated the weight of the eligible securities within the sector - $W_{Best-in-class,k}$ - . This step helps us to identify the weight of a specific eligible security within the ESG benchmark by dividing the asset’s weight - $W_{B,i}$ - over the total weight of the retained assets (26,92%) - $\sum_{i \in ESG\ Universe} W_{B,i}$ - . Therefore in the following formula, either the assets’ weight - $W_{B,i}$ - is going to be equal to the initial benchmark weight or will be attributed a “0”, as is it not part of the eligible assets (column (1) in Table 6).

$$W_{Best-in-class,k} = \sum \frac{W_{B,i}}{\sum_{i \in ESG \text{ Universe}} W_{B,i}}$$

$$W_{Best-in-class, Baker Hughes} = \frac{0,0410}{0,2692} = 0,1524$$

with,

$$W_{Best-in-class, Energy} = \frac{0,0410}{0,2692} + \frac{0,0125}{0,2692} = 0,1988$$

In second, we reallocated the weights of the non-eligible securities within this sector in order to equalize the initial sectorial weight (3,01%). In this view, we can compute the weight of the assets in the ESG index - $W_{ESG,k}$ - as follow:

$$W_{ESG, Baker Hughes} = 0,1524 \times \frac{3,0117}{0,1988} = 2,3092$$

The sum of the eligible assets' weight in this sector is now equalizing the weight of the initial sectorial weight.

Then, we reproduced this approach for the next 10 sectors (see **Appendix 2**). With this method, we were able to compute the new weights attributed to the 90 assets listed in our ESG benchmark. Therefore, the sum of the weights of the 90 assets is equal to 100% in the ESG benchmark.

It is important to mention that even though we have made a strategy of negative screening, we have kept the weight of the sectors unchanged. Indeed, contrary to the second model presented by Grégoire, we have eliminated industries (subsets within sectors) and not entire sectors from our ESG benchmark.

After we estimated the weights, we focused on the computation of companies' returns on a weekly basis. We considered discrete returns. The calculation of returns in between two weeks stands for a period of time (e.g. P1 and P2). We, therefore, ended up with 14 periods of analysis out of 15 weekly share prices (see **Appendix 3** for all sectors).

Table 7: S&P 500 “Energy” sector, assets’ returns based on stock prices

Sector "Energy"														
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Exxon Mobil Corporation	-0,1301	-0,0729	-0,2007	-0,1409	0,1286	0,0610	0,1001	0,0021	0,0118	-0,0135	0,0704	-0,0905	0,0825	0,0195
Chevron Corporation	-0,1437	0,0212	-0,1249	-0,2880	0,1580	0,0921	0,1225	0,0339	-0,0019	0,0280	0,0674	-0,0661	0,0125	0,0307
ConocoPhillips	-0,1714	-0,0638	-0,3077	-0,1448	0,0900	0,1250	0,0556	0,0151	0,0235	0,0845	0,1006	-0,0417	0,0590	-0,0254
Phillips 66	-0,1612	-0,0743	-0,2155	-0,1107	0,0821	-0,0134	0,1919	-0,0324	0,0168	0,0964	0,1611	-0,0795	0,0917	0,0235
EOG Resources Inc.	-0,1475	-0,1258	-0,3707	0,0026	0,0318	0,1082	0,1234	-0,0664	0,0456	0,0279	0,1544	-0,0733	0,0965	-0,0251
Kinder Morgan Inc Class P	-0,1342	0,0085	-0,2358	-0,1639	0,1129	-0,0244	0,1449	-0,0252	-0,0231	-0,0042	0,0727	-0,0332	0,0384	0,0253
Valero Energy Corporation	-0,2009	-0,0477	-0,2090	-0,2253	0,1650	-0,1042	0,2417	0,0333	0,0143	0,1192	0,1219	-0,1083	0,1350	0,0146
Schlumberger NV	-0,1885	-0,1197	-0,3225	-0,1165	-0,0360	0,0380	0,1529	-0,0721	0,0540	-0,0225	0,1464	-0,1166	0,1023	0,0504
Williams Companies Inc.	-0,1149	-0,0840	-0,0935	-0,2523	0,2064	-0,0187	0,2154	0,0898	0,0111	0,0148	0,0496	-0,0365	0,0474	0,0397
Marathon Petroleum Corporation	-0,1900	-0,1744	-0,3634	-0,2395	0,2216	-0,1335	0,2772	-0,0067	0,0120	0,1350	0,1297	-0,0825	0,1738	0,0046
Pioneer Natural Resources Company	-0,1368	-0,1438	-0,3277	-0,1261	0,1115	0,0878	0,0189	0,0152	0,0107	0,0706	0,0853	-0,0792	0,1154	-0,0089
ONEOK Inc.	-0,1342	-0,0825	-0,4981	-0,3272	0,0130	0,0335	0,3122	0,0346	-0,0587	0,0437	0,1213	0,0338	0,1176	0,0135
Occidental Petroleum Corporation	-0,2226	-0,1797	-0,4691	-0,2608	0,1349	0,1197	0,1815	-0,1126	0,0132	0,1035	-0,0144	-0,0799	0,0224	-0,0835
Hess Corporation	-0,1280	-0,1150	-0,2977	-0,1143	0,1088	-0,0150	0,2047	-0,0750	0,1368	0,0429	0,0949	-0,0910	0,0688	0,0079
Concho Resources Inc.	-0,1430	-0,1448	-0,1919	-0,1347	0,0381	0,1347	0,1040	-0,0152	0,0222	0,0684	0,0338	-0,0715	0,0289	-0,0235
Halliburton Company	-0,2025	-0,2294	-0,4470	-0,2937	0,2653	0,1909	0,0788	-0,0767	0,1689	0,1016	0,0963	-0,0822	0,1802	0,0138
Baker Hughes Company Class A	-0,2164	-0,0006	-0,2083	-0,2146	0,1883	-0,1244	0,2364	0,0134	0,0295	0,0211	0,0953	-0,0829	0,0985	0,1051
Cabot Oil & Gas Corporation	-0,1301	-0,0471	-0,0858	-0,3469	0,1882	0,0371	0,1796	-0,0270	0,0156	0,0517	0,0206	-0,1044	0,1772	0,0427
Diamondback Energy Inc.	-0,1885	-0,2168	-0,4366	-0,3163	0,2839	0,3235	0,1035	-0,0958	0,1351	0,1258	0,0446	-0,0784	0,1176	-0,0084
Noble Energy Inc.	-0,1184	-0,1583	-0,4605	-0,4393	0,3308	0,1533	0,2139	-0,0748	0,1775	0,0735	0,1427	-0,1339	0,1649	-0,1356
Marathon Oil Corporation	-0,1769	-0,1751	-0,3367	-0,2141	-0,0112	0,0369	0,1288	0,0558	0,1333	0,1156	0,0509	-0,0294	0,0499	-0,0934
Devon Energy Corporation	-0,2255	-0,1767	-0,3492	-0,2938	0,0345	0,3323	0,1539	-0,0465	0,1410	0,0599	0,1390	-0,0591	0,0159	-0,1096
National Oilwell Varco Inc.	-0,1939	-0,1617	-0,3511	0,0059	-0,0128	-0,0209	0,1777	0,0060	0,0300	-0,0266	0,1274	-0,1266	0,0495	0,0314
HollyFrontier Corporation	-0,2107	-0,1505	-0,2082	-0,0165	0,0885	-0,0771	0,1803	0,0226	0,0573	0,0616	0,0294	-0,1390	0,1336	0,0442
Apache Corporation	-0,1225	-0,1694	-0,6100	-0,4012	0,0062	0,1052	0,5261	0,0342	0,2600	0,0582	0,1037	-0,1478	0,1470	-0,1134
TechnipFMC Plc	-0,1247	-0,1507	-0,4335	-0,1173	0,1280	0,0302	0,1715	-0,0333	-0,0123	0,0312	-0,0423	-0,1768	0,1058	0,0264

Note: numbers have been restricted to four decimals to improve the understanding and presentation. Therefore, the results presented in the table can slightly differ from their true value.

Source: personal realisation

In **Table 7**, we computed all the returns by using the following formula, which is the formula to compute discrete returns:

$$R_{(t-1,t)} = \frac{P_t}{P_{t-1}} - 1 \quad t \in 1 - 14$$

P = Prices from P_0 (17th of February) to P_{14} (25th of May).

Here, we provide an example with Baker Hughes for the first period (P1):

$$R_{P1,Baker\ Hughes} = \frac{15,9}{20,29} - 1 = -0,2164$$

After having determined the returns for each asset, we could compute the returns per sector by multiplying the return of each security (see table above for the energy sector) by its weight. **Table 8** shows the result for the “energy” sector.

Table 8: S&P 500 “Energy” sector, assets’ weighted returns

Sector “Energy”	S&P 500 - Initial Benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Exxon Mobil Corporation	-0,1003	-0,0562	-0,1548	-0,1087	0,0991	0,0470	0,0772	0,0016	0,0091	-0,0104	0,0543	-0,0698	0,0636	0,0150
Chevron Corporation	-0,1023	0,0151	-0,0889	-0,2050	0,1125	0,0655	0,0872	0,0242	-0,0013	0,0199	0,0480	-0,0470	0,0089	0,0218
ConocoPhillips	-0,0337	-0,0125	-0,0604	-0,0284	0,0177	0,0245	0,0109	0,0030	0,0046	0,0166	0,0198	-0,0082	0,0116	-0,0050
Phillips 66	-0,0226	-0,0104	-0,0303	-0,0155	0,0115	-0,0019	0,0269	-0,0046	0,0024	0,0135	0,0226	-0,0112	0,0129	0,0033
EOG Resources Inc.	-0,0184	-0,0157	-0,0461	0,0003	0,0040	0,0135	0,0154	-0,0083	0,0057	0,0035	0,0192	-0,0091	0,0120	-0,0031
Kinder Morgan Inc Class P	-0,0163	0,0010	-0,0287	-0,0200	0,0137	-0,0030	0,0176	-0,0031	-0,0028	-0,0005	0,0088	-0,0040	0,0047	0,0031
Valero Energy Corporation	-0,0222	-0,0053	-0,0231	-0,0249	0,0183	-0,0115	0,0267	0,0037	0,0016	0,0132	0,0135	-0,0120	0,0149	0,0016
Schlumberger NV	-0,0190	-0,0121	-0,0326	-0,0118	-0,0036	0,0038	0,0155	-0,0073	0,0055	-0,0023	0,0148	-0,0118	0,0103	0,0051
Williams Companies Inc.	-0,0110	-0,0081	-0,0090	-0,0242	0,0198	-0,0018	0,0207	0,0086	0,0011	0,0014	0,0048	-0,0035	0,0046	0,0038
Marathon Petroleum Corporation	-0,0181	-0,0166	-0,0346	-0,0228	0,0211	-0,0127	0,0264	-0,0006	0,0011	0,0128	0,0123	-0,0078	0,0165	0,0004
Pioneer Natural Resources Company	-0,0086	-0,0091	-0,0207	-0,0080	0,0070	0,0055	0,0012	0,0010	0,0007	0,0045	0,0054	-0,0050	0,0073	-0,0006
ONEOK Inc.	-0,0081	-0,0050	-0,0302	-0,0198	0,0008	0,0020	0,0189	0,0021	-0,0036	0,0027	0,0074	0,0021	0,0071	0,0008
Occidental Petroleum Corporation	-0,0116	-0,0094	-0,0244	-0,0136	0,0070	0,0062	0,0094	-0,0059	0,0007	0,0054	-0,0008	-0,0042	0,0012	-0,0043
Hess Corporation	-0,0064	-0,0058	-0,0149	-0,0057	0,0054	-0,0008	0,0102	-0,0038	0,0068	0,0021	0,0047	-0,0046	0,0034	0,0004
Concho Resources Inc.	-0,0066	-0,0067	-0,0089	-0,0062	0,0018	0,0062	0,0048	-0,0007	0,0010	0,0032	0,0016	-0,0033	0,0013	-0,0011
Halliburton Company	-0,0087	-0,0099	-0,0193	-0,0127	0,0114	0,0082	0,0034	-0,0033	0,0073	0,0044	0,0042	-0,0035	0,0078	0,0006
Baker Hughes Company Class A	-0,0089	0,0000	-0,0085	-0,0088	0,0077	-0,0051	0,0097	0,0005	0,0012	0,0009	0,0039	-0,0034	0,0040	0,0043
Cabot Oil & Gas Corporation	-0,0041	-0,0015	-0,0027	-0,0108	0,0059	0,0012	0,0056	-0,0008	0,0005	0,0016	0,0006	-0,0033	0,0055	0,0013
Diamondback Energy Inc.	-0,0053	-0,0061	-0,0123	-0,0089	0,0080	0,0091	0,0029	-0,0027	0,0038	0,0036	0,0013	-0,0022	0,0033	-0,0002
Noble Energy Inc.	-0,0023	-0,0031	-0,0091	-0,0087	0,0065	0,0030	0,0042	-0,0015	0,0035	0,0015	0,0028	-0,0026	0,0033	-0,0027
Marathon Oil Corporation	-0,0035	-0,0034	-0,0066	-0,0042	-0,0002	0,0007	0,0025	0,0011	0,0026	0,0023	0,0010	-0,0006	0,0010	-0,0018
Devon Energy Corporation	-0,0044	-0,0034	-0,0068	-0,0057	0,0007	0,0065	0,0030	-0,0009	0,0028	0,0012	0,0027	-0,0012	0,0003	-0,0021
National Oilwell Varco Inc.	-0,0037	-0,0031	-0,0066	0,0001	-0,0002	-0,0004	0,0034	0,0001	0,0006	-0,0005	0,0024	-0,0024	0,0009	0,0006
HollyFrontier Corporation	-0,0040	-0,0028	-0,0039	-0,0003	0,0017	-0,0015	0,0034	0,0004	0,0011	0,0012	0,0006	-0,0026	0,0025	0,0008
Apache Corporation	-0,0023	-0,0031	-0,0112	-0,0074	0,0001	0,0019	0,0097	0,0006	0,0048	0,0011	0,0019	-0,0027	0,0027	-0,0021
TechnipFMC Plc	-0,0016	-0,0019	-0,0054	-0,0015	0,0016	0,0004	0,0021	-0,0004	-0,0002	0,0004	-0,0005	-0,0022	0,0013	0,0003
Total	-0,4540	-0,1951	-0,7001	-0,5832	0,3792	0,1669	0,4191	0,0031	0,0605	0,1030	0,2572	-0,2262	0,2131	0,0403

Note: numbers have been restricted to four decimals to improve the understanding and presentation. Therefore, the results presented in the table can slightly differ from their true value.

Source: personal realisation

Therefore, in **Table 8**, the return of “Baker Hughes” for the first period is equal to -0,0089%, considering its weight in the initial benchmark. By summing securities’ weighted returns within a period, we obtained the return per sector for the initial benchmark. Therefore, the return of the energy sector for the first period (P1) is equal to -0,4540.

$$R_{B,k} = \sum_{i \in k} w_{B,i} \times r_{B,i}$$

$$R_{B, \text{ Baker Hughes}} = 0,0410 \times (-0,2164) = -0,0089$$

$$R_{B, \text{ Energy}} = \sum_{i \in \text{Energy}} w_{B,i} \times r_{B,i} = -0,4540$$

By using the same approach, we could obtain the returns per sector for the ESG benchmark this time (see **table 9**). However, we must consider the new weights that we have computed for the ESG benchmark instead of using the initial weights, as explained by this formula:

$$R_{ESG,k} = \sum_{i \in k} w_{ESG,i} \times r_{B,i}$$

$$R_{ESG, Energy} = (2,3092 \times (-0,2164)) + (0,7025 \times (-0,1247)) = -0,5872$$

Table 9: ESG benchmark “Energy” sector, assets’ weighted returns

Sector “Energy”	ESG benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Baker Hughes Company Class A	-0,4996	-0,0015	-0,4810	-0,4956	0,4347	-0,2872	0,5458	0,0309	0,0681	0,0488	0,2200	-0,1915	0,2275	0,2427
TechnipFMC Plc	-0,0876	-0,1059	-0,3046	-0,0824	0,0900	0,0212	0,1205	-0,0234	-0,0087	0,0219	-0,0297	-0,1242	0,0743	0,0185
Total	-0,5872	-0,1073	-0,7856	-0,5780	0,5247	-0,2660	0,6664	0,0075	0,0595	0,0707	0,1903	-0,3157	0,3019	0,2612

Note: numbers have been restricted to four decimals to improve the understanding and presentation. Therefore, the results presented in the table can slightly differ from their true value.

Source: personal realisation

After using the same methodology for every sector, we obtained the returns per sector for both initial and ESG benchmarks (respectively **Appendix 4** and **5**).

By doing so, we were able to compute the “ESG effect by sector for each period. Once again, we decided to illustrate our computation by providing an example with the first period (P1).

Table 10: First period “ESG effect”

P1							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_{B \text{ to } ESG,k}$
Communication Services	12,0302	12,0302	-1,1215	-1,1752	-0,1349	-0,1414	-0,0065
Consumer Discretionary	10,4771	10,4771	-1,1317	-1,1820	-0,1186	-0,1238	-0,0053
Consumer Staples	7,1356	7,1356	-0,7353	-0,7092	-0,0525	-0,0506	0,0019
Energy	3,0117	3,0117	-0,4540	-0,5872	-0,0137	-0,0177	-0,0040
Financials	10,2795	10,2795	-1,3451	-1,4269	-0,1383	-0,1467	-0,0084
Health Care	15,1436	15,1436	-1,5857	-1,1991	-0,2401	-0,1816	0,0586
Industrials	7,6039	7,6039	-0,8841	-0,7072	-0,0672	-0,0538	0,0135
Information Technology	27,0521	27,0521	-2,9732	-2,6361	-0,8043	-0,7131	0,0912
Materials	2,5714	2,5714	-0,3250	-0,2997	-0,0084	-0,0077	0,0007
Real Estate	1,5626	1,5626	-0,2044	-0,2222	-0,0032	-0,0035	-0,0003
Utilities	3,1324	3,1324	-0,3541	-0,3539	-0,0111	-0,0111	0,0000
Total	100	100	-1,5922	-1,4509	-1,5922	-1,4509	0,1413

Source: personal realisation

In **Table 10**, it can be seen that we first computed the total return of both initial and ESG benchmarks, as well as the contribution of each sector to the total returns.

The contribution of each sector is computed by multiplying its weight with the return the latter provided during the period.

$$CR_{B,k} = \frac{w_{B,k} \times R_{B,k}}{100}$$

$$CR_{ESG,k} = \frac{w_{ESG,k} \times R_{ESG,k}}{100}$$

We illustrated once again our calculation with the Energy sector.

$$CR_{B, Energy} = -0,0137 = \frac{3,0177 \times (-0,4540)}{100}$$

$$CR_{ESG, Energy} = -0,0177 = \frac{3,0177 \times (-0,5872)}{100}$$

By summing the contribution of each sector to the total return of both initial and ESG benchmarks, we could determine the total return of both benchmarks for the first period (P1). Therefore, the total return of the initial and ESG benchmarks is equal to -1,5922% and -1,4509% respectively for this period.

We were finally able to measure the “ESG effect” for the first period. In order to do so, we used the following formula.

$$ESG\ Effect = R_{ESG} - R_{NS}$$

$$ESG\ Effect = (-1,45) - (-1,59) = 0,14$$

For the energy sector,

$$CR_{B\ to\ ESG, Energy} = (-0,0177) - (-0,0137) = -0,0040$$

Therefore, the “ESG effect” is equal to 0,14 for the first period, which means that integrating ESG constraints within an investment strategy provides 0,14% of return in addition to what a classic investment strategy would have given during this period.

The same formula was applied to measure the contribution of each sector within the total “ESG effect”. In the case of the Energy sector, the latter is equal to -0,0040%. Therefore, the two companies from the sector that perform better from an ESG perspective provided a slightly lower return than the initial sector in its whole, which is composed of 26 companies.

We used the same methodology for every sector. Therefore, the total “ESG effect” for a period is equal to the sum of the sectorial “ESG effects” from this period.

b. Results

Once we determined the “ESG effect” for the first period, we also computed it for the 13 other periods by using the same methodology (see **Appendix 6**). In this way, we were able to draw some conclusions. Our final results are described in the table below.

Table 11: “ESG effect” per period

Sectors	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Communication Services	-0,0065	-0,0341	0,0032	0,0054	-0,0323	-0,0046	-0,0029	0,0259	-0,0039	0,0201	0,0209	0,0057	-0,0269	0,0042
Consumer Discretionary	-0,0053	0,0377	-0,0206	-0,1316	0,1244	-0,0298	0,0039	-0,0571	0,0074	0,0410	0,0247	0,0157	-0,0311	0,0083
Consumer Staples	0,0019	-0,0015	0,0021	-0,0129	0,0095	0,0018	-0,0038	0,0009	-0,0019	0,0014	0,0003	0,0013	-0,0062	-0,0020
Energy	-0,0040	0,0026	-0,0026	0,0002	0,0044	-0,0130	0,0074	0,0001	0,0000	-0,0010	-0,0020	-0,0027	0,0027	0,0067
Financials	-0,0084	0,0158	0,0241	-0,0040	0,0212	0,0216	-0,0314	0,0193	-0,0030	0,0187	0,0158	0,0228	-0,0122	-0,0154
Health Care	0,0586	0,0071	-0,0093	0,1279	-0,0235	0,0286	-0,0970	0,0283	-0,0091	0,0012	0,0158	0,0037	-0,0178	-0,0079
Industrials	0,0135	0,0100	0,0204	-0,0001	-0,0216	0,0170	-0,0085	-0,0002	0,0016	-0,0044	0,0013	0,0033	-0,0116	-0,0017
Information Technology	0,0912	-0,1095	0,0243	0,1747	-0,0586	0,1123	-0,0968	0,1237	-0,0552	-0,0934	-0,0107	0,0623	-0,0806	-0,0213
Materials	0,0007	0,0010	0,0015	-0,0009	-0,0005	-0,0012	0,0004	0,0000	0,0003	0,0002	0,0004	0,0006	0,0002	0,0006
Real Estate	-0,0003	-0,0002	0,0009	0,0011	0,0008	0,0014	-0,0009	0,0005	0,0004	-0,0013	0,0002	0,0001	-0,0003	0,0000
Utilities	0,0000	0,0008	-0,0011	0,0009	0,0003	0,0015	-0,0018	-0,0001	0,0002	-0,0007	-0,0003	-0,0010	0,0005	0,0012
Total	0,1413	-0,0704	0,0429	0,1606	0,0242	0,1356	-0,2314	0,1412	-0,0634	-0,0183	0,0662	0,1119	-0,1834	-0,0274

Source: personal realisation

Table 11 provides the “ESG effect” by sector for each period. Therefore, the line “Total” gives us the total “ESG effect” for each period and can be obtained by summing the sectorial “ESG effects” of the respective period, as explained above.

We decided to provide a chart (**Figure 3**) to give a better overview of the evolution of “ESG effect” over time.

Figure 3: “ESG effect” over time



Source: personal realisation

On the latter, it can be seen that out of 14 periods, integrating ESG constraints resulted six times in a lower return and height times in a higher return compared to the initial benchmark.

We also wanted to determine the total “ESG effect” over all 14 periods. However, we could not have computed it by only summing the “ESG effects” by period. In fact, the discrete returns provided by a security across the periods are not additive. Therefore, to calculate the results over several periods, a standard chaining methodology has to be used.

Indeed, as explained by Hauptmann (2015), the total return that an index provided over several periods can be computed as follow:

$$R_{(0,t)} = \prod_{t=0}^{T-1} (1 + R_{(t-1,t)}) - 1$$

In our case,

$$R_{(period)} = \prod_{t=0}^{T-1} (1 + R_{(period)}) - 1 = \left((1 + R_{(P1)}) \times (1 + R_{(P2)}) \times \dots \times (1 + R_{(P14)}) \right) - 1$$

Therefore, by computing the multi-period returns, we can determine the total “ESG effect” over the global period observed.

Table 12: Returns of S&P 500 and ESG benchmark with the total “ESG effect”

Period	$R_{S\&P\ 500}$	$R_{ESG\ Index}$	$CR_{B\ to\ ESG,k}$
P1	-1,5922	-1,4509	0,1413
P2	0,1605	0,0902	-0,0704
P3	-0,9548	-0,9119	0,0429
P4	-2,0982	-1,9376	0,1606
P5	1,5094	1,5335	0,0242
P6	-0,2327	-0,0971	0,1356
P7	1,6811	1,4498	-0,2314
P8	0,6354	0,7766	0,1412
P9	-0,1240	-0,1874	-0,0634
P10	-0,0075	-0,0258	-0,0183
P11	0,6751	0,7413	0,0662
P12	-0,2175	-0,1056	0,1119
P13	0,4534	0,2700	-0,1834
P14	0,3635	0,3362	-0,0274
	0,1802	0,4193	0,2392

Source: personal realisation

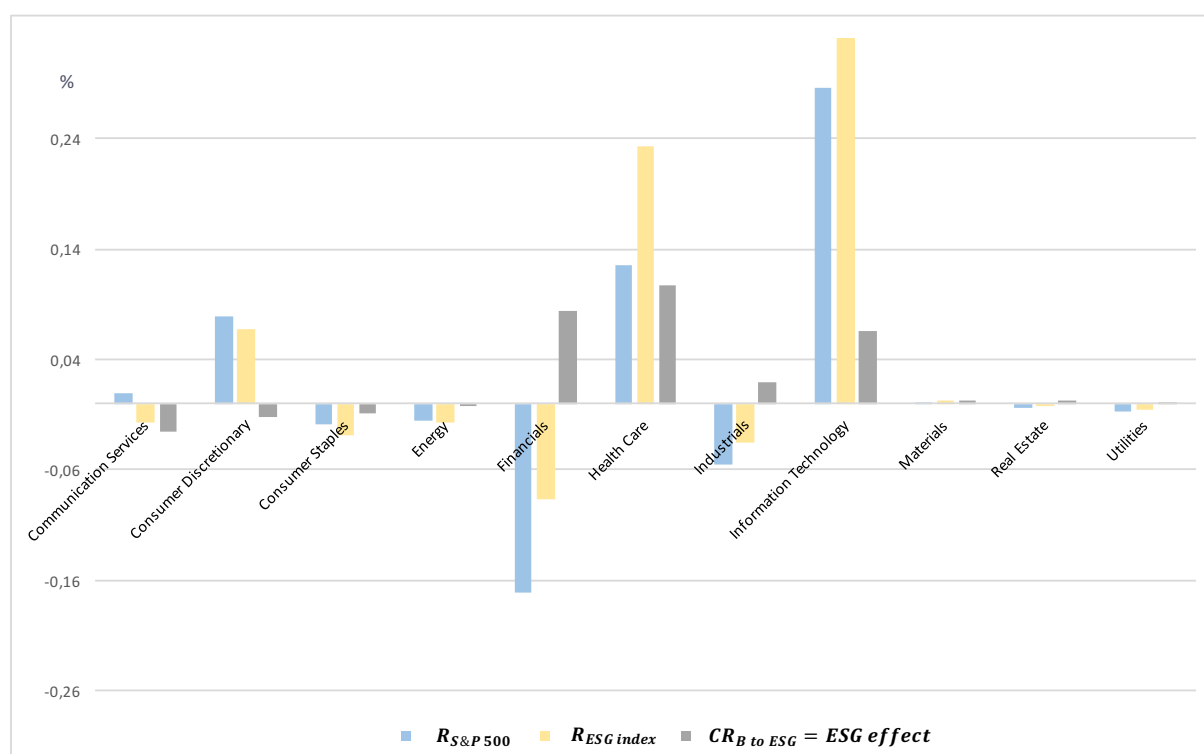
Using the data in **Table 12** and the formula described previously, we computed the total return of both benchmarks across the 14 periods. These are respectively equal to 0,1802%¹ and 0,4193% for the S&P 500 and the ESG sub-index, which means that the ESG sub-index provided a superior return than the initial benchmark.

Finally, we calculated the total “ESG effect” by subtracting the return of the initial benchmark - R_B - from the one of the ESG benchmark - R_{ESG} -. The final “ESG effect” is then equal to 0,2392%. Therefore, we can say that the ESG benchmark provided us with 0,2392% more return compared to the initial benchmark, the S&P 500.

We also used the standard chaining methodology in order to assess the contribution of each sector in the total “ESG effect”. Based on **Appendix 6**, we were able to illustrate this with the following chart (**Figure 4**). Our computation can be found in **Appendix 7**.

¹ We would like to mention the fact that the total return of our initial benchmark, obtained by following Grégoire's method, does not correspond to the return of the S&P 500 index that can be found on stock exchange platforms. Indeed, we used a weighted sum of the returns of the securities whereas the measurement of the performance of a stock market index as a whole is much more complex.

Figure 4: “ESG effect” per sector

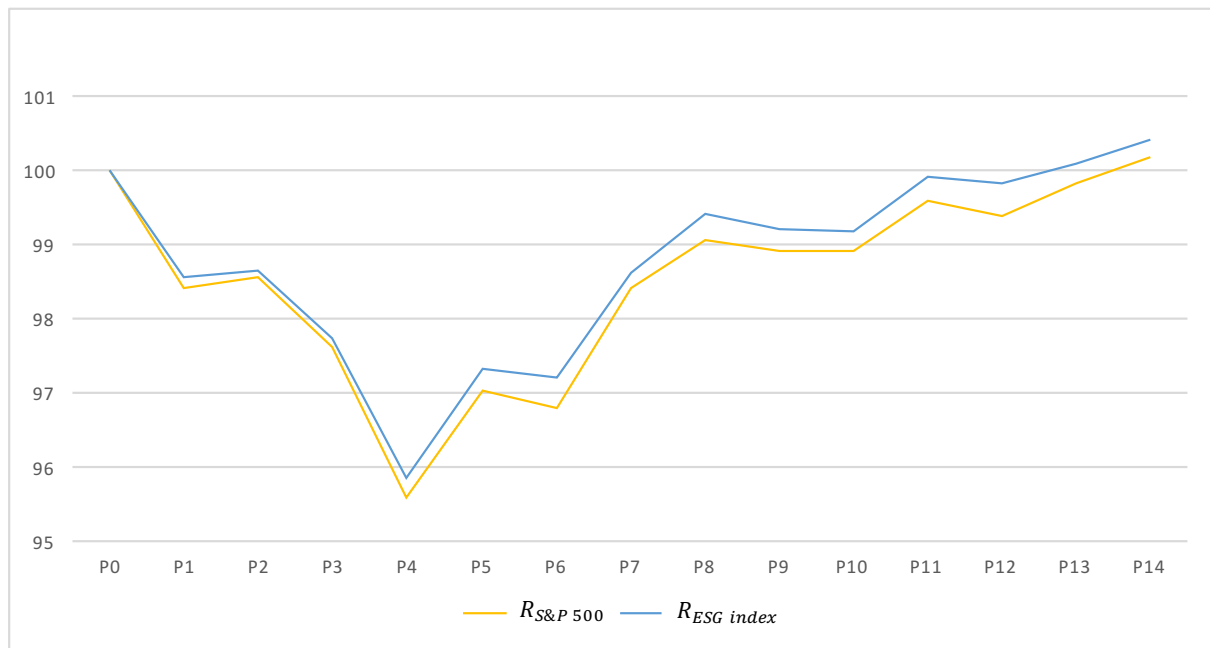


Source: personal realisation

Thus, we observe that we obtained a negative “ESG effect” for four sectors (which are Communication Services, Consumer Discretionary, Consumer Staples and Energy). For the seven others, the “ESG effect” is positive. Moreover, what is striking is that almost half of the difference in profitability occurs in the Health Care sector.

Figure 5 represents the evolution of benchmarks’ returns by period. It shows the difference of performance between benchmarks and therefore, the evolution of the “ESG effect” over time. We, therefore, supposed an original investment of 100. As we can see, for the first four weeks i.e. from the 17th of February to the 16th of March, returns were declining considerably to hit rock bottom. Meanwhile, even if the decrease was operating in both indexes, the ESG index outperformed the S&P 500 for the entire observation period. The curves show a bigger difference in performance when we consider the recovering period, more precisely after the fourth week (P4).

Figure 5: S&P 500 and ESG index cumulative returns: comparison



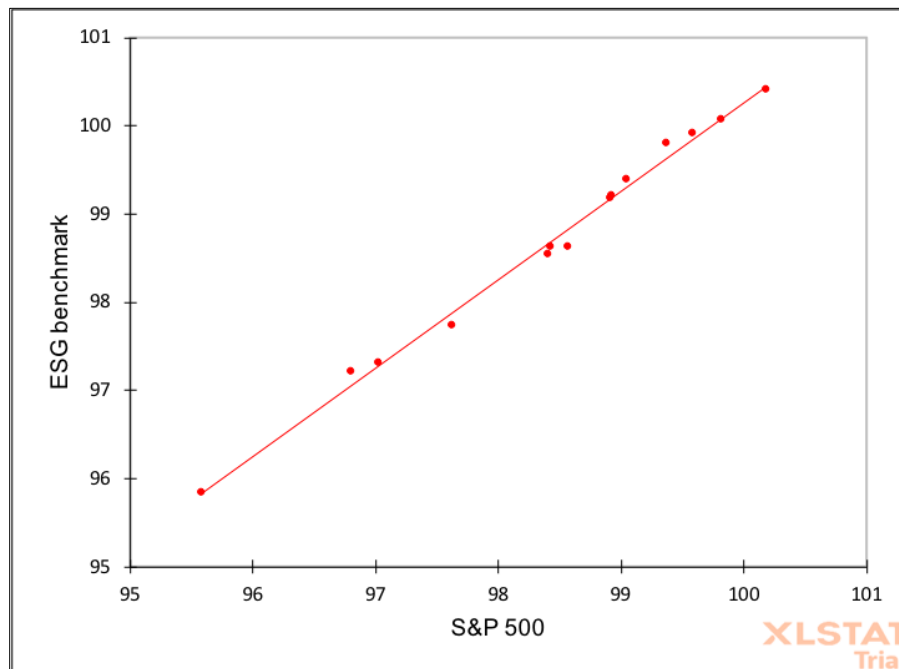
Source: personal realisation

Based on the graph above, we have calculated the level of correlation between the two cumulative returns curves. To calculate this correlation, we used XLSTAT, which is an extension of Excel. Using the program, we obtained a correlation of 0,997, which implies that the indices react almost the same way week after week and thus produce very similar returns.

Correlation matrix (Pearson):

Variables	S&P 500	ESG benchmark
S&P 500	1	0,997
ESG benchmark	0,997	1

The correlation can also be represented by this graph:



As we can see, the dots are following the red line, representing the trending curve and it can be seen that the latter indicates a positive correlation closed to 1.

The slight difference can be explained, among others, by the fact that the ESG index is composed of less volatile assets. In fact, as explained earlier, the volatility of the returns provided by companies performing well, from an ESG perspective, is lower. We then decided to compute the volatility of returns of both benchmarks in order to confirm this hypothesis.

We used the following formula:

$$\sigma(x) = \sqrt{V(x)} = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n}}$$

$\sigma(x)$ = volatility (standard deviation)

$V(x)$ = Variance

x_i = return for a period

$\bar{x}$ = average returns

n = number of periods

In this way, we obtained volatilities (standard deviations) of 1,0103% for the initial benchmark and 0,9461% for the ESG benchmark (see **Appendix 8**). Therefore, the assumption that the returns produced by the ESG benchmark are less volatile is verified in this case. The difference in rentability can then be partially attributed to the difference of volatility, as explained by de Salies (n.d.).

Once the volatility has been computed for both benchmarks, we were able to measure the Sharpe Ratio. According to the Corporate Finance Institute (2020), the latter allows to “gauge the performance of an investment by adjusting for its risk.” Then, “the higher the ratio, the greater the investment return relative to the amount of risk taken, and thus, the better the investment”. The Sharpe Ratio can be calculated with the following formula:

$$Sharpe Ratio_x = \frac{r - \bar{r}_f}{\sigma} \quad \text{with } x = ESG \text{ index or S\&P 500}$$

$\bar{r}_f$ = average risk-free rate

r = return of the considered benchmark

σ = volatility of the considered benchmark

In order to evaluate the Sharpe Ratio, we needed first to identify the risk-free rate. “The risk-free rate of return is the interest rate an investor can expect to earn on an investment that carries zero risks” (Corporate Finance Institute, 2020) The website Ycharts (2020) affirms that the 10-year maturity treasury rate is often considered by investors as the risk-free rate in the US. We, therefore, computed the mean of the weekly 10-year risk-free rates for the period of our analysis (see **Appendix 9**). The risk-free rate we used for the computation of the Sharpe Ratio was then equal to 0,8633.

In our case, the Sharpe Ratio was negative for both benchmarks with -0,6762% for the initial index and -0,4693% for the sustainable benchmark. Therefore, it shows that the performance when taking risks is lower than the performance when no risks are taken. In other words, a Sharpe Ratio beyond 0% means that the portfolio underperforms a risk-free investment. Meanwhile, its value for the ESG benchmark is superior to the initial one, demonstrating higher returns along with lower risks, due to a lower volatility.

Based on the Sharpe Ratio, we decided to also compute the M^2 . The goal of the Modigliani and Modigliani (M^2) value is to create a portfolio (ESG benchmark) that has the same risk as the market portfolio (S&P 500), and to compare the return of the mimicking portfolio $-R'_{ESG}$ with the market return $-R_{S\&P\ 500}$ (AnalystPrep, 2019).

$$R'_{ESG\ index} = R_f + \sigma_{S\&P\ 500} \times Sharpe\ ratio_{ESG\ index} = R_f + \sigma_{S\&P\ 500} \times \left(\frac{R_{ESG\ index} - R_f}{\sigma_{ESG\ index}} \right)$$

$$M^2 = R'_{ESG\ index} - R_{S\&P\ 500}$$

At equal risk, we obtained a return of 0,3892% for our ESG benchmark, which is higher compared to our market index return (0,1802%). It means that our ESG benchmark outperformed the S&P 500 index as M^2 is equal to 0,2090% (**Appendix 10**).

In addition to the financial ratios we calculated, we decided to analyse our results using descriptive statistics. To do so, we used XLSTAT once again. The results we obtained are described in the table below.

Descriptive statistics	S&P 500	ESG benchmark
Nb. observations	14	14
Minimum	-2,098	-1,938
Maximum	1,681	1,534
Mean	0,018	0,034
Variance (n)	1,021	0,895
Standard deviation (n)	1,010	0,946
Skewness (Pearson)	-0,418	-0,405
Kurtosis (Pearson)	-0,212	-0,288

The first observation we make is that the maximum and minimum values are more extreme in the case of the initial index than in the sustainable index. The higher volatility of the initial index can therefore be explained in particular by the impact of these values on it.

Second, we observe that the average weekly return provided by the ESG benchmark is higher. This makes sense given that the ESG benchmark provided a higher total return than the S&P500 across all 14 weeks.

Finally, we decided to analyse the skewness and kurtosis of the two indices. Indeed, these statistical measures consider the extremes of the data group rather than focusing on the mean of the returns obtained. They are, therefore, relevant to use for an investor with a short-term objective. Indeed, the latter is not likely to hold a sufficiently long position for the average to be established.

Skewness measures the frequency with which highly positive and negative returns occur. We can see that the skewness of both portfolios is negative. This implies that there are frequently small gains and few large losses. This is therefore even more observed in the case of the initial index since the value is smaller.

As far as kurtosis is concerned, the latter is used as a measure of financial risk. The higher the kurtosis, the higher the risk because the probability of extremely low or high returns is high. We observe that the ESG benchmark is less likely to provide extreme returns and is, therefore, less risky.

The results we obtained throughout our analysis and the evolution of companies' stock prices convinced us that the crisis played a major role in the bad performances of both indexes. However, we can still conclude that the results obtained are the results expected. As a matter of fact, it can be seen that it was preferable to invest in companies that perform well from an ESG perspective among all the companies in the S&P 500 as these were less risky and provided a greater return.

However, it must be determined whether the differences in return between the two benchmarks are statistically significant or not. Indeed, without this, we cannot draw any conclusions. Thus, we performed a Student test i.e. analyse the difference in mean between samples, using the XLSTAT program. Given that we expect the returns produced by the ESG index to be higher than those provided by the S&P 500, and that therefore the difference between the mean of the first and the second index will be positive, we decided to simulate a

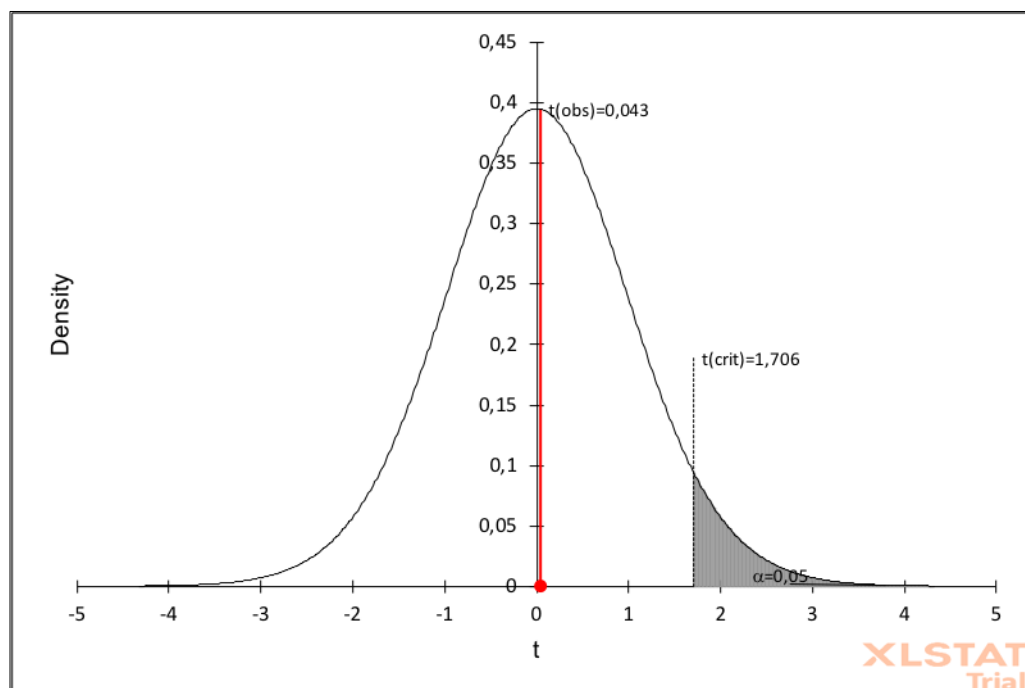
one-tailed right-hand test. The null hypothesis and the alternative hypothesis are therefore as follows:

H_o : The difference between the averages is equal to 0.

H_a : The difference between the averages is greater than 0.

Test t for two independent samples / Right Tailed Test:

Difference	0,016
t (Observed value)	0,043
t (Critical Value)	1,706
DoF	26
p-value (unilateral)	0,483
alpha	0,05



We decided to set the significance threshold at 0,05 (alpha = 5%) as this is the standard threshold. Since we obtained a p-value of 0,483, the latter is, therefore, higher than the significance threshold. This shows that the differences obtained are not statistically significant and that we cannot reject H_o . In other words, we have a 48.3% risk of being wrong in rejecting the null hypothesis (H_o) and accepting the alternative hypothesis (H_1).

We are not too surprised that our p-value is so large. Indeed, as shown above, returns between indices are highly correlated. Moreover, our study is based on only 15 data for each index. A larger number of these data (daily prices or a longer observation period) might have allowed us to draw different conclusions.

Conclusion

Since the objective of our thesis was to measure the impact of companies' extra-financial performance on their stock market performance, we decided to compare the returns that would be generated by an index composed of the 500 largest American companies (S&P 500) with an index that would only include the most sustainable companies from the S&P 500.

Numerous studies have already tried to demonstrate whether or not there is a correlation between the two types of performance. However, the results diverge widely. Even if a majority of these claim that a portfolio composed solely of companies with ethical behaviour would generate higher returns, for others there would be no differences or even lower returns.

Despite these different results, it appears that studies agree on the lower risk provided by ESG investments.

We made the choice to focus our study in times of crisis. Indeed, few studies measuring the correlation between extra-financial and financial performances have been carried out during a stock market crash. Moreover, if sustainable companies are less risky and therefore less volatile, we then expected that an index composed of these would lose less value on financial markets than the initial index, meaning that the former would provide a higher return than the latter.

Thus, we started by creating our ESG benchmark. In this way, we selected only S&P 500 companies rated "AA" or "AAA" by the MSCI rating agency. Subsequently, we calculated the weight of each remaining company (without changing the weight by sector) to make sure that the sum of their weight equals 100%. We were then able to compare the profitability of the two indices.

In the end, the ESG benchmark gave us a positive return of 0,4193% over the 14 weeks studied. As for the S&P 500, it generated a return of 0,1802%. In other words, the ESG index generated a 0,2392% return above the initial benchmark. The results obtained are, therefore, the results we were expecting.

On the other hand, what is quite surprising is that the difference in performance between the two indices became more pronounced from the fourth week onwards. In fact, from that point on, the portfolios started to produce positive returns. It, therefore, appears that the "ESG effect" is greater in periods of market recovery, whereas we thought it would have been greater in periods of crash. We don't know if there are reasons for this, or whether it is simply a matter of chance as nothing is said in the literature about it. However, we note that even in times of recovery, the markets remain unstable because a relapse is possible.

In addition, we wanted to confirm the hypothesis that companies performing well from an ESG perspective are less volatile. We, therefore, calculated the standard deviation for both benchmarks and found that it was lower for the ESG benchmark (0,9461%) than for the initial benchmark (1,0103%).

However, even if the constructed ESG index has slightly higher returns and is less risky than the initial index, we cannot conclude that the former is a better investment than the latter. In fact, the difference between the average returns is not statistically significant.

Besides, we must remain critical about these results. Indeed, the results apply to the case of the Covid-19 crisis for the largest American companies (S&P 500) only. They cannot then be extrapolated to another market or another crisis. However, it would be interesting to perform the same analysis for other markets and crisis periods and observe whether the results obtained are identical. In our case, it would have been very complicated to make a comparison with another crisis (e.g. 2008) or another market (e.g. European) because of the difficulty regarding the access to data. For example, we were not able to find the ESG ratings given to companies in older crises. Also, out of the Stoxx EUROPE 600 companies, only a little more than half of these received a rating from the MSCI agency.

The difficulty to access numerous data is therefore our first limitation. Another difficulty we encountered, which is related to this limitation, is the fact that we had to extract the historical data manually from Yahoo Finance. Indeed, as explained before, we did not have access to the Bloomberg terminals made available to students by the Catholic University of Louvain-la-Neuve during the Covid-19 crisis. For this reason, we extracted only 15 historical data (adjusted closed prices) per company, which already took us an enormous amount of time. This is a very small number to apply statistical testing, but we had no other choices. Therefore,

our statistical analysis, and particularly our significance test, is highly impacted by this low number of data.

Secondly, the decisions regarding the selection of the rating agency and the inclusion threshold with which companies are included in our ESG benchmark are also key elements that influence our results. After our analysis in the theoretical part, it would be wrong to say that the same results would be obtained using another rating agency or a different level of inclusion. It is thus important to remain critical towards these results.

A third limitation is related to our assumption of constant weights over the whole period. Indeed, we would probably have obtained different results if the weights changed each week. We made this assumption to facilitate the application of the model and because we were unable to find the weights of firms for weeks that have already elapsed.

Finally, it is always possible to carry out further researches, by circumventing these limitations for instance, and to analyse other aspects than those mentioned in our thesis. Indeed, there are many phenomena and other concepts that need to be treated in order to deepen the comparison of companies performing better from an ethical and responsible point of view and the other ones. Secondly, we are aware that time cannot be stopped and what is considered true today may not be true tomorrow. Indeed, everything related to CSR is subject to many changes. Some agencies modify the criteria used to determine ESG scores each year to deepen certain issues and/or to be in line with issues considered as urgent. We strongly believe that if we had access to more information and data, we could have carried out an even more in-depth study.

In all cases, regardless of the results obtained in this study, we think that companies should place more emphasis on integrating ESG processes into their business model. Indeed, the trend in the evolution of the SRI but also the changing mindsets show an increasing focus on these factors. This growing attention is already represented by the emergence of new laws and constraints for companies and we firmly believe that this trend tends to increase every day.

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Appendices

Appendix 1: S&P 500, assets' weight, industry, sector and stock prices

Company	Rating	Sector	Industry group	Industry	Weight	Final Weight	17-feb	24-feb	2-march	09-march	16-march	23-march	30-march	06-apr	13-apr	20-apr	27-apr	04-may	11-may	18-may	25-may
Microsoft Corporation	AAA	Information Technology	Software & Services	Software & Services	5,713226	5,722217435	177,61	161,56	161,12	158,39	136,97	149,28	153,4	164,68	178,1	174,07	174,09	184,17	182,65	183	183,25
Apple Inc.	A	Information Technology	Technology, Hardware & Equipment	Technology Hardware, Storage & Peripherals	5,403034	5,411537257	312,2	272,62	288,25	277,22	228,62	247,07	240,76	267,27	282,04	282,21	288,29	309,29	307,71	318,89	317,94
Amazon.com Inc.	BBB	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	4,160286	4,166833429	2 095,97	1 883,75	1 901,09	1 785,00	1 846,09	1 900,10	1 906,59	2 042,76	2 375,00	2 410,22	2 286,04	2 379,61	2 409,78	2 436,88	2 442,37
Facebook Inc. Class A	BBB	Communication Services	Media & Entertainment	Interactive Media & Services	2,273414	2,276991883	210,18	192,47	181,09	170,28	149,73	156,79	154,18	175,19	179,24	190,07	202,27	212,35	210,88	234,91	225,09
Alphabet Inc. Class A	AA	Communication Services	Media & Entertainment	Interactive Media & Services	1,720885	1,723593317	1 483,46	1 339,25	1 295,74	1 214,27	1 068,21	1 110,26	1 092,70	1 206,57	1 279,00	1 276,60	1 317,32	1 384,34	1 373,06	1 413,24	1 433,52
Alphabet Inc. Class C	AA	Communication Services	Media & Entertainment	Interactive Media & Services	1,711823	1,714517055	1 485,11	1 339,33	1 298,41	1 219,73	1 072,32	1 110,71	1 097,88	1 211,45	1 283,25	1 279,31	1 320,61	1 388,37	1 373,19	1 410,42	1 428,92
Johnson & Johnson	BBB	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Pharmaceuticals	1,576443	1,578923995	147,95	132,71	141,05	133,37	119,06	122,31	133,25	140,26	150,97	153,79	147,27	147,68	149,4	143,38	148,75
Berkshire Hathaway Inc. Class B	BB	Financials	Diversified Financials	Diversified Financials	1,397081	1,399279716	229,33	206,34	205,98	196,4	170,06	179,66	178,34	193,84	191,2	186,52	182,67	176,83	169,25	174,93	185,58
Visa Inc. Class A	A	Information Technology	Software & Services	Software & Services	1,332248	1,334344682	208,46	181,46	184,05	175,54	146,58	161,29	151,6	173,4	169,26	167,04	175,28	184,78	183,18	190,86	195,24
JPMorgan Chase & Co.	BB	Financials	Banks	Banks	1,154674	1,156491218	134,41	114,92	106,97	102,84	82,64	90,19	83,19	102,76	95,18	90,71	93,25	92,7	85,9	89,47	97,31
Procter & Gamble Company	AA	Consumer Staples	Household & Personal Products	Household & Personal Products	1,136475	1,138263576	125,86	112,48	120,85	113,31	101,75	109,44	114,32	113,9	123,86	117,99	116,82	115,95	114,61	112,6	115,92
UnitedHealth Group Incorporated	BB	Health Care	Health Care Equipments & Services	Health Care Providers & Services	1,109785	1,111531572	300,13	253,86	282,65	270,87	206,59	242,45	229,49	264,13	290,56	291,29	284,51	287	290,96	289,94	304,85
Intel Corporation	A	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	1,100767	1,102499379	63,98	55,21	55,46	54,12	45,57	52,08	53,83	56,82	60,02	58,93	57,15	59,33	58,28	62,26	62,93
Home Depot Inc.	AA	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	1,072781	1,074469335	243,71	216,39	228,99	204,3	152,15	190,55	178,7	201,53	209,42	212,18	218,57	234,43	239,33	241,88	248,48
Mastercard Incorporated Class A	A	Information Technology	Software & Services	Software & Services	1,066511	1,068189467	339,18	289,8	286,57	269,59	211,09	247,27	236,66	268,98	259,97	258,76	268,74	282,44	278,94	294,91	300,89
Verizon Communications Inc.	BBB	Communication Services	Telecommunication Services	Telecommunication Services	0,911307	0,912741209	57,58	53,58	56,26	53,59	51,25	52,21	54,12	56,83	58,46	57,93	56,83	57	54,71	54,1	57,38
AT&T Inc.	BB	Communication Services	Telecommunication Services	Telecommunication Services	0,887878	0,889275336	37,88	34,61	36,39	33,87	27,96	29,32	26,99	30,2	31,23	29,71	29,9	29,79	28,31	29,88	30,86
NVIDIA Corporation	AAA	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,877051	0,878431297	293,89	269,91	266,04	240,84	205,75	252,73	243,91	262,95	292,32	289,59	282,78	312,5	339,63	361,05	355,02
Walt Disney Company	BBB	Communication Services	Media & Entertainment	Media & Entertainment	0,867082	0,868446608	138,97	117,65	115,27	102,52	85,98	96,4	93,88	104,5	106,63	101,19	105,5	109,16	109,05	118,02	117,3
Pfizer Inc.	B	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Pharmaceuticals	0,841871	0,843195931	35,37	33,09	34,67	32,39	28,72	30,6	33,31	35,04	36,55	37,01	37,27	36,85	37,76	37,5	38,19
Merck & Co. Inc.	A	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Pharmaceuticals	0,79571	0,796962283	81,67	75,93	81,53	76,12	71,36	71,73	76,25	82,49	83,46	81,43	77,67	76,4	79,78	76,37	80,72
Netflix Inc.	B	Communication Services	Media & Entertainment	Media & Entertainment	0,780569	0,781797454	380,07	369,03	368,97	336,3	332,83	357,12	361,76	370,72	422,96	424,99	415,27	435,55	454,19	429,32	419,73
Cisco Systems Inc.	AA	Information Technology	Technology, Hardware & Equipment	Technology Hardware, Storage & Peripherals	0,773171	0,774387811	45,87	39,55	39,31	37,29	35,27	38,46	38,69	41,2	42,48	42,52	40,92	42,99	44,27	44,9	47,82
Exxon Mobil Corporation	BBB	Energy	Energy	Integrated Oil & Gas	0,769756	0,770967437	58,01	50,46	46,78	37,39	32,12	36,25	38,46	42,31	42,4	42,9	42,32	45,3	41,2	44,6	45,47
Bank of America Corp	BB	Financials	Banks	Banks	0,7569	0,758091204	34,14	28,32	25,55	24,16	19,67	21,6	20,03	24,86	23,28	22,18	23,08	23,57	21,44	22,66	24,12
Adobe Inc.	AA	Information Technology	Software & Services	Software & Services	0,755318	0,756506714	372,95	345,12	336,77	335,5	295,34	305,83	293,61	318,7	344,11	344,1	343,84	367,51	365,3	385,26	386,6
PepsiCo Inc.	AA	Consumer Staples	Food, Beverages & Tobacco	Beverages	0,741678	0,742845248	144,87	131,14	136,34	127,45	103,93	120,46	124,59	133,63	137,55	134,36	130,14	134,23	135,95	130,48	131,55
Walmart Inc.	BBB	Consumer Staples	Food & Staples Retailing	Retail - Food & Staples	0,724277	0,725416862	117,54	106,74	116,2	113,1	112,97	109,1	118,96	121,27	131,54	128,87	122,38	122,4	125,94	124,33	124,06
Comcast Corporation Class A	BB	Communication Services	Media & Entertainment	Media & Entertainment	0,721936	0,723072178	45,52	40,17	40,11	39,08	33,15	34,35	33,73	38	38,08	37,16	36,98	36,53	35,92	38,74	39,6
Coca-Cola Company	AA	Consumer Staples	Food, Beverages & Tobacco	Beverages	0,711125	0,712244163	59,61	53,02	54,78	48,05	38,3	42,81	43,83	49	48,06	45,43	45,6	46,11	43,26	45,03	46,68
PayPal Holdings Inc	A	Information Technology	Software & Services	Software & Services	0,710914	0,712032831	119,49	107,99	110,89	110,15	86,68	93,48	92,39	105,84	111,85	120,18	120,61	144,96	145,51	150,86	155,01
Chevron Corporation	BBB	Energy	Energy	Integrated Oil & Gas	0,710548	0,711666255	107,43	91,99	93,94	82,21	58,53	67,78	74,02	83,09	85,91	85,75	88,15	94,09	87,87	88,97	91,7

AbbVie Inc.	A	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Biotechnology	0,669593	0,670646801	93,56	84,45	87,51	84,12	67,81	71,6	72,29	78,58	82,22	83,59	82,84	83,96	90,71	92,1	92,67
Abbott Laboratories	BBB	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,652243	0,653269495	87,08	76,71	81,4	81,31	67,71	74,25	79,12	85,68	95,61	94,06	89,85	93,7	89,89	91,47	94,92
salesforce.com inc.	AAA	Information Technology	Software & Services	Software & Services	0,635003	0,636002363	189,5	170,4	164,08	147,78	139,35	146	134,31	154,55	162,62	153,98	156,37	175,9	171,33	177,85	174,79
Bristol-Myers Squibb Company	A	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Pharmaceuticals	0,585449	0,586370375	65,09	58,58	59,81	54,54	48	52,36	55,07	58,91	60,6	62,25	60,26	61,05	64,09	60,79	59,72
McDonald's Corporation	BB	Consumer Discretionary	Consumer Services	Restaurants	0,569062	0,569957586	213,11	191,68	197,54	175,96	147,51	162,92	159,27	182,48	184,87	182,8	181,45	180,03	172,66	183,19	185,09
Thermo Fisher Scientific Inc.	BB	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,54995	0,550815507	334,68	290,57	310,93	299,89	278,37	274,34	282,21	317,38	331,58	328,7	329,81	333,01	342,92	340,26	349,19
Amgen Inc.	AA	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Biotechnology	0,545568	0,546426611	221,29	198,39	209,23	200,74	186,98	196,94	204,03	216,74	233,39	234,69	229,43	233,24	238,59	226,43	229,7
Costco Wholesale Corporation	BB	Consumer Staples	Food & Staples Retailing	Retail - Food & Staples	0,544942	0,545799626	321,22	280,5	310,63	301,58	289,76	283,68	287,99	299,33	317,2	309,84	301,23	305,94	299,21	302,43	308,47
Eli Lilly and Company	A	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Pharmaceuticals	0,525301	0,526127715	141,37	125,54	140,8	138,72	121,83	133,48	139,01	145,05	156,55	162,17	152,91	152,79	158,48	151,16	152,95
Medtronic Plc	BBB	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,522127	0,52294872	112,58	100,04	98,44	88,27	76,98	89,33	86,27	101,03	103,33	99,3	95,14	99,03	93,89	94,72	98,58
Accenture Plc Class A	AAA	Information Technology	Software & Services	Software & Services	0,501709	0,502498586	210,94	179,78	177,95	165,76	149,27	162,15	151,47	177,12	174,3	175,46	180,09	188,56	183,88	193,71	201,62
NIKE Inc. Class B	A	Consumer Discretionary	Consumer durables & Apparel	Textiles, Apparel & Luxury Goods	0,479522	0,480276668	99,72	88,91	88,14	75,39	67,28	83,02	78,66	86,57	89,69	88,15	85,33	90,23	86,77	93,52	98,33
Union Pacific Corporation	BBB	Industrials	Transportation	Road & Rail Transport	0,463885	0,464615059	179,65	157,99	155,22	143,05	117,18	138,27	137,8	147,9	149,05	155,22	155,77	157,38	150,4	164,24	168,91
Oracle Corporation	BBB	Information Technology	Software & Services	Software & Services	0,462125	0,462852289	54,42	49,23	47,15	47,7	45,43	49,59	49,17	52,93	54,62	53,01	51,79	53,57	52,92	52,62	53,77
NextEra Energy Inc.	AAA	Utilities	Utilities	Utilities	0,457012	0,457731242	274,64	250,07	270,33	220,35	190,7	230,68	220,43	243,94	244,91	238,39	225,81	228,47	226,6	232,57	254,16
Philip Morris International Inc.	BBB	Consumer Staples	Food, Beverages & Tobacco	Tobacco	0,44806	0,448765154	88,06	80,43	85,73	78,1	60,01	69,15	73,46	75,34	77,96	73,67	73,28	72	67,78	70,45	73,36
Broadcom Inc.	B	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,445267	0,445967758	299,41	268,06	264,95	230,31	189,01	230,69	234,26	254,3	265,88	264,81	259,7	275,03	260,41	276,65	291,27
Texas Instruments Incorporated	AA	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,433236	0,433917824	127,52	113,25	112,28	105,22	96,84	99,72	99,2	106,85	112,67	113,05	108,86	115	108,24	113,43	118,74
International Business Machines Corporation	AA	Information Technology	Software & Services	Software & Services	0,430934	0,431612201	147,86	128,43	126,04	106,52	94,13	106,6	104,93	119,89	118,53	123,07	120,26	121,36	116,98	118,39	124,9
Linde plc	BBB	Materials	Materials	Specialty Chemicals	0,42496	0,425628799	217,32	190,12	188,31	176,5	151,3	167,34	162,13	189,48	188,55	181,47	180,33	188,41	182,59	190,87	202,34
American Tower Corporation	A	Communication Services	Telecommunication Services	Telecommunication Services	0,412814	0,413463684	245,98	225,86	245,3	238	194,58	217,57	221,87	258,52	253	244,61	234,2	238,36	229,58	242,43	258,17
Danaher Corporation	BB	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,405037	0,405674444	161,65	144,38	148,22	141,19	123,64	138,39	135,15	145,73	156,53	165,07	160,77	161,43	163,85	158,26	166,61
Honeywell International Inc.	AA	Industrials	Capital Goods	Industrial Conglomerates	0,401879	0,402511474	177,6	160,12	162,83	148,32	111,68	130,31	126,52	142,38	137,31	134,53	136,25	135,91	124,49	139,18	145,85
Citigroup Inc.	BBB	Financials	Banks	Banks	0,401308	0,401939576	75,64	62,79	60,64	50,5	37,66	43,34	37,1	46,91	44,97	42,65	45,04	46,32	41,92	44,1	47,91
Wells Fargo & Company	CCC	Financials	Banks	Banks	0,384543	0,385148191	46,75	40,04	36,35	30,27	25,97	29,68	25,71	32,54	27,81	26,38	27,04	24,92	23,36	24,17	26,47
Gilead Sciences Inc.	AA	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Biotechnology	0,37997	0,380567994	69,06	68,72	79,48	70,1	73,26	72,85	78,21	73,51	83,99	79,64	79,95	77,49	76,26	73,34	77,83
Lowe's Companies Inc.	A	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,377715	0,378309445	124,59	105,95	104,7	95,93	65,98	86,48	81,72	94,76	96,54	98,18	104,46	114,23	113,78	122,25	130,35
Starbucks Corporation	BBB	Consumer Discretionary	Consumer Services	Restaurants	0,376338	0,376930278	86,87	77,99	74,92	69,53	57,7	65,97	62,7	73,46	76,67	75,16	73,38	77,43	74,16	77,62	77,99
Lockheed Martin Corporation	A	Industrials	Capital Goods	Aerospace & Defense	0,374044	0,374632668	422,57	365,35	380,17	326,61	289,47	346,28	348,39	368,77	399,09	379,47	381,16	376,12	358,23	366,78	386,1
QUALCOMM Incorporated	B	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,363837	0,364409604	86,34	77,68	76,86	75,81	60,91	66,59	65,23	71,58	76,17	76,04	75,64	80,56	75,77	78,7	80,88
Raytheon Technologies Corporation	A	Industrials	Capital Goods	Aerospace & Defense	0,358935	0,359499889	94,52	81,46	78,9	65,75	51,48	60,6	49,49	64,14	65,49	62,87	60,57	58,15	52,27	60	64,52
3M Company	AAA	Industrials	Capital Goods	Industrial Conglomerates	0,342633	0,343172233	155,39	147,77	152,14	140,29	123,66	131,93	132,48	146,33	145,02	145,56	147,14	147,05	137,33	145	156,44
Fidelity National Information Services Inc.	BB	Information Technology	Software & Services	Software & Services	0,342516	0,343055049	154,52	139,35	139,54	129,56	102,82	120,1	115,22	125,12	127,96	125,73	129,29	128,23	132,22	136,16	138,83
CVS Health Corporation	BBB	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,336433	0,336962476	70,92	58,69	63,62	59,15	54,25	58,11	55,26	59,97	62,83	61,79	59,7	63,12	63,19	63,33	65,57
Charter Communications Inc. Class A	B	Communication Services	Media & Entertainment	Media & Entertainment	0,330914	0,33143479	535,34	493,17	496,72	454,19	371,7	439,7	433,8	466,64	499,42	508,55	509,64	515,28	503,39	512,9	544
BlackRock Inc.	AA	Financials	Diversified Financials	Asset Management & Custody Banks	0,316493	0,316991094	552,81	459,52	447,02	413,78	354,72	434,34	418,07	471,42	476,87	475,14	484,16	498,78	513,73	513,3	528,64
S&P Global Inc.	A	Financials	Diversified Financials	Diversified Financials	0,310303	0,310791353	291,95	264,73	270,48	247,57	208,34	239,23	238,29	282,94	281,98	283,33	285,45	297,01	302,49	311,19	324,32
Intuit Inc.	AA	Information Technology	Software & Services	Software & Services	0,307828	0,308312458	296,93	265,28	275,58	260,69	201,41	229,2	217,92	251,56	265,36	263,66	261,13	280,36	284,39	287,61	290,32

Boeing Company	BB	Industrials	Capital Goods	Aerospace & Defense	0,303416	0,303893514	330,38	275,11	262,33	170,2	95,01	162	124,52	151,84	154	128,98	133,37	133,44	120	137,53	145,85
Vertex Pharmaceuticals Incorporated	AA	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Biotechnology	0,298823	0,299293286	246,29	224,03	233,5	220,86	206	217,24	238,31	246,61	270,46	269,86	254,9	271,63	288,69	284,96	287,96
ServiceNow Inc.	A	Information Technology	Software & Services	Software & Services	0,29541	0,295874914	344,48	326,09	317,24	287,67	254,7	274	249,57	278,06	299,59	302,94	339,51	377,26	370,46	387,96	387,93
Mondelez International Inc. Class A	BBB	Consumer Staples	Food, Beverages & Tobacco	Food Products	0,290024	0,290480438	58,4	52,49	55,33	50,62	43,06	47,6	50,49	52,34	53,48	51,41	50,7	50,9	49,96	49,7	52,12
Anthem Inc.	BB	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,288504	0,288958046	293,62	256,14	281,14	269,34	191,59	222,96	203,3	242,46	267,82	264,12	269,57	274,33	278,09	277,11	294,11
Cigna Corporation	A	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,287664	0,288116724	217,15	182,9	195,48	179,83	142,09	161,29	163,84	181,83	194,13	188,2	187,09	189,27	190,15	189	197,32
Altria Group Inc	BB	Consumer Staples	Food, Beverages & Tobacco	Tobacco	0,286326	0,286776618	44,66	39,29	41,02	39	33,36	35,66	37,41	40,91	40,85	39,42	37,91	36,74	36,59	37,73	39,05
United Parcel Service Inc. Class B	A	Industrials	Transportation	Air Freight & Logistics	0,278407	0,278845155	100,87	88,67	93,02	93,25	92,49	96,51	89,07	97,67	101,68	99,14	90,95	93,85	90,09	95,72	99,71
Booking Holdings Inc.	BBB	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,27269	0,273119158	1 928,72	1 695,66	1 612,09	1 421,33	1 177,43	1 255,15	1 230,68	1 420,64	1 470,87	1 362,77	1 448,79	1 430,83	1 384,31	1 631,30	1 639,42
TJX Companies Inc	BBB	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,269027	0,269450393	63,31	59,8	58,56	51,57	37,37	46,8	40,96	48,81	49,73	46,05	48,25	48,51	47,17	53,41	52,76
Dominion Energy Inc	A	Utilities	Utilities	Utilities	0,264455	0,264871197	88,41	77,33	86,7	78,29	67,22	73,07	69,55	81,59	81,51	77,92	75,61	78,4	78,22	80,51	85,01
Becton Dickinson and Company	A	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,264199	0,264614795	256,5	237,03	238,33	235,72	220,12	216,58	226,73	247,45	261,4	268,17	251,87	254,48	258,25	239,25	246,93
CME Group Inc. Class A	BBB	Financials	Diversified Financials	Diversified Financials	0,261071	0,261481872	208,01	198,04	215,41	181,29	158,41	171,34	173,74	190,16	191,62	182,72	173,65	181,53	181,07	178,8	182,6
Advanced Micro Devices Inc.	BBB	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,260979	0,261389727	53,28	45,48	48,59	43,9	39,61	46,58	42,59	48,38	56,6	56,18	49,88	53,19	54,2	55,17	53,8
Prologis Inc.	AA	Real Estate	Real Estate	Real Estate Management & Services	0,260416	0,260825841	98,41	83,58	85,17	77,18	62,82	79,17	73,59	91,73	90,22	89,04	86,85	89,97	83,28	87,55	91,5
Intuitive Surgical Inc.	B	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,25761	0,258015425	613,08	533,96	555,14	470,98	394,19	490,41	462,47	503,79	526,33	514,93	498,86	537,77	520,41	562,8	580,03
Caterpillar Inc.	A	Industrials	Capital Goods	Construction & Farm Machinery & Heavy Trucks	0,257491	0,257896238	135,96	123,11	120,31	98,73	94,63	104,48	113,63	123,89	115,24	114,04	110,88	112,11	107,92	112,47	120,13
Crown Castle International Corp	BBB	Communication Services	Telecommunication Services	Telecommunication Services	0,256031	0,25643394	166,75	142,17	159,57	153,88	128,06	136,89	145,62	164,14	167,05	161,61	156,41	157,7	150,14	156,2	172,16
Zoetis Inc. Class A	A	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Pharmaceuticals	0,253655	0,2540542	142	133,01	136,83	125,28	100,78	111,59	114,42	128,54	130,51	125,91	127,53	125,47	127,49	130,11	139,39
American Express Company	AA	Financials	Diversified Financials	Consumer Finance	0,246257	0,246644558	134,15	109,32	107,64	99,05	73,71	88,24	73,19	94,82	87,39	83,17	88,32	89,5	82,22	89,33	95,07
Colgate-Palmolive Company	AA	Consumer Staples	Household & Personal Products	Household & Personal Products	0,246065	0,246452255	75,81	67,16	72,07	68,68	61,7	64,87	67,21	69,49	72,98	71,4	68,53	69,37	68,95	70,75	72,33
Target Corporation	A	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,245534	0,24592042	115,73	102,46	105,39	100,49	96,89	94,24	92,08	103,65	112,82	107,25	107,66	115,22	120,3	116,87	122,33
Duke Energy Corporation	BBB	Utilities	Utilities	Utilities	0,245377	0,245763173	101,25	90,64	97,91	84,78	67,61	79,26	75,14	89,27	89,06	84,7	81,69	80,84	80,25	83,23	85,63
Stryker Corporation	B	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,243446	0,243829134	223,49	189,9	185,21	163,71	138,88	158,65	147,54	182,72	189,51	188,12	180,62	192,08	180,27	184,14	195,73
Fiserv Inc.	BBB	Information Technology	Software & Services	Software & Services	0,24164	0,242020291	119,49	109,36	106,81	103,42	81,77	93,95	86,19	99,22	100,63	96,29	100,25	104,78	100,02	103,93	106,77
Automatic Data Processing Inc.	A	Information Technology	Software & Services	Software & Services	0,235526	0,235896669	177,48	153,79	158,17	143,61	112,06	131,38	128,57	142,52	141,08	139,23	140,42	146	134,85	134,87	146,49
Goldman Sachs Group Inc.	BBB	Financials	Diversified Financials	Investment Banking & Brokerage	0,234488	0,234857036	227,79	198,31	191,65	176,07	137,55	157,36	146,02	183,12	182,35	175,9	176	184,24	170,8	178,81	195,27
Equinix Inc.	AA	Information Technology	Software & Services	Software & Services	0,232311	0,232676609	650,66	568,15	606,23	618,6	504,49	591,88	622,18	684,18	692,16	682,35	668,16	675,44	656,01	667,33	697,63
General Electric Company	A	Industrials	Capital Goods	Industrial Conglomerates	0,231218	0,231581889	12,24	10,87	9,39	7,85	6,52	7,62	6,73	7,14	6,84	6,26	6,5	6,29	5,49	6,41	6,57
Southern Company	AA	Utilities	Utilities	Utilities	0,230602	0,23096492	68,18	59,65	66,09	53,34	45,82	55,36	49,68	59,62	56,8	57,06	53,77	54,76	51,93	54,58	57,07
Activision Blizzard Inc.	BBB	Communication Services	Media & Entertainment	Media & Entertainment	0,226796	0,22715293	62,97	57,75	59,58	58,65	51,71	56,59	59,59	60,06	66,44	66,65	64,72	73,14	73,92	73,08	71,98
Biogen Inc.	A	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Biotechnology	0,224622	0,224975509	336,71	308,39	317,95	305,21	278,77	296,75	300,51	321,05	342,55	297,8	293,09	314,02	316,6	304,53	307,09
Global Payments Inc.	BB	Information Technology	Software & Services	Software & Services	0,216391	0,216731555	204,16	183,76	179,36	172,79	119	144,96	126,3	151,03	154,88	153,01	161,64	175,04	169,87	176,75	179,49
CSX Corporation	A	Industrials	Transportation	Road & Rail Transport	0,215408	0,215747008	79,01	69,96	68,01	57,74	49,69	56,09	56,57	63,77	62,55	63,59	64,77	65,88	61,78	68,29	71,33
Marsh & McLennan Companies Inc.	AA	Financials	Insurance	Multi-Line Insurance & Brokerage	0,215398	0,215736992	115,74	104,02	105,12	98,13	79,45	85	79,48	96,11	98,54	93,29	97,1	103,98	104,47	104,5	105,92
Humana Inc.	A	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,213857	0,214193567	368,89	319,01	366,24	313,25	230,12	296,45	291,02	341,9	373,59	369,09	372,24	377,5	398,22	394,43	410,65
Air Products and Chemicals Inc.	BBB	Materials	Materials	Specialty Chemicals	0,212127	0,212460844	253,32	218,19	228,22	205,02	187,92	191,92	185,39	219,32	221,5	216,78	222,25	233,48	228,04	234,35	241,65
Newmont Corporation	A	Materials	Materials	Metals and Mining - Precious Metals	0,211904	0,212237493	49,3	44,5	52,2	39,5	40,56	46,35	47,15	57,31	59,23	63,11	60,99	64,55	67,9	63,05	58,47
Intercontinental Exchange Inc.	BBB	Financials	Diversified Financials	Diversified Financials	0,211117	0,211449254	94,41	88,9	93,7	82,82	72,73	81,25	80,99	87,38	90,4	88,92	88,67	93,52	93,47	93,77	97,25

Northrop Grumman Corporation	AA	Industrials	Capital Goods	Aerospace & Defense	0,209957	0,210287429	362,14	327,45	327,57	313,17	282,82	310,83	312,28	335,23	354,79	337,87	326,67	326,26	320,27	324,53	333,78
Illumina Inc.	BB	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,209864	0,210194282	295,94	265,67	274,42	233,33	242	269,05	263,5	287,62	316,36	309,07	305,88	309,87	335	354,7	363,05
Chubb Limited	BBB	Financials	Insurance	Property & Casualty Insurance	0,209232	0,209561288	162,52	143,94	143,73	120,94	100,8	108,41	102,82	122,27	118,79	104,02	101,59	101,95	99,49	117	121,94
Applied Materials Inc.	AA	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,207821	0,208148067	63,81	57,89	57,56	50,69	37,84	44,87	42,11	49,39	52,99	51,53	46,7	53,6	51,83	54,17	56,18
Ecolab Inc.	AAA	Materials	Materials	Specialty Chemicals	0,205103	0,20542579	206,96	179,98	193,9	179,6	141,51	157,48	147,26	179,86	178,75	180,08	190	197,76	194,75	200,5	212,58
Micron Technology Inc.	BBB	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,204529	0,204850886	56,99	52,56	51,47	42,99	36,11	43,48	41,22	46,13	45,7	44,16	45,06	48,25	44,41	44,94	47,91
Boston Scientific Corporation	BB	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,198116	0,198427794	42,62	37,39	37,6	32,33	27,24	30,61	31,17	36,83	38,29	36,9	35,99	38,18	34,83	35,91	37,99
ConocoPhillips	(AA)	Energy	Energy	Oil & Gas Exploration & Production	0,195998	0,19630646	57,86	47,94	44,88	31,07	26,57	28,96	32,58	34,39	34,91	35,73	38,75	42,65	40,87	43,28	42,18
Illinois Tool Works Inc.	A	Industrials	Capital Goods	Industrial Machinery	0,195955	0,196263393	188,16	166,53	162,88	155,28	124,84	142,23	139,36	159,28	158,58	158,23	159,45	161,01	155,68	163,75	172,46
Kimberly-Clark Corporation	AA	Consumer Staples	Household & Personal Products	Household & Personal Products	0,192523	0,192825991	140,33	130,24	145,4	134,18	118,28	124,89	129,92	131,49	141,94	141,66	136,78	138,51	138,64	139,74	141,44
Morgan Stanley	A	Financials	Diversified Financials	Investment Banking & Brokerage	0,191875	0,192176972	51,96	44,64	41,48	37,17	29,41	33,71	33,55	40,72	38,75	37,64	38,07	40,08	37,29	40,13	44,2
Sherwin-Williams Company	BBB	Materials	Materials	Specialty Chemicals	0,191385	0,1916862	570,52	514,21	539,72	498,14	411,72	458,57	419,03	490,98	515,52	504,86	525,19	548,38	567,03	575,93	593,85
U.S. Bancorp	BB	Financials	Banks	Banks	0,191161	0,191461848	53,91	45,89	41,95	36,66	32,19	35,35	30,82	38,05	35,06	34	34,94	34,75	30,68	32,93	35,56
Edwards Lifesciences Corporation	AA	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,185482	0,18577391	2,85	2,53	2,54	2,29	2,05	2,45	2,33	2,66	2,82	2,76	2,58	2,69	2,63	2,7	2,77
Dollar General Corporation	B	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,185449	0,185740858	166,51	149,97	158,03	145,49	139,82	145,8	161,84	168,86	182,11	175,98	173	176,36	182,02	178,98	191,51
Aon Plc Class A	BB	Financials	Insurance	Multi-Line Insurance & Brokerage	0,184811	0,185101854	230,91	207,46	214,26	176,99	149,16	164,99	153,74	191,55	190,32	175,09	177,75	189,76	191,67	191,97	196,95
PNC Financial Services Group Inc.	A	Financials	Banks	Banks	0,18473	0,185020727	152,02	124,94	112,91	105,74	88,46	98,97	84,21	104,2	100,33	100,73	102,97	105,03	97,25	104,61	114,04
Deere & Company	A	Industrials	Capital Goods	Construction & Farm Machinery & Heavy Trucks	0,18382	0,184109295	176,43	155,6	163,12	138,18	111	134,35	134,76	145,75	138,46	138,63	138,19	137	126,01	140,71	152,12
Regeneron Pharmaceuticals Inc.	BBB	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Biotechnology	0,183279	0,183567443	403,15	444,57	494,43	465,55	438,45	449,52	493,32	512,96	568,79	566,21	525,5	563,4	576,72	569,91	612,81
Truist Financial Corporation	BBB	Financials	Banks	Banks	0,183257	0,183545409	54,07	45,48	40,09	33,35	29,61	32,8	26,82	35,6	32,92	34,98	34,94	35,72	30,9	33,29	36,78
Norfolk Southern Corporation	A	Industrials	Transportation	Road & Rail Transport	0,181573	0,181858758	206,89	181,33	173,62	146,04	123,02	142,56	141,52	158,41	159,77	159,78	169,78	173,77	160,36	171,47	178,29
Baxter International Inc.	BB	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,180694	0,180978375	92,44	83,26	85,38	80,99	75,75	79,79	81,42	86,89	92,95	92,92	87,84	88,08	87,16	86,93	90,01
Progressive Corporation	BBB	Financials	Insurance	Property & Casualty Insurance	0,179191	0,17947301	81,35	73,06	80,41	77,97	68,19	73,44	75,84	80,28	82,5	82,87	76,18	74,27	76,21	74,72	77,68
Autodesk Inc.	AA	Information Technology	Software & Services	Software & Services	0,174781	0,175056069	201,91	190,88	173,42	158,03	148,02	141,57	139	164,9	180,94	180,35	174,9	184,29	180,72	195,78	210,38
Moody's Corporation	A	Financials	Diversified Financials	Diversified Financials	0,168225	0,168489751	270,69	239,02	237,96	212,61	175,42	219,72	208,34	241,16	238,84	244,67	241,32	251,21	250,77	256,27	267,41
Analog Devices Inc.	BBB	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,166923	0,167185702	121,44	107,87	106,42	99,25	84,62	88,19	86,09	98,26	102,24	105,35	103,08	109,24	101,25	110,46	112,34
L3Harris Technologies Inc	A	Industrials	Capital Goods	Aerospace & Defense	0,166179	0,166440531	220,85	196	198,18	176,07	153,38	184,21	177,74	189,98	202,63	189,04	188,65	180,18	176,03	179,68	198,6
Estee Lauder Companies Inc. Class A	BBB	Consumer Staples	Household & Personal Products	Household & Personal Products	0,161626	0,161880366	208,74	183,13	191,95	172,22	151	160,68	154,08	164,83	174,26	166,31	172,54	173,15	169,41	178,2	197,47
Waste Management Inc.	BBB	Industrials	Commercial & Professional services	Commercial Services & Supplies	0,157904	0,158152508	124	110,31	116,6	105,32	98,31	95,3	89,02	99,85	100,27	98,48	98,21	100,97	95,93	98,92	106,75
American Electric Power Company Inc.	A	Utilities	Utilities	Utilities	0,156032	0,156277562	100,81	88,47	96,83	85,7	70,82	82,66	71,86	85,54	85,61	82,49	80,67	79,15	78,43	78,78	85,25
Centene Corporation	BBB	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,155936	0,156181411	65,49	53,02	58,56	63,57	48,85	55,1	54,6	66,42	71,29	70,58	64,97	65,88	68,7	64,84	66,25
Charles Schwab Corporation	BB	Financials	Diversified Financials	Investment Banking & Brokerage	0,155062	0,155306035	45,95	40,54	33,95	33,69	30,59	33,43	33,43	36,35	35,6	35,22	36,26	36,32	32,56	32,83	35,91
Roper Technologies Inc.	A	Industrials	Capital Goods	Industrial Conglomerates	0,154822	0,155065658	386,61	351,12	349,76	313,01	282,69	305,29	299,19	314,93	321,97	306,41	339,38	358,36	361,5	367,06	393,8
Lam Research Corporation	AA	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,154061	0,15430346	314,91	291,68	292,65	260,22	186,77	239,78	218,15	258,28	279,02	266,67	235,02	265,4	251,84	261,14	273,67
DexCom Inc.	A	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,148778	0,149012146	291,25	276	286,56	244,02	209,5	262,96	260,75	275,27	323,4	332,44	341,52	405,5	417,73	405,25	378,31
DuPont de Nemours Inc.	A	Materials	Materials	Specialty Chemicals	0,148156	0,148389167	51,78	42,37	40,25	36,87	31,28	33,62	31,68	40,53	38,13	41,65	44,8	46,65	45,17	48,39	50,42
General Mills Inc.	AA	Consumer Staples	Food, Beverages & Tobacco	Food Products	0,147932	0,148164814	53,45	48,57	54,29	53,02	52,91	51,37	56,22	56,9	60,67	60,48	59,58	59,76	62,49	59,96	63,04
T-Mobile US Inc.	BB	Communication Services	Telecommunication Services	Telecommunication Services	0,145564	0,145793088	98,57	90,16	87,86	85,39	74,55	81,72	81,98	85,9	90,99	90,8	86,2	98,52	97,32	95,8	100,04
Exelon Corporation	AA	Utilities	Utilities	Utilities	0,14457	0,144797523	48,81	42,65	44,69	35,97	30,67	35,12	32,4	38,73	38,03	36,21	35,42	37,03	34,91	36,85	38,31

Ross Stores Inc.	BB	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,143463	0,143688781	122,86	108,45	102,2	92,55	63,7	82,55	74,75	88,74	91,72	85,49	88,96	91,46	85,31	93,88	96,96
Digital Realty Trust Inc.	BB	Information Technology	Software & Services	Software & Services	0,140306	0,140526813	137,05	119,17	127,24	142,22	120,25	132,85	136,49	148,29	149,2	150,03	145,92	145,06	130,77	135,81	143,56
Electronic Arts Inc.	A	Communication Services	Media & Entertainment	Media & Entertainment	0,140224	0,140444684	108,01	101,37	107,67	97,06	86,94	95,37	102,83	105,8	115,15	116,31	113,27	116,62	118,13	119,82	122,88
Phillips 66	BBB	Energy	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,140212	0,140432665	88,13	73,92	68,43	53,68	47,74	51,66	50,97	60,75	58,78	59,77	65,53	76,09	70,04	76,46	78,26
Emerson Electric Co.	BBB	Industrials	Capital Goods	Electrical Equipment	0,140208	0,140428658	71,4	63,49	61,54	49,85	43,67	45,14	45,28	51,28	50,05	53,3	53,27	55,56	52,43	55,87	61,02
Sempra Energy	A	Utilities	Utilities	Utilities	0,139351	0,13957031	156,81	138,35	140,42	105,83	98,62	121,13	104,28	130,53	124,44	126,97	119,93	124,23	119,2	123,81	126,31
General Dynamics Corporation	BB	Industrials	Capital Goods	Aerospace & Defense	0,132651	0,132859765	186,06	158,38	161,7	138,5	113,06	129,01	124,65	139,86	138,19	129,3	127,8	135,35	130,92	138,57	146,83
eBay Inc.	BBB	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,132598	0,132806682	37,89	34,36	36,26	33,87	27,48	30,07	29,3	33,71	37,32	39,21	39,11	42	41,96	43,29	45,38
General Motors Company	CCC	Consumer Discretionary	Automobiles & componennts	Automobiles	0,132548	0,132756603	34,23	30,13	28,34	24,71	18,14	21,38	18,04	24,06	22,48	21,95	20,9	23,93	22,63	25,98	25,88
Eaton Corp. Plc	BBB	Industrials	Capital Goods	Electrical Equipment	0,132138	0,132345958	103,04	89,09	91,1	84,02	64,32	73,84	70,58	80,67	78,51	78,12	81,3	81,47	73,02	78,67	84,9
SBA Communications Corp. Class A	BBB	Communication Services	Telecommunication Services	Telecommunication Services	0,129668	0,129872071	294,7	264,24	284,65	280,99	228,97	260,97	264,38	305,33	314,33	305,31	286,31	291,4	283,65	289,5	313,63
Xcel Energy Inc.	AA	Utilities	Utilities	Utilities	0,128984	0,129186994	70,36	61,92	69,7	66,41	50,63	58,77	57,86	66,27	67,15	64,57	62,18	60,31	57,89	60,37	65,03
O'Reilly Automotive Inc.	B	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,124884	0,125080542	391,5	368,72	368,08	354,3	263,77	313,43	295,38	342,44	373,51	384,82	376,37	402,51	407,12	404,99	417,24
Allstate Corporation	BBB	Financials	Insurance	Property & Casualty Insurance	0,124499	0,124694936	122,33	104,15	106,55	92,26	73,46	87,97	85,49	99,79	104,34	100,88	99,19	100,23	94,85	94,3	97,27
EOG Resources Inc.	BB	Energy	Energy	Oil & Gas Exploration & Production	0,124271	0,124466577	73,55	62,7	54,81	34,49	34,58	35,68	39,54	44,42	41,47	43,36	44,57	51,45	47,68	52,28	50,97
Walgreens Boots Alliance Inc	BBB	Consumer Staples	Food & Staples Retailing	Retail - Food & Staples	0,121675	0,121866491	50,43	45,25	49,94	45,67	45,9	43,51	40,26	43,49	44	43,25	41,19	41,2	37,97	39,16	42,94
Kinder Morgan Inc Class P	BB	Energy	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,121545	0,121736287	21,76	18,84	19	14,52	12,14	13,51	13,18	15,09	14,71	14,37	14,31	15,35	14,84	15,41	15,8
Bank of New York Mellon Corporation	AA	Financials	Diversified Financials	Asset Management & Custody Banks	0,11985	0,120038619	44,65	39,55	37,74	33,83	28,82	32,26	33,46	36,82	37,07	35,45	35,69	35,34	32,06	34,5	37,17
Constellation Brands Inc. Class A	BB	Consumer Staples	Food, Beverages & Tobacco	Beverages	0,116779	0,116962786	206,44	171,58	178,24	132,36	119,14	144,21	131,56	165,47	161,94	158,09	160,82	165,29	158,49	172,31	172,7
HCA Healthcare Inc	A	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,116708	0,116891674	147,5	126,58	127,2	104,28	78,5	87,33	81,83	108,06	115,66	107,83	104,86	107,92	98,74	106,69	106,9
Capital One Financial Corporation	B	Financials	Diversified Financials	Consumer Finance	0,116124	0,116306755	100,48	87,68	81,75	72,36	44,71	54,94	41,99	59,71	54,27	55,78	61,18	61,79	58,03	60,21	68,04
Cognizant Technology Solutions Corporation Class A	BBB	Information Technology	Software & Services	Software & Services	0,115953	0,116135486	69,8	60,68	58	52,4	43,92	46,47	43,22	54,06	53,59	53,59	56,27	56,92	49,97	51,24	53
MSCI Inc. Class A		Financials			0,11551	0,115691789	307,82	294,84	285,26	282,83	242,58	275,18	270,06	310,06	316,54	324,23	319,29	332,9	340,53	337,97	328,85
FedEx Corporation	BB	Industrials	Transportation	Air Freight & Logistics	0,11295	0,11312776	162,43	140,46	127,04	106,63	111,06	120,58	109,22	122,29	124,85	123,06	118,2	120,44	107,52	117	130,56
Public Storage	AA	Financials	Banks	Banks	0,111457	0,11163241	223,53	207,04	226,67	209,24	171,22	191,52	194,08	208,59	196,48	187,23	184,36	190,34	175,97	186,47	202,74
KLA Corporation	BB	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,111335	0,111510218	159,56	152,97	154,93	144,67	113,47	141,56	127,32	149,4	160,43	164,13	149,55	170,68	166,62	173	175,96
WEC Energy Group Inc	A	Utilities	Utilities	Utilities	0,111087	0,111261828	101,74	91,64	103,94	98,68	73,54	88,41	84,62	97,49	99,59	93,07	87,8	85,04	84,17	86,14	91,73
Valero Energy Corporation	BBB	Energy	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,110493	0,110666893	81,62	65,22	62,11	49,13	38,06	44,34	39,72	49,32	50,96	51,69	57,85	64,9	57,87	65,68	66,64
IHS Markit Ltd.	AA	Industrials	Commercial & Professional services	Professional Services	0,110034	0,110207171	78,86	71,06	69,15	55,83	47,76	58,9	61,42	65,3	67	65,43	65,14	67,07	66,56	67,01	69,46
T. Rowe Price Group	AA	Financials	Diversified Financials	Asset Management & Custody Banks	0,109618	0,109790516	134,93	116,85	115,6	106,28	90,34	98,43	95,19	105,16	103,49	100,34	110,44	114,06	113,51	115,09	120,9
Sysco Corporation	BBB	Consumer Staples	Food & Staples Retailing	Retail - Food & Staples	0,10958	0,109752456	76,21	65,93	66,23	46,56	34,95	49,91	39,08	49,59	50,31	53,08	52,76	53,29	47,62	51,75	55,16
Amphenol Corporation Class A	BBB	Information Technology	Technology, Hardware & Equipment	Electronic Equipment, Instruments & Components	0,109516	0,109688356	101,43	91,39	92,27	79,35	69,82	74,27	68,42	81,91	84,22	86,17	85,5	89,56	82,31	90,8	96,56
Yum! Brands Inc.	BB	Consumer Discretionary	Consumer Services	Restaurants	0,108936	0,109107443	102,97	88,79	88,93	78,05	57,78	68,17	62,97	79,95	83,73	85,44	83,37	85,73	84,46	86,8	89,26
Dow Inc.	BBB	Materials	Materials	Commodity Chemicals	0,10844	0,108610662	46,68	39,05	38,28	25,24	26,96	28,06	27,48	35,92	32,83	32,54	33,33	33,73	32,97	35,49	37,92
AutoZone Inc.	B	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,107448	0,107617101	1 068,03	1 032,51	1 060,31	1 012,73	728,13	851,63	790,56	940,83	991,8	1 047,04	994,45	1 057,90	1 074,98	1 122,94	1 147,86
MetLife Inc.	BB	Financials	Insurance	Life & Health Insurance	0,107236	0,107404767	50,52	42,12	38,63	31,48	24,04	30,44	27,33	34,97	32,6	32,84	34,2	34,73	31,72	33,34	36,01
Chipotle Mexican Grill Inc.	BBB	Consumer Discretionary	Consumer Services	Restaurants	0,107128	0,107296597	920,14	773,58	723,08	630,36	566	635,03	611,01	771	820,27	882,47	874,92	925,83	971,75	1055,7	1003,91
Monster Beverage Corporation	CCC	Consumer Staples	Food, Beverages & Tobacco	Beverages	0,10684	0,107008144	69,74	62,41	66,19	62,39	52,1	56,39	54,22	60,51	62,19	59,8	59,52	65,78	66,01	68,71	71,91
IQVIA Holdings Inc	BBB	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,105794	0,105960498	163,43	139,49	136,05	118,71	91,67	107,14	102,72	128,53	131,57	128,86	136,52	137,65	134,2	142,9	149,52

Willis Towers Watson Public Limited Company	BBB	Financials	Insurance	Multi-Line Insurance & Brokerage	0,105027	0,105192291	207,59	188,48	198,9	179,31	152,01	166,53	156,45	196,02	195,39	177,22	183,34	197,35	200,48	198,51	202,9
Kroger Co.	A	Consumer Staples	Food & Staples Retailing	Retail - Food & Staples	0,104874	0,10503905	30,17	28	31,89	30,57	31,62	28,99	32,14	30,91	31,78	32,81	31,81	33,18	32,36	32,37	32,62
Travelers Companies Inc.	A	Financials	Insurance	Property & Casualty Insurance	0,104742	0,104906842	134,27	119,02	124,02	106,74	89,51	99,95	93,89	109,74	105,07	100,82	96,05	97,34	90,31	100,1	106,98
Aflac Incorporated	BBB	Financials	Insurance	Life & Health Insurance	0,104723	0,104887812	50,84	42,5	40,45	34,41	26,51	35,11	32,15	37,77	36,19	36	36,32	35,97	32,72	34,42	36,47
Verisk Analytics Inc	BBB	Industrials	Commercial & Professional services	Professional Services	0,104525	0,104689501	168,39	154,83	163,08	145,35	124,25	137,77	141,65	148,26	153,79	148,54	153,45	159,57	154,56	157,28	172,68
TE Connectivity Ltd.	A	Information Technology	Technology, Hardware & Equipment	Electronic Equipment, Instruments & Components	0,104424	0,104588342	90,72	82,36	78,21	69,78	55,22	62,4	58,33	70,73	67,03	69,72	70,15	76,28	69,61	75,76	81,25
Eversource Energy	AA	Utilities	Utilities	Utilities	0,1044	0,104564304	94,7	85,32	95,09	87,9	67,85	80,38	74,53	89,46	90,91	85,95	79,3	77,24	75,85	77,9	83,7
HP Inc.	AA	Information Technology	Technology, Hardware & Equipment	Technology Hardware, Storage & Peripherals	0,1041	0,104263832	22,49	20,6	21,21	17,02	13,95	16,86	14,48	15,97	15,52	15	14,71	15,66	14,86	17	15,14
Zimmer Biomet Holdings Inc.	CCC	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,10278	0,102941754	157	135,81	123,79	97,56	85,77	94,7	92,01	110,36	118,58	116,45	116,25	121,86	112,39	123,4	126,34
IDEXX Laboratories Inc.	AA	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,102476	0,102637276	278,11	254,51	249,89	254,17	183,29	231,75	234,55	258,58	265,16	271,8	270,75	287,9	294,38	294,72	308,88
Synopsys Inc.	BB	Information Technology	Software & Services	Software & Services	0,102461	0,102622252	149,33	137,93	137,72	129,88	110	124,38	124,55	136,58	154,98	153,03	149,64	160,17	158,73	171,11	180,91
Twitter Inc.	BB	Communication Services	Media & Entertainment	Interactive Media & Services	0,102208	0,102368854	38,31	33,2	33,46	29,29	23,95	25,29	23,09	27,77	26,7	28,74	27,84	29,93	29	32,62	30,97
Agilent Technologies Inc.	AAA	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,102181	0,102341812	84,85	76,87	78,36	69,02	66,29	70,73	70,24	78,33	79,55	75,75	74,21	79,71	81,59	84,98	88,14
Clorox Company	AA	Consumer Staples	Household & Personal Products	Household & Personal Products	0,102171	0,102331796	163,73	158,54	172,31	166,85	176,42	172,24	176,56	183,2	192,43	189,6	192,71	204,05	209,83	198,59	206,25
American International Group Inc.	BB	Financials	Insurance	Multi-Line Insurance & Brokerage	0,102144	0,102304754	47,99	41,63	37,37	28,14	19,23	25,51	20,46	26,54	24,5	23,35	23,9	27,65	26,47	28,89	30,06
Marriott International Inc. Class A	BB	Consumer Discretionary	Consumer Services	Hotels & Travel	0,101458	0,101617674	142,67	123,5	110,66	95,61	74,58	78,85	59,08	81,31	84,26	80,71	84,75	87,17	79,76	91,05	88,5
Schlumberger NV	BBB	Energy	Energy	Energy Equipment & Services	0,100889	0,101047778	33,16	26,91	23,69	16,05	14,18	13,67	14,19	16,36	15,18	16	15,64	17,93	15,84	17,46	18,34
Cummins Inc.	AAA	Industrials	Capital Goods	Construction & Farm Machinery & Heavy Trucks	0,098877	0,099032612	164,81	150,06	147,4	135,73	115,54	130,59	131,2	149,48	147,97	146,57	156,15	159,98	154,38	153,78	169,6
Cadence Design Systems Inc.	AA	Information Technology	Software & Services	Software & Services	0,098874	0,099029607	74,73	66,14	64,73	62,47	55,08	62,28	63,93	71,65	78,65	80,52	75,84	82,46	82,07	86,05	91,29
Public Service Enterprise Group Inc	AA	Utilities	Utilities	Utilities	0,098743	0,098898401	59,42	50,85	54,24	43,74	37,82	44,48	44,36	52,95	54,62	51,37	49,41	48,77	45,46	48,12	51,04
Rockwell Automation Inc.	A	Industrials	Capital Goods	Electrical Equipment	0,096388	0,096539695	208,25	182,52	177,89	165,29	126,11	150,65	146	166,74	167,69	173,66	182,21	191,42	196,81	202,19	216,16
Motorola Solutions Inc.	A	Information Technology	Technology, Hardware & Equipment	Technology Hardware, Storage & Peripherals	0,096287	0,096438536	184,53	165,02	175,22	154,33	136,61	135,07	126,62	152,89	157,77	152,8	138,83	131,27	129,07	134,19	135,33
McKesson Corporation	BB	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,096205	0,096356407	170,04	139,11	141,12	132,22	124,64	125,37	125,16	132,97	141,24	139,57	134,35	135,61	136,09	149,03	158,26
PACCAR Inc	BBB	Industrials	Capital Goods	Construction & Farm Machinery & Heavy Trucks	0,09588	0,096030895	75,01	66,59	64,26	64,83	52,06	59,22	61,33	66,96	67,34	67,17	67,98	69,3	66,52	68,42	73,86
Williams Companies Inc.	BB	Energy	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,095814	0,095964791	20,98	18,57	17,01	15,42	11,53	13,91	13,65	16,59	18,08	18,28	18,55	19,47	18,76	19,65	20,43
Consolidated Edison Inc.	AA	Utilities	Utilities	Utilities	0,094957	0,095106443	88,51	77,99	86,97	87,14	71,83	77,08	77,08	87,01	88,62	81,77	76,44	73,4	69,62	70,18	75,06
Marathon Petroleum Corporation	BB	Energy	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,094939	0,095088414	57,57	46,63	38,5	24,51	18,64	22,77	19,73	25,2	25,03	25,33	28,75	32,48	29,8	34,98	35,14
Prudential Financial Inc.	A	Financials	Insurance	Life & Health Insurance	0,094765	0,09491414	90,83	74,01	68,48	51,91	41,45	52,03	45,21	57,58	55,52	54,72	58,4	57,86	51,92	55,21	60,96
ResMed Inc.	AA	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,093604	0,093751313	173,47	158,59	165,69	149,38	114,07	141,62	152,61	159,45	164,77	160,62	158,7	162,37	163,74	161,35	160,82
ANSYS Inc.	A	Information Technology	Software & Services	Software & Services	0,093374	0,093520951	287,11	242,19	237,78	235,42	213,11	223,02	218,3	237,92	263,9	259,45	255,64	263,02	253,93	269,87	283
Johnson Controls International plc	AAA	Industrials	Capital Goods	Building Products	0,092933	0,093079257	42,09	36,26	37,83	32,53	24,91	25,94	25,47	30,6	29,54	27,91	27,86	29,8	28,46	29,53	31,41
PPG Industries Inc.	AA	Materials	Materials	Specialty Chemicals	0,091718	0,091862345	117,73	103,86	100,88	93,66	79,27	84,52	79,98	96,62	92,78	92,22	87,5	91,46	86,92	96,18	101,67
Alexion Pharmaceuticals Inc.	B	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Biotechnology	0,091561	0,091705098	103,14	94,03	91,98	80,44	80,35	84,01	89,77	96,23	103,48	108,12	103,91	97,34	101,94	101,5	119,9
Fastenal Company	AA	Industrials	Capital Goods	Trading Companies & Distributors	0,090141	0,090282863	38,59	33,98	33,92	33,85	28,54	30,82	30,27	33,39	35,68	35,78	35,45	39,05	38,92	38,68	41,26
Xilinx Inc.	BBB	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,089777	0,08991829	87,33	83,12	79,51	76,2	71,54	74,89	78,73	82,74	88,61	89,35	82,63	86,48	82,86	86,59	91,95
Hilton Worldwide Holdings Inc	BBB	Consumer Discretionary	Consumer Services	Hotels & Travel	0,089757	0,089898259	109,4	97,05	90,45	78,63	61,6	69,15	55,94	68,45	75,62	71,37	72,03	72,19	68,54	78,39	79,31
Ford Motor Company	B	Consumer Discretionary	Automobiles & components	Automobiles	0,089719	0,089860199	7,89	6,96	6,49	5,63	4,33	5,19	4,24	5,37	5,12	4,87	4,92	5,24	4,9	5,65	5,71
FirstEnergy Corp.	BBB	Utilities	Utilities	Utilities	0,08926	0,089400477	51,09	44,11	46,05	40,85	33,96	38,24	37,59	44,33	45,78	41,92	40,46	40,22	39,29	40,64	42,26
VeriSign Inc.	BBB	Information Technology	Software & Services	Software & Services	0,089233	0,089373434	206,12	189,75	192,01	182,62	157,13	173,91	182,69	196,07	209,93	212,13	205,02	210,04	217,25	213,72	219,01

American Water Works Company Inc.	BBB	Utilities	Utilities	Utilities	0,08872	0,088859627	137,13	123,08	140,34	127,69	100,22	120,21	112,79	131,14	131,15	124,43	118,64	117,48	117,21	120,71	127
AvalonBay Communities Inc.	BBB	Real Estate	Real Estate	Real Estate Management & Services	0,087828	0,087966223	225,76	198,6	206,99	191,24	130,31	158,68	130,91	167,36	170,37	158,38	158,44	163,96	150,35	153,67	156,01
Paychex Inc.	BBB	Information Technology	Software & Services	Software & Services	0,087665	0,087802967	88,16	76,7	76,72	70,84	51,45	59,57	58,95	65,87	66,82	67,41	65,93	66,44	62,79	67,58	72,28
Parker-Hannifin Corporation	A	Industrials	Capital Goods	Industrial Machinery	0,087372	0,087509505	213,97	183,71	164,04	139,51	101,84	120,58	115,15	144,34	137,8	134,18	152,2	160,08	153,29	166,88	179,97
State Street Corporation	AA	Financials	Diversified Financials	Asset Management & Custody Banks	0,08654	0,086676196	76,36	67,43	59,53	58,27	46,2	48,17	51,64	60,95	58,49	57,41	59,08	60,22	54,41	55,32	60,96
Otis Worldwide Corporation	BBB	Industrials	Capital Goods	Industrial Machinery	0	0															
Cerner Corporation	A	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,086298	0,086433815	75,84	69,06	73,14	64,24	56,38	59,83	62,09	68,38	70,01	72,75	66,71	68,75	65,11	67,28	72,9
Microchip Technology Incorporated	BB	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,085777	0,085911995	104,29	90,33	86,6	69,68	59,39	67,92	63,77	78,12	80	81,67	81,18	89,33	83,2	87,44	96,02
Ball Corporation	A	Materials	Materials	Containers & Packaging	0,085737	0,085871932	76,54	70,16	75,89	63,7	54,77	64,24	62,04	69,79	70,05	65,13	65,47	64,42	62,1	64,37	71,11
McCormick & Company Incorporated	A	Consumer Staples	Food, Beverages & Tobacco	Food Products	0,084985	0,085118749	161,53	145,58	150,01	134,44	124,02	131,74	146,27	153,66	156,89	154,26	154,42	164,03	177,98	171,87	175,16
FleetCor Technologies Inc.	B	Information Technology	Software & Services	Software & Services	0,084243	0,084375581	308,92	265,79	249,16	235,46	187,03	196,18	184,78	224,99	223,59	222,62	232,83	240	222,54	239,25	243,79
Fortinet Inc.	BBB	Information Technology	Software & Services	Software & Services	0,083191	0,083321925	114,48	102,06	99,5	82,64	84,91	97,28	101,44	101,93	112,96	103,27	104,34	136,84	143,43	142,64	139,2
Equity Residential	A	Real Estate	Real Estate	Real Estate Management & Services	0,082561	0,082690934	86,14	74,35	76,87	72,88	54,74	62,68	54,26	69,42	69,79	63,99	62,31	64,22	57,13	57,4	60,56
Edison International	BBB	Utilities	Utilities	Utilities	0,082384	0,082513655	76,68	66,42	66,81	52,64	46,32	54,72	48,79	60,27	62,06	59,25	55,69	57,05	55,95	56,43	58,11
Cintas Corporation	BBB	Industrials	Commercial & Professional services	Commercial Services & Supplies	0,082307	0,082436534	293,36	266,74	272,32	243,58	175,09	181,57	164,23	198,74	204,16	200,18	211,81	218,21	227,42	240,65	247,96
PPL Corporation	BBB	Utilities	Utilities	Utilities	0,080736	0,080863062	35,15	29,61	31,09	27,06	19,67	25,42	21,77	26,7	26,39	25,49	24,87	26,11	24,51	25,65	27,94
Archer-Daniels-Midland Company	A	Consumer Staples	Food, Beverages & Tobacco	Food Products	0,080062	0,080188001	43,46	37,27	37,26	34,29	30,3	33,16	34,3	37,2	36,82	35,63	34,77	36,02	33,78	35,02	39,31
Trane Technologies plc	AA	Industrials	Capital Goods	Building Products	0,079775	0,079900549	144,92	128,4	111,97	102,93	75,68	82,67	80,03	91,6	89,91	84,03	86,81	84,39	77,21	83,36	90,21
Skyworks Solutions Inc.	A	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,079608	0,079733287	114,18	99,79	95,34	82,68	73,38	86,75	79,99	89,6	95,03	96,13	98,44	110,79	105,8	116,56	118,54
DTE Energy Company	A	Utilities	Utilities	Utilities	0,07955	0,079675195	26,68	25,44	26,01	25,25	22,44	25	24,65	26,22	25,91	26,06	26,14	26,35	26,27	26,34	26,71
Entergy Corporation	A	Utilities	Utilities	Utilities	0,079355	0,079479888	128,71	115,79	123,09	101,94	79,22	96,4	82,58	101,92	100,3	96,59	92,67	94,1	94,98	97,96	101,82
Dollar Tree Inc.	B	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,078573	0,078696658	93,89	83,03	80,24	74,7	75,97	77,05	70,24	77,56	81,73	74,54	77,39	78,05	75,07	81,7	97,87
AMETEK Inc.	B	Industrials	Capital Goods	Electrical Equipment	0,078529	0,078652588	99,11	85,8	88,31	74,43	63,37	71,01	71,29	78,23	80,31	77,06	80,49	84,32	79,59	85,9	91,71
Hershey Company	BBB	Consumer Staples	Food, Beverages & Tobacco	Food Products	0,077523	0,077645005	158,61	143,14	155,37	139,02	117,04	130,07	138,95	143,06	145,6	134,94	131,76	132,41	129,61	129,49	135,68
Welltower Inc.	A	Real Estate	Real Estate	Real Estate Management & Services	0,076794	0,076914858	84,95	73,7	72,85	50,51	41,78	48,95	36,7	55,75	48,36	43,4	46,62	43,88	40,04	47,1	50,67
Keysight Technologies Inc	AA	Information Technology	Technology, Hardware & Equipment	Electronic Equipment, Instruments & Components	0,076399	0,076519236	96,18	94,76	96,01	92,03	83,09	78,28	82,52	92,1	95,84	97,54	93,84	100,69	94,78	102,06	108,13
Stanley Black & Decker Inc.	BBB	Industrials	Capital Goods	Industrial Machinery	0,076219	0,07638953	156,48	142,22	126,89	108,49	79,01	96,13	94,75	118,71	111,92	107,15	105,91	116,68	107,25	120,82	124,76
TransDigm Group Incorporated	BB	Industrials	Capital Goods	Aerospace & Defense	0,076178	0,076297888	629,9	557,81	503,11	414,72	302,51	363,01	270,31	344,54	337,4	304,92	349,45	352,61	325	380,8	424,82
V.F. Corporation	AA	Consumer Discretionary	Consumer durables & Apparel	Textiles, Apparel & Luxury Goods	0,075509	0,075627836	83,15	71,51	69,65	59,13	52,78	57,79	48,88	59,21	57,5	54,57	55,43	58,23	51,96	55,64	56,1
Kraft Heinz Company	BB	Consumer Staples	Food, Beverages & Tobacco	Food Products	0,075192	0,075310337	26,45	24,04	25,26	23,26	21,99	23,93	24,99	27,75	28,95	28,85	29	29,18	28,82	29,56	30,08
Corteva Inc	BBB	Materials	Materials	Specialty Chemicals	0,074986	0,075104012	30,9	26,92	25,04	24,68	22,4	23,08	22,49	27,77	25,37	26,12	25,35	25,83	22,64	24,54	27,31
Aptiv PLC	A	Consumer Discretionary	Automobiles & components	Auto Components	0,074553	0,074670331	90,07	78,11	76,29	66,47	45,17	51,28	43,29	62,23	63,92	62,74	65,75	68,15	64,07	71,89	75,35
Alexandria Real Estate Equities Inc.	A	Real Estate	Real Estate	Real Estate Management & Services	0,072931	0,073045778	166,77	150,79	157,92	146,68	122,42	142,44	129,06	157,8	155,31	149,49	150,99	152	141,43	146,99	153,72
MarketAxess Holdings Inc.	BBB	Financials	Diversified Financials	Diversified Financials	0,072788	0,072902553	339,69	323,94	361,93	342,66	310,26	342,37	386,81	402,87	429,27	420,52	449,26	483,74	487,47	482,32	508,59
D.R. Horton Inc.	BB	Real Estate	Real Estate	Real Estate Development & Diversified Activities	0,07277	0,072884525	61,65	53,07	54,6	39,15	31,26	36,74	32,02	40,89	39,73	40,79	46,37	49,41	47,21	54,06	55,3
Best Buy Co. Inc.	AAA	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,072678	0,07279238	89,44	74,96	73,15	60,5	51,18	62,47	53,48	65,99	70,4	71,88	72,26	78,63	78,61	76,92	78,09
Realty Income Corporation	BB	Real Estate	Real Estate	Real Estate Management & Services	0,072607	0,072721268	81,13	71,24	75,67	71	46,82	56,18	43,04	56,2	51,93	49,5	51,36	54,63	49,78	51,93	55,08
Copart Inc.	A	Industrials	Commercial & Professional services	Commercial Services & Supplies	0,072396	0,072509936	95,25	84,48	80,19	73,84	60,15	70,3	61,8	74,99	72,1	73,83	78,55	83,79	79,54	86,25	89,39
Equifax Inc.	BB	Industrials	Commercial & Professional services	Professional Services	0,07206	0,072173408	158,7	141,3	153,38	140,34	105,37	119,24	106,34	123,9	127,64	131,08	137,53	148,99	144,04	146,65	153,56

Mettler-Toledo International Inc.	AA	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,071934	0,072047209	760,22	701,7	715,55	672,64	645,12	658,78	630,58	727,42	720,91	713,38	689,16	719,57	698,7	748,31	795
Tyson Foods Inc. Class A	BB	Consumer Staples	Food, Beverages & Tobacco	Food Products	0,071386	0,071498347	76,85	66,98	64,22	52,16	53,26	58,2	53,46	60,53	61,92	58,58	59,61	59,99	57,82	58,79	61,03
Incyte Corporation	B	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Biotechnology	0,071264	0,071376155	80,89	75,41	76,04	73,84	66,96	68,96	78,59	86,81	100	103,48	97,3	95,92	96,12	99,37	101,91
Church & Dwight Co. Inc.	BBB	Consumer Staples	Household & Personal Products	Household & Personal Products	0,070933	0,071044634	76,36	69,29	74,44	63,08	65,54	61,77	67,43	68,17	73,31	71,12	70,99	73,11	73,36	71,93	75,07
Simon Property Group Inc.	BB	Real Estate	Real Estate	Real Estate Management & Services	0,070335	0,070445693	142,25	123,08	119,06	89,77	48,14	58,17	46,72	68,17	56,12	51,49	63,2	58,02	51,32	54,59	57,7
Fortive Corp.	BBB	Industrials	Capital Goods	Industrial Machinery	0,070217	0,070327507	75,65	69,02	66,74	59,66	45,53	49,6	54,22	60,97	60,29	60,27	60,68	59,2	55,19	58,47	60,91
Republic Services Inc.	B	Industrials	Commercial & Professional services	Commercial Services & Supplies	0,069494	0,069603369	98,9	89,78	95,02	84,53	71,16	75,2	72,15	81,82	80,28	76,1	77,13	81,31	79,47	81,12	85,46
Align Technology Inc.	BBB	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,069245	0,069353977	260,26	218,35	225,17	195,88	144,82	177,04	154,2	193,19	193	191,97	203,26	210,03	203,67	243,74	245,62
Ameren Corporation	BBB	Utilities	Utilities	Utilities	0,068878	0,0689864	84,82	78,52	84,83	75,69	62,93	74,24	68,75	79	77,83	73,64	71,45	70,86	68,76	69,82	74,73
Arthur J. Gallagher & Co.	BBB	Financials	Insurance	Multi-Line Insurance & Brokerage	0,068647	0,068755036	107,37	97,08	100,41	90,06	71,58	80,17	76,26	86,84	83,6	75,28	77,51	86,4	87,23	91,1	94,28
Ameriprise Financial Inc.	BBB	Financials	Diversified Financials	Asset Management & Custody Banks	0,068572	0,068679918	173,94	140,1	125,53	112,38	89,07	102,45	89,55	119,45	110,01	106,57	110,32	124,54	120,95	132,46	140,07
Laboratory Corporation of America Holdings	BBB	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,068317	0,068424517	189,56	175,69	179,71	151,02	107,24	128,71	113,31	146,8	148,52	163,72	159,03	167,26	167,43	170,16	175,32
First Republic Bank	BBB	Financials	Banks	Banks	0,067784	0,067890678	116,4	100,38	94,73	96,63	79,42	82,18	81,62	99,31	99,83	99,86	100,4	103,91	95,91	97,3	108,17
Lennar Corporation Class A	BB	Real Estate	Real Estate	Real Estate Development & Diversified Activities	0,067606	0,067712398	70,44	60,16	62,37	45,55	33,98	40,14	33,29	44,67	42,81	42,76	49,46	54,01	50,64	60,09	60,46
Las Vegas Sands Corp.	BB	Consumer Discretionary	Consumer Services	Casinos & Gaming	0,067158	0,067263693	64,32	57,17	53,79	48,05	42,46	42,1	37,92	47,86	47,01	43,78	45,61	50,94	44,76	46,9	47,94
Corning Inc	A	Information Technology	Technology, Hardware & Equipment	Electronic Equipment, Instruments & Components	0,067116	0,067221627	27,46	23,43	24,65	22,58	18,68	20,54	17,74	20,98	20,52	20,58	20,47	21,42	19,46	21,18	22,58
Akamai Technologies Inc.	BBB	Information Technology	Software & Services	Software & Services	0,066775	0,06688009	100,52	86,51	90,62	85,73	82,37	90,61	95,36	95,39	105,35	102,78	95,86	101,15	98,09	100,42	105,8
Teleflex Incorporated	BB	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,066267	0,066371291	369,65	334,35	346,57	318,1	243,59	282,23	294,07	325,23	346,33	338,05	329,04	339,96	335,35	363,24	362,86
Carrier Global Corp.	A	Industrials	Capital Goods	Building Products	0	0	127,75	84,93	101,33	147,76	133,16	160,27	143,77	160,40	167,71	160,08	167,41	160,08	167,41	160,08	167,41
Citrix Systems Inc.	A	Information Technology	Software & Services	Software & Services	0,064349	0,064450272	115,71	103,06	117,54	113,67	119,33	140,04	141,33	139,4	150,41	146,04	142,58	150,98	146,72	137,04	148,12
Northern Trust Corporation	AA	Financials	Diversified Financials	Asset Management & Custody Banks	0,064149	0,064249957	100,94	86,9	76,88	75,31	64,56	73,98	77,03	84,89	80	77,39	75,47	75,99	71,13	73,88	79,01
Conagra Brands Inc.	BBB	Consumer Staples	Food, Beverages & Tobacco	Food Products	0,063814	0,06391443	29,41	26,53	28,08	24,64	25,89	27,75	31,02	32,26	33,37	33,97	33,08	33,52	34,17	32,68	34,79
Southwest Airlines Co.	BB	Industrials	Transportation	Airlines	0,063803	0,063903413	56,31	46,01	45,55	41,28	31,94	36,38	30,54	36,47	31,19	29,33	29,23	27,2	23,87	28,87	32,1
West Pharmaceutical Services Inc.	AA	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,063737	0,063837309	170	150,42	149,81	145,97	130,53	140,95	151,21	162,78	169,82	195,36	191,64	200,01	214,17	211,44	216,04
Cardinal Health Inc.	A	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,063653	0,063753177	59,13	51,6	50,76	47,15	42,9	43,94	46,15	50,43	51,23	50,32	47,42	49,88	48,95	53,59	54,69
CMS Energy Corporation	AA	Utilities	Utilities	Utilities	0,06345	0,063549857	67,94	59,97	67,38	61,92	49,18	57,8	54,14	61,86	62,7	58,96	55,53	54,88	53,28	55,59	58,58
LyondellBasell Industries NV	BBB	Materials	Materials	Commodity Chemicals	0,063162	0,063261404	81,68	70,4	71,99	46,84	42	49,4	46,1	58,93	52,19	50,05	55,16	56,45	53,6	60,42	63,76
Take-Two Interactive Software Inc.	BBB	Communication Services	Media & Entertainment	Media & Entertainment	0,063136	0,063235363	116,03	107,48	117,69	116,62	100,15	111,7	118,49	119,4	124,44	127,88	122,65	129,85	132,54	140,51	136,17
CDW Corp.	B	Information Technology	Technology, Hardware & Equipment	Electronic Equipment, Instruments & Components	0,063041	0,063140213	133,07	113,5	111,19	100,95	79,28	93,42	86,59	105,89	108,44	104,41	106,45	108,16	97,47	105,37	110,91
Pioneer Natural Resources Company	BB	Energy	Energy	Oil & Gas Exploration & Production	0,062998	0,063097146	141,11	121,8	104,28	70,11	61,27	68,1	74,08	75,48	76,63	77,45	82,92	89,99	82,86	92,42	91,6
Essex Property Trust Inc.	BB	Real Estate	Real Estate	Real Estate Management & Services	0,062907	0,063006003	326,04	280,78	291,98	273,22	194,55	226,52	189,13	246,96	260,84	241,61	236,81	246,65	226,55	236,41	242,77
Amcor PLC	AA	Materials	Materials	Containers & Packaging	0,062875	0,062973952	10	9,1	9,1	6,74	7,22	7,71	7,75	9,05	8,68	8,32	8,58	8,87	9	9,49	10,09
Kellogg Company	AAA	Consumer Staples	Food, Beverages & Tobacco	Food Products	0,062411	0,062509222	64,34	59,38	62,05	63,11	55,32	58,95	63,03	62,19	64,45	63,54	64,29	63,13	63,51	61,55	64,74
Maxim Integrated Products Inc.	A	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,061484	0,061580763	60,16	54,7	54,33	48,16	43,76	47,17	48,24	51,36	52,65	53,23	51,63	53,67	51,63	55,66	57,2
Quest Diagnostics Incorporated	AA	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,061336	0,06143253	112,29	105,25	111,16	96,03	74,67	82,45	72,78	89,08	95,4	106,62	108,81	112,22	111,08	112,83	118,28
Old Dominion Freight Line Inc.	BBB	Industrials	Transportation	Road & Rail Transport	0,060804	0,060899693	148,2	129,05	132,14	118,62	112,45	128,33	122,51	135,15	136,65	141,63	147,03	152,76	149,05	158,79	171,09
ONEOK Inc.	A	Energy	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,060557	0,060652304	74,59	64,58	59,25	29,74	20,01	20,27	20,95	27,49	28,44	26,77	27,94	31,33	32,39	36,2	36,69
Domino's Pizza Inc.	BBB	Consumer Discretionary	Consumer Services	Restaurants	0,059513	0,059606661	371,09	338,66	335,62	315,89	299,95	338,74	328,23	343,64	362,97	367,29	357,3	369,11	376,04	372,1	385,84
Kansas City Southern	AA	Industrials	Transportation	Road & Rail Transport	0,059356	0,059449414	173,78	150,29	146,7	127,61	108,52	127,96	123	136,6	139,36	131,41	128,36	136,63	133,85	147,25	150,52

Weyerhaeuser Company	A	Materials	Materials	Paper & Forest Products	0,058873	0,058965654	30,36	25,67	26,28	21,92	14,76	17,2	15,34	21,01	20,1	19,61	17,97	19,85	17,33	19,78	20,19
Jack Henry & Associates Inc.	BBB	Information Technology	Software & Services	Software & Services	0,057774	0,057864924	170,13	150,96	161,06	160,52	134,01	148,68	155,84	169,76	169,26	158,73	158,13	182,36	189,34	186,48	180,43
Cooper Companies Inc.	BBB	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,057653	0,057743734	355,67	324,57	333,81	291,04	250,65	273,23	279,68	296,57	306,28	293,21	280,31	304,52	296,52	287,42	316,98
Hologic Inc.	A	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,057445	0,057535407	52,59	47,12	46,75	40,58	31,05	33,26	32,82	41,11	43,79	47,11	49,4	51,99	51,93	52,33	53
AmerisourceBergen Corporation	BBB	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,056742	0,0568313	96,52	83,9	85,38	89,55	80,21	81,37	80,93	87,37	88,74	88,26	85,95	87,65	85,32	93,14	95,34
International Flavors & Fragrances Inc.	AA	Materials	Materials	Specialty Chemicals	0,056313	0,056401625	131,2	118,89	121,82	108,21	101,65	109,4	98,9	127,37	125,12	126,49	126,63	134,47	128,22	129,42	133,19
CBRE Group Inc. Class A	AA	Real Estate	Real Estate	Real Estate Management & Services	0,05605	0,056138211	62,73	56,14	54,58	46,38	34,26	39,2	35,5	45,61	44,5	39,99	39,7	41,6	35,99	40,3	43,98
Tiffany & Co.	AAA	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,055375	0,055462149	133,54	132,89	132,01	127,27	124,79	127,44	128,28	127,95	129,15	126,35	127,06	128,56	127,01	125,07	128,13
Paycom Software Inc.	A	Information Technology	Software & Services	Software & Services	0,055253	0,055339957	300,39	282,65	267,71	226,62	192,81	208,94	165,01	221,99	224,99	211,8	241,66	272,03	261,68	269,35	297,23
Broadridge Financial Solutions Inc.	BBB	Information Technology	Software & Services	Software & Services	0,055028	0,055114603	118,95	103,78	99,81	103,11	90,77	91,57	92,39	105,91	109,94	111,44	113,06	116,81	115,55	116,81	121,1
Hewlett Packard Enterprise Co.	AA	Information Technology	Technology, Hardware & Equipment	Technology Hardware, Storage & Peripherals	0,054861	0,05494734	14,03	12,65	11,86	9,75	8,63	9,82	9,3	10,53	9,71	9,53	9,48	10,25	9,11	9,17	9,71
Delta Air Lines Inc.	A	Industrials	Transportation	Airlines	0,054809	0,054895258	57,47	46,13	45,89	38,36	21,35	29,55	22,48	24,39	24,27	22,41	24,12	22,72	19,19	22,69	25,21
Evergy Inc.	BB	Utilities	Utilities	Utilities	0,054752	0,05483168	71,78	64,33	68,75	58,58	46,78	57,03	51,36	62,56	60,46	58,01	55,44	57,01	56,06	59,49	61,69
Hartford Financial Services Group Inc.	BB	Financials	Insurance	Multi-Line Insurance & Brokerage	0,054634	0,054719983	57,21	49,23	50,54	42,17	31,01	34,84	31,88	41,53	39,68	35,74	35,39	36,05	32,97	36,68	37,97
Vulcan Materials Company	BB	Materials	Materials	Construction Materials	0,054291	0,054376443	133,15	119,54	127,01	109,4	84,37	98,88	98,88	112,72	111,65	101,69	110,31	100,77	95,75	99,51	108,32
STERIS Plc	A	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,054283	0,05436843	167,58	158,27	157,03	136,29	115,7	129,74	138,72	152,69	154,97	147,82	141,4	148,25	151,32	157,48	165,89
Leidos Holdings Inc.	A	Information Technology	Software & Services	Software & Services	0,054126	0,054211183	116,76	102,24	105,26	89,95	72,51	93,44	87,94	95,46	99,28	101,95	97,89	102,7	96,82	100,96	105,29
CarMax Inc.	BB	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,054065	0,054150087	101,21	87,31	85	69,19	44,27	58,93	48,6	66,5	65,22	70,96	71,07	76,69	75,8	81,55	88,05
Zebra Technologies Corporation Class A	A	Information Technology	Technology, Hardware & Equipment	Electronic Equipment, Instruments & Components	0,053949	0,054033905	238,39	210,97	202,74	184,02	179,38	184,57	178,08	201,22	202,98	208,62	225,55	242,92	217,8	243,54	261,32
Dover Corporation	BBB	Industrials	Capital Goods	Industrial Machinery	0,053927	0,05401187	118,3	101,76	100,98	90,29	65,8	81,54	76,97	88,96	88,04	90,51	91,01	91,77	84,51	89,32	96,76
Nasdaq Inc.	BBB	Financials	Diversified Financials	Diversified Financials	0,053522	0,053606233	114,63	102,06	109,98	95,6	80,5	92,78	95,22	107,92	111,24	105,63	106,62	107,59	112,08	115,34	118,46
International Paper Company	BBB	Materials	Materials	Containers & Packaging	0,052884	0,052967228	42,08	36,38	35,15	32,91	29,05	30,14	28,91	33,63	31,35	30,64	33,38	33,81	30,56	32,13	33,51
Mid-America Apartment Communities Inc.	BBB	Real Estate	Real Estate	Real Estate Management & Services	0,052754	0,052837024	146,44	128,1	142,01	124,87	86,71	106,63	93,46	115,6	112,48	106,43	109,63	115,57	106,87	114,28	116,36
W.W. Grainger Inc.	AA	Industrials	Capital Goods	Trading Companies & Distributors	0,052753	0,052836022	301,77	276,12	283,17	264,66	212,68	245,88	237,54	278,44	278,78	268,23	266,29	283,99	278,79	292,91	309,62
Freeport-McMoRan Inc.	BB	Materials	Materials	Metals and Mining - Precious Metals	0,052742	0,052825005	11,94	9,96	9,43	7,53	5,52	6,2	6,32	8,19	8,34	8,48	8,46	9,21	8,48	8,74	9,07
Tractor Supply Company	A	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,052661	0,052743878	99,11	88,23	91,19	75,97	75,67	82,83	79,24	87,95	92,42	101,65	101,76	106,87	111,36	111,49	122,02
Hormel Foods Corporation	A	Consumer Staples	Food, Beverages & Tobacco	Food Products	0,052344	0,052426379	44,55	41,4	43,73	42,19	44,9	44,74	48,14	47,31	50,51	46,61	46,6	47,24	47,92	46,93	48,83
Discover Financial Services	BB	Financials	Diversified Financials	Consumer Finance	0,052288	0,05237029	74,05	64,85	61,89	51,19	24,97	37,98	28,21	38,78	34,65	35,83	40,91	42,25	37,58	40,02	47,51
M&T Bank Corporation	BBB	Financials	Banks	Banks	0,052278	0,052360275	165,6	137,91	123,87	111,61	97,76	106,21	90,75	113,59	104,42	104	106,12	103,81	88,22	97,04	104,59
Masco Corporation	A	Industrials	Capital Goods	Building Products	0,052244	0,052326221	45,03	41,18	41,96	39,65	29,37	34,53	32,3	40,23	39,99	40,05	40,04	42,14	42,72	44,82	46,65
Ulta Beauty Inc	BB	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,052175	0,052257113	299,4	257,09	256,58	207,06	148,06	174,45	156,74	202,48	215,51	210,52	214,28	230,07	200,45	220,62	244,01
Occidental Petroleum Corporation	BB	Energy	Energy	Integrated Oil & Gas	0,05197	0,05205179	40,88	31,78	26,07	13,84	10,23	11,61	13	15,36	13,63	13,81	15,24	15,02	13,82	14,13	12,95
Western Digital Corporation	B	Information Technology	Technology, Hardware & Equipment	Technology Hardware, Storage & Peripherals	0,051081	0,051161391	66,11	54,84	54,02	41,28	30,65	41,7	37,72	45,05	42,32	40,69	40,48	44,2	39,21	42,42	44,37
Fifth Third Bancorp	BB	Financials	Banks	Banks	0,050727	0,050806834	28,94	24,02	21,85	17,35	12,71	16,88	13,23	17,82	16,63	17,12	17,77	18,1	16,12	17,61	19,39
Expeditors International of Washington Inc.	AAA	Industrials	Transportation	Air Freight & Logistics	0,050557	0,050636566	74,89	69,94	70	64,7	54,56	64,66	66,64	70,99	71,25	71,44	70,87	74,32	71,02	71,56	75,85
Hess Corporation	(AA)	Energy	Energy	Oil & Gas Exploration & Production	0,049982	0,050060661	63,93	55,75	49,34	34,65	30,69	34,03	33,52	40,38	37,35	42,46	44,28	48,48	44,07	47,1	47,47
J.M. Smucker Company	BBB	Consumer Staples	Food, Beverages & Tobacco	Food Products	0,049949	0,050027609	110,04	102,22	109,17	102,28	103,39	102,26	111,49	111,91	120,67	116,92	114,65	115,22	113,88	108,56	113,93
Nucor Corporation	BBB	Materials	Materials	Steel	0,049805	0,049883383	47,98	40,85	39,13	35,41	30,26	32,96	35,22	39,43	37,33	37,87	41	42,2	38,07	39,48	42,26
Duke Realty Corporation	BBB	Real Estate	Real Estate	Real Estate Management & Services	0,049747	0,049825291	38,54	32,23	33,7	31,64	26,79	31,84	29,37	35,3	34,66	34,05	33,05	33,67	30,6	33,28	34,48

Garmin Ltd.	BBB	Consumer Discretionary	Consumer durables & Apparel	Household Durables	0,049736	0,049814274	95,82	87,7	86,84	76,74	66,03	73,53	71,56	78,65	82,11	78,92	79,81	81,34	78,03	83,89	90,17
Ventas Inc.	BBB	Real Estate	Real Estate	Real Estate Management & Services	0,04969	0,049768202	61,25	52,29	48,25	32,41	21,02	29,55	21,9	33,8	31,29	27,71	30,33	30,1	27,97	33,71	34,95
Arista Networks Inc.	BBB	Information Technology	Technology, Hardware & Equipment	Technology Hardware, Storage & Peripherals	0,049624	0,049702098	223,46	193,12	190,78	176,76	164,48	191,29	194,64	209,91	210,02	216,81	207,64	218,01	210,45	220,17	233,46
Waters Corporation	AA	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,048887	0,048963938	216,38	194,89	200	184,48	173,46	185,36	179,94	195,93	197,51	191,32	178,08	186,98	178,46	186,68	199,85
Brown-Forman Corporation Class B	A	Consumer Staples	Food, Beverages & Tobacco	Beverages	0,048842	0,048918867	69,94	61,24	62,07	53,15	48,85	54,5	55,44	62,89	63,97	61,13	61,02	65,97	66,32	64,78	65,93
FMC Corporation	BB	Materials	Materials	Specialty Chemicals	0,048729	0,048805689	105,97	92,57	90,01	87,54	64,94	76,18	70,47	90	86,1	88,2	89,92	93,48	88,02	93,3	98,41
Healthpeak Properties Inc.	AA	Real Estate	Real Estate	Real Estate Management & Services	0,048622	0,048698521	36,58	31,15	33,2	28,42	20,64	24,64	19,98	27,91	25,86	23,86	24,76	23,88	21,94	24,55	24,64
Seagate Technology PLC	BBB	Information Technology	Technology, Hardware & Equipment	Technology Hardware, Storage & Peripherals	0,048502	0,048578332	53,18	47,19	48,47	48,15	40,08	47,21	45,76	51,25	51,47	48,63	47,71	51,06	47,77	50,96	53,04
Atmos Energy Corporation	BBB	Utilities	Utilities	Utilities	0,047795	0,047870219	117,43	102,64	110,6	100,08	85,69	96,84	93,61	104,58	110,05	103,8	99,51	96,76	94,55	97,75	102,78
Qorvo Inc.	BB	Information Technology	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	0,047051	0,047125049	98,19	100,58	94,36	83,8	70,85	80,69	73,44	83,11	86,27	89,89	93,15	103	94,71	101,54	104,74
NortonLifeLock Inc.	A	Information Technology	Software & Services	Software & Services	0,047019	0,047092998	20,35	19,03	18,68	17,45	16,96	18,93	18,29	19,37	20,12	20,96	20,86	21,28	20,02	20,24	22,78
Boston Properties Inc.	A	Real Estate	Real Estate	Real Estate Management & Services	0,046992	0,047065956	144,26	127,59	131,2	115,84	81,14	92,84	82,17	106	95,5	90,36	92,93	86,91	74,95	78,01	85,98
Concho Resources Inc.	B	Energy	Energy	Oil & Gas Exploration & Production	0,046291	0,046363852	78,87	67,59	57,8	46,71	40,42	41,96	47,61	52,56	51,76	52,91	56,53	58,44	54,26	55,83	54,52
IDEX Corporation	A	Industrials	Capital Goods	Industrial Machinery	0,046257	0,046329799	172,76	147,5	145,74	130,4	116,08	130,73	138,04	151	152,21	152,2	150,77	154,17	147,91	150,45	159,37
Omnicom Group Inc	BBB	Communication Services	Media & Entertainment	Media & Entertainment	0,046103	0,046175557	77,5	68,6	65,17	62,29	49,51	51,98	49,59	56,8	54,57	52,03	55,89	55,11	50,9	51,78	54,79
Extra Space Storage Inc.	BB	Real Estate	Real Estate	Real Estate Management & Services	0,046057	0,046129484	108,18	99,42	108,99	95,68	79,72	96,02	96,13	102,91	93,1	88,89	87,16	91,69	81,81	86,23	96,75
Genuine Parts Company		Consumer Discretionary			0,045849	0,045921157	95,36	86,47	82,12	79,27	55,35	64,46	58,26	71,67	74,65	75,03	75,19	76,44	73,12	77,22	83,41
Martin Marietta Materials Inc.	BB	Materials	Materials	Construction Materials	0,045446	0,045517523	250,12	226,36	238,08	197,7	153,19	180,72	169,04	207,61	198,32	176,86	186,07	176,1	167,6	179,19	191,55
Xylem Inc.	AAA	Industrials	Capital Goods	Industrial Machinery	0,04528	0,045351261	87,9	76,79	80,9	71,83	59,65	65,24	60,26	69,06	69,31	68,25	69,01	62,75	57,96	61,97	66,08
Alliant Energy Corp	A	Utilities	Utilities	Utilities	0,04527	0,045341246	58,7	51,73	57,06	50,52	40,39	47,39	44,81	52,74	52,47	49,61	46,9	47,99	45,95	46,38	49,36
Cboe Global Markets Inc	BB	Financials	Diversified Financials	Diversified Financials	0,044579	0,044649158	121,82	113,26	116,36	94,47	79,41	90,57	89,31	93,09	101,64	96,18	93,68	99,83	99,53	98,96	106,09
NVR Inc.	BBB	Real Estate	Real Estate	Real Estate Development & Diversified Activities	0,044516	0,044586059	4031,14	3667,18	3845,23	2922,28	2326,89	2871,62	2362,94	2928,01	2917,75	2847,37	3036,9	3119,67	2795,06	3133,86	3221,61
ViacomCBS Inc. Class B	BB	Communication Services	Media & Entertainment	Media & Entertainment	0,043575	0,043643578	27,84	24,24	21,25	16,16	11,97	12,79	12,43	16,56	15,8	15,63	16,46	18,08	17,3	19,59	20,74
Expedia Group Inc.	BBB	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,043504	0,043572466	119,68	98,25	91,51	69,37	48,8	60,03	48,71	62,42	63,22	66,57	67,29	69,27	66,76	77,95	79,48
KeyCorp	A	Financials	Banks	Banks	0,043177	0,043244952	19,14	15,91	14,47	12,53	9,05	11,03	8,93	11,82	10,64	10,73	10,9	11,1	9,57	10,57	11,66
Halliburton Company	BBB	Energy	Energy	Energy Equipment & Services	0,043077	0,043144794	21,04	16,78	12,93	7,15	5,05	6,39	7,61	8,21	7,58	8,86	9,76	10,7	9,82	11,59	11,75
C.H. Robinson Worldwide Inc.	A	Industrials	Transportation	Air Freight & Logistics	0,043016	0,043083698	74,01	68,4	65,6	62,37	63,91	62,51	68,15	73,22	74,23	72,28	70,83	73,8	72,5	77,86	81,13
Varian Medical Systems Inc.	BBB	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,042989	0,043056656	143,44	122,97	124,31	113,14	99,52	100,97	96,35	113,15	115,75	108,68	111,37	118,7	114,03	115,41	121,39
UDR Inc.	A	Real Estate	Real Estate	Real Estate Management & Services	0,042949	0,043016593	50,42	44,53	47,82	44,21	31,71	37,56	31,3	40,71	38,94	36,29	36,1	38,34	34,76	36,28	36,98
Jacobs Engineering Group Inc.	A	Industrials	Capital Goods	Construction & Engineering	0,042668	0,042735151	103,6	92,11	93,84	86,55	65,49	74,7	78,78	81,11	83,99	79,8	80,58	79,77	71,93	76,91	84,02
Celanese Corporation	BBB	Materials	Materials	Specialty Chemicals	0,042598	0,04266504	107,12	93	91,52	77,79	64,22	70,7	66,57	83,24	77,54	78,16	79,31	82,72	76,67	85,48	89,91
Westinghouse Air Brake Technologies Corporation	BB	Industrials	Capital Goods	Construction & Farm Machinery & Heavy Trucks	0,042535	0,042601941	78,32	68,54	61,38	54,83	40,66	47,47	43,96	55,13	49,14	53,32	54,29	57,19	52,36	56,8	61,07
NetApp Inc.	BB	Information Technology	Technology, Hardware & Equipment	Technology Hardware, Storage & Peripherals	0,042512	0,042578905	51,38	46,16	43,47	40,31	35,81	39,75	36,89	42,73	42,15	43,06	41,48	44,9	42,38	44,68	44,54
Gartner Inc.	BB	Information Technology	Software & Services	Software & Services	0,042204	0,04227042	155,46	129,39	120,16	106,31	83,24	104,79	91,82	106,89	105,96	109,76	114,92	122,58	111,53	117,61	121,7
Synchrony Financial	BB	Financials	Diversified Financials	Consumer Finance	0,041871	0,041936896	32,96	28,78	27,94	23,86	13,26	16,91	13,1	17,42	15,45	16,78	18,3	18,62	16,54	17,85	20,37
PerkinElmer Inc.	BBB	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,041719	0,041784657	92,77	86,36	83,44	73,75	70,83	74,73	71,14	78,27	83,56	87,55	89,09	92,48	92,86	93,41	100,47
Ingersoll Rand Inc.	BB	Industrials	Capital Goods	Industrial Machinery	0,041482	0,041547284	37,74	32,05	27,16	22,48	19,61	22,63	23,49	26,5	26,81	27,82	28,13	29,17	26,42	28,54	28,2
Baker Hughes Company Class A	AAA	Energy	Energy	Energy Equipment & Services	0,040968	0,041032475	20,29	15,9	15,89	12,58	9,88	11,74	10,28	12,71	12,88	13,26	13,54	14,83	13,6	14,94	16,51
SVB Financial Group	A	Financials	Banks	Banks	0,040338	0,040401484	261,42	208,16	174,44	156,67	150,64	159,34	139,34	185,69	173,69	184	184,86	185,85	172,79	189,49	214,75

Fox Corporation Class A	B	Communication Services	Media & Entertainment	Media & Entertainment	0,039601	0,039663324	35,24	30,23	28,31	25,38	20,05	22,04	21,59	25,64	26,23	24,52	25,02	25,73	25,5	27,37	28,78
United Rentals Inc.	BBB	Industrials	Capital Goods	Trading Companies & Distributors	0,039296	0,039357844	151,41	132,48	115,67	91,01	70,1	90,15	91,07	107,71	105,05	106,05	119,28	119,58	118,57	130,56	138,89
Regions Financial Corporation	A	Financials	Banks	Banks	0,039277	0,039338814	16,16	13,38	12,84	9,98	8,26	9,67	8,07	11,01	9,52	9,79	10,17	10,32	9,19	9,95	11,31
Principal Financial Group Inc.	BBB	Financials	Insurance	Life & Health Insurance	0,039081	0,039142505	53,02	43,26	41,7	35,06	25,33	32,15	26,05	32,15	30,12	29,57	34,62	37,69	33,39	36,42	38,09
DENTSPLY SIRONA Inc.	A	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,038463	0,038523533	56,69	49,1	44,6	40,34	32,73	37,82	35,45	41,87	40,86	39,31	40,29	40,65	37,71	42,24	46,52
Darden Restaurants Inc.	BBB	Consumer Discretionary	Consumer Services	Restaurants	0,038405	0,038465442	121,1	97,5	88,15	65,32	39	54,66	45,48	64,34	63,35	68,82	69,85	74,72	69,61	75,63	76,86
E*TRADE Financial Corporation	BBB	Financials	Diversified Financials	Investment Banking & Brokerage	0,038312	0,038372295	53,03	45,5	42,06	35,99	28,88	33,86	34,17	41,62	39,73	38,53	39,31	41,07	38,2	41,16	45,54
Advance Auto Parts Inc.	BBB	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,038188	0,0382481	140,21	132,61	127,55	113,37	74,82	95,6	84,65	106,86	118,86	117,59	116,59	124,85	126,06	133,48	139,32
CenturyLink Inc.	BB	Communication Services	Telecommunication Services	Telecommunication Services	0,038049	0,038108881	12,64	11,54	11,44	9,87	8,88	8,84	8,89	10,39	10	9,96	9,92	9,7	9,04	9,58	9,59
Citizens Financial Group Inc.	BBB	Financials	Banks	Banks	0,038026	0,038085845	36,96	31,14	27,49	23,25	17,22	19,61	16,65	21,73	19,52	20,24	21,05	22,2	19,92	21,28	24,1
J.B. Hunt Transport Services Inc.	BB	Industrials	Transportation	Road & Rail Transport	0,037059	0,037117323	109,4	96,18	92,98	87,65	80,41	89,82	89,52	98,92	107,29	101,33	100,6	102,97	98,14	108,46	119,67
Eastman Chemical Company	BB	Materials	Materials	Diversified Chemicals	0,036566	0,036623547	72,45	60,55	56,88	45,59	40,81	46,47	45,09	59,71	55,1	57,27	60,02	62,53	59,97	65,46	68,08
NRG Energy Inc.	B	Utilities	Utilities	Utilities	0,036522	0,036579478	39,03	32,92	34,02	28,6	23,11	29,29	25,98	30,49	31,1	32,32	32,68	32,77	32,6	35,72	36,05
Avery Dennison Corporation	BB	Materials	Materials	Containers & Packaging	0,036471	0,036528398	132,62	113,35	119,62	105,54	90,33	99,79	93,13	114,44	108,8	107,98	107,52	108,7	99,96	105,9	110,1
ABIOMED Inc.	A	Health Care	Health Care Equipments & Services	Health Care Equipment & Supplies	0,03602	0,036076688	166,74	150,26	157,08	142,82	130,51	145,24	141,4	160,08	166,02	168,52	183,49	187,07	184,92	206,16	223,9
Alliegon PLC	AA	Industrials	Capital Goods	Building Products	0,035909	0,035965513	128,21	114,66	119,46	111,49	82,6	91,62	84,04	95,36	97,63	96,57	97,48	102,27	92,94	94,29	99,7
Hasbro Inc.	AA	Consumer Discretionary	Consumer durables & Apparel	Leisure Products	0,035859	0,035915435	89,13	76,53	72,07	54,51	45,68	65,03	66,32	74,96	74,5	74,17	68,09	69,7	64,8	66,69	73,51
Packaging Corporation of America	B	Materials	Materials	Containers & Packaging	0,035758	0,035814276	101,41	89,78	89,94	83,58	85,88	86,09	80,51	90,46	90,84	85,99	94,75	98,14	90,92	92,99	101,41
Cincinnati Financial Corporation	BB	Financials	Insurance	Property & Casualty Insurance	0,035608	0,03566404	110,47	92,53	97,46	89,89	74,46	75,95	71,03	83,58	85,8	78,53	60,95	55,73	49,25	57,32	58,95
NISource Inc	BBB	Utilities	Utilities	Utilities	0,0348	0,034854768	29,65	26,81	29,23	24,98	20,84	24,57	22,31	26,37	26,17	25,83	24,28	23,27	22,37	23,09	23,83
Huntington Bancshares Incorporated	BB	Financials	Banks	Banks	0,034667	0,034721559	13,66	12,05	10,92	9,33	7,48	8,3	6,83	9,03	8,06	8,16	8,57	8,65	7,51	8,1	8,89
Universal Health Services Inc. Class B	CCC	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,034621	0,034675486	142,5	123,55	125,97	105,09	75,42	88,99	85,38	104,51	107,79	101,65	99,15	102,06	92,63	104,17	105,45
Henry Schein Inc.	AAA	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,034609	0,034663467	67,54	60,94	57,69	56,71	45,01	50	46,35	52,25	53,64	52,39	52,15	54,03	51,76	56,71	60,72
Fortune Brands Home & Security Inc.	A	Industrials	Capital Goods	Building Products	0,034459	0,034513231	70,5	61,29	60,19	48,42	36,46	43,28	35,29	50,64	46,43	43,56	51,31	55,88	53,36	60,31	60,73
PulteGroup Inc.	BB	Real Estate	Real Estate	Real Estate Development & Diversified Activities	0,034331	0,03438503	46,25	40,06	41,36	30,43	19,77	24,52	18,92	26,34	25,52	25,64	27,24	29,88	27,72	33,31	33,97
CenterPoint Energy Inc.	BB	Utilities	Utilities	Utilities	0,034129	0,034182712	44,98	41,63	39,38	28,24	22,34	29,56	25,39	33,59	31,41	31,93	31,28	34,79	31,22	32,77	34,42
Everest Re Group Ltd.	B	Financials	Insurance	Multi-Line Insurance & Brokerage	0,033803	0,033856199	285,77	244,39	249,94	210,09	193,18	187,86	176,68	210,7	194,87	169,52	163,77	175,47	167,67	204,13	196,91
MGM Resorts International	BBB	Consumer Discretionary	Consumer Services	Casinos & Gaming	0,03362	0,033672911	31,16	24,38	20,24	15,33	9,11	12,19	10,58	14,55	14,08	13,94	15,01	15,59	13,85	15,9	17,18
Mylan N.V.	B	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Pharmaceuticals	0,03358	0,033632848	21,15	17,19	15,4	15,05	15,25	14,88	13,74	16,08	16,11	15,76	16,13	17,57	15,16	15,64	17,07
Loews Corporation	BBB	Financials	Insurance	Property & Casualty Insurance	0,033577	0,033629843	53,46	45,49	44,09	36,94	31,2	33,63	32,64	39,34	36,07	32,34	31,56	30,96	29,75	31,85	33,17
Host Hotels & Resorts Inc.	A	Real Estate	Real Estate	Real Estate Management & Services	0,033546	0,033598794	17,07	14,22	13,22	11,21	10,45	11,08	8,9	11,91	11,37	11,1	11,44	11,06	10,06	11,23	11,94
F5 Networks Inc.	BBB	Information Technology	Technology, Hardware & Equipment	Technology Hardware, Storage & Peripherals	0,033476	0,033528684	133,36	119,95	119,64	105,7	100,14	110,8	107,3	125,39	124,11	127,32	135,3	149,02	138,73	137,31	144,92
Lamb Weston Holdings Inc.	A	Consumer Staples	Food, Beverages & Tobacco	Food Products	0,033291	0,033343393	94,47	86,55	83,04	63,6	47,44	57,03	50	58,17	59,69	57,55	58,12	61,3	52,09	57,22	60,06
AES Corporation	AA	Utilities	Utilities	Utilities	0,033174	0,033226209	20,54	16,56	16,65	12,87	11,75	13,32	12,12	14,57	12,99	12,73	12,81	12,87	11,75	12,24	12,49
Pinnacle West Capital Corporation	A	Utilities	Utilities	Utilities	0,033143	0,03319516	102,55	88,58	98,3	80,74	64,88	76,84	67,5	81,39	79,1	76,36	73,37	73,87	71,42	72,66	77,9
W. R. Berkley Corporation	B	Financials	Insurance	Property & Casualty Insurance	0,032982	0,033033907	78,51	67,02	66,12	56,08	47,58	51,87	49,48	58,32	56,99	50,24	51,45	51,73	47,73	56,45	57,95
Raymond James Financial Inc.	BB	Financials	Diversified Financials	Investment Banking & Brokerage	0,032727	0,032778506	97,05	83,15	73,18	71,91	61,07	61,3	57,2	69,44	63,67	61,55	63,18	66,83	61,04	65,21	69,28
Wynn Resorts Limited	CCC	Consumer Discretionary	Consumer Services	Casinos & Gaming	0,032713	0,032764483	126,89	107,08	94,03	72,52	51,97	63,31	48,5	70,65	78,46	76,61	80,83	86,94	77,7	78,25	83,28
Campbell Soup Company	AA	Consumer Staples	Food, Beverages & Tobacco	Food Products	0,032525	0,032576188	47,6	44,78	51,37	48,91	44,96	43,86	49,16	47,39	50,34	50,75	50,41	51,26	53,53	48,35	50,98

Western Union Company	A	Information Technology	Software & Services	Software & Services	0,032334	0,032384887	25,51	22,16	22,12	21,9	18,18	19,74	17,72	20,19	19,93	18,5	18,52	19,93	18,57	19,01	20,02
LKQ Corporation	BBB	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,032159	0,032209612	33,04	29,58	27,52	24,9	16,3	21,36	17,35	22,53	20,94	21,33	24,81	26,28	23,6	25,34	27,46
Juniper Networks Inc.	BBB	Information Technology	Technology, Hardware & Equipment	Technology Hardware, Storage & Peripherals	0,031929	0,03197925	23,72	20,85	21,2	20,13	17,49	19,77	19,94	21,49	22,38	23,09	21,64	23,48	22,76	22,96	24,06
Cabot Oil & Gas Corporation	B	Energy	Energy	Oil & Gas Exploration & Production	0,031097	0,03114594	42,19	36,7	34,97	31,97	20,88	24,81	25,73	30,35	29,53	29,99	31,54	32,19	28,83	33,94	35,39
Whirlpool Corporation	BB	Consumer Discretionary	Consumer durables & Apparel	Household Durables	0,030473	0,030520958	144,22	125,28	119,72	114,09	73,59	83,29	81,68	103,54	104,11	103,37	110,89	111,3	107,54	119,7	121,82
Huntington Ingalls Industries Inc.	A	Industrials	Capital Goods	Aerospace & Defense	0,03031	0,030357702	233,74	203,54	203,27	177,73	158,52	184,66	180,13	191,43	194,98	183,58	184,74	179,68	169,69	181,86	198,89
Royal Caribbean Cruises Ltd.	BBB	Consumer Discretionary	Consumer Services	Hotels & Travel	0,030251	0,030298609	105,07	79,62	64,37	32,33	23,81	34,5	24,39	40,22	37,39	35,68	40,77	39,92	37,45	43,14	51,87
Perrigo Co. Plc	BBB	Health Care	Pharmaceuticals, Biotechnology & Life Sciences	Pharmaceuticals	0,030221	0,030268562	59,4	50,3	52,95	46,1	41,96	45,91	44,18	50,25	51,66	51,22	52,47	52,43	52,55	54,06	54,55
Globe Life Inc.	BB	Financials	Insurance	Life & Health Insurance	0,030116	0,030163396	109,83	92,4	86,35	71,38	61,24	71,03	63,75	80,4	77,25	76,07	79,99	77,75	68,76	72,54	77,02
DISH Network Corporation Class A	CCC	Communication Services	Media & Entertainment	Media & Entertainment	0,029813	0,029859919	40,73	33,52	29,21	21,59	19,97	20,98	18,98	23,07	22,52	23,4	23,99	25,73	24,71	29,56	31,65
Snap-on Incorporated	A	Industrials	Capital Goods	Industrial Machinery	0,029753	0,029799825	157,7	143,57	140,62	125,19	99,06	106,97	94,74	121,13	117,37	115,13	123,04	126,3	121,95	127,83	129,69
Albemarle Corporation	BB	Materials	Materials	Specialty Chemicals	0,029642	0,02968865	91,92	81,4	82,15	67,64	53,45	55,02	52,7	67,02	61,47	61,53	57,44	64,25	61,35	68,11	76,52
Lincoln National Corporation	BBB	Financials	Insurance	Life & Health Insurance	0,029422	0,029468304	59,04	44,83	37,65	28,51	16,85	27,12	23,17	33,87	29,66	30,21	32,48	36,65	32,75	35	37,93
DaVita Inc.	A	Health Care	Health Care Equipments & Services	Health Care Providers & Services	0,029182	0,029227926	84,09	77,62	81,84	75,95	64,99	73,09	65,52	74,82	78,16	74	76,51	80,76	79,25	76,81	80,96
Regency Centers Corporation	A	Real Estate	Real Estate	Real Estate Management & Services	0,028683	0,028728141	62,06	56,5	59,46	54,35	34,72	39,83	31,74	43,4	38,03	34,85	40,25	41,28	36,21	41,26	42,79
Diamondback Energy Inc.	B	Energy	Energy	Oil & Gas Exploration & Production	0,028217	0,028261408	75,24	61,06	47,82	26,94	18,42	23,65	31,3	34,54	31,23	35,45	39,91	41,69	38,42	42,94	42,58
Molson Coors Beverage Company Class B	AA	Consumer Staples	Food, Beverages & Tobacco	Beverages	0,028133	0,028177276	54,66	49,05	47,49	42,56	36,94	38,06	41,01	47,4	44,38	43,03	38,92	38,89	36,35	36,83	37,96
Iron Mountain Inc.	AA	Information Technology	Software & Services	Software & Services	0,027955	0,027998995	33,65	29,7	31,03	28,32	22,71	24,37	22,06	27,11	24,99	23,53	23,6	24,57	22,42	24,17	25,76
WestRock Company	BB	Materials	Materials	Containers & Packaging	0,026324	0,026365429	40,51	32,98	29,83	25,66	25,31	27,66	25,47	31,89	30,44	28,64	30,59	26,78	24,01	25,14	28,06
Live Nation Entertainment Inc.	BB	Communication Services	Media & Entertainment	Media & Entertainment	0,026278	0,026319356	74,19	60,77	53	42,85	33,97	47,15	33,57	38,27	38,35	38,24	41,17	41,96	40,06	46,49	49,16
Interpublic Group of Companies Inc.	BB	Communication Services	Media & Entertainment	Media & Entertainment	0,025738	0,025778506	23,77	20,8	19,75	16,86	12,34	14,99	13,38	16,04	14,84	14,52	16,19	17,07	15,15	16,24	16,86
Discovery Inc. Class C	BBB	Communication Services	Media & Entertainment	Media & Entertainment	0,025605	0,025645297	27,93	25,1	24,07	21,29	16,87	17,16	16,84	20,14	20,2	19,14	19,54	19,35	18,72	18,36	19,59
Textron Inc.	BB	Industrials	Capital Goods	Aerospace & Defense	0,02536	0,025399911	47,33	40,57	35,95	29,1	22,29	26,69	24,85	29,44	27,75	27,03	26,22	27,3	24,2	26,91	30,97
BorgWarner Inc.	A	Consumer Discretionary	Automobiles & components	Auto Components	0,025104	0,025143508	33,61	31,26	28,72	25,52	20,39	23,57	21,18	25,6	26,84	26,94	27,02	29,23	27,62	29,68	31,98
Assurant Inc.	BB	Financials	Insurance	Multi-Line Insurance & Brokerage	0,025025	0,025064384	133,31	113,44	116,27	100,02	89,57	105,63	100,04	112,68	105,49	105,09	102,49	100,11	93,84	101,73	102,4
Pentair plc	BBB	Industrials	Capital Goods	Industrial Machinery	0,024887	0,024926167	44,29	39,15	38,05	35,59	23,63	29,75	28,2	32,64	31,47	31,67	33,43	35,1	33,49	36,48	39,14
FLIR Systems Inc.	A	Information Technology	Technology, Hardware & Equipment	Electronic Equipment, Instruments & Components	0,024747	0,024785947	57,89	42,14	39,18	31,96	25,43	32,4	30,97	34,37	34,02	39,51	42,68	47,91	44,08	44,89	46,2
CF Industries Holdings Inc.	B	Materials	Materials	Specialty Chemicals	0,024723	0,024761909	38,87	36,41	36,39	27,34	21,98	25,24	25,46	30,63	27,94	27,66	26,29	28,68	24,52	27,59	29,37
A. O. Smith Corporation	BBB	Industrials	Capital Goods	Building Products	0,024149	0,024187006	44,09	39,55	42,69	41,49	34,75	36,85	35,87	40,21	41,08	40,39	41,65	44,79	40,41	42,22	47,5
Carnival Corporation	CCC	Consumer Discretionary	Consumer Services	Hotels & Travel	0,023549	0,023586061	41,21	33,46	27,15	17,58	12	14,41	8,49	12,42	12,56	11,91	13,93	14,21	12,78	14,46	15,74
Robert Half International Inc.	AA	Industrials	Commercial & Professional services	Professional Services	0,023307	0,02334368	58,46	49,77	48,72	46,9	34,75	38,74	37,7	42,98	42,94	43,75	44,07	47,05	44,82	47,08	50,74
Vornado Realty Trust	BB	Real Estate	Real Estate	Real Estate Management & Services	0,023151	0,023187435	62,73	52,64	51,43	43,46	29,14	37,04	31,33	42,72	41,31	37,11	41,26	38,72	35,32	34,15	36,21
United Airlines Holdings Inc.	B	Industrials	Transportation	Airlines	0,022935	0,022971095	78,01	61,59	52,1	41,64	24,5	32,84	22,89	31,5	29,08	25,56	26,62	25,42	19,92	25,4	28,04
Federal Realty Investment Trust	BBB	Real Estate	Real Estate	Real Estate Management & Services	0,02279	0,022825867	127,7	115,17	120,15	104,64	71,56	76,05	65,81	86	75,36	69,26	78,42	78,12	72,02	78,49	79,91
IPG Photonics Corporation	B	Information Technology	Technology, Hardware & Equipment	Electronic Equipment, Instruments & Components	0,022551	0,022586491	135,01	127,64	121,47	112,15	109,08	109,03	102,74	119,05	119,05	120,9	119,37	152,06	146,18	157,39	155,4
Rollins Inc.	BB	Industrials	Commercial & Professional services	Commercial Services & Supplies	0,022232	0,022266989	40,35	37,37	39,67	37,75	34,93	34,19	35,98	35,95	38,89	38,07	39,92	42,21	40	38,73	41,8
Apartment Investment & Management Co Class A		Real Estate			0,021745	0,021779222	54,83	47,27	49,21	45,5	27,97	34,56	30,27	39,49	38,68	34,67	36,03	37,39	33,21	35,9	36,87
Zions Bancorporation N.A.	A	Financials	Banks	Banks	0,02145	0,021483758	44,91	39,5	34,88	29,09	25,29	27,27	24,4	30,65	28,75	29,12	30,55	30,37	27,02	30,19	32,91
Franklin Resources Inc.	A	Financials	Diversified Financials	Asset Management & Custody Banks	0,020715	0,020747601	24,81	21,42	21,31	17,83	16,64	17,08	15,37	16,81	16,34	15,92	18,03	19,2	17,76	17,89	18,87

Mohawk Industries Inc.	A	Consumer Discretionary	Consumer durables & Apparel	Household Durables	0,020598	0,020630417	135	121,15	118,57	96,48	58,66	78,04	62,01	88,01	79,6	78,96	83,38	84,86	76,58	83,31	93,2
Newell Brands Inc	A	Consumer Discretionary	Consumer durables & Apparel	Household Durables	0,020321	0,020352981	18,66	14,97	13,76	12,75	11,24	13,39	11,8	13,92	12,65	12,7	12,08	12,21	11,51	12,58	12,94
People's United Financial Inc.	A	Financials	Banks	Banks	0,020321	0,020352981	16,07	13,8	13,9	12,69	11,65	11,42	9,38	12,13	11,32	11,72	11,81	12,06	10,68	10,86	11,45
Quanta Services Inc.	BBB	Information Technology	Technology, Hardware & Equipment	Technology Hardware, Storage & Peripherals	0,020017	0,020048503	39,96	38,07	38,18	32,4	25,09	29,79	30,51	33,55	34,91	33,98	34,97	34,36	31,34	34,25	36,93
Noble Energy Inc.	BBB	Energy	Energy	Oil & Gas Exploration & Production	0,019761	0,0197921	17,91	15,79	13,29	7,17	4,02	5,35	6,17	7,49	6,93	8,16	8,76	10,01	8,67	10,1	8,73
Howmet Aerospace Inc.	BBB	Industrials	Capital Goods	Aerospace & Defense	0,019682	0,019712975	26,68	26,59	24,09	18,53	14,02	9,64	13,19	12,69	12,6	11,64	11,41	11,95	11,76	12,34	13,06
Marathon Oil Corporation	BBB	Energy	Energy	Oil & Gas Exploration & Production	0,019526	0,01955673	10,06	8,28	6,83	4,53	3,56	3,52	3,65	4,12	4,35	4,93	5,5	5,78	5,61	5,89	5,34
Devon Energy Corporation	BBB	Energy	Energy	Oil & Gas Exploration & Production	0,019483	0,019513662	20,75	16,07	13,23	8,61	6,08	6,29	8,38	9,67	9,22	10,52	11,15	12,7	11,95	12,14	10,81
Comerica Incorporated	A	Financials	Banks	Banks	0,019477	0,019507653	61,36	51,7	44,01	37,98	28,93	32,87	27,34	34,75	30	32,13	32,83	33,89	30,04	32,65	36,35
Nielsen Holdings Plc	A	Industrials	Commercial & Professional services	Professional Services	0,019213	0,019243237	21,78	18,15	16,3	15,05	13,62	13	12,17	14,14	13,26	12,47	13,96	14,15	12,71	13,59	13,89
Sealed Air Corporation	BBB	Materials	Materials	Containers & Packaging	0,019143	0,019173127	34,79	30,15	29,77	25,5	24,02	24,72	24,35	30,8	29,5	28,49	28,22	29,64	28,76	29,8	32,1
Kimco Realty Corporation	BBB	Real Estate	Real Estate	Real Estate Management & Services	0,019118	0,019148088	18,52	16,85	16,83	12,84	10,32	10,1	7,55	10,82	8,92	8,6	10,6	10,9	9,15	11,33	11,11
National Oilwell Varco Inc.	A	Energy	Energy	Energy Equipment & Services	0,018909	0,018938759	23,1	18,62	15,61	10,13	10,19	10,06	9,85	11,6	11,67	12,02	11,7	13,19	11,52	12,09	12,47
HollyFrontier Corporation	BB	Energy	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,018786	0,018815565	42,19	33,3	28,29	22,4	22,03	23,98	22,13	26,12	26,71	28,24	29,98	30,86	26,57	30,12	31,45
Apache Corporation	BBB	Energy	Energy	Oil & Gas Exploration & Production	0,018413	0,018441978	28,32	24,85	20,64	8,05	4,82	4,85	5,36	8,18	8,46	10,66	11,28	12,45	10,61	12,17	10,79
Fox Corporation Class B	B	Communication Services	Media & Entertainment	Media & Entertainment	0,017775	0,017802974	35,24	30,23	28,31	25,38	20,05	22,04	21,59	25,64	26,23	24,52	25,02	25,73	25,5	27,37	28,78
News Corporation Class A	CCC	Communication Services	Media & Entertainment	Media & Entertainment	0,017403	0,017430389	14,2	11,96	10,91	10,37	9,02	8,53	8,18	9,49	8,9	8,83	9,48	10,93	10,87	11,52	12,25
DXC Technology Co.	BBB	Information Technology	Software & Services	Software & Services	0,016566	0,016592071	28,68	23,64	18,66	14,85	11,44	13,96	11,67	16,09	15,33	15,92	16,79	17,65	15,28	15,48	14,21
Mosaic Company	A	Materials	Materials	Specialty Chemicals	0,016454	0,016479895	19,13	16,98	14,26	11,01	9,59	9,9	9,94	12,97	11,45	11,33	11,15	11,91	10,08	11,56	12,09
Tapestry Inc.	BBB	Consumer Discretionary	Consumer durables & Apparel	Textiles, Apparel & Luxury Goods	0,016082	0,01610731	27,6	23,12	21,4	16,23	12,04	13,91	11,09	15,7	15,22	13,64	15,16	14,88	12,2	13,98	13,6
Alaska Air Group Inc.		Industrials			0,016015	0,016040204	65,43	50,46	45,21	37,95	23,56	29,87	24,69	31,61	29,93	28,01	30,11	30	25,63	31,02	34,19
American Airlines Group Inc.	CCC	Industrials	Transportation	Airlines	0,015972	0,015997137	27,82	19,05	15,97	14,31	10,38	14,04	9,39	12,51	11,57	10,31	10,64	10,14	9,04	9,7	10,5
Leggett & Platt Incorporated	BB	Consumer Discretionary	Consumer durables & Apparel	Household Durables	0,0157	0,015724709	44,13	39,2	37,32	32,06	23,84	27,95	22,72	29,88	28,89	29,88	33,75	29,8	26,61	29,99	30,59
Ralph Lauren Corporation Class A	BB	Consumer Discretionary	Consumer durables & Apparel	Textiles, Apparel & Luxury Goods	0,015178	0,015201887	116,32	104,48	104,74	82,85	65,96	67,33	61	80,41	72,68	68,3	73,09	72,08	65,38	72,84	75,51
Harley-Davidson Inc.	BBB	Consumer Discretionary	Automobiles & components	Automobiles	0,014854	0,014877377	34,7	30,05	25,83	23,7	16,21	17,78	15,03	21,11	19,33	18,65	20,37	21,43	19,64	24,36	21,34
Hanesbrands Inc.	AA	Consumer Discretionary	Consumer durables & Apparel	Textiles, Apparel & Luxury Goods	0,014527	0,014549862	14,23	13,01	11,81	9,51	8,82	8,05	7,04	9,4	9,05	8,29	9,41	9,3	8,37	9,42	9,86
H&R Block Inc.		Consumer Discretionary			0,013912	0,013933895	23,12	20,36	19,5	17,2	12,89	15,08	11,94	14,99	14,36	14,7	16,06	16,22	15,63	16,94	17
Xerox Holdings Corporation	A	Information Technology	Technology, Hardware & Equipment	Technology Hardware, Storage & Peripherals	0,013421	0,013442122	35,88	31,79	30,89	23,66	16,24	17,44	16,9	19,36	18,12	17,97	17,03	18,13	14,89	16,98	15,88
PVH Corp.	AA	Consumer Discretionary	Consumer durables & Apparel	Textiles, Apparel & Luxury Goods	0,013405	0,013426097	84,57	74,03	69,1	50,28	31,53	38	30,99	49,51	44,88	41,36	44,67	46,02	40,21	44,15	45,47
Discovery Inc. Class A	BBB	Communication Services	Media & Entertainment	Media & Entertainment	0,013288	0,013308913	27,93	25,1	24,07	21,29	16,87	17,16	16,84	20,14	20,2	19,14	19,54	19,35	18,72	18,36	19,59
L Brands Inc.		Consumer Discretionary			0,013235	0,013255829	23,78	21,66	22,25	16,12	9,78	12,59	11,34	14,93	13,78	10,31	12	12,22	10,86	15,08	16,19
Flowserve Corporation	A	Industrials	Capital Goods	Industrial Machinery	0,013145	0,013165688	45,59	39,84	36,42	25,5	20,25	21,5	23,76	27,19	24,8	25,53	26,55	26,78	22,44	25,2	26,1
Unum Group	B	Financials	Insurance	Life & Health Insurance	0,012848	0,01286822	29,39	22,86	20,25	15,21	10,36	15,66	13,2	15,28	15,21	15,06	16,5	15,52	13,98	14,71	15,15
SL Green Realty Corp.	BBB	Real Estate	Real Estate	Real Estate Management & Services	0,012612	0,012631849	91,64	76,98	79,08	64,69	44,98	46,66	37,92	53,49	50,62	44,16	48,46	48,19	37,72	36,58	41,84
TechnipFMC Plc	AA	Energy	Energy	Energy Equipment & Services	0,012464	0,012483616	16,6	14,53	12,34	6,99	6,17	6,96	7,17	8,4	8,12	8,02	8,27	7,92	6,52	7,21	7,4
Norwegian Cruise Line Holdings Ltd.	BBB	Consumer Discretionary	Consumer Services	Hotels & Travel	0,012387	0,012406495	46,97	37,26	27,1	11,1	8,72	12,02	8,46	13,11	12,38	10,86	13,84	12,43	10,92	13,9	15,66
Kohl's Corporation	BB	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,011722	0,011740448	42,96	37,75	33,41	23,9	15,28	17,55	11,51	19,91	18,48	15,8	17,64	18,2	17,54	17,48	19,22
Invesco Ltd.	A	Financials	Diversified Financials	Asset Management & Custody Banks	0,011195	0,011212619	17,13	14,11	12,85	10,58	8,38	9,18	7,65	9,66	8,89	7,64	7,83	7,82	6,7	7,27	7,97

Alliance Data Systems Corporation	BB	Information Technology	Software & Services	Software & Services	0,007211	0,007222349	101,63	85,43	72,23	49,25	27,41	36,28	26,35	38,38	37,66	40,19	46,14	46,94	37,98	42,05	46,33
Gap Inc.	AA	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,007209	0,007220345	16,43	13,8	12,7	10,41	6,95	7,5	5,44	8,76	8,35	6,9	7,83	8,1	7,6	8,21	8,9
Nordstrom Inc.	A	Consumer Discretionary	Retailing	Retail - Consumer Discretionary	0,006868	0,006878809	40,02	34,26	28,67	21,31	17,86	16,01	13,05	21,32	18,8	17,84	17,66	18,03	16,37	15,66	16,13
Under Armour Inc. Class A	BBB	Consumer Discretionary	Consumer durables & Apparel	Textiles, Apparel & Luxury Goods	0,006441	0,006451137	14,57	12,48	11,14	9,48	7,23	8,32	7,48	9,35	8,89	8,97	8,76	8,94	6,91	7,38	7,86
Under Armour Inc. Class C	BBB	Consumer Discretionary	Consumer durables & Apparel	Textiles, Apparel & Luxury Goods	0,006092	0,006101588	14,57	12,48	11,14	9,48	7,23	8,32	7,48	9,35	8,89	8,97	8,76	8,94	6,91	7,38	7,86
News Corporation Class B	CCC	Communication Services	Media & Entertainment	Media & Entertainment	0,005824	0,005833166	14,2	11,96	10,91	10,37	9,02	8,53	8,18	9,49	8,9	8,83	9,48	10,93	10,87	11,52	12,25
Coty Inc. Class A	B	Consumer Discretionary	Consumer durables & Apparel	Household Durables	0,00409	0,004096437	11,24	9,23	8,6	7,77	4,48	6,31	4,6	6,02	5,75	6,27	5,18	5,2	3,29	3,75	3,63
					99,842868	100															



Orange boxes correspond to the missing data from the database

Appendix 2: Assets' sectorial weight in S&P 500 and ESG benchmark

Sector "Energy"							
Company	Rating	Sector	Industries	$W_{B,k}$	(1) $W_{Best-in\ classe,k}$	$W_{ESG,k}$	
Exxon Mobil Corporation	BBB	Energy	Integrated Oil & Gas	0,7710	0,00	0,00	0,00
Chevron Corporation	BBB	Energy	Integrated Oil & Gas	0,7117	0,00	0,00	0,00
ConocoPhillips	AA	Energy	Oil & Gas Exploration & Production	0,1963	0,00	0,00	0,00
Phillips 66	BBB	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,1404	0,00	0,00	0,00
EOG Resources Inc.	BB	Energy	Oil & Gas Exploration & Production	0,1245	0,00	0,00	0,00
Kinder Morgan Inc Class P	BB	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,1217	0,00	0,00	0,00
Valero Energy Corporation	BBB	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,1107	0,00	0,00	0,00
Schlumberger NV	BBB	Energy	Energy Equipment & Services	0,1010	0,00	0,00	0,00
Williams Companies Inc.	BB	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,0960	0,00	0,00	0,00
Marathon Petroleum Corporation	BB	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,0951	0,00	0,00	0,00
Pioneer Natural Resources Company	BB	Energy	Oil & Gas Exploration & Production	0,0631	0,00	0,00	0,00
ONEOK Inc.	A	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,0607	0,00	0,00	0,00
Occidental Petroleum Corporation	BB	Energy	Integrated Oil & Gas	0,0521	0,00	0,00	0,00
Hess Corporation	AA	Energy	Oil & Gas Exploration & Production	0,0501	0,00	0,00	0,00
Concho Resources Inc.	B	Energy	Oil & Gas Exploration & Production	0,0464	0,00	0,00	0,00
Halliburton Company	BBB	Energy	Energy Equipment & Services	0,0431	0,00	0,00	0,00
Baker Hughes Company Class A	AAA	Energy	Energy Equipment & Services	0,0410	0,0410	0,1524	2,3092
Cabot Oil & Gas Corporation	B	Energy	Oil & Gas Exploration & Production	0,0311	0,00	0,00	0,00
Diamondback Energy Inc.	B	Energy	Oil & Gas Exploration & Production	0,0283	0,00	0,00	0,00
Noble Energy Inc.	BBB	Energy	Oil & Gas Exploration & Production	0,0198	0,00	0,00	0,00
Marathon Oil Corporation	BBB	Energy	Oil & Gas Exploration & Production	0,0196	0,00	0,00	0,00
Devon Energy Corporation	BBB	Energy	Oil & Gas Exploration & Production	0,0195	0,00	0,00	0,00
National Oilwell Varco Inc.	A	Energy	Energy Equipment & Services	0,0189	0,00	0,00	0,00
HollyFrontier Corporation	BB	Energy	Oil & Gas Refining, Marketing, Transportation & Storage	0,0188	0,00	0,00	0,00
Apache Corporation	BBB	Energy	Oil & Gas Exploration & Production	0,0184	0,00	0,00	0,00
TechnipFMC Plc	AA	Energy	Energy Equipment & Services	0,0125	0,0125	0,0464	0,7025
Total				3,0117	0,0535	0,1988	3,0117

Sector "Communication Services"							
Company	Rating	Sector	Industries	$W_{B,k}$	(1) $W_{Best-in\ classe,k}$	$W_{ESG,k}$	
Linde plc	BBB	Materials	Specialty Chemicals	0,43	0,00	0,00	0,00
Air Products and Chemicals Inc.	BBB	Materials	Specialty Chemicals	0,21	0,00	0,00	0,00
Newmont Corporation	A	Materials	Metals and Mining - Precious Metals	0,21	0,00	0,00	0,00
Ecolab Inc.	AAA	Materials	Specialty Chemicals	0,21	0,21	0,76	1,27
Sherwin-Williams Company	BBB	Materials	Specialty Chemicals	0,19	0,00	0,00	0,00
DuPont de Nemours Inc.	A	Materials	Specialty Chemicals	0,15	0,00	0,00	0,00
Dow Inc.	BBB	Materials	Commodity Chemicals	0,11	0,00	0,00	0,00
PPG Industries Inc.	AA	Materials	Specialty Chemicals	0,09	0,09	0,34	0,57
Ball Corporation	A	Materials	Containers & Packaging	0,09	0,00	0,00	0,00
Corteva Inc	BBB	Materials	Specialty Chemicals	0,08	0,00	0,00	0,00
LyondellBasell Industries NV	BBB	Materials	Commodity Chemicals	0,06	0,00	0,00	0,00
Amcor PLC	AA	Materials	Containers & Packaging	0,06	0,06	0,23	0,39
Weyerhaeuser Company	A	Materials	Paper & Forest Products	0,06	0,00	0,00	0,00
International Flavors & Fragrances Inc.	AA	Materials	Specialty Chemicals	0,06	0,06	0,21	0,35
Vulcan Materials Company	BB	Materials	Construction Materials	0,05	0,00	0,00	0,00
International Paper Company	BBB	Materials	Containers & Packaging	0,05	0,00	0,00	0,00
Freeport-McMoRan Inc.	BB	Materials	Metals and Mining - Precious Metals	0,05	0,00	0,00	0,00
Nucor Corporation	BBB	Materials	Steel	0,05	0,00	0,00	0,00
FMC Corporation	BB	Materials	Specialty Chemicals	0,05	0,00	0,00	0,00
Martin Marietta Materials Inc.	BB	Materials	Construction Materials	0,05	0,00	0,00	0,00
Celanese Corporation	BBB	Materials	Specialty Chemicals	0,04	0,00	0,00	0,00
Eastman Chemical Company	BB	Materials	Diversified Chemicals	0,04	0,00	0,00	0,00
Avery Dennison Corporation	BB	Materials	Containers & Packaging	0,04	0,00	0,00	0,00
Packaging Corporation of America	B	Materials	Containers & Packaging	0,04	0,00	0,00	0,00
Albemarle Corporation	BB	Materials	Specialty Chemicals	0,03	0,00	0,00	0,00
WestRock Company	BB	Materials	Containers & Packaging	0,03	0,00	0,00	0,00
CF Industries Holdings Inc.	B	Materials	Specialty Chemicals	0,02	0,00	0,00	0,00
Sealed Air Corporation	BBB	Materials	Containers & Packaging	0,02	0,00	0,00	0,00
Mosaic Company	A	Materials	Specialty Chemicals	0,02	0,00	0,00	0,00
Total				2,57	0,42	1,55	2,57

Sector "Communication Discretionary"							
Company	Rating	Sector	Industries	$W_{B,k}$	(1)	$W_{Best-in\ classe,k}$	$W_{ESG,k}$
Amazon.com Inc.	BBB	Consumer Discretionary	Retail - Consumer Discretionary	4,1668	0	0	0
Home Depot Inc.	AA	Consumer Discretionary	Retail - Consumer Discretionary	1,0745	1,0745	3,9907	8,3421
McDonald's Corporation	BB	Consumer Discretionary	Restaurants	0,5700	0	0	0
NIKE Inc. Class B	A	Consumer Discretionary	Textiles, Apparel & Luxury Goods	0,4803	0	0	0
Lowe's Companies Inc.	A	Consumer Discretionary	Retail - Consumer Discretionary	0,3783	0	0	0
Starbucks Corporation	BBB	Consumer Discretionary	Restaurants	0,3769	0	0	0
Booking Holdings Inc.	BBB	Consumer Discretionary	Retail - Consumer Discretionary	0,2731	0	0	0
TJX Companies Inc	BBB	Consumer Discretionary	Retail - Consumer Discretionary	0,2695	0	0	0
Target Corporation	A	Consumer Discretionary	Retail - Consumer Discretionary	0,2459	0	0	0
Dollar General Corporation	B	Consumer Discretionary	Retail - Consumer Discretionary	0,1857	0	0	0
Ross Stores Inc.	BB	Consumer Discretionary	Retail - Consumer Discretionary	0,1437	0	0	0
eBay Inc.	BBB	Consumer Discretionary	Retail - Consumer Discretionary	0,1328	0	0	0
General Motors Company	CCC	Consumer Discretionary	Automobiles	0,1328	0	0	0
O'Reilly Automotive Inc.	B	Consumer Discretionary	Retail - Consumer Discretionary	0,1251	0	0	0
Yum! Brands Inc.	BB	Consumer Discretionary	Restaurants	0,1091	0	0	0
AutoZone Inc.	B	Consumer Discretionary	Retail - Consumer Discretionary	0,1076	0	0	0
Chipotle Mexican Grill Inc.	BBB	Consumer Discretionary	Restaurants	0,1073	0	0	0
Marriott International Inc. Class A	BB	Consumer Discretionary	Hotels & Travel	0,1016	0	0	0
Hilton Worldwide Holdings Inc	BBB	Consumer Discretionary	Hotels & Travel	0,0899	0	0	0
Ford Motor Company	B	Consumer Discretionary	Automobiles	0,0899	0	0	0
Dollar Tree Inc.	B	Consumer Discretionary	Retail - Consumer Discretionary	0,0787	0	0	0
V.F. Corporation	AA	Consumer Discretionary	Textiles, Apparel & Luxury Goods	0,0756	0,0756	0,2809	0,5872
Aptiv PLC	A	Consumer Discretionary	Auto Components	0,0747	0	0	0
Best Buy Co. Inc.	AAA	Consumer Discretionary	Retail - Consumer Discretionary	0,0728	0,0728	0,2704	0,5652
Las Vegas Sands Corp.	BB	Consumer Discretionary	Casinos & Gaming	0,0673	0	0	0
Domino's Pizza Inc.	BBB	Consumer Discretionary	Restaurants	0,0596	0	0	0
Tiffany & Co.	AAA	Consumer Discretionary	Retail - Consumer Discretionary	0,0555	0,0555	0,2060	0,4306
CarMax Inc.	BB	Consumer Discretionary	Retail - Consumer Discretionary	0,0542	0	0	0
Tractor Supply Company	A	Consumer Discretionary	Retail - Consumer Discretionary	0,0527	0	0	0
Ulta Beauty Inc	BB	Consumer Discretionary	Retail - Consumer Discretionary	0,0523	0	0	0
Garmin Ltd.	BBB	Consumer Discretionary	Household Durables	0,0498	0	0	0
Genuine Parts Company		Consumer Discretionary		0,0459	0	0	0
Expedia Group Inc.	BBB	Consumer Discretionary	Retail - Consumer Discretionary	0,0436	0	0	0
Darden Restaurants Inc.	BBB	Consumer Discretionary	Restaurants	0,0385	0	0	0
Advance Auto Parts Inc.	BBB	Consumer Discretionary	Retail - Consumer Discretionary	0,0382	0	0	0
Hasbro Inc.	AA	Consumer Discretionary	Leisure Products	0,0359	0,0359	0,1334	0,2788
MGM Resorts International	BBB	Consumer Discretionary	Casinos & Gaming	0,0337	0	0	0
Wynn Resorts Limited	CCC	Consumer Discretionary	Casinos & Gaming	0,0328	0	0	0
LKQ Corporation	BBB	Consumer Discretionary	Retail - Consumer Discretionary	0,0322	0	0	0
Whirlpool Corporation	BB	Consumer Discretionary	Household Durables	0,0305	0	0	0
Royal Caribbean Cruises Ltd.	BBB	Consumer Discretionary	Hotels & Travel	0,0303	0	0	0
BorgWarner Inc.	A	Consumer Discretionary	Auto Components	0,0251	0	0	0
Carnival Corporation	CCC	Consumer Discretionary	Hotels & Travel	0,0236	0	0	0
Mohawk Industries Inc.	A	Consumer Discretionary	Household Durables	0,0206	0	0	0
Newell Brands Inc	A	Consumer Discretionary	Household Durables	0,0204	0	0	0
Tapestry Inc.	BBB	Consumer Discretionary	Textiles, Apparel & Luxury Goods	0,0161	0	0	0
Leggett & Platt Incorporated	BB	Consumer Discretionary	Household Durables	0,0157	0	0	0
Ralph Lauren Corporation Class A	BB	Consumer Discretionary	Textiles, Apparel & Luxury Goods	0,0152	0	0	0
Harley-Davidson Inc.	BBB	Consumer Discretionary	Automobiles	0,0149	0	0	0
Hanesbrands Inc.	AA	Consumer Discretionary	Textiles, Apparel & Luxury Goods	0,0145	0,0145	0,0540	0,1130
H&R Block Inc.		Consumer Discretionary		0,0139	0	0	0
PVH Corp.	AA	Consumer Discretionary	Textiles, Apparel & Luxury Goods	0,0134	0,0134	0,0499	0,1042
L Brands Inc.		Consumer Discretionary		0,0133	0	0	0
Norwegian Cruise Line Holdings Ltd.	BBB	Consumer Discretionary	Hotels & Travel	0,0124	0	0	0
Kohl's Corporation	BB	Consumer Discretionary	Retail - Consumer Discretionary	0,0117	0	0	0
Gap Inc.	AA	Consumer Discretionary	Retail - Consumer Discretionary	0,0072	0,0072	0,0268	0,0561
Nordstrom Inc.	A	Consumer Discretionary	Retail - Consumer Discretionary	0,0069	0	0	0
Under Armour Inc. Class A	BBB	Consumer Discretionary	Textiles, Apparel & Luxury Goods	0,0065	0	0	0
Under Armour Inc. Class C	BBB	Consumer Discretionary	Textiles, Apparel & Luxury Goods	0,0061	0	0	0
Coty Inc. Class A	B	Consumer Discretionary	Household Durables	0,0041	0	0	0
Total				10,4771	1,3495	5,0121	10,4771

Sector "Communication Staples"							
Company	Rating	Sector	Industries	$W_{B,k}$	(1)	$W_{Best-in\ classe,k}$	$W_{ESG,k}$
Procter & Gamble Company	AA	Consumer Staples	Household & Personal Products	1,1383	1,1383	4,2277	2,3844
PepsiCo Inc.	AA	Consumer Staples	Beverages	0,7428	0,7428	2,7590	1,5561
Walmart Inc.	BBB	Consumer Staples	Retail - Food & Staples	0,7254	0	0	0
Coca-Cola Company	AA	Consumer Staples	Beverages	0,7122	0,7122	2,6454	1,4920
Costco Wholesale Corporation	BB	Consumer Staples	Retail - Food & Staples	0,5458	0	0	0
Philip Morris International Inc.	BBB	Consumer Staples	Tobacco	0,4488	0	0	0
Mondelez International Inc. Class A	BBB	Consumer Staples	Food Products	0,2905	0	0	0
Altria Group Inc	BB	Consumer Staples	Tobacco	0,2868	0	0	0
Colgate-Palmolive Company	AA	Consumer Staples	Household & Personal Products	0,2465	0,2465	0,9154	0,5163
Kimberly-Clark Corporation	AA	Consumer Staples	Household & Personal Products	0,1928	0,1928	0,7162	0,4039
Estee Lauder Companies Inc. Class A	BBB	Consumer Staples	Household & Personal Products	0,1619	0	0	0
General Mills Inc.	AA	Consumer Staples	Food Products	0,1482	0,1482	0,5503	0,3104
Walgreens Boots Alliance Inc	BBB	Consumer Staples	Retail - Food & Staples	0,1219	0	0	0
Constellation Brands Inc. Class A	BB	Consumer Staples	Beverages	0,1170	0	0	0
Sysco Corporation	BBB	Consumer Staples	Retail - Food & Staples	0,1098	0	0	0
Monster Beverage Corporation	CCC	Consumer Staples	Beverages	0,1070	0	0	0
Kroger Co.	A	Consumer Staples	Retail - Food & Staples	0,1050	0	0	0
Clorox Company	AA	Consumer Staples	Household & Personal Products	0,1023	0,1023	0,3801	0,2144
McCormick & Company Incorporated	A	Consumer Staples	Food Products	0,0851	0	0	0
Archer-Daniels-Midland Company	A	Consumer Staples	Food Products	0,0802	0	0	0
Hershey Company	BBB	Consumer Staples	Food Products	0,0776	0	0	0
Kraft Heinz Company	BB	Consumer Staples	Food Products	0,0753	0	0	0
Tyson Foods Inc. Class A	BB	Consumer Staples	Food Products	0,0715	0	0	0
Church & Dwight Co. Inc.	BBB	Consumer Staples	Household & Personal Products	0,0710	0	0	0
Conagra Brands Inc.	BBB	Consumer Staples	Food Products	0,0639	0	0	0
Kellogg Company	AAA	Consumer Staples	Food Products	0,0625	0,0625	0,2322	0,1309
Hormel Foods Corporation	A	Consumer Staples	Food Products	0,0524	0	0	0
J.M. Smucker Company	BBB	Consumer Staples	Food Products	0,0500	0	0	0
Brown-Forman Corporation Class B	A	Consumer Staples	Beverages	0,0489	0	0	0
Lamb Weston Holdings Inc.	A	Consumer Staples	Food Products	0,0333	0	0	0
Campbell Soup Company	AA	Consumer Staples	Food Products	0,0326	0,0326	0,1210	0,0682
Molson Coors Beverage Company Class B	AA	Consumer Staples	Beverages	0,0282	0,0282	0,1047	0,0590
Total				7,1356	3,4064	12,6518	7,1356

Sector "Materials"							
Company	Rating	Sector	Industries	$W_{B,k}$	(1)	$W_{Best-in\ classe,k}$	$W_{ESG,k}$
Linde plc	BBB	Materials	Specialty Chemicals	0,4256	0	0	0
Air Products and Chemicals Inc.	BBB	Materials	Specialty Chemicals	0,2125	0	0	0
Newmont Corporation	A	Materials	Metals and Mining - Precious Metals	0,2122	0	0	0
Ecolab Inc.	AAA	Materials	Specialty Chemicals	0,2054	0,2054	0,7630	1,2677
Sherwin-Williams Company	BBB	Materials	Specialty Chemicals	0,1917	0	0	0
DuPont de Nemours Inc.	A	Materials	Specialty Chemicals	0,1484	0	0	0
Dow Inc.	BBB	Materials	Commodity Chemicals	0,1086	0	0	0
PPG Industries Inc.	AA	Materials	Specialty Chemicals	0,0919	0,0919	0,3412	0,5669
Ball Corporation	A	Materials	Containers & Packaging	0,0859	0	0	0
Corteva Inc	BBB	Materials	Specialty Chemicals	0,0751	0	0	0
LyondellBasell Industries NV	BBB	Materials	Commodity Chemicals	0,0633	0	0	0
Amcor PLC	AA	Materials	Containers & Packaging	0,0630	0,0630	0,2339	0,3886
Weyerhaeuser Company	A	Materials	Paper & Forest Products	0,0590	0	0	0
International Flavors & Fragrances Inc.	AA	Materials	Specialty Chemicals	0,0564	0,0564	0,2095	0,3481
Vulcan Materials Company	BB	Materials	Construction Materials	0,0544	0	0	0
International Paper Company	BBB	Materials	Containers & Packaging	0,0530	0	0	0
Freeport-McMoRan Inc.	BB	Materials	Metals and Mining - Precious Metals	0,0528	0	0	0
Nucor Corporation	BBB	Materials	Steel	0,0499	0	0	0
FMC Corporation	BB	Materials	Specialty Chemicals	0,0488	0	0	0
Martin Marietta Materials Inc.	BB	Materials	Construction Materials	0,0455	0	0	0
Celanese Corporation	BBB	Materials	Specialty Chemicals	0,0427	0	0	0
Eastman Chemical Company	BB	Materials	Diversified Chemicals	0,0366	0	0	0
Avery Dennison Corporation	BB	Materials	Containers & Packaging	0,0365	0	0	0
Packaging Corporation of America	B	Materials	Containers & Packaging	0,0358	0	0	0
Albemarle Corporation	BB	Materials	Specialty Chemicals	0,0297	0	0	0
WestRock Company	BB	Materials	Containers & Packaging	0,0264	0	0	0
CF Industries Holdings Inc.	B	Materials	Specialty Chemicals	0,0248	0	0	0
Sealed Air Corporation	BBB	Materials	Containers & Packaging	0,0192	0	0	0
Mosaic Company	A	Materials	Specialty Chemicals	0,0165	0	0	0
Total				2,5714	0,4167	1,5475	2,5714

Sector "Financials"							
Company	Rating	Sector	Industries	$W_{B,k}$	$(1)W_{Best-in\ classe,k}$	$W_{ESG,k}$	
Berkshire Hathaway Inc. Class B	BB	Financials	Diversified Financials	1,3993	0	0	0
JPMorgan Chase & Co.	BB	Financials	Banks	1,1565	0	0	0
Bank of America Corp	BB	Financials	Banks	0,7581	0	0	0
Citigroup Inc.	BBB	Financials	Banks	0,4019	0	0	0
Wells Fargo & Company	CCC	Financials	Banks	0,3851	0	0	0
BlackRock Inc.	AA	Financials	Asset Management & Custody Banks	0,3170	0,3170	1,1773	2,5594
S&P Global Inc.	A	Financials	Diversified Financials	0,3108	0	0	0
CME Group Inc. Class A	BBB	Financials	Diversified Financials	0,2615	0	0	0
American Express Company	AA	Financials	Consumer Finance	0,2466	0,2466	0,9161	1,9914
Goldman Sachs Group Inc.	BBB	Financials	Investment Banking & Brokerage	0,2349	0	0	0
Marsh & McLennan Companies Inc.	AA	Financials	Multi-Line Insurance & Brokerage	0,2157	0,2157	0,8013	1,7419
Intercontinental Exchange Inc.	BBB	Financials	Diversified Financials	0,2114	0	0	0
Chubb Limited	BBB	Financials	Property & Casualty Insurance	0,2096	0	0	0
Morgan Stanley	A	Financials	Investment Banking & Brokerage	0,1922	0	0	0
U.S. Bancorp	BB	Financials	Banks	0,1915	0	0	0
Aon Plc Class A	BB	Financials	Multi-Line Insurance & Brokerage	0,1851	0	0	0
PNC Financial Services Group Inc.	A	Financials	Banks	0,1850	0	0	0
Truist Financial Corporation	BBB	Financials	Banks	0,1835	0	0	0
Progressive Corporation	BBB	Financials	Property & Casualty Insurance	0,1795	0	0	0
Moody's Corporation	A	Financials	Diversified Financials	0,1685	0	0	0
Charles Schwab Corporation	BB	Financials	Investment Banking & Brokerage	0,1553	0	0	0
Allstate Corporation	BBB	Financials	Property & Casualty Insurance	0,1247	0	0	0
Bank of New York Mellon Corporation	AA	Financials	Asset Management & Custody Banks	0,1200	0,1200	0,4458	0,9692
Capital One Financial Corporation	B	Financials	Consumer Finance	0,1163	0	0	0
MSCI Inc. Class A	0	Financials	0	0,1157	0	0	0
Public Storage	AA	Financials	Banks	0,1116	0,1116	0,4146	0,9013
T. Rowe Price Group	AA	Financials	Asset Management & Custody Banks	0,1098	0,1098	0,4078	0,8865
MetLife Inc.	BB	Financials	Life & Health Insurance	0,1074	0	0	0
Willis Towers Watson Public Limited Company	BBB	Financials	Multi-Line Insurance & Brokerage	0,1052	0	0	0
Travelers Companies Inc.	A	Financials	Property & Casualty Insurance	0,1049	0	0	0
Aflac Incorporated	BBB	Financials	Life & Health Insurance	0,1049	0	0	0
American International Group Inc.	BB	Financials	Multi-Line Insurance & Brokerage	0,1023	0	0	0
Prudential Financial Inc.	A	Financials	Life & Health Insurance	0,0949	0	0	0
State Street Corporation	AA	Financials	Asset Management & Custody Banks	0,0867	0,0867	0,3219	0,6998
MarketAxess Holdings Inc.	BBB	Financials	Diversified Financials	0,0729	0	0	0
Arthur J. Gallagher & Co.	BBB	Financials	Multi-Line Insurance & Brokerage	0,0688	0	0	0
Ameriprise Financial Inc.	BBB	Financials	Asset Management & Custody Banks	0,0687	0	0	0
First Republic Bank	BBB	Financials	Banks	0,0679	0	0	0
Northern Trust Corporation	AA	Financials	Asset Management & Custody Banks	0,0642	0,0642	0,2386	0,5188
Hartford Financial Services Group Inc.	BB	Financials	Multi-Line Insurance & Brokerage	0,0547	0	0	0
Nasdaq Inc.	BBB	Financials	Diversified Financials	0,0536	0	0	0
Discover Financial Services	BB	Financials	Consumer Finance	0,0524	0	0	0
M&T Bank Corporation	BBB	Financials	Banks	0,0524	0	0	0
Fifth Third Bancorp	BB	Financials	Banks	0,0508	0	0	0
Choe Global Markets Inc	BB	Financials	Diversified Financials	0,0446	0	0	0
KeyCorp	A	Financials	Banks	0,0432	0	0	0
Synchrony Financial	BB	Financials	Consumer Finance	0,0419	0	0	0
SVB Financial Group	A	Financials	Banks	0,0404	0	0	0
Regions Financial Corporation	A	Financials	Banks	0,0393	0	0	0
Principal Financial Group Inc.	BBB	Financials	Life & Health Insurance	0,0391	0	0	0
E*TRADE Financial Corporation	BBB	Financials	Investment Banking & Brokerage	0,0384	0	0	0
Citizens Financial Group Inc.	BBB	Financials	Banks	0,0381	0	0	0
Cincinnati Financial Corporation	BB	Financials	Property & Casualty Insurance	0,0357	0	0	0
Huntington Bancshares Incorporated	BB	Financials	Banks	0,0347	0	0	0
Everest Re Group Ltd.	B	Financials	Multi-Line Insurance & Brokerage	0,0339	0	0	0
Loews Corporation	BBB	Financials	Property & Casualty Insurance	0,0336	0	0	0
W. R. Berkley Corporation	B	Financials	Property & Casualty Insurance	0,0330	0	0	0
Raymond James Financial Inc.	BB	Financials	Investment Banking & Brokerage	0,0328	0	0	0
Globe Life Inc.	BB	Financials	Life & Health Insurance	0,0302	0	0	0
Lincoln National Corporation	BBB	Financials	Life & Health Insurance	0,0295	0	0	0
Assurant Inc.	BB	Financials	Multi-Line Insurance & Brokerage	0,0251	0	0	0
Zions Bancorporation N.A.	A	Financials	Banks	0,0215	0	0	0
Franklin Resources Inc.	A	Financials	Asset Management & Custody Banks	0,0207	0	0	0
People's United Financial Inc.	A	Financials	Banks	0,0204	0	0	0
Comerica Incorporated	A	Financials	Banks	0,0195	0	0	0
Unum Group	B	Financials	Life & Health Insurance	0,0129	0	0	0
Invesco Ltd.	A	Financials	Asset Management & Custody Banks	0,0112	0	0	0
Total				10,2795	1,2718	4,7235	10,2681

Sector "Health Care"							
Company	Rating	Sector	Industries	$W_{B,k}$	(1) $W_{Best-in\ class,k}$	$W_{ESG,k}$	
Johnson & Johnson	BBB	Health Care	Pharmaceuticals	1,5789	0	0	0
UnitedHealth Group Incorporated	BB	Health Care	Health Care Providers & Services	1,1115	0	0	0
Pfizer Inc.	B	Health Care	Pharmaceuticals	0,8432	0	0	0
Merck & Co. Inc.	A	Health Care	Pharmaceuticals	0,7970	0	0	0
AbbVie Inc.	A	Health Care	Biotechnology	0,6706	0	0	0
Abbott Laboratories	BBB	Health Care	Health Care Equipment & Supplies	0,6533	0	0	0
Bristol-Myers Squibb Company	A	Health Care	Pharmaceuticals	0,5864	0	0	0
Thermo Fisher Scientific Inc.	BB	Health Care	Health Care Equipment & Supplies	0,5508	0	0	0
Amgen Inc.	AA	Health Care	Biotechnology	0,5464	0,5464	2,0295	4,1546
Eli Lilly and Company	A	Health Care	Pharmaceuticals	0,5261	0	0	0
Medtronic Plc	BBB	Health Care	Health Care Equipment & Supplies	0,5229	0	0	0
Danaher Corporation	BB	Health Care	Health Care Equipment & Supplies	0,4057	0	0	0
Gilead Sciences Inc.	AA	Health Care	Biotechnology	0,3806	0,3806	1,4135	2,8935
CVS Health Corporation	BBB	Health Care	Health Care Providers & Services	0,3370	0	0	0
Vertex Pharmaceuticals Incorporated	AA	Health Care	Biotechnology	0,2993	0,2993	1,1116	2,2756
Anthem Inc.	BB	Health Care	Health Care Providers & Services	0,2890	0	0	0
Cigna Corporation	A	Health Care	Health Care Providers & Services	0,2881	0	0	0
Becton Dickinson and Company	A	Health Care	Health Care Equipment & Supplies	0,2646	0	0	0
Intuitive Surgical Inc.	B	Health Care	Health Care Equipment & Supplies	0,2580	0	0	0
Zoetis Inc. Class A	A	Health Care	Pharmaceuticals	0,2541	0	0	0
Stryker Corporation	B	Health Care	Health Care Equipment & Supplies	0,2438	0	0	0
Biogen Inc.	A	Health Care	Biotechnology	0,2250	0	0	0
Humana Inc.	A	Health Care	Health Care Providers & Services	0,2142	0	0	0
Illumina Inc.	BB	Health Care	Health Care Equipment & Supplies	0,2102	0	0	0
Boston Scientific Corporation	BB	Health Care	Health Care Equipment & Supplies	0,1984	0	0	0
Edwards Lifesciences Corporation	AA	Health Care	Health Care Equipment & Supplies	0,1858	0,1858	0,6900	1,4125
Regeneron Pharmaceuticals Inc.	BBB	Health Care	Biotechnology	0,1836	0	0	0
Baxter International Inc.	BB	Health Care	Health Care Equipment & Supplies	0,1810	0	0	0
Centene Corporation	BBB	Health Care	Health Care Providers & Services	0,1562	0	0	0
DexCom Inc.	A	Health Care	Health Care Equipment & Supplies	0,1490	0	0	0
HCA Healthcare Inc	A	Health Care	Health Care Providers & Services	0,1169	0	0	0
IQVIA Holdings Inc	BBB	Health Care	Health Care Equipment & Supplies	0,1060	0	0	0
Zimmer Biomet Holdings Inc.	CCC	Health Care	Health Care Equipment & Supplies	0,1029	0	0	0
IDEXX Laboratories Inc.	AA	Health Care	Health Care Equipment & Supplies	0,1026	0,1026	0,3812	0,7804
Agilent Technologies Inc.	AAA	Health Care	Health Care Equipment & Supplies	0,1023	0,1023	0,3801	0,7781
McKesson Corporation	BB	Health Care	Health Care Providers & Services	0,0964	0	0	0
ResMed Inc.	AA	Health Care	Health Care Equipment & Supplies	0,0938	0,0938	0,3482	0,7128
Alexion Pharmaceuticals Inc.	B	Health Care	Biotechnology	0,0917	0	0	0
Cerner Corporation	A	Health Care	Health Care Equipment & Supplies	0,0864	0	0	0
Mettler-Toledo International Inc.	AA	Health Care	Health Care Equipment & Supplies	0,0720	0,0720	0,2676	0,5478
Incyte Corporation	B	Health Care	Biotechnology	0,0714	0	0	0
Align Technology Inc.	BBB	Health Care	Health Care Equipment & Supplies	0,0694	0	0	0
Laboratory Corporation of America Holdings	BBB	Health Care	Health Care Providers & Services	0,0684	0	0	0
Teleflex Incorporated	BB	Health Care	Health Care Equipment & Supplies	0,0664	0	0	0
West Pharmaceutical Services Inc.	AA	Health Care	Health Care Equipment & Supplies	0,0638	0,0638	0,2371	0,4854
Cardinal Health Inc.	A	Health Care	Health Care Providers & Services	0,0638	0	0	0
Quest Diagnostics Incorporated	AA	Health Care	Health Care Providers & Services	0,0614	0,0614	0,2282	0,4671
Cooper Companies Inc.	BBB	Health Care	Health Care Equipment & Supplies	0,0577	0	0	0
Hologic Inc.	A	Health Care	Health Care Equipment & Supplies	0,0575	0	0	0
AmerisourceBergen Corporation	BBB	Health Care	Health Care Providers & Services	0,0568	0	0	0
STERIS Plc	A	Health Care	Health Care Equipment & Supplies	0,0544	0	0	0
Waters Corporation	AA	Health Care	Health Care Equipment & Supplies	0,0490	0,0490	0,1819	0,3723
Varian Medical Systems Inc.	BBB	Health Care	Health Care Equipment & Supplies	0,0431	0	0	0
PerkinElmer Inc.	BBB	Health Care	Health Care Equipment & Supplies	0,0418	0	0	0
DENTSPLY SIRONA Inc.	A	Health Care	Health Care Equipment & Supplies	0,0385	0	0	0
ABIOMED Inc.	A	Health Care	Health Care Equipment & Supplies	0,0361	0	0	0
Universal Health Services Inc. Class B	CCC	Health Care	Health Care Providers & Services	0,0347	0	0	0
Henry Schein Inc.	AAA	Health Care	Health Care Providers & Services	0,0347	0,0347	0,1287	0,2636
Mylan N.V.	B	Health Care	Pharmaceuticals	0,0336	0	0	0
Perrigo Co. Plc	BBB	Health Care	Pharmaceuticals	0,0303	0	0	0
DaVita Inc.	A	Health Care	Health Care Providers & Services	0,0292	0	0	0
Total				15,1436	1,9917	7,3976	15,1436

Sector "Industrials"								
Company	Rating	Sector	Industries	$W_{B,k}$	(1) $W_{Best-in\ class,k}$	$W_{ESG,k}$		
Union Pacific Corporation	BBB	Industrials	Road & Rail Transport	0,4646	0	0	0	
Honeywell International Inc.	AA	Industrials	Industrial Conglomerates	0,4025	0,4025	1,4950	1,8015	
Lockheed Martin Corporation	A	Industrials	Aerospace & Defense	0,3746	0	0	0	
Raytheon Technologies Corporation	A	Industrials	Aerospace & Defense	0,3595	0	0	0	
3M Company	AAA	Industrials	Industrial Conglomerates	0,3432	0,3432	1,2746	1,5359	
Boeing Company	BB	Industrials	Aerospace & Defense	0,3039	0	0	0	
United Parcel Service Inc. Class B	A	Industrials	Air Freight & Logistics	0,2788	0	0	0	
Caterpillar Inc.	A	Industrials	Construction & Farm Machinery & Heavy Trucks	0,2579	0	0	0	
General Electric Company	A	Industrials	Industrial Conglomerates	0,2316	0	0	0	
CSX Corporation	A	Industrials	Road & Rail Transport	0,2157	0	0	0	
Northrop Grumman Corporation	AA	Industrials	Aerospace & Defense	0,2103	0,2103	0,7810	0,9411	
Illinois Tool Works Inc.	A	Industrials	Industrial Machinery	0,1963	0	0	0	
Deere & Company	A	Industrials	Construction & Farm Machinery & Heavy Trucks	0,1841	0	0	0	
Norfolk Southern Corporation	A	Industrials	Road & Rail Transport	0,1819	0	0	0	
L3Harris Technologies Inc.	A	Industrials	Aerospace & Defense	0,1664	0	0	0	
Waste Management Inc.	BBB	Industrials	Commercial Services & Supplies	0,1582	0	0	0	
Roper Technologies Inc.	A	Industrials	Industrial Conglomerates	0,1551	0	0	0	
Emerson Electric Co.	BBB	Industrials	Electrical Equipment	0,1404	0	0	0	
General Dynamics Corporation	BB	Industrials	Aerospace & Defense	0,1329	0	0	0	
Eaton Corp. Plc	BBB	Industrials	Electrical Equipment	0,1323	0	0	0	
FedEx Corporation	BB	Industrials	Air Freight & Logistics	0,1131	0	0	0	
IHS Markit Ltd.	AA	Industrials	Professional Services	0,1102	0,1102	0,4093	0,4932	
Verisk Analytics Inc	BBB	Industrials	Professional Services	0,1047	0	0	0	
Cummins Inc.	AAA	Industrials	Construction & Farm Machinery & Heavy Trucks	0,0990	0,0990	0,3678	0,4432	
Rockwell Automation Inc.	A	Industrials	Electrical Equipment	0,0965	0	0	0	
PACCAR Inc	BBB	Industrials	Construction & Farm Machinery & Heavy Trucks	0,0960	0	0	0	
Johnson Controls International plc	AAA	Industrials	Building Products	0,0931	0,0931	0,3457	0,4166	
Fastenal Company	AA	Industrials	Trading Companies & Distributors	0,0903	0,0903	0,3353	0,4041	
Parker-Hannifin Corporation	A	Industrials	Industrial Machinery	0,0875	0	0	0	
Cintas Corporation	BBB	Industrials	Commercial Services & Supplies	0,0824	0	0	0	
Trane Technologies plc	AA	Industrials	Building Products	0,0799	0,0799	0,2968	0,3576	
AMETEK Inc.	B	Industrials	Electrical Equipment	0,0787	0	0	0	
Stanley Black & Decker Inc.	BBB	Industrials	Industrial Machinery	0,0763	0	0	0	
TransDigm Group Incorporated	BB	Industrials	Aerospace & Defense	0,0763	0	0	0	
Copart Inc.	A	Industrials	Commercial Services & Supplies	0,0725	0	0	0	
Equifax Inc.	BB	Industrials	Professional Services	0,0722	0	0	0	
Fortive Corp.	BBB	Industrials	Industrial Machinery	0,0703	0	0	0	
Republic Services Inc.	B	Industrials	Commercial Services & Supplies	0,0696	0	0	0	
Southwest Airlines Co.	BB	Industrials	Airlines	0,0639	0	0	0	
Old Dominion Freight Line Inc.	BBB	Industrials	Road & Rail Transport	0,0609	0	0	0	
Kansas City Southern	AA	Industrials	Road & Rail Transport	0,0594	0,0594	0,2208	0,2661	
Delta Air Lines Inc.	A	Industrials	Airlines	0,0549	0	0	0	
Dover Corporation	BBB	Industrials	Industrial Machinery	0,0540	0	0	0	
W.W. Grainger Inc.	AA	Industrials	Trading Companies & Distributors	0,0528	0,0528	0,1962	0,2365	
Masco Corporation	A	Industrials	Building Products	0,0523	0	0	0	
Expeditors International of Washington Inc.	AAA	Industrials	Air Freight & Logistics	0,0506	0,0506	0,1881	0,2266	
IDEX Corporation	A	Industrials	Industrial Machinery	0,0463	0	0	0	
Xylem Inc.	AAA	Industrials	Industrial Machinery	0,0454	0,0454	0,1684	0,2030	
C.H. Robinson Worldwide Inc.	A	Industrials	Air Freight & Logistics	0,0431	0	0	0	
Jacobs Engineering Group Inc.	A	Industrials	Construction & Engineering	0,0427	0	0	0	
Westinghouse Air Brake Technologies Corpora	BB	Industrials	Construction & Farm Machinery & Heavy Trucks	0,0426	0	0	0	
Ingersoll Rand Inc.	BB	Industrials	Industrial Machinery	0,0415	0	0	0	
United Rentals Inc.	BBB	Industrials	Trading Companies & Distributors	0,0394	0	0	0	
J.B. Hunt Transport Services Inc.	BB	Industrials	Road & Rail Transport	0,0371	0	0	0	
Allegion PLC	AA	Industrials	Building Products	0,0360	0,0360	0,1336	0,1610	
Fortune Brands Home & Security Inc.	A	Industrials	Building Products	0,0345	0	0	0	
Huntington Ingalls Industries Inc.	A	Industrials	Aerospace & Defense	0,0304	0	0	0	
Snap-on Incorporated	A	Industrials	Industrial Machinery	0,0298	0	0	0	
Textron Inc.	BB	Industrials	Aerospace & Defense	0,0254	0	0	0	
Pentair plc	BBB	Industrials	Industrial Machinery	0,0249	0	0	0	
A. O. Smith Corporation	BBB	Industrials	Building Products	0,0242	0	0	0	
Robert Half International Inc.	AA	Industrials	Professional Services	0,0233	0,0233	0,0867	0,1045	
United Airlines Holdings Inc.	B	Industrials	Airlines	0,0230	0	0	0	
Rollins Inc.	BB	Industrials	Commercial Services & Supplies	0,0223	0	0	0	
Howmet Aerospace Inc.	BBB	Industrials	Aerospace & Defense	0,0197	0	0	0	
Nielsen Holdings Plc	A	Industrials	Professional Services	0,0192	0	0	0	
Alaska Air Group Inc.		Industrials		0,0190	0	0	0	
American Airlines Group Inc.	CCC	Industrials	Airlines	0,0160	0	0	0	
Flowserve Corporation	A	Industrials	Industrial Machinery	0,0132	0	0	0	
Total				7,6039	1,6961	6,2994	7,5908	

Sector "Real Estate"							
Company	Rating	Sector	Industries	$W_{B,k}$	(1) $W_{Best-in\ class,k}$	$W_{ESG,k}$	
Prologis Inc.	AA	Real Estate	Real Estate Management & Services	0,2608	0,2608	0,9687	1,1056
AvalonBay Communities Inc.	BBB	Real Estate	Real Estate Management & Services	0,0880	0	0	0
Equity Residential	A	Real Estate	Real Estate Management & Services	0,0827	0	0	0
Welltower Inc.	A	Real Estate	Real Estate Management & Services	0,0769	0	0	0
Alexandria Real Estate Equities Inc.	A	Real Estate	Real Estate Management & Services	0,0730	0	0	0
D.R. Horton Inc.	BB	Real Estate	Real Estate Development & Diversified Activities	0,0729	0	0	0
Realty Income Corporation	BB	Real Estate	Real Estate Management & Services	0,0727	0	0	0
Simon Property Group Inc.	BB	Real Estate	Real Estate Management & Services	0,0704	0	0	0
Lennar Corporation Class A	BB	Real Estate	Real Estate Development & Diversified Activities	0,0677	0	0	0
Essex Property Trust Inc.	BB	Real Estate	Real Estate Management & Services	0,0630	0	0	0
CBRE Group Inc. Class A	AA	Real Estate	Real Estate Management & Services	0,0561	0,0561	0,2085	0,2380
Mid-America Apartment Communities Inc.	BBB	Real Estate	Real Estate Management & Services	0,0528	0	0	0
Duke Realty Corporation	BBB	Real Estate	Real Estate Management & Services	0,0498	0	0	0
Ventas Inc.	BBB	Real Estate	Real Estate Management & Services	0,0498	0	0	0
Healthpeak Properties Inc.	AA	Real Estate	Real Estate Management & Services	0,0487	0,0487	0,1809	0,2064
Boston Properties Inc.	A	Real Estate	Real Estate Management & Services	0,0471	0	0	0
Extra Space Storage Inc.	BB	Real Estate	Real Estate Management & Services	0,0461	0	0	0
NVR Inc.	BBB	Real Estate	Real Estate Development & Diversified Activities	0,0446	0	0	0
UDR Inc.	A	Real Estate	Real Estate Management & Services	0,0430	0	0	0
PulteGroup Inc.	BB	Real Estate	Real Estate Development & Diversified Activities	0,0344	0	0	0
Host Hotels & Resorts Inc.	A	Real Estate	Real Estate Management & Services	0,0336	0	0	0
Regency Centers Corporation	A	Real Estate	Real Estate Management & Services	0,0287	0	0	0
Vornado Realty Trust	BB	Real Estate	Real Estate Management & Services	0,0232	0	0	0
Federal Realty Investment Trust	BBB	Real Estate	Real Estate Management & Services	0,0228	0	0	0
Apartment Investment & Management Co Class A		Real Estate		0,0218	0	0	0
Kimco Realty Corporation	BBB	Real Estate	Real Estate Management & Services	0,0191	0	0	0
SL Green Realty Corp.	BBB	Real Estate	Real Estate Management & Services	0,0126	0	0	0
Total				1,5626	0,3657	1,3581	1,5499

Sector "Utilities"							
Company	Rating	Sector	Industries	$W_{B,k}$	(1) $W_{Best-in\ class,k}$	$W_{ESG,k}$	
NextEra Energy Inc.	AAA	Utilities	Utilities	0,4577	0,4577	1,7001	1,0558
Dominion Energy Inc	A	Utilities	Utilities	0,2649	0	0	0
Duke Energy Corporation	BBB	Utilities	Utilities	0,2458	0	0	0
Southern Company	AA	Utilities	Utilities	0,2310	0,2310	0,8578	0,5327
American Electric Power Company Inc.	A	Utilities	Utilities	0,1563	0	0	0
Exelon Corporation	AA	Utilities	Utilities	0,1448	0,1448	0,5378	0,3340
Sempra Energy	A	Utilities	Utilities	0,1396	0	0	0
Xcel Energy Inc.	AA	Utilities	Utilities	0,1292	0,1292	0,4798	0,2980
WEC Energy Group Inc	A	Utilities	Utilities	0,1113	0	0	0
Eversource Energy	AA	Utilities	Utilities	0,1046	0,1046	0,3884	0,2412
Public Service Enterprise Group Inc	AA	Utilities	Utilities	0,0989	0,0989	0,3673	0,2281
Consolidated Edison Inc.	AA	Utilities	Utilities	0,0951	0,0951	0,3532	0,2194
FirstEnergy Corp.	BBB	Utilities	Utilities	0,0894	0	0	0
American Water Works Company Inc.	BBB	Utilities	Utilities	0,0889	0	0	0
Edison International	BBB	Utilities	Utilities	0,0825	0	0	0
PPL Corporation	BBB	Utilities	Utilities	0,0809	0	0	0
DTE Energy Company	A	Utilities	Utilities	0,0797	0	0	0
Entergy Corporation	A	Utilities	Utilities	0,0795	0	0	0
Ameren Corporation	BBB	Utilities	Utilities	0,0690	0	0	0
CMS Energy Corporation	AA	Utilities	Utilities	0,0635	0,0635	0,2360	0,1466
Eergy Inc.	BB	Utilities	Utilities	0,0548	0	0	0
Atmos Energy Corporation	BBB	Utilities	Utilities	0,0479	0	0	0
Alliant Energy Corp	A	Utilities	Utilities	0,0453	0	0	0
NRG Energy Inc.	B	Utilities	Utilities	0,0366	0	0	0
NiSource Inc	BBB	Utilities	Utilities	0,0349	0	0	0
CenterPoint Energy Inc.	BB	Utilities	Utilities	0,0342	0	0	0
AES Corporation	AA	Utilities	Utilities	0,0332	0,0332	0,1234	0,0766
Pinnacle West Capital Corporation	A	Utilities	Utilities	0,0332	0	0	0
Total				3,1324	1,3580	5,0439	3,1324

Sector "Information Technology"							
Company	Rating	Sector	Industries	$W_{B,k}$	(1)	$W_{Best-in\ class,k}$	$W_{ESG,k}$
Microsoft Corporation	AAA	Information Technology	Software & Services	5,7222	5,7222	21,2531	13,3713
Apple Inc.	A	Information Technology	Technology Hardware, Storage & Peripherals	5,4115	0	0	0
Visa Inc. Class A	A	Information Technology	Software & Services	1,3343	0	0	0
Intel Corporation	A	Information Technology	Semiconductors & Semiconductor Equipment	1,1025	0	0	0
Mastercard Incorporated Class A	A	Information Technology	Software & Services	1,0682	0	0	0
NVIDIA Corporation	AAA	Information Technology	Semiconductors & Semiconductor Equipment	0,8784	0,8784	3,2626	2,0527
Cisco Systems Inc.	AA	Information Technology	Technology Hardware, Storage & Peripherals	0,7744	0,7744	2,8762	1,8095
Adobe Inc.	AA	Information Technology	Software & Services	0,7565	0,7565	2,8098	1,7678
PayPal Holdings Inc	A	Information Technology	Software & Services	0,7120	0	0	0
salesforce.com inc.	AAA	Information Technology	Software & Services	0,6360	0,6360	2,3622	1,4862
Accenture Plc Class A	AAA	Information Technology	Software & Services	0,5025	0,5025	1,8663	1,1742
Oracle Corporation	BBB	Information Technology	Software & Services	0,4629	0	0	0
Broadcom Inc.	B	Information Technology	Semiconductors & Semiconductor Equipment	0,4460	0	0	0
Texas Instruments Incorporated	AA	Information Technology	Semiconductors & Semiconductor Equipment	0,4339	0,4339	1,6116	1,0140
International Business Machines Corporation	AA	Information Technology	Software & Services	0,4316	0,4316	1,6031	1,0086
QUALCOMM Incorporated	B	Information Technology	Semiconductors & Semiconductor Equipment	0,3644	0	0	0
Fidelity National Information Services Inc.	BB	Information Technology	Software & Services	0,3431	0	0	0
Intuit Inc.	AA	Information Technology	Software & Services	0,3083	0,3083	1,1451	0,7204
ServiceNow Inc.	A	Information Technology	Software & Services	0,2959	0	0	0
Advanced Micro Devices Inc.	BBB	Information Technology	Semiconductors & Semiconductor Equipment	0,2614	0	0	0
Fiserv Inc.	BBB	Information Technology	Software & Services	0,2420	0	0	0
Automatic Data Processing Inc.	A	Information Technology	Software & Services	0,2359	0	0	0
Equinix Inc.	AA	Information Technology	Software & Services	0,2327	0,2327	0,8642	0,5437
Global Payments Inc.	BB	Information Technology	Software & Services	0,2167	0	0	0
Applied Materials Inc.	AA	Information Technology	Semiconductors & Semiconductor Equipment	0,2081	0,2081	0,7731	0,4864
Micron Technology Inc.	BBB	Information Technology	Semiconductors & Semiconductor Equipment	0,2049	0	0	0
Autodesk Inc.	AA	Information Technology	Software & Services	0,1751	0,1751	0,6502	0,4091
Analog Devices Inc.	BBB	Information Technology	Semiconductors & Semiconductor Equipment	0,1672	0	0	0
Lam Research Corporation	AA	Information Technology	Semiconductors & Semiconductor Equipment	0,1543	0,1543	0,5731	0,3606
Digital Realty Trust Inc.	BB	Information Technology	Software & Services	0,1405	0	0	0
Cognizant Technology Solutions Corporation C	BBB	Information Technology	Software & Services	0,1161	0	0	0
KLA Corporation	BB	Information Technology	Semiconductors & Semiconductor Equipment	0,1115	0	0	0
Amphenol Corporation Class A	BBB	Information Technology	Electronic Equipment, Instruments & Components	0,1097	0	0	0
TE Connectivity Ltd.	A	Information Technology	Electronic Equipment, Instruments & Components	0,1046	0	0	0
HP Inc.	AA	Information Technology	Technology Hardware, Storage & Peripherals	0,1043	0,1043	0,3872	0,2436
Synopsys Inc.	BB	Information Technology	Software & Services	0,1026	0	0	0
Cadence Design Systems Inc.	AA	Information Technology	Software & Services	0,0990	0,0990	0,3678	0,2314
Motorola Solutions Inc.	A	Information Technology	Technology Hardware, Storage & Peripherals	0,0964	0	0	0
ANSYS Inc.	A	Information Technology	Software & Services	0,0935	0	0	0
Xilinx Inc.	BBB	Information Technology	Semiconductors & Semiconductor Equipment	0,0899	0	0	0
VeriSign Inc.	BBB	Information Technology	Software & Services	0,0894	0	0	0
Paychex Inc.	BBB	Information Technology	Software & Services	0,0878	0	0	0
Microchip Technology Incorporated	BB	Information Technology	Semiconductors & Semiconductor Equipment	0,0859	0	0	0
FleetCor Technologies Inc.	B	Information Technology	Software & Services	0,0844	0	0	0
Fortinet Inc.	BBB	Information Technology	Software & Services	0,0833	0	0	0
Skyworks Solutions Inc.	A	Information Technology	Semiconductors & Semiconductor Equipment	0,0797	0	0	0
Keysight Technologies Inc	AA	Information Technology	Electronic Equipment, Instruments & Components	0,0765	0,0765	0,2842	0,1788
Corning Inc	A	Information Technology	Electronic Equipment, Instruments & Components	0,0672	0	0	0
Akamai Technologies Inc.	BBB	Information Technology	Software & Services	0,0669	0	0	0
Citrix Systems Inc.	A	Information Technology	Software & Services	0,0645	0	0	0
CDW Corp.	B	Information Technology	Electronic Equipment, Instruments & Components	0,0631	0	0	0
Maxim Integrated Products Inc.	A	Information Technology	Semiconductors & Semiconductor Equipment	0,0616	0	0	0
Jack Henry & Associates Inc.	BBB	Information Technology	Software & Services	0,0579	0	0	0
Paycom Software Inc.	A	Information Technology	Software & Services	0,0553	0	0	0
Broadridge Financial Solutions Inc.	BBB	Information Technology	Software & Services	0,0551	0	0	0
Hewlett Packard Enterprise Co.	AA	Information Technology	Technology Hardware, Storage & Peripherals	0,0549	0,0549	0,2041	0,1284
Leidos Holdings Inc.	A	Information Technology	Software & Services	0,0542	0	0	0
Zebra Technologies Corporation Class A	A	Information Technology	Electronic Equipment, Instruments & Components	0,0540	0	0	0
Western Digital Corporation	B	Information Technology	Technology Hardware, Storage & Peripherals	0,0512	0	0	0
Arista Networks Inc.	BBB	Information Technology	Technology Hardware, Storage & Peripherals	0,0497	0	0	0
Seagate Technology PLC	BBB	Information Technology	Technology Hardware, Storage & Peripherals	0,0486	0	0	0
Qorvo Inc.	BB	Information Technology	Semiconductors & Semiconductor Equipment	0,0471	0	0	0
NortonLifeLock Inc.	A	Information Technology	Software & Services	0,0471	0	0	0
NetApp Inc.	BB	Information Technology	Technology Hardware, Storage & Peripherals	0,0426	0	0	0
Gartner Inc.	BB	Information Technology	Software & Services	0,0423	0	0	0
F5 Networks Inc.	BBB	Information Technology	Technology Hardware, Storage & Peripherals	0,0335	0	0	0
Western Union Company	A	Information Technology	Software & Services	0,0324	0	0	0
Juniper Networks Inc.	BBB	Information Technology	Technology Hardware, Storage & Peripherals	0,0320	0	0	0
Iron Mountain Inc.	AA	Information Technology	Software & Services	0,0280	0,0280	0,1040	0,0654
FLIR Systems Inc.	A	Information Technology	Electronic Equipment, Instruments & Components	0,0248	0	0	0
IPG Photonics Corporation	B	Information Technology	Electronic Equipment, Instruments & Components	0,0226	0	0	0
Quanta Services Inc.	BBB	Information Technology	Technology Hardware, Storage & Peripherals	0,0200	0	0	0
DXC Technology Co.	BBB	Information Technology	Software & Services	0,0166	0	0	0
Xerox Holdings Corporation	A	Information Technology	Technology Hardware, Storage & Peripherals	0,0134	0	0	0
Alliance Data Systems Corporation	BB	Information Technology	Software & Services	0,0072	0	0	0
Total				27,0521	11,5768	42,9978	27,0521

Appendix 3: S&P 500, assets' returns based on stock prices

Sector "Consumer Discretionary"														
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Amazon.com Inc.	-0,1013	0,0092	-0,0611	0,0342	0,0293	0,0034	0,0714	0,1626	0,0148	-0,0515	0,0409	0,0127	0,0112	0,0023
Home Depot Inc.	-0,1121	0,0490	-0,1000	-0,2553	0,2524	-0,0622	0,1278	0,0392	0,0132	0,0301	0,0726	0,0209	0,0107	0,0273
McDonald's Corporation	-0,1006	0,0306	-0,1092	-0,1617	0,1045	-0,0224	0,1457	0,0131	-0,0112	-0,0074	-0,0078	-0,0409	0,0610	0,0104
NIKE Inc. Class B	-0,1084	-0,0087	-0,1447	-0,1076	0,2339	-0,0525	0,1006	0,0360	-0,0172	-0,0320	0,0574	-0,0383	0,0778	0,0514
Lowe's Companies Inc.	-0,1496	-0,0118	-0,0838	-0,3122	0,3107	-0,0550	0,1596	0,0188	0,0170	0,0640	0,0935	-0,0039	0,0744	0,0663
Starbucks Corporation	-0,1022	-0,0394	-0,0719	-0,1701	0,1433	-0,0496	0,1716	0,0437	-0,0197	-0,0237	0,0552	-0,0422	0,0467	0,0048
Booking Holdings Inc.	-0,1208	-0,0493	-0,1183	-0,1716	0,0660	-0,0195	0,1544	0,0354	-0,0735	0,0631	-0,0124	-0,0325	0,1784	0,0050
TJX Companies Inc	-0,0554	-0,0207	-0,1194	-0,2754	0,2523	-0,1248	0,1917	0,0188	-0,0740	0,0478	0,0054	-0,0276	0,1323	-0,0122
Target Corporation	-0,1147	0,0286	-0,0465	-0,0358	-0,0274	-0,0229	0,1257	0,0885	-0,0494	0,0038	0,0702	0,0441	-0,0285	0,0467
Dollar General Corporation	-0,0993	0,0537	-0,0794	-0,0390	0,0428	0,1100	0,0434	0,0785	-0,0337	-0,0169	0,0194	0,0321	-0,0167	0,0700
Ross Stores Inc.	-0,1173	-0,0576	-0,0944	-0,3117	0,2959	-0,0945	0,1872	0,0336	-0,0679	0,0406	0,0281	-0,0672	0,1005	0,0328
eBay Inc.	-0,0932	0,0553	-0,0659	-0,1887	0,0943	-0,0256	0,1505	0,1071	0,0506	-0,0026	0,0739	-0,0010	0,0317	0,0483
General Motors Company	-0,1198	-0,0594	-0,1281	-0,2659	0,1786	-0,1562	0,3337	-0,0657	-0,0236	-0,0478	0,1450	-0,0543	0,1480	-0,0038
O'Reilly Automotive Inc.	-0,0582	-0,0017	-0,0374	-0,2555	0,1883	-0,0576	0,1593	0,0907	0,0303	-0,0220	0,0695	0,0115	-0,0052	0,0302
Yum! Brands Inc.	-0,1377	0,0016	-0,1223	-0,2597	0,1798	-0,0763	0,2697	0,0473	0,0204	-0,0242	0,0283	-0,0148	0,0277	0,0283
AutoZone Inc.	-0,0333	0,0269	-0,0449	-0,2810	0,1696	-0,0717	0,1901	0,0542	0,0557	-0,0502	0,0638	0,0161	0,0446	0,0222
Chipotle Mexican Grill Inc.	-0,1593	-0,0653	-0,1282	-0,1021	0,1220	-0,0378	0,2618	0,0639	0,0758	-0,0086	0,0582	0,0496	0,0864	-0,0491
Marriott International Inc. Class A	-0,1344	-0,1040	-0,1360	-0,2200	0,0573	-0,2507	0,3763	0,0363	-0,0421	0,0501	0,0286	-0,0850	0,1415	-0,0280
Hilton Worldwide Holdings Inc	-0,1129	-0,0680	-0,1307	-0,2166	0,1226	-0,1910	0,2236	0,1047	-0,0562	0,0092	0,0022	-0,0506	0,1437	0,0117
Ford Motor Company	-0,1179	-0,0675	-0,1325	-0,2309	0,1986	-0,1830	0,2665	-0,0466	-0,0488	0,0103	0,0650	-0,0649	0,1531	0,0106
Dollar Tree Inc.	-0,1157	-0,0336	-0,0690	0,0170	0,0142	-0,0884	0,1042	0,0538	-0,0880	0,0382	0,0085	-0,0382	0,0883	0,1979
V.F. Corporation	-0,1400	-0,0260	-0,1510	-0,1074	0,0949	-0,1542	0,2113	-0,0289	-0,0510	0,0158	0,0505	-0,1077	0,0708	0,0083
Aptiv PLC	-0,1328	-0,0233	-0,1287	-0,3204	0,1353	-0,1558	0,4375	0,0272	-0,0185	0,0480	0,0365	-0,0599	0,1221	0,0481
Best Buy Co. Inc.	-0,1619	-0,0241	-0,1729	-0,1540	0,2206	-0,1439	0,2339	0,0668	0,0210	0,0053	0,0882	-0,0003	-0,0215	0,0152
Las Vegas Sands Corp.	-0,1112	-0,0591	-0,1067	-0,1163	-0,0085	-0,0993	0,2621	-0,0178	-0,0687	0,0418	0,1169	-0,1213	0,0478	0,0222
Dominio's Pizza Inc.	-0,0874	-0,0090	-0,0588	-0,0505	0,1293	-0,0310	0,0469	0,0563	0,0119	-0,0272	0,0331	0,0188	-0,0105	0,0369
Tiffany & Co.	-0,0049	-0,0066	-0,0359	-0,0195	0,0212	0,0066	-0,0026	0,0094	-0,0217	0,0056	0,0118	-0,0121	-0,0153	0,0245
CarMax Inc.	-0,1373	-0,0265	-0,1860	-0,3602	0,3311	-0,1753	0,3683	-0,0192	0,0880	0,0016	0,0791	-0,0116	0,0759	0,0797
Tractor Supply Company	-0,1098	0,0335	-0,1669	-0,0039	0,0946	-0,0433	0,1099	0,0508	0,0999	0,0011	0,0502	0,0420	0,0012	0,0944
Ulta Beauty Inc	-0,1413	-0,0020	-0,1930	-0,2849	0,1782	-0,1015	0,2918	0,0644	-0,0232	0,0179	0,0737	-0,1287	0,1006	0,1060
Garmin Ltd.	-0,0847	-0,0098	-0,1163	-0,1396	0,1136	-0,0268	0,0991	0,0440	-0,0389	0,0113	0,0192	-0,0407	0,0751	0,0749
Genuine Parts Company	-0,0932	-0,0503	-0,0347	-0,3018	0,1646	-0,0962	0,2302	0,0416	0,0051	0,0021	0,0166	-0,0434	0,0561	0,0802
Expedia Group Inc.	-0,1791	-0,0686	-0,2419	-0,2965	0,2301	-0,1886	0,2815	0,0128	0,0530	0,0108	0,0294	-0,0362	0,1676	0,0196
Darden Restaurants Inc.	-0,1949	-0,0959	-0,2590	-0,4029	0,4015	-0,1679	0,4147	-0,0154	0,0863	0,0150	0,0697	-0,0684	0,0865	0,0163
Advance Auto Parts Inc.	-0,0542	-0,0382	-0,1112	-0,3400	0,2777	-0,1145	0,2624	0,1123	-0,0107	-0,0085	0,0708	0,0097	0,0589	0,0438
Hasbro Inc.	-0,1414	-0,0583	-0,2437	-0,1620	0,4236	0,0198	0,1303	-0,0061	-0,0044	-0,0820	0,0236	-0,0703	0,0292	0,1023
MGM Resorts International	-0,2176	-0,1698	-0,2426	-0,4057	0,3381	-0,1321	0,3752	-0,0323	-0,0099	0,0768	0,0386	-0,1116	0,1480	0,0805
Wynn Resorts Limited	-0,1561	-0,1219	-0,2288	-0,2834	0,2182	-0,2339	0,4567	0,1105	-0,0236	0,0551	0,0756	-0,1063	0,0071	0,0643
LKQ Corporation	-0,1047	-0,0696	-0,0952	-0,3454	0,3104	-0,1877	0,2986	-0,0706	0,0186	0,1632	0,0593	-0,1020	0,0737	0,0837
Whirlpool Corporation	-0,1313	-0,0444	-0,0470	-0,3550	0,1318	-0,0193	0,2676	0,0055	-0,0071	0,0727	0,0037	-0,0338	0,1131	0,0177
Royal Caribbean Cruises Ltd.	-0,2422	-0,1915	-0,4977	-0,2635	0,4490	-0,2930	0,6490	-0,0704	-0,0457	0,1427	-0,0208	-0,0619	0,1519	0,2024
BorgWarner Inc.	-0,0699	-0,0813	-0,1114	-0,2010	0,1560	-0,1014	0,2087	0,0484	0,0037	0,0030	0,0818	-0,0551	0,0746	0,0775
Carnival Corporation	-0,1881	-0,1886	-0,3525	-0,3174	0,2008	-0,4108	0,4629	0,0113	-0,0518	0,1696	0,0201	-0,1006	0,1315	0,0885
Mohawk Industries Inc.	-0,1026	-0,0213	-0,1863	-0,3920	0,3304	-0,2054	0,4193	-0,0956	-0,0080	0,0560	0,0178	-0,0976	0,0879	0,1187
Newell Brands Inc	-0,1977	-0,0808	-0,0734	-0,1184	0,1913	-0,1187	0,1797	-0,0912	0,0040	-0,0488	0,0108	-0,0573	0,0930	0,0286
Tapestry Inc.	-0,1623	-0,0744	-0,2416	-0,2582	0,1553	-0,2027	0,4157	-0,0306	-0,1038	0,1114	-0,0185	-0,1801	0,1459	-0,0272
Leggett & Platt Incorporated	-0,1117	-0,0480	-0,1409	-0,2564	0,1724	-0,1871	0,3151	-0,0331	0,0343	0,1295	-0,1170	-0,1070	0,1270	0,0200
Ralph Lauren Corporation Class A	-0,1018	0,0025	-0,2090	-0,2039	0,0208	-0,0940	0,3182	-0,0961	-0,0603	0,0701	-0,0138	-0,0930	0,1141	0,0367
Harley-Davidson Inc.	-0,1340	-0,1404	-0,0825	-0,3160	0,0969	-0,1547	0,4045	-0,0843	-0,0352	0,0922	0,0520	-0,0835	0,2403	-0,1240
Hanesbrands Inc.	-0,0857	-0,0922	-0,1948	-0,0726	-0,0873	-0,1255	0,3352	-0,0372	-0,0840	0,1351	-0,0117	-0,1000	0,1254	0,0467
H&R Block Inc.	-0,1194	-0,0422	-0,1179	-0,2506	0,1699	-0,2082	0,2554	-0,0420	0,0237	0,0925	0,0100	-0,0364	0,0838	0,0035
PVH Corp.	-0,1246	-0,0666	-0,2724	-0,3729	0,2052	-0,1845	0,5976	-0,0935	-0,0784	0,0800	0,0302	-0,1262	0,0980	0,0299
L Brands Inc.	-0,0892	0,0272	-0,2755	-0,3933	0,2873	-0,0993	0,3166	-0,0770	-0,2518	0,1639	0,0183	-0,1113	0,3886	0,0736
Norwegian Cruise Line Holdings Ltd.	-0,2067	-0,2727	-0,5904	-0,2144	0,3784	-0,2962	0,5496	-0,0557	-0,1228	0,2744	-0,1019	-0,1215	0,2729	0,1266
Kohl's Corporation	-0,1213	-0,1150	-0,2846	-0,3607	0,1486	-0,3442	0,7298	-0,0718	-0,1450	0,1165	0,0317	-0,0363	-0,0034	0,0995
Gap Inc.	-0,1601	-0,0797	-0,1803	-0,3324	0,0791	-0,2747	0,6103	-0,0468	-0,1737	0,1348	0,0345	-0,0617	0,0803	0,0840
Nordstrom Inc.	-0,1439	-0,1632	-0,2567	-0,1619	-0,1036	-0,1849	0,6337	-0,1182	-0,0511	-0,0101	0,0210	-0,0921	-0,0434	0,0300
Under Armour Inc. Class A	-0,1434	-0,1074	-0,1490	-0,2373	0,1508	-0,1010	0,2500	-0,0492	0,0090	-0,0234	0,0205	-0,2271	0,0680	0,0650
Under Armour Inc. Class C	-0,1434	-0,1074	-0,1490	-0,2373	0,1508	-0,1010	0,2500	-0,0492	0,0090	-0,0234	0,0205	-0,2271	0,0680	0,0650
Coty Inc. Class A	-0,1788	-0,0683	-0,0965	-0,4234	0,4085	-0,2710	0,3087	-0,0449	0,0904	-0,1738	0,0039	-0,3673	0,1398	-0,0320

Sector "Communication Services"														
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Facebook Inc. Class A	-0,0843	-0,0591	-0,0597	-0,1207	0,0472	-0,0166	0,1363	0,0231	0,0604	0,0642	0,0498	-0,0069	0,1140	-0,0418
Alphabet Inc. Class A	-0,0972	-0,0325	-0,0629	-0,1203	0,0394	-0,0158	0,1042	0,0600	-0,0019	0,0319	0,0509	-0,0081	0,0293	0,0144
Alphabet Inc. Class C	-0,0982	-0,0306	-0,0606	-0,1209	0,0358	-0,0116	0,1034	0,0593	-0,0031	0,0323	0,0513	-0,0109	0,0271	0,0131
Verizon Communications Inc.	-0,0695	0,0500	-0,0475	-0,0437	0,0187	0,0366	0,0501	0,0287	-0,0091	-0,0190	0,0030	-0,0402	-0,0111	0,0606
AT&T Inc.	-0,0863	0,0514	-0,0692	-0,1745	0,0486	-0,0795	0,1189	0,0341	-0,0487	0,0064	-0,0037	-0,0497	0,0555	0,0328
Walt Disney Company	-0,1534	-0,0202	-0,1106	-0,1613	0,1212	-0,0261	0,1131	0,0204	-0,0510	0,0426	0,0347	-0,0010	0,0823	-0,0061
Netflix Inc.	-0,0290	-0,0002	-0,0885	-0,0103	0,0730	0,0130	0,0248	0,1409	0,0048	-0,0229	0,0488	0,0428	-0,0548	-0,0223
Comcast Corporation Class A	-0,1175	-0,0015	-0,0257	-0,1517	0,0362	-0,0180	0,1266	0,0021	-0,0242	-0,0048	-0,0122	-0,0167	0,0785	0,0222
American Tower Corporation	-0,0818	0,0861	-0,0298	-0,1824	0,1182	0,0198	0,1652	-0,0214	-0,0332	-0,0426	0,0178	-0,0368	0,0560	0,0649
Charter Communications Inc. Class A	-0,0788	0,0072	-0,0856	-0,1816	0,1829	-0,0134	0,0757	0,0702	0,0183	0,0021	0,0111	-0,0231	0,0189	0,0606
Crown Castle International Corp	-0,1474	0,1224	-0,0357	-0,1678	0,0690	0,0638	0,1272	0,0177	-0,0326	-0,0322	0,0082	-0,0479	0,0404	0,1022
Activision Blizzard Inc.	-0,0829	0,0317	-0,0156	-0,1183	0,0944	0,0530	0,0079	0,1062	0,0032	-0,0290	0,1301	0,0107	-0,0114	-0,0151
T-Mobile US Inc.	-0,0853	-0,0255	-0,0281	-0,1269	0,0962	0,0032	0,0478	0,0593	-0,0021	-0,0507	0,1429	-0,0122	-0,0156	0,0443
Electronic Arts Inc.	-0,0615	0,0621	-0,0985	-0,1043	0,0970	0,0782	0,0289	0,0884	0,0101	-0,0261	0,0296	0,0129	0,0143	0,0255
SBA Communications Corp. Class A	-0,1034	0,0772	-0,0129	-0,1851	0,1398	0,0131	0,1549	0,0295	-0,0287	-0,0622	0,0178	-0,0266	0,0206	0,0834
Twitter Inc.	-0,1334	0,0078	-0,1246	-0,1823	0,0559	-0,0870	0,2027	-0,0385	0,0764	-0,0313	0,0751	-0,0311	0,1248	-0,0506
Take-Two Interactive Software Inc.	-0,0737	0,0950	-0,0091	-0,1412	0,1153	0,0608	0,0077	0,0422	0,0276	-0,0409	0,0587	0,0207	0,0601	-0,0309
Omnicom Group Inc	-0,1148	-0,0500	-0,0442	-0,2052	0,0499	-0,0460	0,1454	-0,0393	-0,0465	0,0742	-0,0140	-0,0764	0,0173	0,0581
ViacomCBS Inc. Class B	-0,1293	-0,1233	-0,2395	-0,2593	0,0685	-0,0281	0,3323	-0,0459	-0,0108	0,0531	0,0984	-0,0431	0,1324	0,0587
Fox Corporation Class A	-0,1422	-0,0635	-0,1035	-0,2100	0,0993	-0,0204	0,1876	0,0230	-0,0652	0,0204	0,0284	-0,0089	0,0733	0,0515
CenturyLink Inc.	-0,0870	-0,0087	-0,1372	-0,1003	-0,0045	0,0057	0,1687	-0,0375	-0,0040	-0,0040	-0,0222	-0,0680	0,0597	0,0010
DISH Network Corporation Class A	-0,1770	-0,1286	-0,2609	-0,0750	0,0506	-0,0953	0,2155	-0,0238	0,0391	0,0252	0,0725	-0,0396	0,1963	0,0707
Live Nation Entertainment Inc.	-0,1809	-0,1279	-0,1915	-0,2072	0,3880	-0,2880	0,1400	0,0021	-0,0029	0,0766	0,0192	-0,0453	0,1605	0,0574
Interpublic Group of Companies Inc.	-0,1249	-0,0505	-0,1463	-0,2681	0,2147	-0,1074	0,1988	-0,0748	-0,0216	0,1150	0,0544	-0,1125	0,0719	0,0382
Discovery Inc. Class C	-0,1013	-0,0410	-0,1155	-0,2076	0,0172	-0,0186	0,1960	0,0030	-0,0525	0,0209	-0,0097	-0,0326	-0,0192	0,0670
Fox Corporation Class B	-0,1422	-0,0635	-0,1035	-0,2100	0,0993	-0,0204	0,1876	0,0230	-0,0652	0,0204	0,0284	-0,0089	0,0733	0,0515
News Corporation Class A	-0,1577	-0,0878	-0,0495	-0,1302	-0,0543	-0,0410	0,1601	-0,0622	-0,0079	0,0736	0,1530	-0,0055	0,0598	0,0634
Discovery Inc. Class A	-0,1013	-0,0410	-0,1155	-0,2076	0,0172	-0,0186	0,1960	0,0030	-0,0525	0,0209	-0,0097	-0,0326	-0,0192	0,0670
News Corporation Class B	-0,1577	-0,0878	-0,0495	-0,1302	-0,0543	-0,0410	0,1601	-0,0622	-0,0079	0,0736	0,1530	-0,0055	0,0598	0,0634

Sector "Consumer Staples"														
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Procter & Gamble Company	-0,1063	0,0744	-0,0624	-0,1020	0,0756	0,0446	-0,0037	0,0874	-0,0474	-0,0099	-0,0074	-0,0116	-0,0175	0,0295
PepsiCo Inc.	-0,0948	0,0397	-0,0652	-0,1845	0,1590	0,0343	0,0726	0,0293	-0,0232	-0,0314	0,0314	0,0128	-0,0402	0,0082
Walmart Inc.	-0,0919	0,0886	-0,0267	-0,0011	-0,0343	0,0904	0,0194	0,0847	-0,0203	-0,0504	0,0002	0,0289	-0,0128	-0,0022
Coca-Cola Company	-0,1106	0,0332	-0,1229	-0,2029	0,1178	0,0238	0,1180	-0,0192	-0,0547	0,0037	0,0112	-0,0618	0,0409	0,0366
Costco Wholesale Corporation	-0,1268	0,1074	-0,0291	-0,0392	-0,0210	0,0152	0,0394	0,0597	-0,0232	-0,0278	0,0156	-0,0220	0,0108	0,0200
Philip Morris International Inc.	-0,0866	0,0659	-0,0890	-0,2316	0,1523	0,0623	0,0256	0,0348	-0,0550	-0,0053	-0,0175	-0,0586	0,0394	0,0413
Mondelez International Inc. Class A	-0,1012	0,0541	-0,0851	-0,1493	0,1054	0,0607	0,0366	0,0218	-0,0387	-0,0138	0,0039	-0,0185	-0,0052	0,0487
Altria Group Inc	-0,1202	0,0440	-0,0492	-0,1446	0,0689	0,0491	0,0936	-0,0015	-0,0350	-0,0383	-0,0309	-0,0041	0,0312	0,0350
Colgate-Palmolive Company	-0,1141	0,0731	-0,0470	-0,1016	0,0514	0,0361	0,0339	0,0502	-0,0216	-0,0402	0,0123	-0,0061	0,0261	0,0223
Kimberly-Clark Corporation	-0,0719	0,1164	-0,0772	-0,1185	0,0559	0,0403	0,0121	0,0795	-0,0020	-0,0344	0,0126	0,0009	0,0079	0,0122
Estee Lauder Companies Inc. Class A	-0,1227	0,0482	-0,1028	-0,1232	0,0641	-0,0411	0,0698	0,0572	-0,0456	0,0375	0,0035	-0,0216	0,0519	0,1081
General Mills Inc.	-0,0913	0,1178	-0,0234	-0,0021	-0,0291	0,0944	0,0121	0,0663	-0,0031	-0,0149	0,0030	0,0457	-0,0405	0,0514
Walgreens Boots Alliance Inc	-0,1027	0,1036	-0,0855	0,0050	-0,0521	-0,0747	0,0802	0,0117	-0,0170	-0,0476	0,0002	-0,0784	0,0313	0,0965
Constellation Brands Inc. Class A	-0,1689	0,0388	-0,2574	-0,0999	0,2104	-0,0877	0,2578	-0,0213	-0,0238	0,0173	0,0278	-0,0411	0,0872	0,0023
Sysco Corporation	-0,1349	0,0046	-0,2970	-0,2494	0,4280	-0,2170	0,2689	0,0145	0,0551	-0,0060	0,0100	-0,1064	0,0867	0,0659
Monster Beverage Corporation	-0,1051	0,0606	-0,0574	-0,1649	0,0823	-0,0385	0,1160	0,0278	-0,0384	-0,0047	0,1052	0,0035	0,0409	0,0466
Kroger Co.	-0,0719	0,1389	-0,0414	0,0343	-0,0832	0,1087	-0,0383	0,0281	0,0324	-0,0305	0,0431	-0,0247	0,0003	0,0077
Clorox Company	-0,0317	0,0869	-0,0317	0,0574	-0,0237	0,0251	0,0376	0,0504	-0,0147	0,0164	0,0588	0,0283	-0,0536	0,0386
McCormick & Company Incorporated	-0,0987	0,0304	-0,1038	-0,0775	0,0622	0,1103	0,0505	0,0210	-0,0168	0,0010	0,0622	0,0850	-0,0343	0,0191
Archer-Daniels-Midland Company	-0,1424	-0,0003	-0,0797	-0,1164	0,0944	0,0344	0,0845	-0,0102	-0,0323	-0,0241	0,0360	-0,0622	0,0367	0,1225
Hershey Company	-0,0975	0,0854	-0,1052	-0,1581	0,1113	0,0683	0,0296	0,0178	-0,0732	-0,0236	0,0049	-0,0211	-0,0009	0,0478
Kraft Heinz Company	-0,0911	0,0507	-0,0792	-0,0546	0,0882	0,0443	0,1104	0,0432	-0,0035	0,0052	0,0062	-0,0123	0,0257	0,0176
Tyson Foods Inc. Class A	-0,1284	-0,0412	-0,1878	0,0211	0,0928	-0,0814	0,1322	0,0230	-0,0539	0,0176	0,0064	-0,0362	0,0168	0,0381
Church & Dwight Co. Inc.	-0,0926	0,0743	-0,1526	0,0390	-0,0575	0,0916	0,0110	0,0754	-0,0299	-0,0018	0,0299	0,0034	-0,0195	0,0437
Conagra Brands Inc.	-0,0979	0,0584	-0,1225	0,0507	0,0718	0,1178	0,0400	0,0344	0,0180	-0,0262	0,0133	0,0194	-0,0436	0,0646
Kellogg Company	-0,0771	0,0450	0,0171	-0,1234	0,0656	0,0692	-0,0133	0,0363	-0,0141	0,0118	-0,0180	0,0060	-0,0309	0,0518
Hormel Foods Corporation	-0,0707	0,0563	-0,0352	0,0642	-0,0036	0,0760	-0,0172	0,0676	-0,0772	-0,0002	0,0137	0,0144	-0,0207	0,0405
J.M. Smucker Company	-0,0711	0,0680	-0,0631	0,0109	-0,0109	0,0903	0,0038	0,0783	-0,0311	-0,0194	0,0050	-0,0116	-0,0467	0,0495
Brown-Forman Corporation Class B	-0,1244	0,0136	-0,1437	-0,0809	0,1157	0,0172	0,1344	0,0172	-0,0444	-0,0018	0,0811	0,0053	-0,0232	0,0178
Lamb Weston Holdings Inc.	-0,0838	-0,0406	-0,2341	-0,2541	0,2022	-0,1233	0,1634	0,0261	-0,0359	0,0099	0,0547	-0,1502	0,0985	0,0496
Campbell Soup Company	-0,0592	0,1472	-0,0479	-0,0808	-0,0245	0,1208	-0,0360	0,0622	0,0081	-0,0067	0,0169	0,0443	-0,0968	0,0544
Molson Coors Beverage Company Class B	-0,1026	-0,0318	-0,1038	-0,1320	0,0303	0,0775	0,1558	-0,0637	-0,0304	-0,0955	-0,0008	-0,0653	0,0132	0,0307

Sector "Energy"														
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Exxon Mobil Corporation	-0,1301	-0,0729	-0,2007	-0,1409	0,1286	0,0610	0,1001	0,0021	0,0118	-0,0135	0,0704	-0,0905	0,0825	0,0195
Chevron Corporation	-0,1437	0,0212	-0,1249	-0,2880	0,1580	0,0921	0,1225	0,0339	-0,0019	0,0280	0,0674	-0,0661	0,0125	0,0307
ConocoPhillips	-0,1714	-0,0638	-0,3077	-0,1448	0,0900	0,1250	0,0556	0,0151	0,0235	0,0845	0,1006	-0,0417	0,0590	-0,0254
Phillips 66	-0,1612	-0,0743	-0,2155	-0,1107	0,0821	-0,0134	0,1919	-0,0324	0,0168	0,0964	0,1611	-0,0795	0,0917	0,0235
EOG Resources Inc.	-0,1475	-0,1258	-0,3707	0,0026	0,0318	0,1082	0,1234	-0,0664	0,0456	0,0279	0,1544	-0,0733	0,0965	-0,0251
Kinder Morgan Inc Class P	-0,1342	0,0085	-0,2358	-0,1639	0,1129	-0,0244	0,1449	-0,0252	-0,0231	-0,0042	0,0727	-0,0332	0,0384	0,0253
Valero Energy Corporation	-0,2009	-0,0477	-0,2090	-0,2253	0,1650	-0,1042	0,2417	0,0333	0,0143	0,1192	0,1219	-0,1083	0,1350	0,0146
Schlumberger NV	-0,1885	-0,1197	-0,3225	-0,1165	-0,0360	0,0380	0,1529	-0,0721	0,0540	-0,0225	0,1464	-0,1166	0,1023	0,0504
Williams Companies Inc.	-0,1149	-0,0840	-0,0935	-0,2523	0,2064	-0,0187	0,2154	0,0898	0,0111	0,0148	0,0496	-0,0365	0,0474	0,0397
Marathon Petroleum Corporation	-0,1900	-0,1744	-0,3634	-0,2395	0,2216	-0,1335	0,2772	-0,0067	0,0120	0,1350	0,1297	-0,0825	0,1738	0,0046
Pioneer Natural Resources Company	-0,1368	-0,1438	-0,3277	-0,1261	0,1115	0,0878	0,0189	0,0152	0,0107	0,0706	0,0853	-0,0792	0,1154	-0,0089
ONEOK Inc.	-0,1342	-0,0825	-0,4981	-0,3272	0,0130	0,0335	0,3122	0,0346	-0,0587	0,0437	0,1213	0,0338	0,1176	0,0135
Occidental Petroleum Corporation	-0,2226	-0,1797	-0,4691	-0,2608	0,1349	0,1197	0,1815	-0,1126	0,0132	0,1035	-0,0144	-0,0799	0,0224	-0,0835
Hess Corporation	-0,1280	-0,1150	-0,2977	-0,1143	0,1088	-0,0150	0,2047	-0,0750	0,1368	0,0429	0,0949	-0,0910	0,0688	0,0079
Concho Resources Inc.	-0,1430	-0,1448	-0,1919	-0,1347	0,0381	0,1347	0,1040	-0,0152	0,0222	0,0684	0,0338	-0,0715	0,0289	-0,0235
Halliburton Company	-0,2025	-0,2294	-0,4470	-0,2937	0,2653	0,1909	0,0788	-0,0767	0,1689	0,1016	0,0963	-0,0822	0,1802	0,0138
Baker Hughes Company Class A	-0,2164	-0,0006	-0,2083	-0,2146	0,1883	-0,1244	0,2364	0,0134	0,0295	0,0211	0,0953	-0,0829	0,0985	0,1051
Cabot Oil & Gas Corporation	-0,1301	-0,0471	-0,0858	-0,3469	0,1882	0,0371	0,1796	-0,0270	0,0156	0,0517	0,0206	-0,1044	0,1772	0,0427
Diamondback Energy Inc.	-0,1885	-0,2168	-0,4366	-0,3163	0,2839	0,3235	0,1035	-0,0958	0,1351	0,1258	0,0446	-0,0784	0,1176	-0,0084
Noble Energy Inc.	-0,1184	-0,1583	-0,4605	-0,4393	0,3308	0,1533	0,2139	-0,0748	0,1775	0,0735	0,1427	-0,1339	0,1649	-0,1356
Marathon Oil Corporation	-0,1769	-0,1751	-0,3367	-0,2141	-0,0112	0,0369	0,1288	0,0558	0,1333	0,1156	0,0509	-0,0294	0,0499	-0,0934
Devon Energy Corporation	-0,2255	-0,1767	-0,3492	-0,2938	0,0345	0,3323	0,1539	-0,0465	0,1410	0,0599	0,1390	-0,0591	0,0159	-0,1096
National Oilwell Varco Inc.	-0,1939	-0,1617	-0,3511	0,0059	-0,0128	-0,0209	0,1777	0,0060	0,0300	-0,0266	0,1274	-0,1266	0,0495	0,0314
HollyFrontier Corporation	-0,2107	-0,1505	-0,2082	-0,0165	0,0885	-0,0771	0,1803	0,0226	0,0573	0,0616	0,0294	-0,1390	0,1336	0,0442
Apache Corporation	-0,1225	-0,1694	-0,6100	-0,4012	0,0062	0,1052	0,5261	0,0342	0,2600	0,0582	0,1037	-0,1478	0,1470	-0,1134
TechnipFMC Plc	-0,1247	-0,1507	-0,4335	-0,1173	0,1280	0,0302	0,1715	-0,0333	-0,0123	0,0312	-0,0423	-0,1768	0,1058	0,0264

Sector "Utilities"														
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
NextEra Energy Inc.	-0,0895	0,0810	-0,1849	-0,1346	0,2096	-0,0444	0,1067	0,0040	-0,0266	-0,0528	0,0118	-0,0082	0,0263	0,0928
Dominion Energy Inc	-0,1253	0,1212	-0,0970	-0,1414	0,0870	-0,0482	0,1731	-0,0010	-0,0440	-0,0296	0,0369	-0,0023	0,0293	0,0559
Duke Energy Corporation	-0,1048	0,0802	-0,1341	-0,2025	0,1723	-0,0520	0,1880	-0,0024	-0,0490	-0,0355	-0,0104	-0,0073	0,0371	0,0288
Southern Company	-0,1251	0,1080	-0,1929	-0,1410	0,2082	-0,1026	0,2001	-0,0473	0,0046	-0,0577	0,0184	-0,0517	0,0510	0,0456
American Electric Power Company Inc.	-0,1224	0,0945	-0,1149	-0,1736	0,1672	-0,1307	0,1904	0,0008	-0,0364	-0,0221	-0,0188	-0,0091	0,0045	0,0821
Exelon Corporation	-0,1262	0,0478	-0,1951	-0,1473	0,1451	-0,0774	0,1954	-0,0181	-0,0479	-0,0218	0,0455	-0,0573	0,0556	0,0396
Sempra Energy	-0,1177	0,0150	-0,2463	-0,0681	0,2282	-0,1391	0,2517	-0,0467	0,0203	-0,0554	0,0359	-0,0405	0,0387	0,0202
Xcel Energy Inc.	-0,1200	0,1256	-0,0472	-0,2376	0,1608	-0,0155	0,1454	0,0133	-0,0384	-0,0370	-0,0301	-0,0401	0,0428	0,0772
WEC Energy Group Inc	-0,0993	0,1342	-0,0506	-0,2548	0,2022	-0,0429	0,1521	0,0215	-0,0655	-0,0566	-0,0314	-0,0102	0,0234	0,0649
Eversource Energy	-0,0990	0,1145	-0,0756	-0,2281	0,1847	-0,0728	0,2003	0,0162	-0,0546	-0,0774	-0,0260	-0,0180	0,0270	0,0745
Public Service Enterprise Group Inc	-0,1442	0,0667	-0,1936	-0,1353	0,1761	-0,0027	0,1936	0,0315	-0,0595	-0,0382	-0,0130	-0,0679	0,0585	0,0607
Consolidated Edison Inc.	-0,1189	0,1151	0,0020	-0,1757	0,0731	0,0000	0,1288	0,0185	-0,0773	-0,0652	-0,0398	-0,0515	0,0080	0,0695
FirstEnergy Corp.	-0,1366	0,0440	-0,1129	-0,1687	0,1260	-0,0170	0,1793	0,0327	-0,0843	-0,0348	-0,0059	-0,0231	0,0344	0,0399
American Water Works Company Inc.	-0,1025	0,1402	-0,0901	-0,2151	0,1995	-0,0617	0,1627	0,0001	-0,0512	-0,0465	-0,0098	-0,0023	0,0299	0,0521
Edison International	-0,1338	0,0059	-0,2121	-0,1201	0,1813	-0,1084	0,2353	0,0297	-0,0453	-0,0601	0,0244	-0,0193	0,0086	0,0298
PPL Corporation	-0,1576	0,0500	-0,1296	-0,2731	0,2923	-0,1436	0,2265	-0,0116	-0,0341	-0,0243	0,0499	-0,0613	0,0465	0,0893
DTE Energy Company	-0,0465	0,0224	-0,0292	-0,1113	0,1141	-0,0140	0,0637	-0,0118	0,0058	0,0031	0,0080	-0,0030	0,0027	0,0140
Entergy Corporation	-0,1004	0,0630	-0,1718	-0,2229	0,2169	-0,1434	0,2342	-0,0159	-0,0370	-0,0406	0,0154	0,0094	0,0314	0,0394
Ameren Corporation	-0,0743	0,0804	-0,1077	-0,1686	0,1797	-0,0739	0,1491	-0,0148	-0,0538	-0,0297	-0,0083	-0,0296	0,0154	0,0703
CMS Energy Corporation	-0,1173	0,1236	-0,0810	-0,2057	0,1753	-0,0633	0,1426	0,0136	-0,0596	-0,0582	-0,0117	-0,0292	0,0434	0,0538
Emergy Inc.	-0,1038	0,0687	-0,1479	-0,2014	0,2191	-0,0994	0,2181	-0,0336	-0,0405	-0,0443	0,0283	-0,0167	0,0612	0,0370
Atmos Energy Corporation	-0,1259	0,0776	-0,0951	-0,1438	0,1301	-0,0334	0,1172	0,0523	-0,0568	-0,0413	-0,0276	-0,0228	0,0338	0,0515
Alliant Energy Corp	-0,1187	0,1030	-0,1146	-0,2005	0,1733	-0,0544	0,1770	-0,0051	-0,0545	-0,0546	0,0232	-0,0425	0,0094	0,0643
NRG Energy Inc.	-0,1565	0,0334	-0,1593	-0,1920	0,2674	-0,1130	0,1736	0,0200	0,0392	0,0111	0,0028	-0,0052	0,0957	0,0092
NiSource Inc	-0,0958	0,0903	-0,1454	-0,1657	0,1790	-0,0920	0,1820	-0,0076	-0,0130	-0,0600	-0,0416	-0,0387	0,0322	0,0320
CenterPoint Energy Inc.	-0,0745	-0,0540	-0,2829	-0,2089	0,3232	-0,1411	0,3230	-0,0649	0,0166	-0,0204	0,1122	-0,1026	0,0496	0,0504
AES Corporation	-0,1938	0,0054	-0,2270	-0,0870	0,1336	-0,0901	0,2021	-0,1084	-0,0200	0,0063	0,0047	-0,0870	0,0417	0,0204
Pinnacle West Capital Corporation	-0,1362	0,1097	-0,1786	-0,1964	0,1843	-0,1216	0,2058	-0,0281	-0,0346	-0,0392	0,0068	-0,0332	0,0174	0,0721

Sector "Financials"														
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Berkshire Hathaway Inc. Class B	-0.1002	-0.0017	-0.0465	-0.1341	0.0565	-0.0073	0.0869	-0.0136	-0.0245	-0.0206	-0.0320	-0.0429	0.0336	0.0609
JPMorgan Chase & Co.	-0.1450	-0.0692	-0.0386	-0.1964	0.0914	-0.0776	0.2352	-0.0738	-0.0470	0.0280	-0.0059	-0.0734	0.0416	0.0876
Bank of America Corp	-0.1705	-0.0978	-0.0544	-0.1858	0.0981	-0.0727	0.2411	-0.0636	-0.0473	0.0406	0.0212	-0.0904	0.0569	0.0644
Citigroup Inc.	-0.1699	-0.0342	-0.1672	-0.2543	0.1508	-0.1440	0.2644	-0.0414	-0.0516	0.0560	0.0284	-0.0950	0.0520	0.0864
Wells Fargo & Company	-0.1435	-0.0922	-0.1673	-0.1421	0.1429	-0.1338	0.2657	-0.1454	-0.0514	0.0250	-0.0784	-0.0626	0.0347	0.0952
BlackRock Inc.	-0.1688	-0.0272	-0.0744	-0.1427	0.2245	-0.0375	0.1276	0.0116	-0.0036	0.0190	0.0302	0.0300	-0.0008	0.0299
S&P Global Inc.	-0.0932	0.0217	-0.0847	-0.1585	0.1483	-0.0039	0.1874	-0.0034	0.0048	0.0075	0.0405	0.0185	0.0288	0.0422
CME Group Inc. Class A	-0.0479	0.0877	-0.1584	-0.1262	0.0816	0.0140	0.0945	0.0077	-0.0464	-0.0496	0.0454	-0.0025	-0.0125	0.0213
American Express Company	-0.1851	-0.0154	-0.0798	-0.2558	0.1971	-0.1706	0.2955	-0.0784	-0.0483	0.0619	0.0134	-0.0813	0.0865	0.0643
Goldman Sachs Group Inc.	-0.1294	-0.0336	-0.0813	-0.2188	0.1440	-0.0721	0.2541	-0.0042	-0.0354	0.0006	0.0468	-0.0729	0.0469	0.0921
Marsh & McLennan Companies Inc.	-0.1013	0.0106	-0.0665	-0.1904	0.0699	-0.0649	0.2092	0.0253	-0.0533	0.0408	0.0709	0.0047	0.0003	0.0136
Intercontinental Exchange Inc.	-0.0584	0.0540	-0.1161	-0.1218	0.1171	-0.0032	0.0789	0.0346	-0.0164	-0.0028	0.0547	-0.0005	0.0032	0.0371
Chubb Limited	-0.1143	-0.0015	-0.1586	-0.1665	0.0755	-0.0516	0.1892	-0.0285	-0.1243	-0.0234	0.0035	-0.0241	0.1760	0.0422
Morgan Stanley	-0.1409	-0.0708	-0.1039	-0.2088	0.1462	-0.0047	0.2137	-0.0484	-0.0286	0.0114	0.0528	-0.0696	0.0762	0.1014
U.S. Bancorp	-0.1488	-0.0859	-0.1261	-0.1219	0.0982	-0.1281	0.2346	-0.0786	-0.0302	0.0276	-0.0054	-0.1171	0.0733	0.0799
Aon Plc Class A	-0.1016	0.0328	-0.1739	-0.1572	0.1061	-0.0682	0.2459	-0.0064	-0.0800	0.0152	0.0676	0.0101	0.0016	0.0259
PNC Financial Services Group Inc.	-0.1781	-0.0963	-0.0635	-0.1634	0.1188	-0.1491	0.2374	-0.0371	0.0040	0.0222	0.0200	-0.0741	0.0757	0.0901
Truist Financial Corporation	-0.1589	-0.1185	-0.1681	-0.1121	0.1077	-0.1823	0.3274	-0.0753	0.0626	-0.0011	0.0223	-0.1349	0.0773	0.1048
Progressive Corporation	-0.1019	0.1006	-0.0303	-0.1254	0.0770	0.0327	0.0585	0.0277	0.0045	-0.0807	-0.0251	0.0261	-0.0196	0.0396
Moody's Corporation	-0.1170	-0.0044	-0.1065	-0.1749	0.2525	-0.0518	0.1575	-0.0096	0.0244	-0.0137	0.0410	-0.0018	0.0219	0.0435
Charles Schwab Corporation	-0.1177	-0.1626	-0.0077	-0.0920	0.0928	0.0000	0.0873	-0.0206	-0.0107	0.0295	0.0017	-0.1035	0.0083	0.0938
Allstate Corporation	-0.1486	0.0230	-0.1341	-0.2038	0.1975	-0.0282	0.1673	0.0456	-0.0332	-0.0168	0.0105	-0.0537	-0.0058	0.0315
Bank of New York Mellon Corporation	-0.1142	-0.0458	-0.1036	-0.1481	0.1194	0.0372	0.1004	0.0068	-0.0437	0.0068	-0.0098	-0.0928	0.0761	0.0774
Capital One Financial Corporation	-0.1274	-0.0676	-0.1149	-0.3821	0.2288	-0.2357	0.4220	-0.0911	0.0278	0.0968	0.0100	-0.0609	0.0376	0.1300
MSCI Inc. Class A	-0.0422	-0.0325	-0.0085	-0.1423	0.1344	-0.0186	0.1481	0.0209	0.0243	-0.0152	0.0426	0.0229	-0.0075	-0.0270
Public Storage	-0.0738	0.0948	-0.0769	-0.1817	0.1186	0.0134	0.0748	-0.0581	-0.0471	-0.0153	0.0324	-0.0755	0.0597	0.0873
T. Rowe Price Group	-0.1340	-0.0107	-0.0806	-0.1500	0.0896	-0.0329	0.1047	-0.0159	-0.0304	0.1007	0.0328	-0.0048	0.0139	0.0505
MetLife Inc.	-0.1663	-0.0829	-0.1851	-0.2363	0.2662	-0.1022	0.2795	-0.0678	0.0074	0.0414	0.0155	-0.0867	0.0511	0.0801
Willis Towers Watson Public Limited Company	-0.0921	0.0553	-0.0985	-0.1523	0.0955	-0.0605	0.2529	-0.0032	-0.0930	0.0345	0.0764	0.0159	-0.0098	0.0221
Travelers Companies Inc.	-0.1136	0.0420	-0.1393	-0.1614	0.1166	-0.0606	0.1688	-0.0426	-0.0404	-0.0473	0.0134	-0.0722	0.1084	0.0687
Aflac Incorporated	-0.1640	-0.0482	-0.1493	-0.2296	0.3244	-0.0843	0.1748	-0.0418	-0.0053	0.0089	-0.0096	-0.0904	0.0520	0.0596
American International Group Inc.	-0.1325	-0.1023	-0.2470	-0.3166	0.3266	-0.1980	0.2972	-0.0769	-0.0469	0.0236	0.1569	-0.0427	0.0914	0.0405
Prudential Financial Inc.	-0.1852	-0.0747	-0.2420	-0.2015	0.2552	-0.1311	0.2736	-0.0358	-0.0144	0.0673	-0.0092	-0.1027	0.0634	0.1041
State Street Corporation	-0.1169	-0.1172	-0.0212	-0.2071	0.0426	0.0720	0.1803	-0.0404	-0.0185	0.0291	0.0193	-0.0965	0.0167	0.1020
MarketAxess Holdings Inc.	-0.0464	0.1173	-0.0532	-0.0946	0.1035	0.1298	0.0415	0.0655	-0.0204	0.0683	0.0767	0.0077	-0.0106	0.0545
Arthur J. Gallagher & Co.	-0.0958	0.0343	-0.1031	-0.2052	0.1200	-0.0488	0.1387	-0.0373	-0.0995	0.0296	0.1147	0.0096	0.0444	0.0349
Ameriprise Financial Inc.	-0.1945	-0.1040	-0.1048	-0.2074	0.1502	-0.1259	0.3339	-0.0790	-0.0313	0.0352	0.1289	-0.0288	0.0952	0.0575
First Republic Bank	-0.1376	-0.0563	0.0201	-0.1781	0.0348	-0.0068	0.2167	0.0052	0.0003	0.0054	0.0350	-0.0770	0.0145	0.1117
Northern Trust Corporation	-0.1391	-0.1153	-0.0204	-0.1427	0.1459	0.0412	0.1020	-0.0576	-0.0326	-0.0248	0.0069	-0.0640	0.0387	0.0694
Hartford Financial Services Group Inc.	-0.1395	0.0266	-0.1656	-0.2646	0.1235	-0.0850	0.3027	-0.0445	-0.0993	-0.0098	0.0186	-0.0854	0.1125	0.0352
Nasdaq Inc.	-0.1097	0.0776	-0.1308	-0.1579	0.1525	0.0263	0.1334	0.0308	-0.0504	0.0094	0.0091	0.0417	0.0291	0.0271
Discover Financial Services	-0.1242	-0.0456	-0.1729	-0.5122	0.5210	-0.2572	0.3747	-0.1065	0.0341	0.1418	0.0328	-0.1105	0.0649	0.1872
M&T Bank Corporation	-0.1672	-0.1018	-0.0990	-0.1241	0.0864	-0.1456	0.2517	-0.0807	-0.0040	0.0204	-0.0218	-0.1502	0.1000	0.0778
Fifth Third Bancorp	-0.1700	-0.0903	-0.2059	-0.2674	0.3281	-0.2162	0.3469	-0.0668	0.0295	0.0380	0.0186	-0.1094	0.0924	0.1011
Cboe Global Markets Inc	-0.0703	0.0274	-0.1881	-0.1594	0.1405	-0.0139	0.0423	0.0918	-0.0537	-0.0260	0.0656	-0.0030	-0.0057	0.0720
KeyCorp	-0.1688	-0.0905	-0.1341	-0.2777	0.2188	-0.1904	0.3236	-0.0998	0.0085	0.0158	0.0183	-0.1378	0.1045	0.1031
Synchrony Financial	-0.1268	-0.0292	-0.1460	-0.4443	0.2753	-0.2253	0.3298	-0.1131	0.0861	0.0906	0.0175	-0.1117	0.0792	0.1412
SVB Financial Group	-0.2037	-0.1620	-0.1019	-0.0385	0.0578	-0.1255	0.3326	-0.0646	0.0594	0.0047	0.0054	-0.0703	0.0966	0.1333
Regions Financial Corporation	-0.1720	-0.0404	-0.2227	-0.1723	0.1707	-0.1655	0.3643	-0.1353	0.0284	0.0388	0.0147	-0.1095	0.0827	0.1367
Principal Financial Group Inc.	-0.1841	-0.0361	-0.1592	-0.2775	0.2692	-0.1897	0.2342	-0.0631	-0.0183	0.1708	0.0887	-0.1141	0.0907	0.0459
E*TRADE Financial Corporation	-0.1420	-0.0756	-0.1443	-0.1976	0.1724	0.0092	0.2180	-0.0454	-0.0302	0.0202	0.0448	-0.0699	0.0775	0.1064
Citizens Financial Group Inc.	-0.1575	-0.1172	-0.1542	-0.2594	0.1388	-0.1509	0.3051	-0.1017	0.0369	0.0400	0.0546	-0.1027	0.0683	0.1325
Cincinnati Financial Corporation	-0.1624	0.0533	-0.0777	-0.1717	0.0200	-0.0648	0.1767	0.0266	-0.0847	-0.2239	-0.0856	-0.1163	0.1639	0.0284
Huntington Bancshares Incorporated	-0.1179	-0.0938	-0.1456	-0.1983	0.1096	-0.1771	0.3221	-0.1074	0.0124	0.0502	0.0093	-0.1318	0.0786	0.0975
Everest Re Group Ltd.	-0.1448	0.0227	-0.1594	-0.0805	-0.0275	-0.0595	0.1926	-0.0751	-0.1301	-0.0339	0.0714	-0.0445	0.2175	-0.0354
Loews Corporation	-0.1491	-0.0308	-0.1622	-0.1554	0.0779	-0.0294	0.2053	-0.0831	-0.1034	-0.0241	-0.0190	-0.0391	0.0706	0.0414
W. R. Berkley Corporation	-0.1464	-0.0134	-0.1518	-0.1516	0.0902	-0.0461	0.1787	-0.0228	-0.1184	0.0241	0.0054	-0.0773	0.1827	0.0266
Raymond James Financial Inc.	-0.1432	-0.1199	-0.0174	-0.1507	0.0038	-0.0669	0.2140	-0.0831	-0.0333	0.0265	0.0578	-0.0866	0.0683	0.0624
Globe Life Inc.	-0.1587	-0.0655	-0.1734	-0.1421	0.1599	-0.1025	0.2612	-0.0392	-0.0153	0.0515	-0.0280	-0.1156	0.0550	0.0618
Lincoln National Corporation	-0.2407	-0.1602	-0.2428	-0.4090	0.6095	-0.1456	0.4618	-0.1243	0.0185	0.0751	0.1284	-0.1064	0.0687	0.0837
Assurant Inc.	-0.1491	0.0249	-0.1398	-0.1045	0.1793	-0.0529	0.1263	-0.0638	-0.0038	-0.0247	-0.0232	-0.0626	0.0841	0.0066
Zions Bancorporation N.A.	-0.1205	-0.1170	-0.1660	-0.1306	0.0783	-0.1052	0.2561	-0.0620	0.0129	0.0491	-0.0059	-0.1103	0.1173	0.0901
Franklin Resources Inc.	-0.1366	-0.0051	-0.1633	-0.0667	0.0264	-0.1001	0.0937	-0.0280	-0.0257	0.1325	0.0649	-0.0750	0.0073	0.0548
People's United Financial Inc.	-0.1413	0.0072	-0.0871	-0.0820	-0.0197	-0.1786	0.2932	-0.0668	0.0353	0.0077	0.0212	-0.1144	0.0169	0.0543
Comerica Incorporated	-0.1574	-0.1487	-0.1370	-0.2383	0.1362	-0.1682	0.2710	-0.1367	0.0710	0.0218	0.0323	-0.1136	0.0869	0.1133
Unum Group	-0.2222	-0.1142	-0.2489	-0.3189	0.5116	-0.1571	0.1576	-0.0046	-0.0099	0.0956	-0.0594	-0.0992	0.0522	0.0299
Invesco Ltd.	-0.1763	-0.0893	-0.1767	-0.2079	0.0955	-0.1667	0.2627	-0.0797	-0.1406	0.0249	-0.0013	-0.1432	0.0851	0.0963

Sector "Health Care"															
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	
Johnson & Johnson	-0.1030	0.0628	-0.0544	-0.1073	0.0273	0.0894	0.0526	0.0764	0.0187	-0.0424	0.0028	0.0116	-0.0403	0.0375	
UnitedHealth Group Incorporated	-0.1542	0.1134	-0.0417	-0.2373	0.1736	-0.0535	0.1509	0.1001	0.0025	-0.0233	0.0088	0.0138	-0.0035	0.0514	
Pfizer Inc.	-0.0645	0.0477	-0.0658	-0.1133	0.0655	0.0886	0.0519	0.0431	0.0126	0.0070	-0.0113	0.0247	-0.0069	0.0184	
Merck & Co. Inc.	-0.0703	0.0738	-0.0664	-0.0625	0.0052	0.0630	0.0818	0.0118	-0.0243	-0.0462	-0.0164	0.0442	-0.0427	0.0570	
AbbVie Inc.	-0.0974	0.0362	-0.0387	-0.1939	0.0559	0.0096	0.0870	0.0463	0.0167	-0.0090	0.0135	0.0804	0.0153	0.0062	
Abbott Laboratories	-0.1191	0.0611	-0.0011	-0.1673	0.0966	0.0656	0.0829	0.1159	-0.0162	-0.0448	0.0428	-0.0407	0.0176	0.0377	
Bristol-Myers Squibb Company	-0.1000	0.0210	-0.0881	-0.1199	0.0908	0.0518	0.0697	0.0287	0.0272	-0.0320	0.0131	0.0498	-0.0515	-0.0176	
Thermo Fisher Scientific Inc.	-0.1318	0.0701	-0.0355	-0.0718	-0.0145	0.0287	0.1246	0.0447	-0.0087	0.0034	0.0097	0.0298	-0.0078	0.0262	
Amgen Inc.	-0.1035	0.0546	-0.0406	-0.0685	0.0533	0.0360	0.0623	0.0768	0.0056	-0.0224	0.0166	0.0229	-0.0510	0.0144	
Eli Lilly and Company	-0.1120	0.1216	-0.0148	-0.1218	0.0956	0.0414	0.0435	0.0793	0.0359	-0.0571	-0.0008	0.0372	-0.0462	0.0118	
Medtronic Plc	-0.1114	-0.0160	-0.1033	-0.1279	0.1604	-0.0343	0.1711	0.0228	-0.0390	-0.0419	0.0409	-0.0519	0.0088	0.0408	
Danaher Corporation	-0.1068	0.0266	-0.0474	-0.1243	0.1193	-0.0234	0.0783	0.0741	0.0546	-0.0260	0.0041	0.0150	-0.0341	0.0528	
Gilead Sciences Inc.	-0.0049	0.1566	-0.1180	0.0451	-0.0056	0.0736	-0.0601	0.1426	-0.0518	0.0039	-0.0308	-0.0159	-0.0383	0.0612	
CVS Health Corporation	-0.1724	0.0840	-0.0703	-0.0828	0.0712	-0.0490	0.0852	0.0477	-0.0166	-0.0338	0.0573	0.0011	0.0022	0.0354	
Vertex Pharmaceuticals Incorporated	-0.0904	0.0423	-0.0541	-0.0673	0.0546	0.0970	0.0348	0.0967	-0.0022	-0.0554	0.0656	0.0628	-0.0129	0.0105	
Anthem Inc.	-0.1276	0.0976	-0.0420	-0.2887	0.1637	-0.0882	0.1926	0.1046	-0.0138	0.0206	0.0177	0.0137	-0.0035	0.0613	
Cigna Corporation	-0.1577	0.0688	-0.0801	-0.2099	0.1351	0.0158	0.1098	0.0676	-0.0305	-0.0059	0.0117	0.0046	-0.0060	0.0440	
Becton Dickinson and Company	-0.0759	0.0055	-0.0110	-0.0662	-0.0161	0.0469	0.0914	0.0564	0.0259	-0.0608	0.0104	0.0148	-0.0736	0.0321	
Intuitive Surgical Inc.	-0.1291	0.0397	-0.1516	-0.1630	0.2441	-0.0570	0.0893	0.0447	-0.0217	-0.0312	0.0780	-0.0323	0.0815	0.0306	
Zoetis Inc. Class A	-0.0633	0.0287	-0.0844	-0.1956	0.1073	0.0254	0.1234	0.0153	-0.0352	0.0129	-0.0162	0.0161	0.0206	0.0713	
Stryker Corporation	-0.1503	-0.0247	-0.1161	-0.1517	0.1424	-0.0700	0.2384	0.0372	-0.0073	-0.0399	0.0634	-0.0615	0.0215	0.0629	
Biogen Inc.	-0.0841	0.0310	-0.0401	-0.0866	0.0645	0.0127	0.0684	0.0670	-0.1306	-0.0158	0.0714	0.0082	-0.0381	0.0084	
Humana Inc.	-0.1352	0.1481	-0.1447	-0.2654	0.2882	-0.0183	0.1748	0.0927	-0.0120	0.0085	0.0141	0.0549	-0.0095	0.0411	
Illumina Inc.	-0.1023	0.0329	-0.1497	0.0372	0.1118	-0.0206	0.0915	0.0999	-0.0230	-0.0103	0.0130	0.0811	0.0588	0.0235	
Boston Scientific Corporation	-0.1227	0.0056	-0.1402	-0.1574	0.1237	0.0183	0.1816	0.0396	-0.0363	-0.0247	0.0609	-0.0877	0.0310	0.0579	
Edwards Lifesciences Corporation	-0.1123	0.0040	-0.0984	-0.1048	0.1951	-0.0490	0.1416	0.0602	-0.0213	-0.0652	0.0426	-0.0223	0.0266	0.0259	
Regeneron Pharmaceuticals Inc.	0.1027	0.1122	-0.0584	-0.0582	0.0252	0.0974	0.0398	0.1088	-0.0045	-0.0719	0.0721	0.0236	-0.0118	0.0753	
Baxter International Inc.	-0.0993	0.0255	-0.0514	-0.0647	0.0533	0.0204	0.0672	0.0697	-0.0003	-0.0547	0.0027	-0.0104	-0.0026	0.0354	
Centene Corporation	-0.1904	0.1045	0.0856	-0.2316	0.1279	-0.0091	0.2165	0.0733	-0.0100	-0.0795	0.0140	0.0428	-0.0562	0.0217	
DexCom Inc.	-0.0524	0.0383	-0.1485	-0.1415	0.2552	-0.0084	0.0557	0.1748	0.0280	0.0273	0.1873	0.0302	-0.0299	-0.0665	
HCA Healthcare Inc	-0.1418	0.0049	-0.1802	-0.2472	0.1125	-0.0630	0.3205	0.0703	-0.0677	-0.0275	0.0292	-0.0851	0.0805	0.0020	
IQVIA Holdings Inc	-0.1465	-0.0247	-0.1275	-0.2278	0.1688	-0.0413	0.2513	0.0237	-0.0206	0.0594	0.0083	-0.0251	0.0648	0.0463	
Zimmer Biomet Holdings Inc.	-0.1350	-0.0885	-0.2119	-0.1208	0.1041	-0.0284	0.1994	0.0745	-0.0180	-0.0017	0.0483	-0.0777	0.0980	0.0238	
IDEXX Laboratories Inc.	-0.0849	-0.0182	0.0171	-0.2789	0.2644	0.0121	0.1025	0.0254	-0.0039	0.0633	0.0225	0.0012	0.0480		
Agilent Technologies Inc.	-0.0940	0.0194	-0.1192	-0.0396	0.0670	-0.0069	0.1152	0.0156	-0.0478	-0.0203	0.0741	0.0236	0.0415	0.0372	
McKesson Corporation	-0.1819	0.0144	-0.0631	-0.0573	0.0059	-0.0017	0.0624	0.0622	-0.0118	-0.0374	0.0094	0.0035	0.0951	0.0619	
ResMed Inc.	-0.0858	0.0448	-0.0984	-0.2364	0.2415	0.0776	0.0448	0.0334	-0.0252	-0.0120	0.0231	0.0084	-0.0146	-0.0033	
Alexion Pharmaceuticals Inc.	-0.0883	-0.0218	-0.1255	-0.0011	0.0456	0.0686	0.0720	0.0753	0.0448	-0.0389	-0.0632	0.0473	-0.0043	0.1813	
Cerner Corporation	-0.0894	0.0591	-0.1217	-0.1224	0.0612	0.0378	0.1013	0.0238	0.0391	-0.0830	0.0306	-0.0529	0.0333	0.0835	
Mettler-Toledo International Inc.	-0.0770	0.0197	-0.0600	-0.0409	0.0212	-0.0428	0.1536	-0.0089	-0.0104	-0.0340	0.0441	-0.0290	0.0710	0.0624	
Incyte Corporation	-0.0677	0.0084	-0.0289	-0.0932	0.0299	0.1396	0.1046	0.1519	0.0348	-0.0597	-0.0142	0.0021	0.0338	0.0256	
Align Technology Inc.	-0.1610	0.0312	-0.1301	-0.2607	0.2225	-0.1290	0.2529	-0.0010	-0.0053	0.0588	0.0333	-0.0303	0.1967	0.0077	
Laboratory Corporation of America Holdings	-0.0732	0.0229	-0.1596	-0.2899	0.2002	-0.1196	0.2956	0.0117	0.1023	-0.0286	0.0518	0.0010	0.0163	0.0303	
Teleflex Incorporated	-0.0955	0.0365	-0.0821	-0.2342	0.1586	0.0420	0.1060	0.0649	-0.0239	-0.0267	0.0332	-0.0136	0.0832	-0.0010	
West Pharmaceutical Services Inc.	-0.1152	-0.0041	-0.0256	-0.1058	0.0798	0.0728	0.0765	0.0432	0.1504	-0.0190	0.0437	0.0708	-0.0127	0.0218	
Cardinal Health Inc.	-0.1273	-0.0163	-0.0711	-0.0901	0.0242	0.0503	0.0927	0.0159	-0.0178	-0.0576	0.0519	-0.0186	0.0948	0.0205	
Quest Diagnostics Incorporated	-0.0627	0.0562	-0.1361	-0.2224	0.1042	-0.1173	0.2240	0.0709	0.1176	0.0205	0.0313	-0.0102	0.0158	0.0483	
Cooper Companies Inc.	-0.0874	0.0285	-0.1281	-0.1388	0.0901	0.0236	0.0604	0.0327	-0.0427	-0.0440	0.0864	-0.0263	-0.0307	0.1028	
Hologic Inc.	-0.1040	-0.0079	-0.1320	-0.2348	0.0712	-0.0132	0.2526	0.0652	0.0758	0.0486	0.0524	-0.0012	0.0077	0.0128	
AmerisourceBergen Corporation	-0.1308	0.0176	0.0488	-0.1043	0.0145	-0.0054	0.0796	0.0157	-0.0054	-0.0262	0.0198	-0.0266	0.0917	0.0236	
STERIS Plc	-0.0556	-0.0078	-0.1321	-0.1511	0.1213	0.0692	0.1007	0.0149	-0.0461	-0.0434	0.0484	0.0207	0.0407	0.0534	
Waters Corporation	-0.0993	0.0262	-0.0776	-0.0597	0.0686	-0.0292	0.0889	0.0081	-0.0313	-0.0692	0.0500	-0.0456	0.0461	0.0705	
Varian Medical Systems Inc.	-0.1427	0.0109	-0.0899	-0.1204	0.0146	-0.0458	0.1744	0.0230	-0.0611	0.0248	0.0658	-0.0393	0.0121	0.0518	
PerkinElmer Inc.	-0.0691	-0.0338	-0.1161	-0.0396	0.0551	-0.0480	0.1002	0.0676	0.0478	0.0176	0.0381	0.0041	0.0059	0.0756	
DENTSPLY SIRONA Inc.	-0.1339	-0.0916	-0.0955	-0.1886	0.1555	-0.0627	0.1811	-0.0241	-0.0379	0.0249	0.0089	-0.0723	0.1201	0.1013	
ABIOMED Inc.	-0.0988	0.0454	-0.0908	-0.0862	0.1129	-0.0264	0.1321	0.0371	0.0151	0.0888	0.0195	-0.0115	0.1149	0.0860	
Universal Health Services Inc. Class B	-0.1330	0.0196	-0.1658	-0.2823	0.1799	-0.0406	0.2241	0.0314	-0.0570	-0.0246	0.0293	-0.0924	0.1246	0.0123	
Henry Schein Inc.	-0.0977	-0.0533	-0.0170	-0.2063	0.1109	-0.0730	0.1273	0.0266	-0.0233	-0.0046	0.0360	-0.0420	0.0956	0.0707	
Mylan N.V.	-0.1872	-0.1041	-0.0227	0.0133	-0.0243	-0.0766	0.1703	0.0019	-0.0217	0.0235	0.0893	-0.1372	0.0317	0.0914	
Perrigo Co. Plc	-0.1532	0.0527	-0.1294	-0.0898	0.0941	-0.0377	0.1374	0.0281	-0.0085	0.0244	-0.0008	0.0023	0.0287	0.0091	
DaVita Inc.	-0.0769	0.0544	-0.0720	-0.1443	0.1246	-0.1036	0.1419	0.0446	-0.0532	0.0339	0.0555	-0.0187	-0.0308	0.0540	

Sector "Industrials"															
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	
Union Pacific Corporation	-0.1206	-0.0175	-0.0784	-0.1808	0.1800	-0.0034	0.0733	0.0078	0.0414	0.0035	0.0103	-0.0444	0.0920	0.0284	
Honeywell International Inc.	-0.0984	0.0169	-0.0891	-0.2470	0.1668	-0.0291	0.1254	-0.0356	-0.0202	0.0128	-0.0025	-0.0840	0.1180	0.0479	
Lockheed Martin Corporation	-0.1354	0.0406	-0.1409	-0.1137	0.1963	0.0061	0.0585	0.0822	-0.0492	0.0045	-0.0132	-0.0476	0.0239	0.0527	
Raytheon Technologies Corporation	-0.1382	-0.0314	-0.1667	-0.2170	0.1772	-0.1833	0.2960	0.0210	-0.0400	-0.0366	-0.0400	-0.1011	0.1479	0.0753	
3M Company	-0.0490	0.0296	-0.0779	-0.1185	0.0669	0.0042	0.1045	-0.0090	0.0037	0.0109	-0.0006	-0.0661	0.0559	0.0789	
Boeing Company	-0.1673	-0.0465	-0.3512	-0.4418	0.7051	-0.2314	0.2194	0.0142	-0.1625	0.0340	0.0005	-0.1007	0.1461	0.0605	
United Parcel Service Inc. Class B	-0.1209	0.0491	0.0025	-0.0082	0.0435	-0.0771	0.0966	0.0411	-0.0250	-0.0826	0.0319	-0.0401	0.0625	0.0417	
Caterpillar Inc.	-0.0945	-0.0227	-0.1794	-0.0415	0.1041	0.0876	0.0903	-0.0698	-0.0104	-0.0277	0.0111	-0.0374	0.0422	0.0681	
General Electric Company	-0.1119	-0.1362	-0.1640	-0.1694	0.1687	-0.1168	0.0609	-0.0420	-0.0848	0.0383	-0.0323	-0.1272	0.1676	0.0250	
CSX Corporation	-0.1145	-0.0279	-0.1510	-0.1394	0.1288	0.0086	0.1273	-0.0191	0.0166	0.0186	0.0171	-0.0622	0.1054	0.0445	
Northrop Grumman Corporation	-0.0958	0.0004	-0.0440	-0.0969	0.0990	0.0047	0.0735	0.0583	-0.0477	-0.0331	-0.0013	-0.0184	0.0133	0.0285	
Illinois Tool Works Inc.	-0.1150	-0.0219	-0.0467	-0.1960	0.1393	-0.0202	0.1429	-0.0044	-0.0022	0.0077	0.0098	-0.0331	0.0518	0.0532	
Deere & Company	-0.1181	0.0483	-0.1529	-0.1967	0.2104	0.0031	0.0816	-0.0500	0.0012	-0.0032	-0.0086	-0.0802	0.1167	0.0811	
Norfolk Southern Corporation	-0.1235	-0.0425	-0.1589	-0.1576	0.1588	-0.0073	0.1193	0.0086	0.0001	0.0626	0.0235	-0.0772	0.0693	0.0398	
L3Harris Technologies Inc.	-0.1125	0.0111	-0.1116	-0.1289	0.2010	-0.0351	0.0689	0.0666	-0.0671	-0.0021	-0.0449	-0.0230	0.0207	0.1053	
Waste Management Inc.	-0.1104	0.0570	-0.0967	-0.0666	-0.0306	-0.0659	0.1217	0.0042	-0.0179	-0.0027	0.0281	-0.0499	0.0312	0.0792	
Roper Technologies Inc.	-0.0918	-0.0039	-0.1051	-0.0969	0.0799	-0.0200	0.0526	0.0224	-0.0483	0.1076	0.0559	0.0088	0.0154	0.0728	
Emerson Electric Co.	-0.1108	-0.0307	-0.1900	-0.1240	0.0337	0.0031	0.1325	-0.0240	0.0649	-0.0006	0.0430	-0.0563	0.0656	0.0922	
General Dynamics Corporation	-0.1488	0.0210	-0.1435	-0.1837	0.1411	-0.0338	0.1220	-0.0119	-0.0643	-0.0116	0.0591	-0.0327	0.0584	0.0596	
Eaton Corp. Plc	-0.1354	0.0226	-0.0777	-0.2345	0.1480	-0.0441	0.1430	-0.0268	-0.0050	0.0407	0.0021	-0.1037	0.0774	0.0792	
FedEx Corporation	-0.1353	-0.0955	-0.1607	0.0415	0.0857	-0.0942	0.1197	0.0209	-0.0143	-0.0395	0.0190	-0.1073	0.0882	0.1159	
IHS Markit Ltd.	-0.0989	-0.0269	-0.1926	-0.1445	0.2332	0.0428	0.0632	0.0260	-0.0234	-0.0044	0.0296	-0.0076	0.0068	0.0366	
Verisk Analytics Inc.	-0.0805	0.0533	-0.1087	-0.1452	0.1088	0.0282	0.0467	0.0373	-0.0341	0.0331	0.0399	-0.0314	0.0176	0.0979	
Cummins Inc.	-0.0895	-0.0177	-0.0792	-0.1488	0.1303	0.0047	0.1393	-0.0101	-0.0095	0.0654	0.0245	-0.0350	-0.0039	0.1029	
Rockwell Automation Inc.	-0.1236	-0.0254	-0.0708	-0.2370	0.1946	-0.0309	0.1421	0.0057	0.0356	0.0492	0.0505	0.0282	0.0273	0.0691	
PACCAR Inc.	-0.1123	-0.0350	0.0089	-0.1970	0.1375	0.0356	0.0918	0.0057	-0.0025	0.0121	0.0194	-0.0401	0.0286	0.0795	
Johnson Controls International plc	-0.1385	0.0433	-0.1401	-0.2342	0.0413	-0.0181	0.2014	-0.0346	-0.0552	-0.0018	0.0696	-0.0450	0.0376	0.0637	
Fastenal Company	-0.1195	-0.0018	-0.0021	-0.1569	0.0799	-0.0178	0.1031	0.0686	0.0028	-0.0092	0.1016	-0.0033	-0.0062	0.0667	
Parker-Hannifin Corporation	-0.1414	-0.1071	-0.1495	-0.2700	0.1840	-0.0450	0.2535	-0.0453	-0.0263	0.1343	0.0518	-0.0424	0.0887	0.0784	
Cintas Corporation	-0.0907	0.0209	-0.1055	-0.2812	0.0370	-0.0955	0.2101	0.0273	-0.0195	0.0581	0.0302	0.0422	0.0582	0.0304	
Trane Technologies plc	-0.1140	-0.1280	-0.0807	-0.2647	0.0924	-0.0319	0.1446	-0.0184	-0.0654	0.0331	-0.0279	-0.0851	0.0797	0.0822	
AMETEK Inc.	-0.1343	0.0293	-0.1572	-0.1486	0.1206	0.0039	0.0973	0.0266	-0.0405	0.0445	0.0476	-0.0561	0.0793	0.0676	
Stanley Black & Decker Inc.	-0.0911	-0.1078	-0.1450	-0.2717	0.2167	-0.0144	0.2529	-0.0572	-0.0426	-0.0116	0.1017	-0.0808	0.1265	0.0326	
TransDigm Group Incorporated	-0.1144	-0.0981	-0.1757	-0.2706	0.2000	-0.2554	0.2746	-0.0207	-0.0963	0.1460	0.0090	-0.0783	0.1717	0.1156	
Copart Inc.	-0.1131	-0.0508	-0.0792	-0.1854	0.1687	-0.1209	0.2134	-0.0385	0.0240	0.0639	0.0667	-0.0507	0.0844	0.0364	
Equifax Inc.	-0.1096	0.0855	-0.0850	-0.2492	0.1316	-0.1082	0.1651	0.0302	0.0270	0.0492	0.0833	-0.0332	0.0181	0.0471	
Fortive Corp.	-0.0876	-0.0330	-0.1061	-0.2368	0.0894	0.0931	0.1245	-0.0112	-0.0003	0.0068	-0.0244	-0.0677	0.0594	0.0417	
Republic Services Inc.	-0.0922	0.0584	-0.1104	-0.1582	0.0568	-0.0406	0.1340	-0.0188	-0.0521	0.0135	0.0542	-0.0226	0.0208	0.0535	
Southwest Airlines Co.	-0.1829	-0.0100	-0.0937	-0.2263	0.1390	-0.1605	0.1942	-0.1448	-0.0596	-0.0034	-0.0694	-0.1224	0.2095	0.1119	
Old Dominion Freight Line Inc.	-0.1292	0.0239	-0.1023	-0.0520	0.1412	-0.0454	0.1032	0.0111	0.0364	0.0381	0.0390	-0.0243	0.0653	0.0775	
Kansas City Southern	-0.1352	-0.0239	-0.1301	-0.1496	0.1791	-0.0388	0.1106	0.0202	-0.0570	-0.0232	0.0644	-0.0203	0.1001	0.0222	
Delta Air Lines Inc.	-0.1973	-0.0052	-0.1641	-0.4434	0.3841	-0.2393	0.0850	-0.0049	-0.0766	0.0763	-0.0580	-0.1554	0.1824	0.1111	
Dover Corporation	-0.1398	-0.0077	-0.1059	-0.2712	0.2392	-0.0560	0.1558	-0.0103	0.0281	0.0055	0.0084	-0.0791	0.0569	0.0833	
W.W. Grainger Inc.	-0.0850	0.0255	-0.0654	-0.1964	0.1561	-0.0339	0.1722	0.0012	-0.0378	-0.0072	0.0665	-0.0183	0.0506	0.0570	
Masco Corporation	-0.0855	0.0189	-0.0551	-0.2593	0.1757	-0.0646	0.2455	-0.0060	0.0015	-0.0002	0.0524	0.0138	0.0492	0.0408	
Expeditors International of Washington Inc.	-0.0661	0.0009	-0.0757	-0.1567	0.1851	0.0306	0.0653	0.0037	0.0027	-0.0080	0.0487	-0.0444	0.0076	0.0599	
IDEX Corporation	-0.1462	-0.0119	-0.1053	-0.1098	0.1262	0.0559	0.0939	0.0080	-0.0001	-0.0094	0.0226	-0.0406	0.0172	0.0593	
Xylem Inc.	-0.1264	0.0535	-0.1121	-0.1696	0.0937	-0.0763	0.1460	0.0036	-0.0153	0.0111	-0.0907	-0.0763	0.0692	0.0663	
C.H. Robinson Worldwide Inc.	-0.0758	-0.0409	-0.0492	0.0247	-0.0219	0.0902	0.0744	0.0138	-0.0263	-0.0201	0.0419	-0.0176	0.0739	0.0420	
Jacobs Engineering Group Inc.	-0.1109	0.0188	-0.0777	-0.2433	0.1406	0.0546	0.0296	0.0355	-0.0499	0.0098	-0.0101	-0.0983	0.0692	0.0924	
Westinghouse Air Brake Technologies Corporation	-0.1249	-0.1045	-0.1067	-0.2584	0.1675	-0.0739	0.2541	-0.1087	0.0851	0.0182	0.0534	-0.0845	0.0848	0.0752	
Ingersoll Rand Inc.	-0.1508	-0.1526	-0.1723	-0.1277	0.1540	0.0380	0.1281	0.0117	0.0377	0.0111	0.0370	-0.0943	0.0802	-0.0119	
United Rentals Inc.	-0.1250	-0.1269	-0.2132	-0.2298	0.2860	0.0102	0.1827	-0.0247	0.0095	0.1248	0.0025	-0.0084	0.1011	0.0638	
J.B. Hunt Transport Services Inc.	-0.1208	-0.0333	-0.0573	-0.0826	0.1170	-0.0033	0.1050	0.0846	-0.0556	-0.0072	0.0236	-0.0469	0.1052	0.1034	
Allegion PLC	-0.1057	0.0419	-0.0667	-0.2591	0.1092	-0.0827	0.1347	0.0238	-0.0109	0.0094	0.0491	-0.0912	0.0145	0.0574	
Fortune Brands Home & Security Inc.	-0.1306	-0.0179	-0.1955	-0.2470	0.1871	-0.1846	0.4350	-0.0831	-0.0618	0.1779	0.0891	-0.0451	0.1302	0.0070	
Huntington Ingalls Industries Inc.	-0.1292	-0.0013	-0.1256	-0.1081	0.1649	-0.0245	0.0627	0.0185	-0.0585	0.0063	-0.0274	-0.0556	0.0717	0.0936	
Snap-on Incorporated	-0.0896	-0.0205	-0.1097	-0.2087	0.0799	-0.1143	0.2786	-0.0310	-0.0191	0.0687	0.0265	-0.0344	0.0482	0.0146	
Textron Inc.	-0.1428	-0.1139	-0.1905	-0.2340	0.1974	-0.0689	0.1847	-0.0574	-0.0259	-0.0300	0.0412	-0.1136	0.1120	0.1509	
Pentair plc	-0.1161	-0.0281	-0.0647	-0.3360	0.2590	-0.0521	0.1574	-0.0358	0.0064	0.0556	0.0500	-0.0459	0.0893	0.0729	
A. O. Smith Corporation	-0.1030	0.0794	-0.0281	-0.1624	0.0604	-0.0266	0.1210	0.0216	-0.0168	0.0312	0.0754	-0.0978	0.0448	0.1251	
Robert Half International Inc.	-0.1486	-0.0211	-0.0374	-0.2591	0.1148	-0.0268	0.1401	-0.0009	0.0189	0.0073	0.0676	-0.0474	0.0504	0.0777	
United Airlines Holdings Inc.	-0.2105	-0.1541	-0.2008	-0.4116	0.3404	-0.3030	0.3761	-0.0768	-0.1210	0.0415	-0.0451	-0.2164	0.2751	0.1039	
Rollins Inc.	-0.0739	0.0615	-0.0484	-0.0747	-0.0212	0.0524	-0.0008	0.0818	-0.0211	0.0486	0.0574	-0.0524	-0.0318	0.0793	
Howmet Aerospace Inc.	-0.0034	-0.0940	-0.2308	-0.2434	-0.3124	0.3683	-0.0379	-0.0071	-0.0762	-0.0198	0.0473	-0.0159	0.0493	0.0583	
Nielsen Holdings Plc	-0.1667	-0.1019	-0.0767	-0.0950	-0.0455	-0.0638	0.1619	-0.0622	-0.0596	0.1195	0.0136</				

Sector "Real State"															
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	
Prologis Inc.	-0,1507	0,0190	-0,0938	-0,1861	0,2603	-0,0705	0,2465	-0,0165	-0,0131	-0,0246	0,0359	-0,0744	0,0513	0,0451	
AvalonBay Communities Inc.	-0,1203	0,0422	-0,0761	-0,3186	0,2177	-0,1750	0,2784	0,0180	-0,0704	0,0004	0,0348	-0,0830	0,0221	0,0152	
Equity Residential	-0,1369	0,0339	-0,0519	-0,2489	0,1450	-0,1343	0,2794	0,0053	-0,0831	-0,0263	0,0307	-0,1104	0,0047	0,0551	
Welltower Inc.	-0,1324	-0,0115	-0,3067	-0,1728	0,1716	-0,2503	0,5191	-0,1326	-0,1026	0,0742	-0,0588	-0,0875	0,1763	0,0758	
Alexandria Real Estate Equities Inc.	-0,0958	0,0473	-0,0712	-0,1654	0,1635	-0,0939	0,2227	-0,0158	-0,0375	0,0100	0,0067	-0,0695	0,0393	0,0458	
D.R. Horton Inc.	-0,1392	0,0288	-0,2830	-0,2015	0,1753	-0,1285	0,2770	-0,0284	0,0267	0,1368	0,0656	-0,0445	0,1451	0,0229	
Realty Income Corporation	-0,1219	0,0622	-0,0617	-0,3406	0,1999	-0,2339	0,3058	-0,0760	-0,0468	0,0376	0,0637	-0,0888	0,0432	0,0607	
Simon Property Group Inc.	-0,1348	-0,0327	-0,2460	-0,4637	0,2084	-0,1968	0,4591	-0,1768	-0,0825	0,2274	-0,0820	-0,1155	0,0637	0,0570	
Lennar Corporation Class A	-0,1459	0,0367	-0,2697	-0,2540	0,1813	-0,1707	0,3418	-0,0416	-0,0012	0,1567	0,0920	-0,0624	0,1866	0,0062	
Essex Property Trust Inc.	-0,1388	0,0399	-0,0643	-0,2879	0,1643	-0,1651	0,3058	0,0562	-0,0737	-0,0199	0,0416	-0,0815	0,0435	0,0269	
CBRE Group Inc. Class A	-0,1051	-0,0278	-0,1502	-0,2613	0,1442	-0,0944	0,2848	-0,0243	-0,1013	-0,0073	0,0479	-0,1349	0,1198	0,0913	
Mid-America Apartment Communities Inc.	-0,1252	0,1086	-0,1207	-0,3056	0,2297	-0,1235	0,2369	-0,0270	-0,0538	0,0301	0,0542	-0,0753	0,0693	0,0182	
Duke Realty Corporation	-0,1637	0,0456	-0,0611	-0,1533	0,1885	-0,0776	0,2019	-0,0181	-0,0176	-0,0294	0,0188	-0,0912	0,0876	0,0361	
Ventas Inc.	-0,1463	-0,0773	-0,3283	-0,3514	0,4058	-0,2589	0,5434	-0,0743	-0,1144	0,0946	-0,0076	-0,0708	0,2052	0,0368	
Healthpeak Properties Inc.	-0,1484	0,0658	-0,1440	-0,2738	0,1938	-0,1891	0,3969	-0,0735	-0,0773	0,0377	-0,0355	-0,0812	0,1190	0,0037	
Boston Properties Inc.	-0,1156	0,0283	-0,1171	-0,2996	0,1442	-0,1149	0,2900	-0,0991	-0,0538	0,0284	-0,0648	-0,1376	0,0408	0,1022	
Extra Space Storage Inc.	-0,0810	0,0963	-0,1221	-0,1668	0,2045	0,0011	0,0705	-0,0953	-0,0452	-0,0195	0,0520	-0,1078	0,0540	0,1220	
NVR Inc.	-0,0903	0,0486	-0,2400	-0,2037	0,2341	-0,1771	0,2391	-0,0035	-0,0241	0,0666	0,0273	-0,1041	0,1212	0,0280	
UDR Inc.	-0,1168	0,0739	-0,0755	-0,2827	0,1845	-0,1667	0,3006	-0,0435	-0,0681	-0,0052	0,0620	-0,0934	0,0437	0,0193	
PulteGroup Inc.	-0,1338	0,0325	-0,2643	-0,3503	0,2403	-0,2284	0,3922	-0,0311	0,0047	0,0624	0,0969	-0,0723	0,2017	0,0198	
Host Hotels & Resorts Inc.	-0,1670	-0,0703	-0,1520	-0,0678	0,0603	-0,1968	0,3382	-0,0453	-0,0237	0,0306	-0,0332	-0,0904	0,1163	0,0632	
Regency Centers Corporation	-0,0896	0,0524	-0,0859	-0,3612	0,1472	-0,2031	0,3674	-0,1237	-0,0836	0,1549	0,0256	-0,1228	0,1395	0,0371	
Vornado Realty Trust	-0,1608	-0,0230	-0,1550	-0,3295	0,2711	-0,1542	0,3635	-0,0330	-0,1017	0,1118	-0,0616	-0,0878	-0,0331	0,0603	
Federal Realty Investment Trust	-0,0981	0,0432	-0,1291	-0,3161	0,0627	-0,1346	0,3068	-0,1237	-0,0809	0,1323	-0,0038	-0,0781	0,0898	0,0181	
Apartment Investment & Management Co Class A	-0,1379	0,0410	-0,0754	-0,3853	0,2356	-0,1241	0,3046	-0,0205	-0,1037	0,0392	0,0377	-0,1118	0,0810	0,0270	
Kimco Realty Corporation	-0,0902	-0,0012	-0,2371	-0,1963	-0,0213	-0,2525	0,4331	-0,1756	-0,0359	0,2326	0,0283	-0,1606	0,2383	-0,0194	
SL Green Realty Corp.	-0,1600	0,0273	-0,1820	-0,3047	0,0373	-0,1873	0,4106	-0,0537	-0,1276	0,0974	-0,0056	-0,2173	-0,0302	0,1438	

Sector "Materials"															
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	
Linde plc	-0.1252	-0.0095	-0.0627	-0.1428	0.1060	-0.0311	0.1687	-0.0049	-0.0375	-0.0063	0.0448	-0.0309	0.0453	0.0601	
Air Products and Chemicals Inc.	-0.1387	0.0460	-0.1017	-0.0834	0.0213	-0.0340	0.1830	0.0099	-0.0213	0.0252	0.0505	-0.0233	0.0277	0.0311	
Newmont Corporation	-0.0974	0.1730	-0.2433	0.0268	0.1428	0.0173	0.2155	0.0335	0.0655	-0.0336	0.0584	0.0519	-0.0714	-0.0726	
Ecolab Inc.	-0.1304	0.0773	-0.0737	-0.2121	0.1129	-0.0649	0.2214	-0.0062	0.0074	0.0551	0.0408	-0.0152	0.0295	0.0602	
Sherwin-Williams Company	-0.0987	0.0496	-0.0770	-0.1735	0.1138	-0.0862	0.1717	0.0500	-0.0207	0.0403	0.0442	0.0340	0.0157	0.0311	
DuPont de Nemours Inc.	-0.1817	-0.0500	-0.0840	-0.1516	0.0748	-0.0577	0.2794	-0.0592	0.0923	0.0756	0.0413	-0.0317	0.0713	0.0420	
Dow Inc.	-0.1635	-0.0197	-0.3406	0.0681	0.0408	-0.0207	0.3071	-0.0860	-0.0088	0.0243	0.0120	-0.0225	0.0764	0.0685	
PPG Industries Inc.	-0.1178	-0.0287	-0.0716	-0.1536	0.0662	-0.0537	0.2081	-0.0397	-0.0060	-0.0512	0.0453	-0.0496	0.1065	0.0571	
Ball Corporation	-0.0834	0.0817	-0.1606	-0.1402	0.1729	-0.0342	0.1249	0.0037	-0.0702	0.0052	-0.0160	-0.0360	0.0366	0.1047	
Corteva Inc	-0.1288	-0.0698	-0.0144	-0.0924	0.0304	-0.0256	0.2348	-0.0864	0.0296	-0.0295	0.0189	-0.1235	0.0839	0.1129	
LyondellBasell Industries NV	-0.1381	0.0226	-0.3494	-0.1033	0.1762	-0.0668	0.2783	-0.1144	-0.0410	0.1021	0.0234	-0.0505	0.1272	0.0553	
Amcor PLC	-0.0900	0.0000	-0.2593	0.0712	0.0679	0.0052	0.1677	-0.0409	-0.0415	0.0313	0.0338	0.0147	0.0544	0.0632	
Weyerhaeuser Company	-0.1545	0.0238	-0.1659	-0.3266	0.1653	-0.1081	0.3696	-0.0433	-0.0244	-0.0836	0.1046	-0.1270	0.1414	0.0207	
International Flavors & Fragrances Inc.	-0.0938	0.0246	-0.1117	-0.0606	0.0762	-0.0960	0.2879	-0.0177	0.0109	0.0011	0.0619	-0.0465	0.0094	0.0291	
Vulcan Materials Company	-0.1022	0.0625	-0.1387	-0.2288	0.1720	0.0000	0.1400	-0.0095	-0.0892	0.0848	-0.0865	-0.0498	0.0393	0.0885	
International Paper Company	-0.1355	-0.0338	-0.0637	-0.1173	0.0375	-0.0408	0.1633	-0.0678	-0.0226	0.0894	0.0129	-0.0961	0.0514	0.0430	
Freeport-McMoRan Inc.	-0.1658	-0.0532	-0.2015	-0.2669	0.1232	0.0194	0.2959	0.0183	0.0168	-0.0024	0.0887	-0.0793	0.0307	0.0378	
Nucor Corporation	-0.1486	-0.0421	-0.0951	-0.1454	0.0892	0.0686	0.1195	-0.0533	0.0145	0.0827	0.0293	-0.0979	0.0370	0.0704	
FMC Corporation	-0.1265	-0.0277	-0.0274	-0.2582	0.1731	-0.0750	0.2771	-0.0433	0.0244	0.0195	0.0396	-0.0584	0.0600	0.0548	
Martin Marietta Materials Inc.	-0.0950	0.0518	-0.1696	-0.2251	0.1797	-0.0646	0.2282	-0.0447	-0.1082	0.0521	-0.0536	-0.0483	0.0692	0.0690	
Celanese Corporation	-0.1318	-0.0159	-0.1500	-0.1744	0.1009	-0.0584	0.2504	-0.0685	0.0080	0.0147	0.0430	-0.0731	0.1149	0.0518	
Eastman Chemical Company	-0.1643	-0.0606	-0.1985	-0.1048	0.1387	-0.0297	0.3242	-0.0772	0.0394	0.0480	0.0418	-0.0409	0.0915	0.0400	
Avery Dennison Corporation	-0.1453	0.0553	-0.1177	-0.1441	0.1047	-0.0667	0.2288	-0.0493	-0.0075	-0.0043	0.0110	-0.0804	0.0594	0.0397	
Packaging Corporation of America	-0.1147	0.0018	-0.0707	0.0275	0.0024	-0.0648	0.1236	0.0042	-0.0534	0.1019	0.0358	-0.0736	0.0228	0.0905	
Albemarle Corporation	-0.1144	0.0092	-0.1766	-0.2098	0.0294	-0.0422	0.2717	-0.0828	0.0010	-0.0665	0.1186	-0.0451	0.1102	0.1235	
WestRock Company	-0.1859	-0.0955	-0.1398	-0.0136	0.0928	-0.0792	0.2521	-0.0455	-0.0591	0.0681	-0.1246	-0.1034	0.0471	0.1161	
CF Industries Holdings Inc.	-0.0633	-0.0005	-0.2487	-0.1960	0.1483	0.0087	0.2031	-0.0878	-0.0100	-0.0495	0.0909	-0.1450	0.1252	0.0645	
Sealed Air Corporation	-0.1334	-0.0126	-0.1434	-0.0580	0.0291	-0.0150	0.2649	-0.0422	-0.0342	-0.0095	0.0503	-0.0297	0.0362	0.0772	
Mosaic Company	-0.1124	-0.1602	-0.2279	-0.1290	0.0323	0.0040	0.3048	-0.1172	-0.0105	-0.0159	0.0682	-0.1537	0.1468	0.0458	

Sector "Information Technology"																
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14		
Microsoft Corporation	-0,0904	-0,0027	-0,0169	-0,1352	0,0899	0,0276	0,0735	0,0815	-0,0226	0,0001	0,0579	-0,0083	0,0019	0,0014		
Apple Inc.	-0,1268	0,0573	-0,0383	-0,1753	0,0807	-0,0255	0,1101	0,0553	0,0006	0,0215	0,0728	-0,0051	0,0363	-0,0030		
Visa Inc. Class A	-0,1295	0,0143	-0,0462	-0,1650	0,1004	-0,0601	0,1438	-0,0239	-0,0131	0,0493	0,0542	-0,0087	0,0419	0,0229		
Intel Corporation	-0,1371	0,0045	-0,0242	-0,1580	0,1429	0,0336	0,0555	0,0563	-0,0182	-0,0302	0,0381	-0,0177	0,0683	0,0108		
Mastercard Incorporated Class A	-0,1456	-0,0111	-0,0593	-0,2170	0,1714	-0,0429	0,1366	-0,0335	-0,0047	0,0386	0,0510	-0,0124	0,0573	0,0203		
NVIDIA Corporation	-0,0816	-0,0143	-0,0947	-0,1457	0,2283	-0,0349	0,0781	0,1117	-0,0093	-0,0235	0,1051	0,0868	0,0631	-0,0167		
Cisco Systems Inc.	-0,1378	-0,0061	-0,0514	-0,0542	0,0904	0,0060	0,0649	0,0311	0,0009	-0,0376	0,0506	0,0298	0,0142	0,0650		
Adobe Inc.	-0,0746	-0,0242	-0,0038	-0,1197	0,0355	-0,0400	0,0855	0,0797	0,0000	-0,0008	0,0688	-0,0060	0,0546	0,0035		
PayPal Holdings Inc	-0,0962	0,0269	-0,0067	-0,2131	0,0784	-0,0117	0,1456	0,0568	0,0745	0,0036	0,2019	0,0038	0,0368	0,0275		
salesforce.com inc.	-0,1008	-0,0371	-0,0993	-0,0570	0,0477	-0,0801	0,1507	0,0522	-0,0531	0,0155	0,1249	-0,0260	0,0381	-0,0172		
Accenture Plc Class A	-0,1477	-0,0102	-0,0685	-0,0995	0,0863	-0,0659	0,1693	-0,0159	0,0067	0,0264	0,0470	-0,0248	0,0535	0,0408		
Oracle Corporation	-0,0954	-0,0423	0,0117	-0,0476	0,0916	-0,0085	0,0765	0,0319	-0,0295	-0,0230	0,0344	-0,0121	-0,0057	0,0219		
Broadcom Inc.	-0,1047	-0,0116	-0,1307	-0,1793	0,2205	0,0155	0,0855	0,0455	-0,0040	-0,0193	0,0590	-0,0532	0,0624	0,0528		
Texas Instruments Incorporated	-0,1119	-0,0086	-0,0629	-0,0796	0,0297	-0,0052	0,0771	0,0545	0,0034	-0,0371	0,0564	-0,0588	0,0479	0,0468		
International Business Machines Corporation	-0,1314	-0,0186	-0,1549	-0,1163	0,1325	-0,0157	0,1426	-0,0113	0,0383	-0,0228	0,0091	-0,0361	0,0121	0,0550		
QUALCOMM Incorporated	-0,1003	-0,0106	-0,0137	-0,1965	0,0933	-0,0204	0,0973	0,0641	-0,0017	-0,0053	0,0650	-0,0595	0,0387	0,0277		
Fidelity National Information Services Inc.	-0,0982	0,0014	-0,0715	-0,2064	0,1681	-0,0406	0,0859	0,0227	-0,0174	0,0283	-0,0082	0,0311	0,0298	0,0196		
Intuit Inc.	-0,1066	0,0388	-0,0540	-0,2274	0,1380	-0,0492	0,1544	0,0549	-0,0064	-0,0096	0,0736	0,0144	0,0113	0,0094		
ServiceNow Inc.	-0,0534	-0,0271	-0,0932	-0,1146	0,0758	-0,0892	0,1142	0,0774	0,0112	0,1207	0,1112	-0,0180	0,0472	-0,0001		
Advanced Micro Devices Inc.	-0,1464	0,0684	-0,0965	-0,0977	0,1760	-0,0857	0,1359	0,1699	-0,0074	-0,1121	0,0664	0,0190	0,0179	-0,0248		
Fiserv Inc.	-0,0848	-0,0233	-0,0317	-0,2093	0,1490	-0,0826	0,1512	0,0142	-0,0431	0,0411	0,0452	-0,0454	0,0391	0,0273		
Automatic Data Processing Inc.	-0,1335	0,0285	-0,0921	-0,2197	0,1724	-0,0214	0,1085	-0,0101	-0,0131	0,0085	0,0397	-0,0764	0,0001	0,0862		
Equinix Inc.	-0,1268	0,0670	0,0204	-0,1845	0,1732	0,0512	0,0996	0,0117	-0,0142	-0,0208	0,0109	-0,0288	0,0173	0,0454		
Global Payments Inc.	-0,0999	-0,0239	-0,0366	-0,3113	0,2182	-0,1287	0,1958	0,0255	-0,0121	0,0564	0,0829	-0,0295	0,0405	0,0155		
Applied Materials Inc.	-0,0928	-0,0057	-0,1194	-0,2535	0,1858	-0,0615	0,1729	0,0729	-0,0276	-0,0937	0,1478	-0,0330	0,0451	0,0371		
Micron Technology Inc.	-0,0777	-0,0207	-0,1648	-0,1600	0,2041	-0,0520	0,1191	-0,0093	-0,0337	0,0204	0,0708	-0,0796	0,0119	0,0661		
Autodesk Inc.	-0,0546	-0,0915	-0,0887	-0,0633	-0,0436	-0,0182	0,1863	0,0973	-0,0033	-0,0302	0,0537	-0,0194	0,0833	0,0746		
Analog Devices Inc.	-0,1117	-0,0134	-0,0674	-0,1474	0,0422	-0,0238	0,1414	0,0405	0,0304	-0,0215	0,0598	-0,0731	0,0910	0,0170		
Lam Research Corporation	-0,0738	0,0033	-0,1108	-0,2823	0,2838	-0,0902	0,1840	0,0803	-0,0443	-0,1187	0,1293	-0,0511	0,0369	0,0480		
Digital Realty Trust Inc.	-0,1305	0,0677	0,1177	-0,1545	0,1048	0,0274	0,0865	0,0061	-0,0056	-0,0274	0,0059	-0,0985	0,0385	0,0571		
Cognizant Technology Solutions Corporation Class A	-0,1307	-0,0442	-0,0966	-0,1618	0,0581	-0,0699	0,2508	-0,0087	0,0000	0,0500	0,0116	-0,1221	0,0254	0,0343		
KLA Corporation	-0,0413	0,0128	-0,0662	-0,2157	0,2476	-0,1006	0,1734	0,0738	0,0231	-0,0888	0,1413	-0,0238	0,0383	0,0171		
Amphenol Corporation Class A	-0,0990	0,0096	-0,1400	-0,1201	0,0637	-0,0788	0,1972	0,0282	0,0232	-0,0078	0,0475	-0,0810	0,1031	0,0634		
TE Connectivity Ltd.	-0,0922	-0,0504	-0,1078	-0,2087	0,1300	-0,0652	0,2126	-0,0523	0,0401	0,0062	0,0874	-0,0874	0,0883	0,0725		
HP Inc.	-0,0840	0,0296	-0,1975	-0,1804	0,2086	-0,1412	0,1029	-0,0282	-0,0335	-0,0193	0,0646	-0,0511	0,1440	-0,1094		
Synopsys Inc.	-0,0763	-0,0015	-0,0569	-0,1531	0,1307	0,0014	0,0966	0,1347	-0,0126	-0,0222	0,0704	-0,0090	0,0780	0,0573		
Cadence Design Systems Inc.	-0,1149	-0,0213	-0,0349	-0,1183	0,1307	0,0265	0,1208	0,0977	0,0238	-0,0581	0,0873	-0,0047	0,0485	0,0609		
Motorola Solutions Inc.	-0,1057	0,0618	-0,1192	-0,1148	-0,0113	-0,0626	0,2075	0,0319	-0,0315	-0,0914	-0,0545	-0,0168	0,0397	0,0085		
ANSYS Inc.	-0,1565	-0,0182	-0,0099	-0,0948	0,0465	-0,0212	0,0899	0,1092	-0,0169	-0,0147	0,0289	-0,0346	0,0628	0,0487		
Xilinx Inc.	-0,0482	-0,0434	-0,0416	-0,0612	0,0468	0,0513	0,0509	0,0709	0,0084	-0,0752	0,0466	-0,0419	0,0450	0,0619		
VeriSign Inc.	-0,0794	0,0119	-0,0489	-0,1396	0,1068	0,0505	0,0732	0,0707	0,0105	-0,0335	0,0245	0,0343	-0,0162	0,0248		
Paychex Inc.	-0,1300	0,0003	-0,0766	-0,2737	0,1578	-0,1014	0,1174	0,0144	0,0088	-0,0220	0,0077	-0,0549	0,0763	0,0695		
Microchip Technology Incorporated	-0,1339	-0,0413	-0,1954	-0,1477	0,1436	-0,0611	0,2250	0,0241	0,0209	-0,0060	0,1004	-0,0686	0,0510	0,0981		
FleetCor Technologies Inc.	-0,1396	-0,0626	-0,0550	-0,2057	0,0489	-0,0581	0,2176	-0,0062	-0,0043	0,0459	0,0308	-0,0728	0,0751	0,0190		
Fortinet Inc.	-0,1085	-0,0251	-0,1694	0,0275	0,1457	0,0428	0,0048	0,1082	-0,0858	0,0104	0,3115	0,0482	-0,0055	-0,0241		
Skyworks Solutions Inc.	-0,1260	-0,0446	-0,1328	-0,1125	0,1822	-0,0779	0,1201	0,0606	0,0116	0,0240	0,1255	-0,0450	0,1017	0,0170		
Keysight Technologies Inc	-0,0148	0,0132	-0,0415	-0,0971	-0,0579	0,0542	0,1161	0,0406	0,0177	-0,0379	0,0730	-0,0587	0,0768	0,0595		
Corning Inc	-0,1468	0,0521	-0,0840	-0,1727	0,0996	-0,1363	0,1826	-0,0219	0,0029	-0,0053	0,0464	-0,0915	0,0884	0,0661		
Akamai Technologies Inc.	-0,1394	0,0475	-0,0540	-0,0392	0,1000	0,0524	0,0003	0,1044	-0,0244	-0,0673	0,0552	-0,0303	0,0238	0,0536		
Citrix Systems Inc.	-0,1093	0,1405	-0,0329	0,0498	0,1736	0,0092	-0,0137	0,0790	-0,0291	-0,0237	0,0589	-0,0282	-0,0660	0,0809		
CDW Corp.	-0,1471	-0,0204	-0,0921	-0,2147	0,1784	-0,0731	0,2229	0,0241	-0,0372	0,0195	0,0161	-0,0988	0,0811	0,0526		
Maxim Integrated Products Inc.	-0,0908	-0,0068	-0,1136	-0,0914	0,0779	0,0227	0,0647	0,0251	0,0110	-0,0301	0,0395	-0,0380	0,0781	0,0277		
Jack Henry & Associates Inc.	-0,1127	0,0669	-0,0034	-0,1652	0,1095	0,0482	0,0893	-0,0029	-0,0622	-0,0038	0,1532	0,0383	-0,0151	-0,0324		
Paycom Software Inc.	-0,0591	-0,0529	-0,1535	-0,1492	0,0837	-0,2103	0,3453	0,0135	-0,0586	0,1410	0,1257	-0,0380	0,0293	0,1035		
Broadridge Financial Solutions Inc.	-0,1275	-0,0383	0,0331	-0,1197	0,0088	0,0090	0,1463	0,0381	0,0136	0,0145	0,0332	-0,0108	0,0109	0,0367		
Hewlett Packard Enterprise Co.	-0,0984	-0,0625	-0,1779	-0,1149	0,1379	-0,0530	0,1323	-0,0779	-0,0185	-0,0052	0,0812	-0,1112	0,0066	0,0589		
Leidos Holdings Inc.	-0,1244	0,0295	-0,1454	-0,1939	0,2886	-0,0589	0,0855	0,0400	0,0269	-0,0398	0,0491	-0,0573	0,0428	0,0429		
Zebra Technologies Corporation Class A	-0,1150	-0,0390	-0,0923	-0,0252	0,0289	-0,0352	0,1299	0,0087	0,0278	0,0812	0,0770	-0,1034	0,1182	0,0730		
Western Digital Corporation	-0,1705	-0,0150	-0,2358	-0,2575	0,3605	-0,0954	0,1943	-0,0606	-0,0385	-0,0052	0,0919	-0,1129	0,0819	0,0460		
Arista Networks Inc.	-0,1358	-0,0121	-0,0735	-0,0695	0,1630	0,0175	0,0785	0,0005	0,0323	-0,0423	0,0499	-0,0347	0,0462	0,0604		
Seagate Technology PLC	-0,1126	0,0271	-0,0066	-0,1676	0,1779	-0,0307	0,1200	0,0043	-0,0552	-0,0189	0,0702	-0,0644	0,0668	0,0408		
Qorvo Inc.	0,0243	-0,0618	-0,1119	-0,1545	0,1389	-0,0899	0,1317	0,0380	0,0420	0,0363	0,1057	-0,0805	0,0721	0,0315		
NortonLifeLock Inc.	-0,0649	-0,0184	-0,0658	-0,0281	0,1162	-0,0338	0,0590	0,0387	0,0417	-0,0048	0,0201	-0,0592	0,0110	0,1255		
NetApp Inc.	-0,1016	-0,0583	-0,0727	-0,1116	0,1100	-0,0719	0,1583	-0,0136	0,0216	-0,0367	0,0824	-0,0561	0,0543	-0,0031		
Gartner Inc.	-0,1677	-0,0713	-0,1153	-0,2170	0,2589	-0,1238	0,1641	-0,0087	0,0359	0,0470	0,0667	-0,0901	0,0545	0,0348		
FS Networks Inc.	-0,1006	-0,0026	-0,1165	-0,0526	0,1065	-0,0316	0,1686	-0,0102	0,0259	0,0627	0,1014	-0,0691	-0,0102	0,0554		
Western Union Company	-0,1313	-0,0018	-0,0099	-0,1699	0,0858	-0,1023	0,1394	-0,0129	-0,0718	0,0011	0,0761	-0,0682	0,0237	0,0531		
Juniper Networks Inc.	-0,1210	0,0168	-0,0505	-0,1311	0,1304	0,0086	0,0777	0,0414	0,0317	-0,0628	0,0850	-0,0307	0,0088	0,0479		
Iron Mountain Inc.	-0,1174	0,0448	-0,0873	-0,1981	0,0731	-0,0948	0,2289	-0,0782	-0,0584							

Appendix 4: S&P 500, assets' sectorial weighted returns

Sector "Consumer Discretionary"	S&P 500 - Initial Benchmark													
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Amazon.com Inc.	-0,4219	0,0384	-0,2544	0,1426	0,1219	0,0142	0,2976	0,6777	0,0618	-0,2147	0,1706	0,0528	0,0469	0,0094
Home Depot Inc.	-0,1204	0,0526	-0,1074	-0,2743	0,2712	-0,0668	0,1373	0,0421	0,0142	0,0324	0,0780	0,0225	0,0114	0,0293
McDonald's Corporation	-0,0573	0,0174	-0,0623	-0,0922	0,0595	-0,0128	0,0831	0,0075	-0,0064	-0,0042	-0,0045	-0,0233	0,0348	0,0059
NIKE Inc. Class B	-0,0521	-0,0042	-0,0695	-0,0517	0,1124	-0,0252	0,0483	0,0173	-0,0082	-0,0154	0,0276	-0,0184	0,0374	0,0247
Lowe's Companies Inc.	-0,0566	-0,0045	-0,0317	-0,1181	0,1175	-0,0208	0,0604	0,0071	0,0064	0,0242	0,0354	-0,0015	0,0282	0,0251
Starbucks Corporation	-0,0385	-0,0148	-0,0271	-0,0641	0,0540	-0,0187	0,0647	0,0165	-0,0074	-0,0089	0,0208	-0,0159	0,0176	0,0018
Booking Holdings Inc.	-0,0330	-0,0135	-0,0323	-0,0469	0,0180	-0,0053	0,0422	0,0097	-0,0201	0,0172	-0,0034	-0,0089	0,0487	0,0014
TJX Companies Inc.	-0,0149	-0,0056	-0,0322	-0,0742	0,0680	-0,0336	0,0516	0,0051	-0,0199	0,0129	0,0015	-0,0074	0,0356	-0,0033
Target Corporation	-0,0282	0,0070	-0,0114	-0,0088	-0,0067	-0,0056	0,0309	0,0218	-0,0121	0,0009	0,0173	0,0108	-0,0070	0,0115
Dollar General Corporation	-0,0185	0,0100	-0,0147	-0,0072	0,0079	0,0204	0,0081	0,0146	-0,0063	-0,0031	0,0036	0,0060	-0,0031	0,0130
Ross Stores Inc.	-0,0169	-0,0083	-0,0136	-0,0448	0,0425	-0,0136	0,0269	0,0048	-0,0098	0,0058	0,0040	-0,0097	0,0144	0,0047
eBay Inc.	-0,0124	0,0073	-0,0088	-0,0251	0,0125	-0,0034	0,0200	0,0142	0,0067	-0,0003	0,0098	-0,0001	0,0042	0,0064
General Motors Company	-0,0159	-0,0079	-0,0170	-0,0353	0,0237	-0,0207	0,0443	-0,0087	-0,0031	-0,0064	0,0192	-0,0072	0,0197	-0,0005
O'Reilly Automotive Inc.	-0,0073	-0,0002	-0,0047	-0,0320	0,0235	-0,0072	0,0199	0,0113	0,0038	-0,0027	0,0087	0,0014	-0,0007	0,0038
Yum! Brands Inc.	-0,0150	0,0002	-0,0133	-0,0283	0,0196	-0,0083	0,0294	0,0052	0,0022	-0,0026	0,0031	-0,0016	0,0030	0,0031
AutoZone Inc.	-0,0036	0,0029	-0,0048	-0,0302	0,0183	-0,0077	0,0205	0,0058	0,0060	-0,0054	0,0069	0,0017	0,0048	0,0024
Chipotle Mexican Grill Inc.	-0,0171	-0,0070	-0,0138	-0,0110	0,0131	-0,0041	0,0281	0,0069	0,0081	-0,0009	0,0062	0,0053	0,0093	-0,0053
Marriott International Inc. Class A	-0,0137	-0,0106	-0,0138	-0,0224	0,0058	-0,0255	0,0382	0,0037	-0,0043	0,0051	0,0029	-0,0086	0,0144	-0,0028
Hilton Worldwide Holdings Inc	-0,0101	-0,0061	-0,0117	-0,0195	0,0110	-0,0172	0,0201	0,0094	-0,0051	0,0008	0,0002	-0,0045	0,0129	0,0011
Ford Motor Company	-0,0106	-0,0061	-0,0119	-0,0207	0,0178	-0,0164	0,0239	-0,0042	-0,0044	0,0009	0,0058	-0,0058	0,0138	0,0010
Dollar Tree Inc.	-0,0091	-0,0026	-0,0054	0,0013	0,0011	-0,0070	0,0082	0,0042	-0,0069	0,0030	0,0007	-0,0030	0,0070	0,0156
V.F. Corporation	-0,0106	-0,0020	-0,0114	-0,0081	0,0072	-0,0117	0,0160	-0,0022	-0,0039	0,0012	0,0038	-0,0081	0,0054	0,0006
Aptiv PLC	-0,0099	-0,0017	-0,0096	-0,0239	0,0101	-0,0116	0,0327	0,0020	-0,0014	0,0036	0,0027	-0,0045	0,0091	0,0036
Best Buy Co. Inc.	-0,0118	-0,0018	-0,0126	-0,0112	0,0161	-0,0105	0,0170	0,0049	0,0015	0,0004	0,0064	0,0000	-0,0016	0,0011
Las Vegas Sands Corp.	-0,0075	-0,0040	-0,0072	-0,0078	-0,0006	-0,0067	0,0176	-0,0012	-0,0046	0,0028	0,0079	-0,0082	0,0032	0,0015
Dominos's Pizza Inc.	-0,0052	-0,0005	-0,0035	-0,0030	0,0077	-0,0018	0,0028	0,0034	0,0007	-0,0016	0,0020	0,0011	-0,0006	0,0022
Tiffany & Co.	-0,0003	-0,0004	-0,0020	-0,0011	0,0012	0,0004	-0,0001	0,0005	-0,0012	0,0003	0,0007	-0,0007	-0,0008	0,0014
CarMax Inc.	-0,0074	-0,0014	-0,0101	-0,0195	0,0179	-0,0095	0,0199	-0,0010	0,0048	0,0001	0,0043	-0,0006	0,0041	0,0043
Tractor Supply Company	-0,0058	0,0018	-0,0088	-0,0002	0,0050	-0,0023	0,0058	0,0027	0,0053	0,0001	0,0026	0,0022	0,0001	0,0050
Ulta Beauty Inc	-0,0074	-0,0001	-0,0101	-0,0149	0,0093	-0,0053	0,0152	0,0034	-0,0012	0,0009	0,0039	-0,0067	0,0053	0,0055
Garmin Ltd.	-0,0042	-0,0005	-0,0058	-0,0070	0,0057	-0,0013	0,0049	0,0022	-0,0019	0,0006	0,0010	-0,0020	0,0037	0,0037
Genuine Parts Company	-0,0043	-0,0023	-0,0016	-0,0139	0,0076	-0,0044	0,0106	0,0019	0,0002	0,0001	0,0008	-0,0020	0,0026	0,0037
Expedia Group Inc.	-0,0078	-0,0030	-0,0105	-0,0129	0,0100	-0,0082	0,0123	0,0006	0,0023	0,0005	0,0013	-0,0016	0,0073	0,0009
Darden Restaurants Inc.	-0,0075	-0,0037	-0,0100	-0,0155	0,0154	-0,0065	0,0160	-0,0006	0,0033	0,0006	0,0027	-0,0026	0,0033	0,0006
Advance Auto Parts Inc.	-0,0021	-0,0015	-0,0043	-0,0130	0,0106	-0,0044	0,0100	0,0043	-0,0004	-0,0003	0,0027	0,0004	0,0023	0,0017
Hasbro Inc.	-0,0051	-0,0021	-0,0088	-0,0058	0,0152	0,0007	0,0047	-0,0002	-0,0002	-0,0029	0,0008	-0,0025	0,0010	0,0037
MGM Resorts International	-0,0073	-0,0057	-0,0082	-0,0137	0,0114	-0,0044	0,0126	-0,0011	-0,0003	0,0026	0,0013	-0,0038	0,0050	0,0027
Wynn Resorts Limited	-0,0051	-0,0040	-0,0075	-0,0093	0,0071	-0,0077	0,0150	0,0036	-0,0008	0,0018	0,0025	-0,0035	0,0002	0,0021
LKQ Corporation	-0,0034	-0,0022	-0,0031	-0,0111	0,0100	-0,0060	0,0096	-0,0023	0,0006	0,0053	0,0019	-0,0033	0,0024	0,0027
Whirlpool Corporation	-0,0040	-0,0014	-0,0014	-0,0108	0,0040	-0,0006	0,0082	0,0002	-0,0002	0,0022	0,0001	-0,0010	0,0035	0,0005
Royal Caribbean Cruises Ltd.	-0,0073	-0,0058	-0,0151	-0,0080	0,0136	-0,0089	0,0197	-0,0021	-0,0014	0,0043	-0,0006	-0,0019	0,0046	0,0061
BorgWarner Inc.	-0,0018	-0,0020	-0,0028	-0,0051	0,0039	-0,0025	0,0052	0,0012	0,0001	0,0001	0,0021	-0,0014	0,0019	0,0019
Carnival Corporation	-0,0044	-0,0044	-0,0083	-0,0075	0,0047	-0,0097	0,0109	0,0003	-0,0012	0,0040	0,0005	-0,0024	0,0031	0,0021
Mohawk Industries Inc.	-0,0021	-0,0004	-0,0038	-0,0081	0,0068	-0,0042	0,0087	-0,0020	-0,0002	0,0012	0,0004	-0,0020	0,0018	0,0024
Newell Brands Inc	-0,0040	-0,0016	-0,0015	-0,0024	0,0039	-0,0024	0,0037	-0,0019	0,0001	-0,0010	0,0002	-0,0012	0,0019	0,0006
Tapestry Inc.	-0,0026	-0,0012	-0,0039	-0,0042	0,0025	-0,0033	0,0067	-0,0005	-0,0017	0,0018	-0,0003	-0,0029	0,0024	-0,0004
Leggett & Platt Incorporated	-0,0018	-0,0008	-0,0022	-0,0040	0,0027	-0,0029	0,0050	-0,0005	0,0005	0,0020	-0,0018	-0,0017	0,0020	0,0003
Ralph Lauren Corporation Class A	-0,0015	0,0000	-0,0032	-0,0031	0,0003	-0,0014	0,0048	-0,0015	-0,0009	0,0011	-0,0002	-0,0014	0,0017	0,0006
Harley-Davidson Inc.	-0,0020	-0,0021	-0,0012	-0,0047	0,0014	-0,0023	0,0060	-0,0013	-0,0005	0,0014	0,0008	-0,0012	0,0036	-0,0018
Hanesbrands Inc.	-0,0012	-0,0013	-0,0028	-0,0011	-0,0013	-0,0018	0,0049	-0,0005	-0,0012	0,0020	-0,0002	-0,0015	0,0018	0,0007
H&R Block Inc.	-0,0017	-0,0006	-0,0016	-0,0035	0,0024	-0,0029	0,0036	-0,0006	0,0003	0,0013	0,0001	-0,0005	0,0012	0,0000
PVH Corp.	-0,0017	-0,0009	-0,0037	-0,0050	0,0028	-0,0025	0,0080	-0,0013	-0,0011	0,0011	0,0004	-0,0017	0,0013	0,0004
L Brands Inc.	-0,0012	0,0004	-0,0037	-0,0052	0,0038	-0,0013	0,0042	-0,0010	-0,0033	0,0022	0,0002	-0,0015	0,0052	0,0010
Norwegian Cruise Line Holdings Ltd.	-0,0026	-0,0034	-0,0073	-0,0027	0,0047	-0,0037	0,0068	-0,0007	-0,0015	0,0034	-0,0013	-0,0015	0,0034	0,0016
Kohl's Corporation	-0,0014	-0,0013	-0,0033	-0,0042	0,0017	-0,0040	0,0086	-0,0008	-0,0017	0,0014	0,0004	-0,0004	0,0000	0,0012
Gap Inc.	-0,0012	-0,0006	-0,0013	-0,0024	0,0006	-0,0020	0,0044	-0,0003	-0,0013	0,0010	0,0002	-0,0004	0,0006	0,0006
Nordstrom Inc.	-0,0010	-0,0011	-0,0018	-0,0011	-0,0007	-0,0013	0,0044	-0,0008	-0,0004	-0,0001	0,0001	-0,0006	-0,0003	0,0002
Under Armour Inc. Class A	-0,0009	-0,0007	-0,0010	-0,0015	0,0010	-0,0007	0,0016	-0,0003	0,0001	-0,0002	0,0001	-0,0015	0,0004	0,0004
Under Armour Inc. Class C	-0,0009	-0,0007	-0,0009	-0,0014	0,0009	-0,0006	0,0015	-0,0003	0,0001	-0,0001	0,0001	-0,0014	0,0004	0,0004
Coty Inc. Class A	-0,0007	-0,0003	-0,0004	-0,0017	0,0017	-0,0011	0,0013	-0,0002	0,0004	-0,0007	0,0000	-0,0015	0,0006	-0,0001
Total	-1,1317	-0,0208	-0,9681	-1,1423	1,2413	-0,4468	1,4542	0,8777	-0,0169	-0,1174	0,4649	-0,0915	0,4460	0,2137

sector "Communication Services"	S&P 500 - Initial Benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Facebook Inc. Class A	-0.1919	-0.1346	-0.1359	-0.2748	0.1074	-0.0379	0.3103	0.0526	0.1376	0.1462	0.1135	-0.0158	0.2595	-0.0952
Alphabet Inc. Class A	-0.1676	-0.0560	-0.1084	-0.2073	0.0678	-0.0273	0.1796	0.1035	-0.0032	0.0550	0.0877	-0.0140	0.0504	0.0247
Alphabet Inc. Class C	-0.1683	-0.0524	-0.1039	-0.2072	0.0614	-0.0198	0.1774	0.1016	-0.0053	0.0553	0.0880	-0.0187	0.0465	0.0225
Verizon Communications Inc.	-0.0634	0.0457	-0.0433	-0.0399	0.0171	0.0334	0.0457	0.0262	-0.0083	-0.0173	0.0027	-0.0367	-0.0102	0.0553
AT&T Inc.	-0.0768	0.0457	-0.0616	-0.1552	0.0433	-0.0707	0.1058	0.0303	-0.0433	0.0057	-0.0033	-0.0442	0.0493	0.0292
Walt Disney Company	-0.1332	-0.0176	-0.0961	-0.1401	0.1052	-0.0227	0.0982	0.0177	-0.0443	0.0370	0.0301	-0.0009	0.0714	-0.0053
Netflix Inc.	-0.0227	-0.0001	-0.0692	-0.0081	0.0571	0.0102	0.0194	0.1102	0.0038	-0.0179	0.0382	0.0335	-0.0428	-0.0175
Comcast Corporation Class A	-0.0850	-0.0011	-0.0186	-0.1097	0.0262	-0.0131	0.0915	0.0015	-0.0175	-0.0035	-0.0088	-0.0121	0.0568	0.0161
American Tower Corporation	-0.0338	0.0356	-0.0123	-0.0754	0.0489	0.0082	0.0683	-0.0088	-0.0137	-0.0176	0.0073	-0.0152	0.0231	0.0268
Charter Communications Inc. Class A	-0.0261	0.0024	-0.0284	-0.0602	0.0606	-0.0044	0.0251	0.0233	0.0061	0.0007	0.0037	-0.0076	0.0063	0.0201
Crown Castle International Corp	-0.0378	0.0314	-0.0091	-0.0430	0.0177	0.0164	0.0326	0.0045	-0.0084	-0.0083	0.0021	-0.0123	0.0104	0.0262
Activision Blizzard Inc.	-0.0188	0.0072	-0.0035	-0.0269	0.0214	0.0120	0.0018	0.0241	0.0007	-0.0066	0.0296	0.0024	-0.0026	-0.0034
T-Mobile US Inc.	-0.0124	-0.0037	-0.0041	-0.0185	0.0140	0.0005	0.0070	0.0086	-0.0003	-0.0074	0.0208	-0.0018	-0.0023	0.0065
Electronic Arts Inc.	-0.0086	0.0087	-0.0138	-0.0146	0.0136	0.0110	0.0041	0.0124	0.0014	-0.0037	0.0042	0.0018	0.0020	0.0036
SBA Communications Corp. Class A	-0.0134	0.0100	-0.0017	-0.0240	0.0182	0.0017	0.0201	0.0038	-0.0037	-0.0081	0.0023	-0.0035	0.0027	0.0108
Twitter Inc.	-0.0137	0.0008	-0.0128	-0.0187	0.0057	-0.0089	0.0207	-0.0039	0.0078	-0.0032	0.0077	-0.0032	0.0128	-0.0052
Take-Two Interactive Software Inc.	-0.0047	0.0060	-0.0006	-0.0089	0.0073	0.0038	0.0005	0.0027	0.0017	-0.0026	0.0037	0.0013	0.0038	-0.0020
Omnicom Group Inc	-0.0053	-0.0023	-0.0020	-0.0095	0.0023	-0.0021	0.0067	-0.0018	-0.0021	0.0034	-0.0006	-0.0035	0.0008	0.0027
ViacomCBS Inc. Class B	-0.0056	-0.0054	-0.0105	-0.0113	0.0030	-0.0012	0.0145	-0.0020	-0.0005	0.0023	0.0043	-0.0019	0.0058	0.0026
Fox Corporation Class A	-0.0056	-0.0025	-0.0041	-0.0083	0.0039	-0.0008	0.0074	0.0009	-0.0026	0.0008	0.0011	-0.0004	0.0029	0.0020
CenturyLink Inc.	-0.0033	-0.0003	-0.0052	-0.0038	-0.0002	0.0002	0.0064	-0.0014	-0.0002	-0.0002	-0.0008	-0.0026	0.0023	0.0000
DISH Network Corporation Class A	-0.0053	-0.0038	-0.0078	-0.0022	0.0015	-0.0028	0.0064	-0.0007	0.0012	0.0008	0.0022	-0.0012	0.0059	0.0021
Live Nation Entertainment Inc.	-0.0048	-0.0034	-0.0050	-0.0055	0.0102	-0.0076	0.0037	0.0001	-0.0001	0.0020	0.0005	-0.0012	0.0042	0.0015
Interpublic Group of Companies Inc.	-0.0032	-0.0013	-0.0038	-0.0069	0.0055	-0.0028	0.0051	-0.0019	-0.0006	0.0030	0.0014	-0.0029	0.0019	0.0010
Discovery Inc. Class C	-0.0026	-0.0011	-0.0030	-0.0053	0.0004	-0.0005	0.0050	0.0001	-0.0013	0.0005	-0.0002	-0.0008	-0.0005	0.0017
Fox Corporation Class B	-0.0025	-0.0011	-0.0018	-0.0037	0.0018	-0.0004	0.0033	0.0004	-0.0012	0.0004	0.0005	-0.0002	0.0013	0.0009
News Corporation Class A	-0.0027	-0.0015	-0.0009	-0.0023	-0.0009	-0.0007	0.0028	-0.0011	-0.0001	0.0013	0.0027	-0.0001	0.0010	0.0011
Discovery Inc. Class A	-0.0013	-0.0005	-0.0015	-0.0028	0.0002	-0.0002	0.0026	0.0000	-0.0007	0.0003	-0.0001	-0.0004	-0.0003	0.0009
News Corporation Class B	-0.0009	-0.0005	-0.0003	-0.0008	-0.0003	-0.0002	0.0009	-0.0004	0.0000	0.0004	0.0009	0.0000	0.0003	0.0004
Total	-1.1215	-0.0958	-0.7692	-1.4950	0.7203	-0.1268	1.2731	0.5025	0.0030	0.2188	0.4412	-0.1621	0.5627	0.1302

Sector "Consumer Staples"	S&P 500 - Initial Benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Procter & Gamble Company	-0.1210	0.0847	-0.0710	-0.1161	0.0860	0.0508	-0.0042	0.0995	-0.0539	-0.0113	-0.0085	-0.0132	-0.0200	0.0336
PepsiCo Inc.	-0.0704	0.0295	-0.0484	-0.1371	0.1181	0.0255	0.0539	0.0218	-0.0172	-0.0233	0.0233	0.0095	-0.0299	0.0061
Walmart Inc.	-0.0667	0.0643	-0.0194	-0.0008	-0.0249	0.0656	0.0141	0.0614	-0.0147	-0.0365	0.0001	0.0210	-0.0093	-0.0016
Coca-Cola Company	-0.0787	0.0236	-0.0875	-0.1445	0.0839	0.0170	0.0840	-0.0137	-0.0390	0.0027	0.0080	-0.0440	0.0291	0.0261
Costco Wholesale Corporation	-0.0692	0.0586	-0.0159	-0.0214	-0.0115	0.0083	0.0215	0.0326	-0.0127	-0.0152	0.0085	-0.0120	0.0059	0.0109
Philip Morris International Inc.	-0.0389	0.0296	-0.0399	-0.1039	0.0684	0.0280	0.0115	0.0156	-0.0247	-0.0024	-0.0078	-0.0263	0.0177	0.0185
Mondelez International Inc. Class A	-0.0294	0.0157	-0.0247	-0.0434	0.0306	0.0176	0.0106	0.0063	-0.0112	-0.0040	0.0011	-0.0054	-0.0015	0.0141
Altria Group Inc	-0.0345	0.0126	-0.0141	-0.0415	0.0198	0.0141	0.0268	-0.0004	-0.0100	-0.0110	-0.0089	-0.0012	0.0089	0.0100
Colgate-Palmolive Company	-0.0281	0.0180	-0.0116	-0.0250	0.0127	0.0089	0.0084	0.0124	-0.0053	-0.0099	0.0030	-0.0015	0.0064	0.0055
Kimberly-Clark Corporation	-0.0139	0.0224	-0.0149	-0.0228	0.0108	0.0078	0.0023	0.0153	-0.0004	-0.0066	0.0024	0.0002	0.0015	0.0023
Estee Lauder Companies Inc. Class A	-0.0199	0.0078	-0.0166	-0.0199	0.0104	-0.0066	0.0113	0.0093	-0.0074	0.0061	0.0006	-0.0035	0.0084	0.0175
General Mills Inc.	-0.0135	0.0174	-0.0035	-0.0003	-0.0043	0.0140	0.0018	0.0098	-0.0005	-0.0022	0.0004	0.0068	-0.0060	0.0076
Walgreens Boots Alliance Inc	-0.0125	0.0126	-0.0104	0.0006	-0.0063	-0.0091	0.0098	0.0014	-0.0021	-0.0058	0.0000	-0.0096	0.0038	0.0118
Constellation Brands Inc. Class A	-0.0198	0.0045	-0.0301	-0.0117	0.0246	-0.0103	0.0301	-0.0025	-0.0028	0.0020	0.0033	-0.0048	0.0102	0.0003
Sysco Corporation	-0.0148	0.0005	-0.0326	-0.0274	0.0470	-0.0238	0.0295	0.0016	0.0060	-0.0007	0.0011	-0.0117	0.0095	0.0072
Monster Beverage Corporation	-0.0112	0.0065	-0.0061	-0.0176	0.0088	-0.0041	0.0124	0.0030	-0.0041	-0.0005	0.0113	0.0004	0.0044	0.0050
Kroger Co.	-0.0076	0.0146	-0.0043	0.0036	-0.0087	0.0114	-0.0040	0.0030	0.0034	-0.0032	0.0045	-0.0026	0.0000	0.0008
Clorox Company	-0.0032	0.0089	-0.0032	0.0059	-0.0024	0.0026	0.0038	0.0052	-0.0015	0.0017	0.0060	0.0029	-0.0055	0.0039
McCormick & Company Incorporated	-0.0084	0.0026	-0.0088	-0.0066	0.0053	0.0094	0.0043	0.0018	-0.0014	0.0001	0.0053	0.0072	-0.0029	0.0016
Archer-Daniels-Midland Company	-0.0114	0.0000	-0.0064	-0.0093	0.0076	0.0028	0.0068	-0.0008	-0.0026	-0.0019	0.0029	-0.0050	0.0029	0.0098
Hershey Company	-0.0076	0.0066	-0.0082	-0.0123	0.0086	0.0053	0.0023	0.0014	-0.0057	-0.0018	0.0004	-0.0016	-0.0001	0.0037
Kraft Heinz Company	-0.0069	0.0038	-0.0060	-0.0041	0.0066	0.0033	0.0083	0.0033	-0.0003	0.0004	0.0005	-0.0009	0.0019	0.0013
Tyson Foods Inc. Class A	-0.0092	-0.0029	-0.0134	0.0015	0.0066	-0.0058	0.0095	0.0016	-0.0039	0.0013	0.0005	-0.0026	0.0012	0.0027
Church & Dwight Co. Inc.	-0.0066	0.0053	-0.0108	0.0028	-0.0041	0.0065	0.0008	0.0054	-0.0021	-0.0001	0.0021	0.0002	-0.0014	0.0031
Conagra Brands Inc.	-0.0063	0.0037	-0.0078	0.0032	0.0046	0.0075	0.0026	0.0022	0.0011	-0.0017	0.0009	0.0012	-0.0028	0.0041
Kellogg Company	-0.0048	0.0028	0.0011	-0.0077	0.0041	0.0043	-0.0008	0.0023	-0.0009	0.0007	-0.0011	0.0004	-0.0019	0.0032
Hormel Foods Corporation	-0.0037	0.0030	-0.0018	0.0034	-0.0002	0.0040	-0.0009	0.0035	-0.0040	0.0000	0.0007	0.0008	-0.0011	0.0021
J.M. Smucker Company	-0.0036	0.0034	-0.0032	0.0005	-0.0005	0.0045	0.0002	0.0039	-0.0016	-0.0010	0.0002	-0.0006	-0.0023	0.0025
Brown-Forman Corporation Class B	-0.0061	0.0007	-0.0070	-0.0040	0.0057	0.0008	0.0066	0.0008	-0.0022	-0.0001	0.0040	0.0003	-0.0011	0.0009
Lamb Weston Holdings Inc.	-0.0028	-0.0014	-0.0078	-0.0085	0.0067	-0.0041	0.0054	0.0009	-0.0012	0.0003	0.0018	-0.0050	0.0033	0.0017
Campbell Soup Company	-0.0019	0.0048	-0.0016	-0.0026	-0.0008	0.0039	-0.0012	0.0020	0.0003	-0.0002	0.0005	0.0014	-0.0032	0.0018
Molson Coors Beverage Company Class B	-0.0029	-0.0009	-0.0029	-0.0037	0.0009	0.0022	0.0044	-0.0018	-0.0009	-0.0027	0.0000	-0.0018	0.0004	0.0009
Total	-0.7353	0.4634	-0.5392	-0.7709	0.5140	0.2621	0.3719	0.3081	-0.2233	-0.1269	0.0672	-0.1010	0.0267	0.2192

Sector "Energy"	S&P 500 - Initial Benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Exxon Mobil Corporation	-0,1003	-0,0562	-0,1548	-0,1087	0,0991	0,0470	0,0772	0,0016	0,0091	-0,0104	0,0543	-0,0698	0,0636	0,0150
Chevron Corporation	-0,1023	0,0151	-0,0889	-0,2050	0,1125	0,0655	0,0872	0,0242	-0,0013	0,0199	0,0480	-0,0470	0,0089	0,0218
ConocoPhillips	-0,0337	-0,0125	-0,0604	-0,0284	0,0177	0,0245	0,0109	0,0030	0,0046	0,0166	0,0198	-0,0082	0,0116	-0,0050
Phillips 66	-0,0226	-0,0104	-0,0303	-0,0155	0,0115	-0,0019	0,0269	-0,0046	0,0024	0,0135	0,0226	-0,0112	0,0129	0,0033
EOG Resources Inc.	-0,0184	-0,0157	-0,0461	0,0003	0,0040	0,0135	0,0154	-0,0083	0,0057	0,0035	0,0192	-0,0091	0,0120	-0,0031
Kinder Morgan Inc Class P	-0,0163	0,0010	-0,0287	-0,0200	0,0137	-0,0030	0,0176	-0,0031	-0,0028	-0,0005	0,0088	-0,0040	0,0047	0,0031
Valero Energy Corporation	-0,0222	-0,0053	-0,0231	-0,0249	0,0183	-0,0115	0,0267	0,0037	0,0016	0,0132	0,0135	-0,0120	0,0149	0,0016
Schlumberger NV	-0,0190	-0,0121	-0,0326	-0,0118	-0,0036	0,0038	0,0155	-0,0073	0,0055	-0,0023	0,0148	-0,0118	0,0103	0,0051
Williams Companies Inc.	-0,0110	-0,0081	-0,0090	-0,0242	0,0198	-0,0018	0,0207	0,0086	0,0011	0,0014	0,0048	-0,0035	0,0046	0,0038
Marathon Petroleum Corporation	-0,0181	-0,0166	-0,0346	-0,0228	0,0211	-0,0127	0,0264	-0,0006	0,0011	0,0128	0,0123	-0,0078	0,0165	0,0004
Pioneer Natural Resources Company	-0,0086	-0,0091	-0,0207	-0,0080	0,0070	0,0055	0,0012	0,0010	0,0007	0,0045	0,0054	-0,0050	0,0073	-0,0006
ONEOK Inc.	-0,0081	-0,0050	-0,0302	-0,0198	0,0008	0,0020	0,0189	0,0021	-0,0036	0,0027	0,0074	0,0021	0,0071	0,0008
Occidental Petroleum Corporation	-0,0116	-0,0094	-0,0244	-0,0136	0,0070	0,0062	0,0094	-0,0059	0,0007	0,0054	-0,0008	-0,0042	0,0012	-0,0043
Hess Corporation	-0,0064	-0,0058	-0,0149	-0,0057	0,0054	-0,0008	0,0102	-0,0038	0,0068	0,0021	0,0047	-0,0046	0,0034	0,0004
Concho Resources Inc.	-0,0066	-0,0067	-0,0089	-0,0062	0,0018	0,0062	0,0048	-0,0007	0,0010	0,0032	0,0016	-0,0033	0,0013	-0,0011
Halliburton Company	-0,0087	-0,0099	-0,0193	-0,0127	0,0114	0,0082	0,0034	-0,0033	0,0073	0,0044	0,0042	-0,0035	0,0078	0,0006
Baker Hughes Company Class A	-0,0089	0,0000	-0,0085	-0,0088	0,0077	-0,0051	0,0097	0,0005	0,0012	0,0009	0,0039	-0,0034	0,0040	0,0043
Cabot Oil & Gas Corporation	-0,0041	-0,0015	-0,0027	-0,0108	0,0059	0,0012	0,0056	-0,0008	0,0005	0,0016	0,0006	-0,0033	0,0055	0,0013
Diamondback Energy Inc.	-0,0053	-0,0061	-0,0123	-0,0089	0,0080	0,0091	0,0029	-0,0027	0,0038	0,0036	0,0013	-0,0022	0,0033	-0,0002
Noble Energy Inc.	-0,0023	-0,0031	-0,0091	-0,0087	0,0065	0,0030	0,0042	-0,0015	0,0035	0,0015	0,0028	-0,0026	0,0033	-0,0027
Marathon Oil Corporation	-0,0035	-0,0034	-0,0066	-0,0042	-0,0002	0,0007	0,0025	0,0011	0,0026	0,0023	0,0010	-0,0006	0,0010	-0,0018
Devon Energy Corporation	-0,0044	-0,0034	-0,0068	-0,0057	0,0007	0,0065	0,0030	-0,0009	0,0028	0,0012	0,0027	-0,0012	0,0003	-0,0021
National Oilwell Varco Inc.	-0,0037	-0,0031	-0,0066	0,0001	-0,0002	-0,0004	0,0034	0,0001	0,0006	-0,0005	0,0024	-0,0024	0,0009	0,0006
HollyFrontier Corporation	-0,0040	-0,0028	-0,0039	-0,0003	0,0017	-0,0015	0,0034	0,0004	0,0011	0,0012	0,0006	-0,0026	0,0025	0,0008
Apache Corporation	-0,0023	-0,0031	-0,0112	-0,0074	0,0001	0,0019	0,0097	0,0006	0,0048	0,0011	0,0019	-0,0027	0,0027	-0,0021
TechnipFMC Plc	-0,0016	-0,0019	-0,0054	-0,0015	0,0016	0,0004	0,0021	-0,0004	-0,0002	0,0004	-0,0005	-0,0022	0,0013	0,0003
Total	-0,4540	-0,1951	-0,7001	-0,5832	0,3792	0,1669	0,4191	0,0031	0,0605	0,1030	0,2572	-0,2262	0,2131	0,0403

Sector "Utilities"	S&P 500 - Initial Benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
NextEra Energy Inc.	-0,0409	0,0371	-0,0846	-0,0616	0,0960	-0,0203	0,0488	0,0018	-0,0122	-0,0242	0,0054	-0,0037	0,0121	0,0425
Dominion Energy Inc	-0,0332	0,0321	-0,0257	-0,0375	0,0231	-0,0128	0,0459	-0,0003	-0,0117	-0,0079	0,0098	-0,0006	0,0078	0,0148
Duke Energy Corporation	-0,0258	0,0197	-0,0330	-0,0498	0,0423	-0,0128	0,0462	-0,0006	-0,0120	-0,0087	-0,0026	-0,0018	0,0091	0,0071
Southern Company	-0,0289	0,0249	-0,0446	-0,0326	0,0481	-0,0237	0,0462	-0,0109	0,0011	-0,0133	0,0043	-0,0119	0,0118	0,0105
American Electric Power Company Inc.	-0,0191	0,0148	-0,0180	-0,0271	0,0261	-0,0204	0,0298	0,0001	-0,0057	-0,0034	-0,0029	-0,0014	0,0007	0,0128
Exelon Corporation	-0,0183	0,0069	-0,0283	-0,0213	0,0210	-0,0112	0,0283	-0,0026	-0,0069	-0,0032	0,0066	-0,0083	0,0080	0,0057
Sempra Energy	-0,0164	0,0021	-0,0344	-0,0095	0,0319	-0,0194	0,0351	-0,0065	0,0028	-0,0077	0,0050	-0,0057	0,0054	0,0028
Xcel Energy Inc.	-0,0155	0,0162	-0,0061	-0,0307	0,0208	-0,0020	0,0188	0,0017	-0,0050	-0,0048	-0,0039	-0,0052	0,0055	0,0100
WEC Energy Group Inc	-0,0110	0,0149	-0,0056	-0,0283	0,0225	-0,0048	0,0169	0,0024	-0,0073	-0,0063	-0,0035	-0,0011	0,0026	0,0072
Eversource Energy	-0,0104	0,0120	-0,0079	-0,0239	0,0193	-0,0076	0,0209	0,0017	-0,0057	-0,0081	-0,0027	-0,0019	0,0028	0,0078
Public Service Enterprise Group Inc	-0,0143	0,0066	-0,0191	-0,0134	0,0174	-0,0003	0,0192	0,0031	-0,0059	-0,0038	-0,0013	-0,0067	0,0058	0,0060
Consolidated Edison Inc.	-0,0113	0,0110	0,0002	-0,0167	0,0070	0,0000	0,0123	0,0018	-0,0074	-0,0062	-0,0038	-0,0049	0,0008	0,0066
FirstEnergy Corp.	-0,0122	0,0039	-0,0101	-0,0151	0,0113	-0,0015	0,0160	0,0029	-0,0075	-0,0031	-0,0005	-0,0021	0,0031	0,0036
American Water Works Company Inc.	-0,0091	0,0125	-0,0080	-0,0191	0,0177	-0,0055	0,0145	0,0000	-0,0046	-0,0041	-0,0009	-0,0002	0,0027	0,0046
Edison International	-0,0110	0,0005	-0,0175	-0,0099	0,0150	-0,0089	0,0194	0,0025	-0,0037	-0,0050	0,0020	-0,0016	0,0007	0,0025
PPL Corporation	-0,0127	0,0040	-0,0105	-0,0221	0,0236	-0,0116	0,0183	-0,0009	-0,0028	-0,0020	0,0040	-0,0050	0,0038	0,0072
DTE Energy Company	-0,0037	0,0018	-0,0023	-0,0089	0,0091	-0,0011	0,0051	-0,0009	0,0005	0,0002	0,0006	-0,0002	0,0002	0,0011
Entergy Corporation	-0,0080	0,0050	-0,0137	-0,0177	0,0172	-0,0114	0,0186	-0,0013	-0,0029	-0,0032	0,0012	0,0007	0,0025	0,0031
Ameren Corporation	-0,0051	0,0055	-0,0074	-0,0116	0,0124	-0,0051	0,0103	-0,0010	-0,0037	-0,0021	-0,0006	-0,0020	0,0011	0,0049
CMS Energy Corporation	-0,0075	0,0079	-0,0051	-0,0131	0,0111	-0,0040	0,0091	0,0009	-0,0038	-0,0037	-0,0007	-0,0019	0,0028	0,0034
Eergy Inc.	-0,0057	0,0038	-0,0081	-0,0110	0,0120	-0,0055	0,0120	-0,0018	-0,0022	-0,0024	0,0016	-0,0009	0,0034	0,0020
Atmos Energy Corporation	-0,0060	0,0037	-0,0046	-0,0069	0,0062	-0,0016	0,0056	0,0025	-0,0027	-0,0020	-0,0013	-0,0011	0,0016	0,0025
Alliant Energy Corp	-0,0054	0,0047	-0,0052	-0,0091	0,0079	-0,0025	0,0080	-0,0002	-0,0025	-0,0025	0,0011	-0,0019	0,0004	0,0029
NRG Energy Inc.	-0,0057	0,0012	-0,0058	-0,0070	0,0098	-0,0041	0,0064	0,0007	0,0014	0,0004	0,0001	-0,0002	0,0035	0,0003
NiSource Inc	-0,0033	0,0031	-0,0051	-0,0058	0,0062	-0,0032	0,0063	-0,0003	-0,0005	-0,0021	-0,0014	-0,0013	0,0011	0,0011
CenterPoint Energy Inc.	-0,0025	-0,0018	-0,0097	-0,0071	0,0110	-0,0048	0,0110	-0,0022	0,0006	-0,0007	0,0038	-0,0035	0,0017	0,0017
AES Corporation	-0,0064	0,0002	-0,0075	-0,0029	0,0044	-0,0030	0,0067	-0,0036	-0,0007	0,0002	0,0002	-0,0029	0,0014	0,0007
Pinnacle West Capital Corporation	-0,0045	0,0036	-0,0059	-0,0065	0,0061	-0,0040	0,0068	-0,0009	-0,0011	-0,0013	0,0002	-0,0011	0,0006	0,0024
Total	-0,3541	0,2579	-0,4336	-0,5262	0,5566	-0,2132	0,5424	-0,0120	-0,1120	-0,1308	0,0197	-0,0784	0,1028	0,1779

Sector "Financials"	S&P 500 - Initial Benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Berkshire Hathaway Inc. Class B	-0.1403	-0.0024	-0.0651	-0.1877	0.0790	-0.0103	0.1216	-0.0191	-0.0343	-0.0289	-0.0447	-0.0600	0.0470	0.0852
JPMorgan Chase & Co.	-0.1677	-0.0800	-0.0447	-0.2272	0.1057	-0.0898	0.2721	-0.0853	-0.0543	0.0324	-0.0068	-0.0848	0.0481	0.1013
Bank of America Corp	-0.1292	-0.0741	-0.0412	-0.1409	0.0744	-0.0551	0.1828	-0.0482	-0.0358	0.0308	0.0161	-0.0685	0.0431	0.0488
Citigroup Inc.	-0.0683	-0.0138	-0.0672	-0.1022	0.0606	-0.0579	0.1063	-0.0166	-0.0207	0.0225	0.0114	-0.0382	0.0209	0.0347
Wells Fargo & Company	-0.0553	-0.0355	-0.0644	-0.0547	0.0550	-0.0515	0.1023	-0.0560	-0.0198	0.0096	-0.0302	-0.0241	0.0134	0.0367
BlackRock Inc.	-0.0535	-0.0086	-0.0236	-0.0452	0.0712	-0.0119	0.0405	0.0037	-0.0011	0.0060	0.0096	0.0095	-0.0003	0.0095
S&P Global Inc.	-0.0290	0.0068	-0.0263	-0.0492	0.0461	-0.0012	0.0582	-0.0011	0.0015	0.0023	0.0126	0.0057	0.0089	0.0131
CME Group Inc. Class A	-0.0125	0.0229	-0.0414	-0.0330	0.0213	0.0037	0.0247	0.0020	-0.0121	-0.0130	0.0119	-0.0007	-0.0033	0.0056
American Express Company	-0.0457	-0.0038	-0.0197	-0.0631	0.0486	-0.0421	0.0729	-0.0193	-0.0119	0.0153	0.0033	-0.0201	0.0213	0.0158
Goldman Sachs Group Inc.	-0.0304	-0.0079	-0.0191	-0.0514	0.0338	-0.0169	0.0597	-0.0010	-0.0083	0.0001	0.0110	-0.0171	0.0110	0.0216
Marsh & McLennan Companies Inc.	-0.0218	0.0023	-0.0143	-0.0411	0.0151	-0.0140	0.0451	0.0055	-0.0115	0.0088	0.0153	0.0010	0.0001	0.0029
Intercontinental Exchange Inc.	-0.0123	0.0114	-0.0246	-0.0258	0.0248	-0.0007	0.0167	0.0073	-0.0035	-0.0006	0.0116	-0.0001	0.0007	0.0078
Chubb Limited	-0.0240	-0.0003	-0.0332	-0.0349	0.0158	-0.0108	0.0396	-0.0060	-0.0261	-0.0049	0.0007	-0.0051	0.0369	0.0088
Morgan Stanley	-0.0271	-0.0136	-0.0200	-0.0401	0.0281	-0.0009	0.0411	-0.0093	-0.0055	0.0022	0.0101	-0.0134	0.0146	0.0195
U.S. Bancorp	-0.0285	-0.0164	-0.0241	-0.0233	0.0188	-0.0245	0.0449	-0.0150	-0.0058	0.0053	-0.0010	-0.0224	0.0140	0.0153
Aon Plc Class A	-0.0188	0.0061	-0.0322	-0.0291	0.0196	-0.0126	0.0455	-0.0012	-0.0148	0.0028	0.0125	0.0019	0.0003	0.0048
PNC Financial Services Group Inc.	-0.0330	-0.0178	-0.0117	-0.0302	0.0220	-0.0276	0.0439	-0.0069	0.0007	0.0041	0.0037	-0.0137	0.0140	0.0167
Truist Financial Corporation	-0.0292	-0.0218	-0.0309	-0.0206	0.0198	-0.0335	0.0601	-0.0138	0.0115	-0.0002	0.0041	-0.0248	0.0142	0.0192
Progressive Corporation	-0.0183	0.0181	-0.0054	-0.0225	0.0138	0.0059	0.0105	0.0050	0.0008	-0.0145	-0.0045	0.0047	-0.0035	0.0071
Moody's Corporation	-0.0197	-0.0007	-0.0179	-0.0295	0.0425	-0.0087	0.0265	-0.0016	0.0041	-0.0023	0.0069	-0.0003	0.0037	0.0073
Charles Schwab Corporation	-0.0183	-0.0252	-0.0012	-0.0143	0.0144	0.0000	0.0136	-0.0032	-0.0017	0.0046	0.0003	-0.0161	0.0013	0.0146
Allstate Corporation	-0.0185	0.0029	-0.0167	-0.0254	0.0246	-0.0035	0.0209	0.0057	-0.0041	-0.0021	0.0013	-0.0067	-0.0007	0.0039
Bank of New York Mellon Corporation	-0.0137	-0.0055	-0.0124	-0.0178	0.0143	0.0045	0.0121	0.0008	-0.0052	0.0008	-0.0012	-0.0111	0.0091	0.0093
Capital One Financial Corporation	-0.0148	-0.0079	-0.0134	-0.0444	0.0266	-0.0274	0.0491	-0.0106	0.0032	0.0113	0.0012	-0.0071	0.0044	0.0151
MSCI Inc. Class A	-0.0049	-0.0038	-0.0010	-0.0165	0.0155	-0.0022	0.0171	0.0024	0.0028	-0.0018	0.0049	0.0027	-0.0009	-0.0031
Public Storage	-0.0082	0.0106	-0.0086	-0.0203	0.0132	0.0015	0.0083	-0.0065	-0.0053	-0.0017	0.0036	-0.0084	0.0007	0.0097
T. Rowe Price Group	-0.0147	-0.0012	-0.0089	-0.0165	0.0098	-0.0036	0.0115	-0.0017	-0.0033	0.0111	0.0036	-0.0005	0.0015	0.0055
MetLife Inc.	-0.0179	-0.0089	-0.0199	-0.0254	0.0286	-0.0110	0.0300	-0.0073	0.0008	0.0044	0.0017	-0.0093	0.0055	0.0086
Willis Towers Watson Public Limited Company	-0.0097	0.0058	-0.0104	-0.0160	0.0100	-0.0064	0.0266	-0.0003	-0.0098	0.0036	0.0080	0.0017	-0.0010	0.0023
Travelers Companies Inc.	-0.0119	0.0044	-0.0146	-0.0169	0.0122	-0.0064	0.0177	-0.0045	-0.0042	-0.0050	0.0014	-0.0076	0.0114	0.0072
Aflac Incorporated	-0.0172	-0.0051	-0.0157	-0.0241	0.0340	-0.0088	0.0183	-0.0044	-0.0006	0.0009	-0.0010	-0.0095	0.0054	0.0062
American International Group Inc.	-0.0136	-0.0105	-0.0253	-0.0324	0.0334	-0.0203	0.0304	-0.0079	-0.0048	0.0024	0.0161	-0.0044	0.0094	0.0041
Prudential Financial Inc.	-0.0176	-0.0071	-0.0230	-0.0191	0.0242	-0.0124	0.0260	-0.0034	-0.0014	0.0064	-0.0009	-0.0097	0.0060	0.0099
State Street Corporation	-0.0101	-0.0102	-0.0018	-0.0180	0.0037	0.0062	0.0156	-0.0035	-0.0016	0.0025	0.0017	-0.0084	0.0014	0.0088
MarketAxess Holdings Inc.	-0.0034	0.0085	-0.0039	-0.0069	0.0075	0.0095	0.0030	0.0048	-0.0015	0.0050	0.0056	0.0006	-0.0008	0.0040
Arthur J. Gallagher & Co.	-0.0066	0.0024	-0.0071	-0.0141	0.0083	-0.0034	0.0095	-0.0026	-0.0068	0.0020	0.0079	0.0007	0.0031	0.0024
Ameriprise Financial Inc.	-0.0134	-0.0071	-0.0072	-0.0142	0.0103	-0.0086	0.0229	-0.0054	-0.0021	0.0024	0.0089	-0.0020	0.0065	0.0039
First Republic Bank	-0.0093	-0.0038	0.0014	-0.0121	0.0024	-0.0005	0.0147	0.0004	0.0000	0.0004	0.0024	-0.0052	0.0010	0.0076
Northern Trust Corporation	-0.0089	-0.0074	-0.0013	-0.0092	0.0094	0.0026	0.0066	-0.0037	-0.0021	-0.0016	0.0004	-0.0041	0.0025	0.0045
Hartford Financial Services Group Inc.	-0.0076	0.0015	-0.0091	-0.0145	0.0068	-0.0046	0.0166	-0.0024	-0.0054	-0.0005	0.0010	-0.0047	0.0062	0.0019
Nasdaq Inc.	-0.0059	0.0042	-0.0070	-0.0085	0.0082	0.0014	0.0071	0.0016	-0.0027	0.0005	0.0005	0.0022	0.0016	0.0015
Discover Financial Services	-0.0065	-0.0024	-0.0091	-0.0268	0.0273	-0.0135	0.0196	-0.0056	0.0018	0.0074	0.0017	-0.0058	0.0034	0.0098
M&T Bank Corporation	-0.0088	-0.0053	-0.0052	-0.0065	0.0045	-0.0076	0.0132	-0.0042	-0.0002	0.0011	-0.0011	-0.0079	0.0052	0.0041
Fifth Third Bancorp	-0.0086	-0.0046	-0.0105	-0.0136	0.0167	-0.0110	0.0176	-0.0034	0.0015	0.0019	0.0009	-0.0056	0.0047	0.0051
Cboe Global Markets Inc	-0.0031	0.0012	-0.0084	-0.0071	0.0063	-0.0006	0.0019	0.0041	-0.0024	-0.0012	0.0029	-0.0001	-0.0003	0.0032
KeyCorp	-0.0073	-0.0039	-0.0058	-0.0120	0.0095	-0.0082	0.0140	-0.0043	0.0004	0.0007	0.0008	-0.0060	0.0045	0.0045
Synchrony Financial	-0.0053	-0.0012	-0.0061	-0.0186	0.0115	-0.0094	0.0138	-0.0047	0.0036	0.0038	0.0007	-0.0047	0.0033	0.0059
SVB Financial Group	-0.0082	-0.0065	-0.0041	-0.0016	0.0023	-0.0051	0.0134	-0.0026	0.0024	0.0002	0.0002	-0.0028	0.0039	0.0054
Regions Financial Corporation	-0.0068	-0.0016	-0.0088	-0.0068	0.0067	-0.0065	0.0143	-0.0053	0.0011	0.0015	0.0006	-0.0043	0.0033	0.0054
Principal Financial Group Inc.	-0.0072	-0.0014	-0.0062	-0.0109	0.0105	-0.0074	0.0092	-0.0025	-0.0007	0.0067	0.0035	-0.0045	0.0036	0.0018
E*TRADE Financial Corporation	-0.0054	-0.0029	-0.0055	-0.0076	0.0066	0.0004	0.0084	-0.0017	-0.0012	0.0008	0.0017	-0.0027	0.0030	0.0041
Citizens Financial Group Inc.	-0.0060	-0.0045	-0.0059	-0.0099	0.0053	-0.0057	0.0116	-0.0039	0.0014	0.0015	0.0021	-0.0039	0.0026	0.0050
Cincinnati Financial Corporation	-0.0058	0.0019	-0.0028	-0.0061	0.0007	-0.0023	0.0063	0.0009	-0.0030	-0.0080	-0.0031	-0.0041	0.0058	0.0010
Huntington Bancshares Incorporated	-0.0041	-0.0033	-0.0051	-0.0069	0.0038	-0.0061	0.0112	-0.0037	0.0004	0.0017	0.0003	-0.0046	0.0027	0.0034
Everest Re Group Ltd.	-0.0049	0.0008	-0.0054	-0.0027	-0.0009	-0.0020	0.0065	-0.0025	-0.0044	-0.0011	0.0024	-0.0015	0.0074	-0.0012
Loews Corporation	-0.0050	-0.0010	-0.0055	-0.0052	0.0026	-0.0010	0.0069	-0.0028	-0.0035	-0.0008	-0.0006	-0.0013	0.0024	0.0014
W. R. Berkley Corporation	-0.0048	-0.0004	-0.0050	-0.0050	0.0030	-0.0015	0.0059	-0.0008	-0.0039	0.0008	0.0002	-0.0026	0.0060	0.0009
Raymond James Financial Inc.	-0.0047	-0.0039	-0.0006	-0.0049	0.0001	-0.0022	0.0070	-0.0027	-0.0011	0.0009	0.0019	-0.0028	0.0022	0.0020
Globe Life Inc.	-0.0048	-0.0020	-0.0052	-0.0043	0.0048	-0.0031	0.0079	-0.0012	-0.0005	0.0016	-0.0008	-0.0035	0.0017	0.0019
Lincoln National Corporation	-0.0071	-0.0047	-0.0072	-0.0121	0.0180	-0.0043	0.0136	-0.0037	0.0005	0.0022	0.0038	-0.0031	0.0020	0.0025
Assurant Inc.	-0.0037	0.0006	-0.0035	-0.0026	0.0045	-0.0013	0.0032	-0.0016	-0.0001	-0.0006	-0.0006	-0.0016	0.0021	0.0002
Zions Bancorporation N.A.	-0.0026	-0.0025	-0.0036	-0.0028	0.0017	-0.0023	0.0055	-0.0013	0.0003	0.0011	-0.0001	-0.0024	0.0025	0.0019
Franklin Resources Inc.	-0.0028	-0.0001	-0.0034	-0.0014	0.0005	-0.0021	0.0019	-0.0006	-0.0005	0.0027	0.0013	-0.0016	0.0002	0.0011
People's United Financial Inc.	-0.0029	0.0001	-0.0018	-0.0017	-0.0004	-0.0036	0.0060	-0.0014	0.0007	0.0002	0.0004	-0.0023	0.0003	0.0011
Comerica Incorporated	-0.0031	-0.0029	-0.0027	-0.0046	0.0027	-0.0033	0.0053	-0.0027	0.0014	0.0004	0.0006	-0.0022	0.0017	0.0022
Unum Group	-0.0029	-0.0015	-0.0032	-0.0041	0.0066	-0.0020	0.0020	-0.0001	-0.0001	0.0012	-0.0008	-0.0013	0.0007	0.0004
Invesco Ltd.	-0.0020	-0.0010	-0.0020	-0.0023	0.0011	-0.0019	0.0029	-0.0009	-0.0016	0.0003	0.0000	-0.0016	0.0010	0.0011
Total	-1.3451	-0.3457	-0.9663	-1.8263	1.2896	-0.6676	2.0220	-0.3877	-0.3104	0.1506	0.1398	-0.5621	0.4605	0.6842

Sector "Health Care"	S&P 500 - Initial Benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Johnson & Johnson	-0,1626	0,0992	-0,0860	-0,1694	0,0431	0,1412	0,0831	0,1206	0,0295	-0,0669	0,0044	0,0184	-0,0636	0,0591
UnitedHealth Group Incorporated	-0,1714	0,1261	-0,0463	-0,2638	0,1929	-0,0594	0,1678	0,1112	0,0028	-0,0259	0,0097	0,0153	-0,0039	0,0572
Pfizer Inc.	-0,0544	0,0403	-0,0555	-0,0955	0,0552	0,0747	0,0438	0,0363	0,0106	0,0059	-0,0095	0,0208	-0,0058	0,0155
Merck & Co. Inc.	-0,0560	0,0588	-0,0529	-0,0498	0,0041	0,0502	0,0652	0,0094	-0,0194	-0,0368	-0,0130	0,0353	-0,0341	0,0454
AbbVie Inc.	-0,0653	0,0243	-0,0260	-0,1300	0,0375	0,0065	0,0584	0,0311	0,0112	-0,0060	0,0091	0,0539	0,0103	0,0042
Abbott Laboratories	-0,0778	0,0399	-0,0007	-0,1093	0,0631	0,0428	0,0542	0,0757	-0,0106	-0,0292	0,0280	-0,0266	0,0115	0,0246
Bristol-Myers Squibb Company	-0,0586	0,0123	-0,0517	-0,0703	0,0533	0,0303	0,0409	0,0168	0,0160	-0,0187	0,0077	0,0292	-0,0302	-0,0103
Thermo Fisher Scientific Inc.	-0,0726	0,0386	-0,0196	-0,0395	-0,0080	0,0158	0,0686	0,0246	-0,0048	0,0019	0,0053	0,0164	-0,0043	0,0145
Amgen Inc.	-0,0565	0,0299	-0,0222	-0,0375	0,0291	0,0197	0,0340	0,0420	0,0030	-0,0122	0,0091	0,0125	-0,0278	0,0079
Eli Lilly and Company	-0,0589	0,0640	-0,0078	-0,0641	0,0503	0,0218	0,0229	0,0417	0,0189	-0,0300	-0,0004	0,0196	-0,0243	0,0062
Medtronic Plc	-0,0582	-0,0084	-0,0540	-0,0669	0,0839	-0,0179	0,0895	0,0119	-0,0204	-0,0219	0,0214	-0,0271	0,0046	0,0213
Danaher Corporation	-0,0433	0,0108	-0,0192	-0,0504	0,0484	-0,0095	0,0318	0,0301	0,0221	-0,0106	0,0017	0,0061	-0,0138	0,0214
Gilead Sciences Inc.	-0,0019	0,0596	-0,0449	0,0172	-0,0021	0,0280	-0,0229	0,0543	-0,0197	0,0015	-0,0117	-0,0060	-0,0146	0,0233
CVS Health Corporation	-0,0581	0,0283	-0,0237	-0,0279	0,0240	-0,0165	0,0287	0,0161	-0,0056	-0,0114	0,0193	0,0004	0,0007	0,0119
Vertex Pharmaceuticals Incorporated	-0,0271	0,0127	-0,0162	-0,0201	0,0163	0,0290	0,0104	0,0289	-0,0007	-0,0166	0,0196	0,0188	-0,0039	0,0032
Anthem Inc.	-0,0369	0,0282	-0,0121	-0,0834	0,0473	-0,0255	0,0557	0,0302	-0,0040	0,0060	0,0051	0,0040	-0,0010	0,0177
Cigna Corporation	-0,0454	0,0198	-0,0231	-0,0605	0,0389	0,0046	0,0316	0,0195	-0,0088	-0,0017	0,0034	0,0013	-0,0017	0,0127
Becton Dickinson and Company	-0,0201	0,0015	-0,0029	-0,0175	-0,0043	0,0124	0,0242	0,0149	0,0069	-0,0161	0,0027	0,0039	-0,0195	0,0085
Intuitive Surgical Inc.	-0,0333	0,0102	-0,0391	-0,0421	0,0630	-0,0147	0,0231	0,0115	-0,0056	-0,0081	0,0201	-0,0083	0,0210	0,0079
Zoetis Inc. Class A	-0,0161	0,0073	-0,0214	-0,0497	0,0273	0,0064	0,0314	0,0039	-0,0090	0,0033	-0,0041	0,0041	0,0052	0,0181
Stryker Corporation	-0,0366	-0,0060	-0,0283	-0,0370	0,0347	-0,0171	0,0581	0,0091	-0,0018	-0,0097	0,0155	-0,0150	0,0052	0,0153
Biogen Inc.	-0,0189	0,0070	-0,0090	-0,0195	0,0145	0,0029	0,0154	0,0151	-0,0294	-0,0036	0,0161	0,0018	-0,0086	0,0019
Humana Inc.	-0,0290	0,0317	-0,0310	-0,0568	0,0617	-0,0039	0,0374	0,0199	-0,0026	0,0018	0,0030	0,0118	-0,0020	0,0088
Illumina Inc.	-0,0215	0,0069	-0,0315	0,0078	0,0235	-0,0043	0,0192	0,0210	-0,0048	-0,0022	0,0027	0,0170	0,0124	0,0049
Boston Scientific Corporation	-0,0243	0,0011	-0,0278	-0,0312	0,0245	0,0036	0,0360	0,0079	-0,0072	-0,0049	0,0121	-0,0174	0,0062	0,0115
Edwards Lifesciences Corporation	-0,0209	0,0007	-0,0183	-0,0195	0,0362	-0,0091	0,0263	0,0112	-0,0040	-0,0121	0,0079	-0,0041	0,0049	0,0048
Regeneron Pharmaceuticals Inc.	0,0189	0,0206	-0,0107	-0,0107	0,0046	0,0179	0,0073	0,0200	-0,0008	-0,0132	0,0132	0,0043	-0,0022	0,0138
Baxter International Inc.	-0,0180	0,0046	-0,0093	-0,0117	0,0097	0,0037	0,0122	0,0126	-0,0001	-0,0099	0,0005	-0,0019	-0,0005	0,0064
Centene Corporation	-0,0297	0,0163	0,0134	-0,0362	0,0200	-0,0014	0,0338	0,0115	-0,0016	-0,0124	0,0022	0,0067	-0,0088	0,0034
DexCom Inc.	-0,0078	0,0057	-0,0221	-0,0211	0,0380	-0,0013	0,0083	0,0261	0,0042	0,0041	0,0279	0,0045	-0,0045	-0,0099
HCA Healthcare Inc	-0,0166	0,0006	-0,0211	-0,0289	0,0131	-0,0074	0,0375	0,0082	-0,0079	-0,0032	0,0034	-0,0099	0,0094	0,0002
IQVIA Holdings Inc	-0,0155	-0,0026	-0,0135	-0,0241	0,0179	-0,0044	0,0266	0,0025	-0,0022	0,0063	0,0009	-0,0027	0,0069	0,0049
Zimmer Biomet Holdings Inc.	-0,0139	-0,0091	-0,0218	-0,0124	0,0107	-0,0029	0,0205	0,0077	-0,0018	-0,0002	0,0050	-0,0080	0,0101	0,0025
IDEXX Laboratories Inc.	-0,0087	-0,0019	0,0018	-0,0286	0,0271	0,0012	0,0105	0,0026	0,0026	-0,0004	0,0065	0,0023	0,0001	0,0049
Agilent Technologies Inc.	-0,0096	0,0020	-0,0122	-0,0040	0,0069	-0,0007	0,0118	0,0016	-0,0049	-0,0021	0,0076	0,0024	0,0043	0,0038
McKesson Corporation	-0,0175	0,0014	-0,0061	-0,0055	0,0006	-0,0002	0,0060	0,0060	-0,0011	-0,0036	0,0009	0,0003	0,0092	0,0060
ResMed Inc.	-0,0080	0,0042	-0,0092	-0,0222	0,0226	0,0073	0,0042	0,0031	-0,0024	-0,0011	0,0022	0,0008	-0,0014	-0,0003
Alexion Pharmaceuticals Inc.	-0,0081	-0,0020	-0,0115	-0,0001	0,0042	0,0063	0,0066	0,0069	0,0041	-0,0036	-0,0058	0,0043	-0,0004	0,0166
Cerner Corporation	-0,0077	0,0051	-0,0105	-0,0106	0,0053	0,0033	0,0088	0,0021	0,0034	-0,0072	0,0026	-0,0046	0,0029	0,0072
Mettler-Toledo International Inc.	-0,0055	0,0014	-0,0043	-0,0029	0,0015	-0,0031	0,0111	-0,0006	-0,0008	-0,0024	0,0032	-0,0021	0,0051	0,0045
Incyte Corporation	-0,0048	0,0006	-0,0021	-0,0067	0,0021	0,0100	0,0075	0,0108	0,0025	-0,0043	-0,0010	0,0001	0,0024	0,0018
Align Technology Inc.	-0,0112	0,0022	-0,0090	-0,0181	0,0154	-0,0089	0,0175	-0,0001	-0,0004	0,0041	0,0023	-0,0021	0,0136	0,0005
Laboratory Corporation of America Holdings	-0,0050	0,0016	-0,0109	-0,0198	0,0137	-0,0082	0,0202	0,0008	0,0070	-0,0020	0,0035	0,0001	0,0011	0,0021
Teleflex Incorporated	-0,0063	0,0024	-0,0055	-0,0155	0,0105	0,0028	0,0070	0,0043	-0,0016	-0,0018	0,0022	-0,0009	0,0055	-0,0001
West Pharmaceutical Services Inc.	-0,0074	-0,0003	-0,0016	-0,0068	0,0051	0,0046	0,0049	0,0028	0,0096	-0,0012	0,0028	0,0045	-0,0008	0,0014
Cardinal Health Inc.	-0,0081	-0,0010	-0,0045	-0,0057	0,0015	0,0032	0,0059	0,0010	-0,0011	-0,0037	0,0033	-0,0012	0,0060	0,0013
Quest Diagnostics Incorporated	-0,0039	0,0034	-0,0084	-0,0137	0,0064	-0,0072	0,0138	0,0044	0,0072	0,0013	0,0019	-0,0006	0,0010	0,0030
Cooper Companies Inc.	-0,0050	0,0016	-0,0074	-0,0080	0,0052	0,0014	0,0035	0,0019	-0,0025	-0,0025	0,0050	-0,0015	-0,0018	0,0059
Hologic Inc.	-0,0060	-0,0005	-0,0076	-0,0135	0,0041	-0,0008	0,0145	0,0038	0,0044	0,0028	0,0030	-0,0001	0,0004	0,0007
AmerisourceBergen Corporation	-0,0074	0,0010	0,0028	-0,0059	0,0008	-0,0003	0,0045	0,0009	-0,0003	-0,0015	0,0011	-0,0015	0,0052	0,0013
STERIS Plc	-0,0030	-0,0004	-0,0072	-0,0082	0,0066	0,0038	0,0055	0,0008	-0,0025	-0,0024	0,0026	0,0011	0,0022	0,0029
Waters Corporation	-0,0049	0,0013	-0,0038	-0,0029	0,0034	-0,0014	0,0044	0,0004	-0,0015	-0,0034	0,0024	-0,0022	0,0023	0,0035
Varian Medical Systems Inc.	-0,0061	0,0005	-0,0039	-0,0052	0,0006	-0,0020	0,0075	0,0010	-0,0026	0,0011	0,0028	-0,0017	0,0005	0,0022
PerkinElmer Inc.	-0,0029	-0,0014	-0,0049	-0,0017	0,0023	-0,0020	0,0042	0,0028	0,0020	0,0007	0,0016	0,0002	0,0002	0,0032
DENTSPLY SIRONA Inc.	-0,0052	-0,0035	-0,0037	-0,0073	0,0060	-0,0024	0,0070	-0,0009	-0,0015	0,0010	0,0003	-0,0028	0,0046	0,0039
ABIOMED Inc.	-0,0036	0,0016	-0,0033	-0,0031	0,0041	-0,0010	0,0048	0,0013	0,0005	0,0032	0,0007	-0,0004	0,0041	0,0031
Universal Health Services Inc. Class B	-0,0046	0,0007	-0,0057	-0,0098	0,0062	-0,0014	0,0078	0,0011	-0,0020	-0,0009	0,0010	-0,0032	0,0043	0,0004
Henry Schein Inc.	-0,0034	-0,0018	-0,0006	-0,0072	0,0038	-0,0025	0,0044	0,0009	-0,0008	-0,0002	0,0012	-0,0015	0,0033	0,0025
Mylan N.V.	-0,0063	-0,0035	-0,0008	0,0004	-0,0008	-0,0026	0,0057	0,0001	-0,0007	0,0008	0,0030	-0,0046	0,0011	0,0031
Perrigo Co. Plc	-0,0046	0,0016	-0,0039	-0,0027	0,0028	-0,0011	0,0042	0,0008	-0,0003	0,0007	0,0000	0,0001	0,0009	0,0003
DaVita Inc.	-0,0022	0,0016	-0,0021	-0,0042	0,0036	-0,0030	0,0041	0,0013	-0,0016	0,0010	0,0016	-0,0005	-0,0009	0,0016
Total	-1,5857	0,7986	-1,0023	-1,9714	1,3445	0,3112	1,4987	0,9651	-0,0327	-0,3803	0,2970	0,1638	-0,0914	0,5262

Sector "Industrials"	S&P 500 - Initial Benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Union Pacific Corporation	-0,0560	-0,0081	-0,0364	-0,0840	0,0836	-0,0016	0,0341	0,0036	0,0192	0,0016	0,0048	-0,0206	0,0428	0,0132
Honeywell International Inc.	-0,0396	0,0068	-0,0359	-0,0994	0,0671	-0,0117	0,0505	-0,0143	-0,0081	0,0051	-0,0010	-0,0338	0,0475	0,0193
Lockheed Martin Corporation	-0,0507	0,0152	-0,0528	-0,0426	0,0735	0,0023	0,0219	0,0308	-0,0184	0,0017	-0,0050	-0,0178	0,0089	0,0197
Raytheon Technologies Corporation	-0,0497	-0,0113	-0,0599	-0,0780	0,0637	-0,0659	0,1064	0,0076	-0,0144	-0,0132	-0,0144	-0,0364	0,0532	0,0271
3M Company	-0,0168	0,0101	-0,0267	-0,0407	0,0230	0,0014	0,0359	-0,0031	0,0013	0,0037	-0,0002	-0,0227	0,0192	0,0271
Boeing Company	-0,0508	-0,0141	-0,1067	-0,1343	0,2143	-0,0703	0,0667	0,0043	-0,0494	0,0103	0,0002	-0,0306	0,0444	0,0184
United Parcel Service Inc. Class B	-0,0337	0,0137	0,0007	-0,0023	0,0121	-0,0215	0,0269	0,0114	-0,0070	-0,0230	0,0089	-0,0112	0,0174	0,0116
Caterpillar Inc.	-0,0244	-0,0059	-0,0463	-0,0107	0,0268	0,0226	0,0233	-0,0180	-0,0027	-0,0071	0,0029	-0,0096	0,0109	0,0176
General Electric Company	-0,0259	-0,0315	-0,0380	-0,0392	0,0391	-0,0270	0,0141	-0,0097	-0,0196	0,0089	-0,0075	-0,0295	0,0388	0,0058
CSX Corporation	-0,0247	-0,0060	-0,0326	-0,0301	0,0278	0,0018	0,0275	-0,0041	0,0036	0,0040	0,0037	-0,0134	0,0227	0,0096
Northrop Grumman Corporation	-0,0201	0,0001	-0,0092	-0,0204	0,0208	0,0010	0,0155	0,0123	-0,0100	-0,0070	-0,0003	-0,0039	0,0028	0,0060
Illinois Tool Works Inc.	-0,0226	-0,0043	-0,0092	-0,0385	0,0273	-0,0040	0,0281	-0,0009	-0,0004	0,0015	0,0019	-0,0065	0,0102	0,0104
Deere & Company	-0,0217	0,0089	-0,0281	-0,0362	0,0387	0,0006	0,0150	-0,0092	0,0002	-0,0006	-0,0016	-0,0148	0,0215	0,0149
Norfolk Southern Corporation	-0,0225	-0,0077	-0,0289	-0,0287	0,0289	-0,0013	0,0217	0,0016	0,0000	0,0114	0,0043	-0,0140	0,0126	0,0072
L3Harris Technologies Inc.	-0,0187	0,0019	-0,0186	-0,0214	0,0335	-0,0058	0,0115	0,0111	-0,0112	-0,0003	-0,0075	-0,0038	0,0035	0,0175
Waste Management Inc.	-0,0175	0,0090	-0,0153	-0,0105	-0,0048	-0,0104	0,0192	0,0007	-0,0028	-0,0004	0,0044	-0,0079	0,0049	0,0125
Roper Technologies Inc.	-0,0142	-0,0006	-0,0163	-0,0150	0,0124	-0,0031	0,0082	0,0035	-0,0075	0,0167	0,0087	0,0014	0,0024	0,0113
Emerson Electric Co.	-0,0156	-0,0043	-0,0267	-0,0174	0,0047	0,0004	0,0186	-0,0034	0,0091	-0,0001	0,0060	-0,0079	0,0092	0,0129
General Dynamics Corporation	-0,0198	0,0028	-0,0191	-0,0244	0,0187	-0,0045	0,0162	-0,0016	-0,0085	-0,0015	0,0078	-0,0043	0,0078	0,0079
Eaton Corp. Plc	-0,0179	0,0030	-0,0103	-0,0310	0,0196	-0,0058	0,0189	-0,0035	-0,0007	0,0054	0,0003	-0,0137	0,0102	0,0105
FedEx Corporation	-0,0153	-0,0108	-0,0182	0,0047	0,0097	-0,0107	0,0135	0,0024	-0,0016	-0,0045	0,0021	-0,0121	0,0100	0,0131
IHS Markit Ltd.	-0,0109	-0,0030	-0,0212	-0,0159	0,0257	0,0047	0,0070	0,0029	-0,0026	-0,0005	0,0033	-0,0008	0,0007	0,0040
Verisk Analytics Inc	-0,0084	0,0056	-0,0114	-0,0152	0,0114	0,0029	0,0049	0,0039	-0,0036	-0,0003	0,0042	-0,0033	0,0018	0,0103
Cummins Inc.	-0,0089	-0,0018	-0,0078	-0,0147	0,0129	0,0005	0,0138	-0,0010	-0,0009	0,0065	0,0024	-0,0035	-0,0004	0,0102
Rockwell Automation Inc.	-0,0119	-0,0024	-0,0068	-0,0229	0,0188	-0,0030	0,0137	0,0006	0,0034	0,0048	0,0049	0,0027	0,0026	0,0067
PACCAR Inc	-0,0108	-0,0034	0,0009	-0,0189	0,0132	0,0034	0,0088	0,0005	-0,0002	0,0012	0,0019	-0,0039	0,0027	0,0076
Johnson Controls International plc	-0,0129	0,0040	-0,0130	-0,0218	0,0038	-0,0017	0,0187	-0,0032	-0,0051	-0,0002	0,0065	-0,0042	0,0035	0,0059
Fastenal Company	-0,0108	-0,0002	-0,0002	-0,0142	0,0072	-0,0016	0,0093	0,0062	0,0003	-0,0008	0,0092	-0,0003	-0,0006	0,0060
Parker-Hannifin Corporation	-0,0124	-0,0094	-0,0131	-0,0236	0,0161	-0,0039	0,0222	-0,0040	-0,0023	0,0118	0,0045	-0,0037	0,0078	0,0069
Cintas Corporation	-0,0075	0,0017	-0,0087	-0,0232	0,0031	-0,0079	0,0173	0,0022	-0,0016	0,0048	0,0025	0,0035	0,0048	0,0025
Trane Technologies plc	-0,0091	-0,0102	-0,0065	-0,0212	0,0074	-0,0026	0,0116	-0,0015	-0,0052	0,0026	-0,0022	-0,0068	0,0064	0,0066
AMETEK Inc.	-0,0106	0,0023	-0,0124	-0,0117	0,0095	0,0003	0,0077	0,0021	-0,0032	0,0035	0,0037	-0,0044	0,0062	0,0053
Stanley Black & Decker Inc.	-0,0070	-0,0082	-0,0111	-0,0207	0,0165	-0,0011	0,0193	-0,0044	-0,0033	-0,0009	0,0078	-0,0062	0,0097	0,0025
TransDigm Group Incorporated	-0,0087	-0,0075	-0,0134	-0,0206	0,0153	-0,0195	0,0210	-0,0016	-0,0073	0,0111	0,0007	-0,0060	0,0131	0,0088
Copart Inc.	-0,0082	-0,0037	-0,0057	-0,0134	0,0122	-0,0088	0,0155	-0,0028	0,0017	0,0046	0,0048	-0,0037	0,0061	0,0026
Equifax Inc.	-0,0079	0,0062	-0,0061	-0,0180	0,0095	-0,0078	0,0119	0,0022	0,0019	0,0036	0,0060	-0,0024	0,0013	0,0034
Fortive Corp.	-0,0062	-0,0023	-0,0075	-0,0167	0,0063	0,0066	0,0088	-0,0008	0,0000	0,0005	-0,0017	-0,0048	0,0042	0,0029
Republic Services Inc.	-0,0064	0,0041	-0,0077	-0,0110	0,0040	-0,0028	0,0093	-0,0013	-0,0036	0,0009	0,0038	-0,0016	0,0014	0,0037
Southwest Airlines Co.	-0,0117	-0,0006	-0,0060	-0,0145	0,0089	-0,0103	0,0124	-0,0093	-0,0038	-0,0002	-0,0044	-0,0078	0,0134	0,0071
Old Dominion Freight Line Inc.	-0,0079	0,0015	-0,0062	-0,0032	0,0086	-0,0028	0,0063	0,0007	0,0022	0,0023	0,0024	-0,0015	0,0040	0,0047
Kansas City Southern	-0,0080	-0,0014	-0,0077	-0,0089	0,0106	-0,0023	0,0066	0,0012	-0,0034	-0,0014	0,0038	-0,0012	0,0060	0,0013
Delta Air Lines Inc.	-0,0108	-0,0003	-0,0090	-0,0243	0,0211	-0,0131	0,0047	-0,0003	-0,0042	0,0042	-0,0032	-0,0085	0,0100	0,0061
Dover Corporation	-0,0076	-0,0004	-0,0057	-0,0147	0,0129	-0,0030	0,0084	-0,0006	0,0015	0,0003	0,0005	-0,0043	0,0031	0,0045
W.W. Grainger Inc.	-0,0045	0,0013	-0,0035	-0,0104	0,0082	-0,0018	0,0091	0,0001	-0,0020	-0,0004	0,0035	-0,0010	0,0027	0,0030
Masco Corporation	-0,0045	0,0010	-0,0029	-0,0136	0,0092	-0,0034	0,0128	-0,0003	0,0001	0,0000	0,0027	0,0007	0,0026	0,0021
Expeditors International of Washington Inc.	-0,0033	0,0000	-0,0038	-0,0079	0,0094	0,0016	0,0033	0,0002	0,0001	-0,0004	0,0025	-0,0022	0,0004	0,0030
IDEX Corporation	-0,0068	-0,0006	-0,0049	-0,0051	0,0058	0,0026	0,0043	0,0004	0,0000	-0,0004	0,0010	-0,0019	0,0008	0,0027
Xylem Inc.	-0,0057	0,0024	-0,0051	-0,0077	0,0043	-0,0035	0,0066	0,0002	-0,0007	0,0005	-0,0041	-0,0035	0,0031	0,0030
C.H. Robinson Worldwide Inc.	-0,0033	-0,0018	-0,0021	0,0011	-0,0009	0,0039	0,0032	0,0006	-0,0011	-0,0009	0,0018	-0,0008	0,0032	0,0018
Jacobs Engineering Group Inc.	-0,0047	0,0008	-0,0033	-0,0104	0,0060	0,0023	0,0013	0,0015	-0,0021	0,0004	-0,0004	-0,0042	0,0030	0,0040
Westinghouse Air Brake Technologies Corporation	-0,0053	-0,0045	-0,0045	-0,0110	0,0071	-0,0032	0,0108	-0,0046	0,0036	0,0008	0,0023	-0,0036	0,0036	0,0032
Ingersoll Rand Inc.	-0,0063	-0,0063	-0,0072	-0,0053	0,0064	0,0016	0,0053	0,0005	0,0016	0,0005	0,0015	-0,0039	0,0033	-0,0005
United Rentals Inc.	-0,0049	-0,0050	-0,0084	-0,0090	0,0113	0,0004	0,0072	-0,0010	0,0004	0,0049	0,0001	-0,0003	0,0040	0,0025
J.B. Hunt Transport Services Inc.	-0,0045	-0,0012	-0,0021	-0,0031	0,0043	-0,0001	0,0039	0,0031	-0,0021	-0,0003	0,0009	-0,0017	0,0039	0,0038
Allegion PLC	-0,0038	0,0015	-0,0024	-0,0093	0,0039	-0,0030	0,0048	0,0009	-0,0004	0,0003	0,0018	-0,0033	0,0005	0,0021
Fortune Brands Home & Security Inc.	-0,0045	-0,0006	-0,0067	-0,0085	0,0065	-0,0064	0,0150	-0,0029	-0,0021	0,0061	0,0031	-0,0016	0,0045	0,0002
Huntington Ingalls Industries Inc.	-0,0039	0,0000	-0,0038	-0,0033	0,0050	-0,0007	0,0019	0,0006	-0,0018	0,0002	-0,0008	-0,0017	0,0022	0,0028
Snap-on Incorporated	-0,0027	-0,0006	-0,0033	-0,0062	0,0024	-0,0034	0,0083	-0,0009	-0,0006	0,0020	0,0008	-0,0010	0,0014	0,0004
Textron Inc.	-0,0036	-0,0029	-0,0048	-0,0059	0,0050	-0,0018	0,0047	-0,0015	-0,0007	-0,0008	0,0010	-0,0029	0,0028	0,0038
Pentair plc	-0,0029	-0,0007	-0,0016	-0,0084	0,0065	-0,0013	0,0039	-0,0009	0,0002	0,0014	0,0012	-0,0011	0,0022	0,0018
A. O. Smith Corporation	-0,0025	0,0019	-0,0007	-0,0039	0,0015	-0,0006	0,0029	0,0005	-0,0004	0,0008	0,0018	-0,0024	0,0011	0,0030
Robert Half International Inc.	-0,0035	-0,0005	-0,0009	-0,0060	0,0027	-0,0006	0,0033	0,0000	0,0004	0,0002	0,0016	-0,0011	0,0012	0,0018
United Airlines Holdings Inc.	-0,0048	-0,0035	-0,0046	-0,0095	0,0078	-0,0070	0,0086	-0,0018	-0,0028	0,0010	-0,0010	-0,0050	0,0063	0,0024
Rollins Inc.	-0,0016	0,0014	-0,0011	-0,0017	-0,0005	0,0012	0,0000	0,0018	-0,0005	0,0011	0,0013	-0,0012	-0,0007	0,0018
Howmet Aerospace Inc.	-0,0001	-0,0019	-0,0045	-0,0048	-0,0062	0,0073	-0,0007	-0,0001	-0,0015	-0,0004	0,0009	-0,0003	0,0010	0,0012
Nielsen Holdings Plc	-0,0032	-0,0020	-0,0015	-0,0018	-0,0009	-0,0012	0,0031	-0,0012	-0,0011	0,0023	0,0003	-0,0020	0,0013	0,0004
Alaska Air Group Inc.	-0,0037	-0,0017	-0,0026	-0,0061	0,0043	-0,0028	0,0045	-0,0009	-0,0010	0,0012	-0,0001	-0,0023	0,0034	0,0016
American Airlines Group Inc.	-0,0050	-0,0026	-0,0017	-0,0044	0,0056	-0,0053	-0,0012	-0,0017	0,0005	-0,0008	-0,0017	0,0012	0,0012	0,0013
Flowserve Corporation	-0,0017	-0,0011	-0,0039	-0,0027	0,0008	0,0014	0,0019	-0,0012	0,0004	0,0005	0,0001	-0,0021	0,0016	0,0005
Total	-0,8841	-0,0897	-0,9128	-1,3344	1,2111	-0,3111	0,9881	0,0051	-0,1841	0,0959	0,1029	-0,4378	0,5692	0,4675

Sector "Real State"	S&P 500 - Initial Benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Prologis Inc.	-0,0393	0,0050	-0,0245	-0,0485	0,0679	-0,0184	0,0643	-0,0043	-0,0034	-0,0064	0,0094	-0,0194	0,0134	0,0118
AvalonBay Communities Inc.	-0,0106	0,0037	-0,0067	-0,0280	0,0192	-0,0154	0,0245	0,0016	-0,0062	0,0000	0,0031	-0,0073	0,0019	0,0013
Equity Residential	-0,0113	0,0028	-0,0043	-0,0206	0,0120	-0,0111	0,0231	0,0004	-0,0069	-0,0022	0,0025	-0,0091	0,0004	0,0046
Welltower Inc.	-0,0102	-0,0009	-0,0236	-0,0133	0,0132	-0,0192	0,0399	-0,0102	-0,0079	0,0057	-0,0045	-0,0067	0,0136	0,0058
Alexandria Real Estate Equities Inc.	-0,0070	0,0035	-0,0052	-0,0121	0,0119	-0,0069	0,0163	-0,0012	-0,0027	0,0007	0,0005	-0,0051	0,0029	0,0033
D.R. Horton Inc.	-0,0101	0,0021	-0,0206	-0,0147	0,0128	-0,0094	0,0202	-0,0021	0,0019	0,0100	0,0048	-0,0032	0,0106	0,0017
Realty Income Corporation	-0,0089	0,0045	-0,0045	-0,0248	0,0145	-0,0170	0,0222	-0,0055	-0,0034	0,0027	0,0046	-0,0065	0,0031	0,0044
Simon Property Group Inc.	-0,0095	-0,0023	-0,0173	-0,0327	0,0147	-0,0139	0,0323	-0,0125	-0,0058	0,0160	-0,0058	-0,0081	0,0045	0,0040
Lennar Corporation Class A	-0,0099	0,0025	-0,0183	-0,0172	0,0123	-0,0116	0,0231	-0,0028	-0,0001	0,0106	0,0062	-0,0042	0,0126	0,0004
Essex Property Trust Inc.	-0,0087	0,0025	-0,0040	-0,0181	0,0104	-0,0104	0,0193	0,0035	-0,0046	-0,0013	0,0026	-0,0051	0,0027	0,0017
CBRE Group Inc. Class A	-0,0059	-0,0016	-0,0084	-0,0147	0,0081	-0,0053	0,0160	-0,0014	-0,0057	-0,0004	0,0027	-0,0076	0,0067	0,0051
Mid-America Apartment Communities Inc.	-0,0066	0,0057	-0,0064	-0,0161	0,0121	-0,0065	0,0125	-0,0014	-0,0028	0,0016	0,0029	-0,0040	0,0037	0,0010
Duke Realty Corporation	-0,0082	0,0023	-0,0030	-0,0076	0,0094	-0,0039	0,0101	-0,0009	-0,0009	-0,0015	0,0009	-0,0045	0,0044	0,0018
Ventas Inc.	-0,0073	-0,0038	-0,0163	-0,0175	0,0202	-0,0129	0,0270	-0,0037	-0,0057	0,0047	-0,0004	-0,0035	0,0102	0,0018
Healthpeak Properties Inc.	-0,0072	0,0032	-0,0070	-0,0133	0,0094	-0,0092	0,0193	-0,0036	-0,0038	0,0018	-0,0017	-0,0040	0,0058	0,0002
Boston Properties Inc.	-0,0054	0,0013	-0,0055	-0,0141	0,0068	-0,0054	0,0136	-0,0047	-0,0025	0,0013	-0,0030	-0,0065	0,0019	0,0048
Extra Space Storage Inc.	-0,0037	0,0044	-0,0056	-0,0077	0,0094	0,0001	0,0033	-0,0044	-0,0021	-0,0009	0,0024	-0,0050	0,0025	0,0056
NVR Inc.	-0,0040	0,0022	-0,0107	-0,0091	0,0104	-0,0079	0,0107	-0,0002	-0,0011	0,0030	0,0012	-0,0046	0,0045	0,0012
UDR Inc.	-0,0050	0,0032	-0,0032	-0,0122	0,0079	-0,0072	0,0129	-0,0019	-0,0029	-0,0002	0,0027	-0,0040	0,0019	0,0008
PulteGroup Inc.	-0,0046	0,0011	-0,0091	-0,0120	0,0083	-0,0079	0,0135	-0,0011	0,0002	0,0021	0,0033	-0,0025	0,0069	0,0007
Host Hotels & Resorts Inc.	-0,0056	-0,0024	-0,0051	-0,0023	0,0020	-0,0066	0,0114	-0,0015	-0,0008	0,0010	-0,0011	-0,0030	0,0039	0,0021
Regency Centers Corporation	-0,0026	0,0015	-0,0025	-0,0104	0,0042	-0,0058	0,0106	-0,0036	-0,0024	0,0045	0,0007	-0,0035	0,0040	0,0011
Vornado Realty Trust	-0,0037	-0,0005	-0,0036	-0,0076	0,0063	-0,0036	0,0084	-0,0008	-0,0024	0,0026	-0,0014	-0,0020	-0,0008	0,0014
Federal Realty Investment Trust	-0,0022	0,0010	-0,0029	-0,0072	0,0014	-0,0031	0,0070	-0,0028	-0,0018	0,0030	-0,0001	-0,0018	0,0021	0,0004
Apartment Investment & Management Co Class A	-0,0030	0,0009	-0,0016	-0,0084	0,0051	-0,0027	0,0066	-0,0004	-0,0023	0,0009	0,0008	-0,0024	0,0018	0,0006
Kimco Realty Corporation	-0,0017	0,0000	-0,0045	-0,0038	-0,0004	-0,0048	0,0083	-0,0034	-0,0007	0,0045	0,0005	-0,0031	0,0046	-0,0004
SL Green Realty Corp.	-0,0020	0,0003	-0,0023	-0,0038	0,0005	-0,0024	0,0052	-0,0007	-0,0016	0,0012	-0,0001	-0,0027	-0,0004	0,0018
Total	-0,2044	0,0422	-0,2270	-0,3978	0,3101	-0,2282	0,4816	-0,0692	-0,0784	0,0652	0,0338	-0,1396	0,1303	0,0692

Sector "Materials"	S&P 500 - Initial Benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Linde plc	-0,0533	-0,0041	-0,0267	-0,0608	0,0451	-0,0133	0,0718	-0,0021	-0,0160	-0,0027	0,0191	-0,0131	0,0193	0,0256
Air Products and Chemicals Inc.	-0,0295	0,0098	-0,0216	-0,0177	0,0045	-0,0072	0,0389	0,0021	-0,0045	0,0054	0,0107	-0,0050	0,0059	0,0066
Newmont Corporation	-0,0207	0,0367	-0,0516	0,0057	0,0303	0,0037	0,0457	0,0071	0,0139	-0,0071	0,0124	0,0110	-0,0152	-0,0154
Ecolab Inc.	-0,0268	0,0159	-0,0152	-0,0436	0,0232	-0,0133	0,0455	-0,0013	0,0015	0,0113	0,0084	-0,0031	0,0061	0,0124
Sherwin-Williams Company	-0,0189	0,0095	-0,0148	-0,0333	0,0218	-0,0165	0,0329	0,0096	-0,0040	0,0077	0,0085	0,0065	0,0030	0,0060
DuPont de Nemours Inc.	-0,0270	-0,0074	-0,0125	-0,0225	0,0111	-0,0086	0,0415	-0,0088	0,0137	0,0112	0,0061	-0,0047	0,0106	0,0062
Dow Inc.	-0,0178	-0,0021	-0,0370	0,0074	0,0044	-0,0022	0,0334	-0,0093	-0,0010	0,0026	0,0013	-0,0024	0,0083	0,0074
PPG Industries Inc.	-0,0108	-0,0026	-0,0066	-0,0141	0,0061	-0,0049	0,0191	-0,0037	-0,0006	-0,0047	0,0042	-0,0046	0,0098	0,0052
Ball Corporation	-0,0072	0,0070	-0,0138	-0,0120	0,0148	-0,0029	0,0107	0,0003	-0,0060	0,0004	-0,0014	-0,0031	0,0031	0,0090
Corteva Inc	-0,0097	-0,0052	-0,0011	-0,0069	0,0023	-0,0019	0,0176	-0,0065	0,0022	-0,0022	0,0014	-0,0093	0,0063	0,0085
LyondellBasell Industries NV	-0,0087	0,0014	-0,0221	-0,0065	0,0111	-0,0042	0,0176	-0,0072	-0,0026	0,0065	0,0015	-0,0032	0,0080	0,0035
Amcor PLC	-0,0057	0,0000	-0,0163	0,0045	0,0043	0,0003	0,0106	-0,0026	-0,0026	0,0020	0,0021	0,0009	0,0034	0,0040
Weyerhaeuser Company	-0,0091	0,0014	-0,0098	-0,0193	0,0097	-0,0064	0,0218	-0,0026	-0,0014	-0,0049	0,0062	-0,0075	0,0083	0,0012
International Flavors & Fragrances Inc.	-0,0053	0,0014	-0,0063	-0,0034	0,0043	-0,0054	0,0162	-0,0010	0,0006	0,0001	0,0035	-0,0026	0,0005	0,0016
Vulcan Materials Company	-0,0056	0,0034	-0,0075	-0,0124	0,0094	0,0000	0,0076	-0,0005	-0,0049	0,0046	-0,0047	-0,0027	0,0021	0,0048
International Paper Company	-0,0072	-0,0018	-0,0034	-0,0062	0,0020	-0,0022	0,0086	-0,0036	-0,0012	0,0047	0,0007	-0,0051	0,0027	0,0023
Freeport-McMoRan Inc.	-0,0088	-0,0028	-0,0106	-0,0141	0,0065	0,0010	0,0156	0,0010	0,0009	-0,0001	0,0047	-0,0042	0,0016	0,0020
Nucor Corporation	-0,0074	-0,0021	-0,0047	-0,0073	0,0045	0,0034	0,0060	-0,0027	0,0007	0,0041	0,0015	-0,0049	0,0018	0,0035
FMC Corporation	-0,0062	-0,0013	-0,0013	-0,0126	0,0084	-0,0037	0,0135	-0,0021	0,0012	0,0010	0,0019	-0,0029	0,0029	0,0027
Martin Marietta Materials Inc.	-0,0043	0,0024	-0,0077	-0,0102	0,0082	-0,0029	0,0104	-0,0020	-0,0049	0,0024	-0,0024	-0,0022	0,0031	0,0031
Celanese Corporation	-0,0056	-0,0007	-0,0064	-0,0074	0,0043	-0,0025	0,0107	-0,0029	0,0003	0,0006	0,0018	-0,0031	0,0049	0,0022
Eastman Chemical Company	-0,0060	-0,0022	-0,0073	-0,0038	0,0051	-0,0011	0,0119	-0,0028	0,0014	0,0018	0,0015	-0,0015	0,0034	0,0015
Avery Dennison Corporation	-0,0053	0,0020	-0,0043	-0,0053	0,0038	-0,0024	0,0084	-0,0018	-0,0003	-0,0002	0,0004	-0,0029	0,0022	0,0014
Packaging Corporation of America	-0,0041	0,0001	-0,0025	0,0010	0,0001	-0,0023	0,0044	0,0002	-0,0019	0,0036	0,0013	-0,0026	0,0008	0,0032
Albemarle Corporation	-0,0034	0,0003	-0,0052	-0,0062	0,0009	-0,0013	0,0081	-0,0025	0,0000	-0,0020	0,0035	-0,0013	0,0033	0,0037
WestRock Company	-0,0049	-0,0025	-0,0037	-0,0004	0,0024	-0,0021	0,0066	-0,0012	-0,0016	0,0018	-0,0033	-0,0027	0,0012	0,0031
CF Industries Holdings Inc.	-0,0016	0,0000	-0,0062	-0,0049	0,0037	0,0002	0,0050	-0,0022	-0,0002	-0,0012	0,0023	-0,0036	0,0031	0,0016
Sealed Air Corporation	-0,0026	-0,0002	-0,0028	-0,0011	0,0006	-0,0003	0,0051	-0,0008	-0,0007	-0,0002	0,0010	-0,0006	0,0007	0,0015
Mosaic Company	-0,0019	-0,0026	-0,0038	-0,0021	0,0005	0,0001	0,0050	-0,0019	-0,0002	-0,0003	0,0011	-0,0025	0,0024	0,0008
Total	-0,3250	0,0534	-0,3327	-0,3156	0,2535	-0,0990	0,5502	-0,0518	-0,0179	0,0462	0,0952	-0,0830	0,1139	0,1192

Sector "Information Technology"	S&P 500 - Initial Benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Microsoft Corporation	-0,5171	-0,0156	-0,0970	-0,7738	0,5143	0,1579	0,4208	0,4663	-0,1295	0,0007	0,3313	-0,0472	0,0110	0,0078
Apple Inc.	-0,6861	0,3103	-0,2071	-0,9487	0,4367	-0,1382	0,5959	0,2991	0,0033	0,1166	0,3942	-0,0276	0,1966	-0,0161
Visa Inc. Class A	-0,1728	0,0190	-0,0617	-0,2201	0,1339	-0,0802	0,1919	-0,0319	-0,0175	0,0658	0,0723	-0,0116	0,0559	0,0306
Intel Corporation	-0,1511	0,0050	-0,0266	-0,1742	0,1575	0,0370	0,0612	0,0621	-0,0200	-0,0333	0,0421	-0,0195	0,0753	0,0119
Mastercard Incorporated Class A	-0,1555	-0,0119	-0,0633	-0,2318	0,1831	-0,0458	0,1459	-0,0358	-0,0050	0,0412	0,0545	-0,0132	0,0612	0,0217
NVIDIA Corporation	-0,0717	-0,0126	-0,0832	-0,1280	0,2006	-0,0307	0,0686	0,0981	-0,0082	-0,0207	0,0923	0,0763	0,0554	-0,0147
Cisco Systems Inc.	-0,1067	-0,0047	-0,0398	-0,0419	0,0700	0,0046	0,0502	0,0241	0,0007	-0,0291	0,0392	0,0231	0,0110	0,0504
Adobe Inc.	-0,0565	-0,0183	-0,0029	-0,0906	0,0269	-0,0302	0,0646	0,0603	0,0000	-0,0006	0,0521	-0,0045	0,0413	0,0026
PayPal Holdings Inc.	-0,0685	0,0191	-0,0048	-0,1517	0,0559	-0,0083	0,1037	0,0404	0,0530	0,0025	0,1438	0,0027	0,0262	0,0196
salesforce.com inc.	-0,0641	-0,0236	-0,0632	-0,0363	0,0304	-0,0509	0,0958	0,0332	-0,0338	0,0099	0,0794	-0,0165	0,0242	-0,0109
Accenture Plc Class A	-0,0742	-0,0051	-0,0344	-0,0500	0,0434	-0,0331	0,0851	-0,0080	0,0033	0,0133	0,0236	-0,0125	0,0269	0,0205
Oracle Corporation	-0,0441	-0,0196	0,0054	-0,0220	0,0424	-0,0039	0,0354	0,0148	-0,0136	-0,0107	0,0159	-0,0056	-0,0026	0,0101
Broadcom Inc.	-0,0467	-0,0052	-0,0583	-0,0800	0,0983	0,0069	0,0382	0,0203	-0,0018	-0,0086	0,0263	-0,0237	0,0278	0,0236
Texas Instruments Incorporated	-0,0486	-0,0037	-0,0273	-0,0346	0,0129	-0,0023	0,0335	0,0236	0,0015	-0,0161	0,0245	-0,0255	0,0208	0,0203
International Business Machines Corporation	-0,0567	-0,0080	-0,0668	-0,0502	0,0572	-0,0068	0,0615	-0,0049	0,0165	-0,0099	0,0039	-0,0156	0,0052	0,0237
QUALCOMM Incorporated	-0,0366	-0,0038	-0,0050	-0,0716	0,0340	-0,0074	0,0355	0,0234	-0,0006	-0,0019	0,0237	-0,0217	0,0141	0,0101
Fidelity National Information Services Inc.	-0,0337	0,0005	-0,0245	-0,0708	0,0577	-0,0139	0,0295	0,0078	-0,0060	0,0097	-0,0028	0,0107	0,0102	0,0067
Intuit Inc.	-0,0329	0,0120	-0,0167	-0,0701	0,0425	-0,0152	0,0476	0,0169	-0,0020	-0,0030	0,0227	0,0044	0,0035	0,0029
ServiceNow Inc.	-0,0158	-0,0080	-0,0276	-0,0339	0,0224	-0,0264	0,0338	0,0229	0,0033	0,0357	0,0329	-0,0053	0,0140	0,0000
Advanced Micro Devices Inc.	-0,0383	0,0179	-0,0252	-0,0255	0,0460	-0,0224	0,0355	0,0444	-0,0019	-0,0293	0,0173	-0,0050	0,0047	-0,0065
Fiserv Inc.	-0,0205	-0,0056	-0,0077	-0,0507	0,0360	-0,0200	0,0366	0,0034	-0,0104	0,0100	0,0109	-0,0110	0,0095	0,0066
Automatic Data Processing Inc.	-0,0315	0,0067	-0,0217	-0,0518	0,0407	-0,0050	0,0256	-0,0024	-0,0031	0,0020	0,0094	-0,0180	0,0000	0,0203
Equinix Inc.	-0,0295	0,0156	0,0047	-0,0429	0,0403	0,0119	0,0232	0,0027	-0,0033	-0,0048	0,0025	-0,0067	0,0040	0,0106
Global Payments Inc.	-0,0217	-0,0052	-0,0079	-0,0675	0,0473	-0,0279	0,0424	0,0055	-0,0026	0,0122	0,0180	-0,0064	0,0088	0,0034
Applied Materials Inc.	-0,0193	-0,0012	-0,0248	-0,0528	0,0387	-0,0128	0,0360	0,0152	-0,0057	-0,0195	0,0308	-0,0069	0,0094	0,0077
Micron Technology Inc.	-0,0159	-0,0042	-0,0338	-0,0328	0,0418	-0,0106	0,0244	-0,0019	-0,0069	0,0042	0,0145	-0,0163	0,0024	0,0135
Autodesk Inc.	-0,0096	-0,0160	-0,0155	-0,0111	-0,0076	-0,0032	0,0326	0,0170	-0,0006	-0,0053	0,0094	-0,0034	0,0146	0,0131
Analog Devices Inc.	-0,0187	-0,0022	-0,0113	-0,0246	0,0071	-0,0040	0,0236	0,0068	0,0051	-0,0036	0,0100	-0,0122	0,0152	0,0028
Lam Research Corporation	-0,0114	0,0005	-0,0171	-0,0436	0,0438	-0,0139	0,0284	0,0124	-0,0068	-0,0183	0,0199	-0,0079	0,0057	0,0074
Digital Realty Trust Inc.	-0,0183	0,0095	0,0165	-0,0217	0,0147	0,0039	0,0121	0,0009	0,0008	-0,0038	-0,0008	-0,0138	0,0054	0,0080
Cognizant Technology Solutions Corporation Class A	-0,0152	-0,0051	-0,0112	-0,0188	0,0067	-0,0081	0,0291	-0,0010	0,0000	0,0058	0,0013	-0,0142	0,0030	0,0040
KLA Corporation	-0,0046	0,0014	-0,0074	-0,0240	0,0276	-0,0112	0,0193	0,0082	0,0026	-0,0099	0,0158	-0,0027	0,0043	0,0019
Amphenol Corporation Class A	-0,0109	0,0011	-0,0154	-0,0132	0,0070	-0,0086	0,0216	0,0031	0,0025	-0,0009	0,0052	-0,0089	0,0113	0,0070
TE Connectivity Ltd.	-0,0096	-0,0053	-0,0113	-0,0218	0,0136	-0,0068	0,0222	-0,0055	0,0042	0,0006	0,0091	-0,0091	0,0092	0,0076
HP Inc.	-0,0088	0,0031	-0,0206	-0,0188	0,0217	-0,0147	0,0107	-0,0029	-0,0035	-0,0020	0,0067	-0,0053	0,0150	-0,0114
Synopsys Inc.	-0,0078	-0,0002	-0,0058	-0,0157	0,0134	0,0001	0,0099	0,0138	-0,0013	-0,0023	0,0072	-0,0009	0,0080	0,0059
Cadence Design Systems Inc.	-0,0114	-0,0021	-0,0035	-0,0117	0,0129	0,0026	0,0120	0,0097	0,0024	-0,0058	0,0086	-0,0005	0,0048	0,0060
Motorola Solutions Inc.	-0,0102	0,0060	-0,0115	-0,0111	-0,0011	-0,0060	0,0200	0,0031	-0,0030	-0,0088	-0,0053	-0,0016	0,0038	0,0008
ANSYS Inc.	-0,0146	-0,0017	-0,0009	-0,0089	0,0043	-0,0020	0,0084	0,0102	-0,0016	-0,0014	0,0027	-0,0032	0,0059	0,0046
Xilinx Inc.	-0,0043	-0,0039	-0,0037	-0,0055	0,0042	0,0046	0,0064	0,0064	0,0008	-0,0068	0,0042	-0,0038	0,0040	0,0056
VeriSign Inc.	-0,0071	0,0011	-0,0044	-0,0125	0,0095	0,0045	0,0065	0,0063	0,0009	-0,0030	0,0022	0,0031	-0,0015	0,0022
Paychex Inc.	-0,0114	0,0000	-0,0067	-0,0240	0,0139	-0,0009	0,0103	0,0013	0,0008	-0,0019	0,0007	-0,0048	0,0067	0,0061
Microchip Technology Incorporated	-0,0115	-0,0035	-0,0168	-0,0127	0,0123	-0,0052	0,0193	0,0021	0,0018	-0,0005	0,0086	-0,0059	0,0044	0,0084
FleetCor Technologies Inc.	-0,0118	-0,0053	-0,0046	-0,0174	0,0041	-0,0049	0,0184	-0,0005	-0,0004	0,0039	0,0026	-0,0061	0,0063	0,0016
Fortinet Inc.	-0,0090	-0,0021	-0,0141	0,0023	0,0121	0,0036	0,0004	0,0090	-0,0071	0,0009	0,0260	0,0040	-0,0005	-0,0020
Skyworks Solutions Inc.	-0,0100	-0,0036	-0,0106	-0,0090	0,0145	-0,0062	0,0096	0,0048	0,0009	0,0019	0,0100	-0,0036	0,0081	0,0014
Keysight Technologies Inc	-0,0011	0,0010	-0,0032	-0,0074	-0,0044	0,0041	0,0089	0,0031	0,0014	-0,0029	0,0056	-0,0045	0,0059	0,0046
Corning Inc	-0,0099	0,0035	-0,0056	-0,0116	0,0067	-0,0092	0,0123	-0,0015	0,0002	-0,0004	0,0031	-0,0062	0,0059	0,0044
Akamai Technologies Inc.	-0,0093	0,0032	-0,0036	-0,0026	0,0067	0,0035	0,0000	0,0070	-0,0016	-0,0045	0,0037	-0,0020	0,0016	0,0036
Citrix Systems Inc.	-0,0070	0,0091	-0,0021	0,0032	0,0112	0,0006	-0,0009	0,0051	-0,0019	-0,0015	0,0038	-0,0018	-0,0043	0,0052
CDW Corp.	-0,0093	-0,0013	-0,0058	-0,0136	0,0113	-0,0046	0,0141	0,0015	-0,0023	0,0012	0,0010	-0,0062	0,0051	0,0033
Maxim Integrated Products Inc.	-0,0056	-0,0004	-0,0070	-0,0056	0,0048	0,0014	0,0040	0,0015	0,0007	-0,0019	0,0024	-0,0023	0,0048	0,0017
Jack Henry & Associates Inc.	-0,0065	0,0039	-0,0002	-0,0096	0,0063	0,0028	0,0052	-0,0002	-0,0036	-0,0002	0,0089	0,0022	-0,0009	-0,0019
Paycom Software Inc.	-0,0033	-0,0029	-0,0085	-0,0083	0,0046	-0,0116	0,0191	0,0007	-0,0032	0,0078	0,0070	-0,0021	0,0016	0,0057
Broadridge Financial Solutions Inc.	-0,0070	-0,0021	0,0018	-0,0066	0,0005	0,0005	0,0081	0,0021	0,0008	0,0008	0,0018	-0,0006	0,0006	0,0020
Hewlett Packard Enterprise Co.	-0,0054	-0,0034	-0,0098	-0,0063	0,0076	-0,0029	0,0073	-0,0043	-0,0010	-0,0003	0,0045	-0,0061	0,0004	0,0032
Leidos Holdings Inc.	-0,0067	0,0016	-0,0079	-0,0105	0,0156	-0,0032	0,0046	0,0022	0,0015	-0,0022	0,0027	-0,0031	0,0023	0,0023
Zebra Technologies Corporation Class A	-0,0062	-0,0021	-0,0050	-0,0014	0,0016	-0,0019	0,0070	0,0005	0,0015	0,0044	0,0042	-0,0056	0,0064	0,0039
Western Digital Corporation	-0,0087	-0,0008	-0,0121	-0,0132	0,0184	-0,0049	0,0099	-0,0031	-0,0020	-0,0003	0,0047	-0,0058	0,0042	0,0024
Arista Networks Inc.	-0,0067	-0,0006	-0,0037	-0,0035	0,0081	0,0009	0,0039	0,0000	0,0016	-0,0021	0,0025	-0,0017	0,0023	0,0030
Seagate Technology PLC	-0,0055	0,0013	-0,0003	-0,0081	0,0086	-0,0015	0,0058	0,0002	-0,0027	-0,0009	0,0034	-0,0031	0,0032	0,0020
Qorvo Inc.	0,0011	-0,0029	-0,0053	-0,0073	0,0065	-0,0042	0,0062	0,0018	0,0020	0,0017	0,0050	-0,0038	0,0034	0,0015
NortonLifeLock Inc.	-0,0031	-0,0009	-0,0031	-0,0013	0,0055	-0,0016	0,0028	0,0018	0,0020	-0,0002	0,0009	-0,0028	0,0005	0,0059
NetApp Inc.	-0,0043	-0,0025	-0,0031	-0,0048	0,0047	-0,0031	0,0067	-0,0006	0,0009	-0,0016	0,0035	-0,0024	0,0023	-0,0001
Gartner Inc.	-0,0071	-0,0030	-0,0049	-0,0092	0,0109	-0,0052	0,0069	-0,0004	0,0015	0,0020	0,0028	-0,0038	0,0023	0,0015
F5 Networks Inc.	-0,0034	-0,0001	-0,0039	-0,0018	0,0036	-0,0011	0,0057	-0,0003	0,0009	0,0021	0,0034	-0,0023	-0,0003	0,0019
Western Union Company	-0,0043	-0,0001	-0,0003	-0,0055	0,0028	-0,0033	0,0045	-0,0004	-0,0023	0,0000	0,0025	-0,0022	0,0008	0,0017
Juniper Networks Inc.	-0,0039	0,0005	-0,0016	-0,0042	0,0042	0,0003	0,0025	0,0013	0,0010	-0,0020	0,0027	-0,0010	0,0003	0,0015
Iron Mountain Inc.	-0,0033	0,0013	-0,0024	-0,0055	0,0020	-0,0027	0,0064	-0,0022	-0,0016	0,0001	0,0012	-0,0025	0,0022	0,0018
FLIR Systems Inc.	-0,0067	-0,0017	-0,0046	-0,0051	0,0068	-0,0011	0,0027	-0,0003	0,0040	0,0020	0,0030	-0,0020	0,0005	0,0007
IPG Photonics Corporation	-0,0012	-0,0011	-0,0017	-0,0006	0,0000	-0,0013	0,0036	0,0000	0,0004	-0,0003	0,0062	-0,0009	0,0017	-0,0003
Quanta Services Inc.	-0,0009	0,0001	-0,0030	-0,0045	0,0038	0,0005	0,0020	0,0008	-0,0005	0,0006	-0,0003	-0,0018	0,0019	0,0016

Appendix 5: ESG benchmark, assets' sectorial weighted returns

Sector "Consumer Discretionary"	ESG benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Home Depot Inc.	-0,9351	0,4086	-0,8339	-2,1294	2,1054	-0,5188	1,0657	0,3266	0,1099	0,2512	0,6053	0,1744	0,0889	0,2276
V.F. Corporation	-0,0822	-0,0153	-0,0887	-0,0631	0,0557	-0,0905	0,1241	-0,0170	-0,0299	0,0093	0,0297	-0,0632	0,0416	0,0049
Best Buy Co. Inc.	-0,0915	-0,0136	-0,0977	-0,0871	0,1247	-0,0813	0,1322	0,0378	0,0119	0,0030	0,0498	-0,0001	-0,0121	0,0086
Tiffany & Co.	-0,0021	-0,0029	-0,0155	-0,0084	0,0091	0,0028	-0,0011	0,0040	-0,0093	0,0024	0,0051	-0,0052	-0,0066	0,0105
Hasbro Inc.	-0,0394	-0,0163	-0,0679	-0,0452	0,1181	0,0055	0,0363	-0,0017	-0,0012	-0,0229	0,0066	-0,0196	0,0081	0,0285
Hanesbrands Inc.	-0,0097	-0,0104	-0,0220	-0,0082	-0,0099	-0,0142	0,0379	-0,0042	-0,0095	0,0153	-0,0013	-0,0113	0,0142	0,0053
PVH Corp.	-0,0130	-0,0069	-0,0284	-0,0389	0,0214	-0,0192	0,0623	-0,0097	-0,0082	0,0083	0,0032	-0,0132	0,0102	0,0031
Gap Inc.	-0,0090	-0,0045	-0,0101	-0,0186	0,0044	-0,0154	0,0342	-0,0026	-0,0097	0,0076	0,0019	-0,0035	0,0045	0,0047
Total	-1,1820	0,3388	-1,1642	-2,3988	2,4290	-0,7311	1,4916	0,3332	0,0539	0,2742	0,7002	0,0583	0,1488	0,2932

Sector "Communication Services"	ESG benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Alphabet Inc. Class A	-0,5863	-0,1959	-0,3792	-0,7254	0,2374	-0,0954	0,6285	0,3620	-0,0113	0,1924	0,3068	-0,0491	0,1765	0,0865
Alphabet Inc. Class C	-0,5889	-0,1833	-0,3635	-0,7250	0,2148	-0,0693	0,6206	0,3556	-0,0184	0,1937	0,3078	-0,0656	0,1627	0,0787
Total	-1,1752	-0,3792	-0,7427	-1,4505	0,4522	-0,1647	1,2491	0,7176	-0,0297	0,3860	0,6147	-0,1147	0,3391	0,1652

Sector "Consumer Staples"	ESG benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Procter & Gamble Company	-0,2535	0,1774	-0,1488	-0,2433	0,1802	0,1063	-0,0088	0,2085	-0,1130	-0,0236	-0,0178	-0,0276	-0,0418	0,0703
PepsiCo Inc.	-0,1475	0,0617	-0,1015	-0,2872	0,2475	0,0534	0,1129	0,0456	-0,0361	-0,0489	0,0489	0,0199	-0,0626	0,0128
Coca-Cola Company	-0,1649	0,0495	-0,1833	-0,3027	0,1757	0,0355	0,1760	-0,0286	-0,0816	0,0056	0,0167	-0,0922	0,0610	0,0547
Colgate-Palmolive Company	-0,0589	0,0377	-0,0243	-0,0525	0,0265	0,0186	0,0175	0,0259	-0,0112	-0,0208	0,0063	-0,0031	0,0135	0,0115
Kimberly-Clark Corporation	-0,0290	0,0470	-0,0312	-0,0479	0,0226	0,0163	0,0049	0,0321	-0,0008	-0,0139	0,0051	0,0004	0,0032	0,0049
General Mills Inc.	-0,0283	0,0366	-0,0073	-0,0006	-0,0090	0,0293	0,0038	0,0206	-0,0010	-0,0046	0,0009	0,0142	-0,0126	0,0159
Clorox Company	-0,0068	0,0186	-0,0068	0,0123	-0,0051	0,0054	0,0081	0,0108	-0,0032	0,0035	0,0126	0,0061	-0,0115	0,0083
Kellogg Company	-0,0101	0,0059	0,0022	-0,0162	0,0086	0,0091	-0,0017	0,0048	-0,0018	0,0015	-0,0024	0,0008	-0,0040	0,0068
Campbell Soup Company	-0,0040	0,0100	-0,0033	-0,0055	-0,0017	0,0082	-0,0025	0,0042	0,0006	-0,0005	0,0012	0,0030	-0,0066	0,0037
Molson Coors Beverage Company Class B	-0,0061	-0,0019	-0,0061	-0,0078	0,0018	0,0046	0,0092	-0,0038	-0,0018	-0,0056	0,0000	-0,0039	0,0008	0,0018
Total	-0,7092	0,4426	-0,5102	-0,9513	0,6471	0,2867	0,3193	0,3202	-0,2499	-0,1073	0,0716	-0,0824	-0,0606	0,1907

Sector "Energy"	ESG benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Baker Hughes Company Class A	-0,4996	-0,0015	-0,4810	-0,4956	0,4347	-0,2872	0,5458	0,0309	0,0681	0,0488	0,2200	-0,1915	0,2275	0,2427
TechnipFMC Plc	-0,0876	-0,1059	-0,3046	-0,0824	0,0900	0,0212	0,1205	-0,0234	-0,0087	0,0219	-0,0297	-0,1242	0,0743	0,0185
Total	-0,5872	-0,1073	-0,7856	-0,5780	0,5247	-0,2660	0,6664	0,0075	0,0595	0,0707	0,1903	-0,3157	0,3019	0,2612

Sector "Financials"	ESG benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
BlackRock Inc.	-0,4319	-0,0696	-0,1903	-0,3653	0,5745	-0,0959	0,3266	0,0296	-0,0093	0,0486	0,0773	0,0767	-0,0021	0,0765
American Express Company	-0,3686	-0,0306	-0,1589	-0,5095	0,3926	-0,3397	0,5885	-0,1560	-0,0962	0,1233	0,0266	-0,1620	0,1722	0,1280
Marsh & McLennan Companies Inc.	-0,1764	0,0184	-0,1158	-0,3316	0,1217	-0,1131	0,3645	0,0440	-0,0928	0,0711	0,1234	0,0082	0,0005	0,0237
Bank of New York Mellon Corporation	-0,1107	-0,0444	-0,1004	-0,1435	0,1157	0,0361	0,0973	0,0066	-0,0424	0,0066	-0,0095	-0,0900	0,0738	0,0750
Public Storage	-0,0665	0,0855	-0,0693	-0,1638	0,1069	0,0120	0,0674	-0,0523	-0,0424	-0,0138	0,0292	-0,0680	0,0538	0,0786
T. Rowe Price Group	-0,1188	-0,0095	-0,0715	-0,1330	0,0794	-0,0292	0,0928	-0,0141	-0,0270	0,0892	0,0291	-0,0043	0,0123	0,0448
State Street Corporation	-0,0818	-0,0820	-0,0148	-0,1450	0,0298	0,0504	0,1262	-0,0282	-0,0129	0,0204	0,0135	-0,0675	0,0117	0,0713
Northern Trust Corporation	-0,0722	-0,0598	-0,0106	-0,0740	0,0757	0,0214	0,0529	-0,0299	-0,0169	-0,0129	0,0036	-0,0332	0,0201	0,0360
Total	-1,4269	-0,1920	-0,7317	-1,8656	1,4962	-0,4579	1,7163	-0,2004	-0,3399	0,3325	0,2932	-0,3400	0,3422	0,5339

Sector "Health Care"	ESG benchmark													
Company	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Amgen Inc.	-0,4299	0,2270	-0,1686	-0,2848	0,2213	0,1496	0,2588	0,3192	0,0231	-0,0931	0,0690	0,0953	-0,2117	0,0600
Gilead Sciences Inc.	-0,0142	0,4531	-0,3415	0,1304	-0,0162	0,2129	-0,1739	0,4125	-0,1499	0,0113	-0,0890	-0,0459	-0,1108	0,1771
Vertex Pharmaceuticals Incorporated	-0,2057	0,0962	-0,1232	-0,1531	0,1242	0,2207	0,0793	0,2201	-0,0050	-0,1261	0,1494	0,1429	-0,0294	0,0240
Edwards Lifesciences Corporation	-0,1586	0,0056	-0,1390	-0,1480	0,2756	-0,0692	0,2001	0,0850	-0,0301	-0,0921	0,0602	-0,0315	0,0376	0,0366
IDEXX Laboratories Inc.	-0,0662	-0,0142	0,0134	-0,2176	0,2063	0,0094	0,0800	0,0199	0,0195	-0,0030	0,0494	0,0176	0,0009	0,0375
Agilent Technologies Inc.	-0,0732	0,0151	-0,0927	-0,0308	0,0521	-0,0054	0,0896	0,0121	-0,0372	-0,0158	0,0577	0,0184	0,0323	0,0289
ResMed Inc.	-0,0611	0,0319	-0,0702	-0,1685	0,1722	0,0553	0,0319	0,0238	-0,0180	-0,0085	0,0165	0,0060	-0,0104	-0,0023
Mettler-Toledo International Inc.	-0,0422	0,0108	-0,0328	-0,0224	0,0116	-0,0234	0,0841	-0,0049	-0,0057	-0,0186	0,0242	-0,0159	0,0389	0,0342
West Pharmaceutical Services Inc.	-0,0559	-0,0020	-0,0124	-0,0513	0,0387	0,0353	0,0371	0,0210	0,0730	-0,0092	0,0212	0,0344	-0,0062	0,0106
Quest Diagnostics Incorporated	-0,0293	0,0262	-0,0636	-0,1039	0,0487	-0,0548	0,1046	0,0331	0,0549	0,0096	0,0146	-0,0047	0,0074	0,0226
Waters Corporation	-0,0370	0,0098	-0,0289	-0,0222	0,0255	-0,0109	0,0331	0,0030	-0,0117	-0,0258	0,0186	-0,0170	0,0171	0,0263
Henry Schein Inc.	-0,0258	-0,0141	-0,0045	-0,0544	0,0292	-0,0192	0,0335	0,0070	-0,0061	-0,0012	0,0095	-0,0111	0,0252	0,0186
Total	-1,1991	0,8454	-1,0641	-1,1266	1,1892	0,5003	0,8583	1,1517	-0,0930	-0,3727	0,4012	0,1884	-0,2091	0,4740

Sector "Industrials"		ESG benchmark													
Company		P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Honeywell International Inc.		-0,1773	0,0305	-0,1605	-0,4450	0,3005	-0,0524	0,2258	-0,0641	-0,0365	0,0230	-0,0045	-0,1514	0,2126	0,0863
3M Company		-0,0753	0,0454	-0,1196	-0,1821	0,1027	0,0064	0,1606	-0,0137	0,0057	0,0167	-0,0009	-0,1015	0,0858	0,1212
Northrop Grumman Corporation		-0,0902	0,0003	-0,0414	-0,0912	0,0932	0,0044	0,0692	0,0549	-0,0449	-0,0312	-0,0012	-0,0173	0,0125	0,0268
IHS Markit Ltd.		-0,0488	-0,0133	-0,0950	-0,0713	0,1150	0,0211	0,0312	0,0128	-0,0116	-0,0022	0,0146	-0,0038	0,0033	0,0180
Cummins Inc.		-0,0397	-0,0079	-0,0351	-0,0659	0,0577	0,0021	0,0618	-0,0045	-0,0042	0,0290	0,0109	-0,0155	-0,0017	0,0456
Johnson Controls International plc		-0,0577	0,0180	-0,0584	-0,0976	0,0172	-0,0075	0,0839	-0,0144	-0,0230	-0,0007	0,0290	-0,0187	0,0157	0,0265
Fastenal Company		-0,0483	-0,0007	-0,0008	-0,0634	0,0323	-0,0072	0,0416	0,0277	0,0011	-0,0037	0,0410	-0,0013	-0,0025	0,0270
Trane Technologies plc		-0,0408	-0,0458	-0,0289	-0,0947	0,0330	-0,0114	0,0517	-0,0066	-0,0234	0,0118	-0,0100	-0,0304	0,0285	0,0294
Kansas City Southern		-0,0360	-0,0064	-0,0346	-0,0398	0,0477	-0,0103	0,0294	0,0054	-0,0152	-0,0062	0,0171	-0,0054	0,0266	0,0059
W.W. Grainger Inc.		-0,0201	0,0060	-0,0155	-0,0464	0,0369	-0,0080	0,0407	0,0003	-0,0089	-0,0017	0,0157	-0,0043	0,0120	0,0135
Expeditors International of Washington Inc.		-0,0150	0,0002	-0,0172	-0,0355	0,0420	0,0069	0,0148	0,0008	0,0006	-0,0018	0,0110	-0,0101	0,0017	0,0136
Xylem Inc.		-0,0257	0,0109	-0,0228	-0,0344	0,0190	-0,0155	0,0296	0,0007	-0,0031	0,0023	-0,0184	-0,0155	0,0140	0,0135
Allegion PLC		-0,0170	0,0067	-0,0107	-0,0417	0,0176	-0,0133	0,0217	0,0038	-0,0017	0,0015	0,0079	-0,0147	0,0023	0,0092
Robert Half International Inc.		-0,0155	-0,0022	-0,0039	-0,0271	0,0120	-0,0028	0,0146	-0,0001	0,0020	0,0008	0,0071	-0,0050	0,0053	0,0081
Total		-0,7072	0,0420	-0,6443	-1,3361	0,9269	-0,0876	0,8766	0,0030	-0,1630	0,0375	0,1194	-0,3949	0,4161	0,4446

Sector "Real State"		ESG benchmark													
Company		P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Prologis Inc.		-0,1666	0,0210	-0,1037	-0,2057	0,2877	-0,0779	0,2725	-0,0182	-0,0145	-0,0272	0,0397	-0,0822	0,0567	0,0499
CBRE Group Inc. Class A		-0,0250	-0,0066	-0,0357	-0,0622	0,0343	-0,0225	0,0678	-0,0058	-0,0241	-0,0017	0,0114	-0,0321	0,0285	0,0217
Healthpeak Properties Inc.		-0,0306	0,0136	-0,0297	-0,0565	0,0400	-0,0390	0,0819	-0,0152	-0,0160	0,0078	-0,0073	-0,0168	0,0246	0,0008
Total		-0,2222	0,0280	-0,1692	-0,3244	0,3621	-0,1394	0,4222	-0,0392	-0,0545	-0,0211	0,0438	-0,1311	0,1097	0,0724

Sector "Materials"		ESG benchmark													
Company		P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Ecolab Inc.		-0,1653	0,0980	-0,0935	-0,2689	0,1431	-0,0823	0,2806	-0,0078	0,0094	0,0698	0,0518	-0,0193	0,0374	0,0764
PPG Industries Inc.		-0,0668	-0,0163	-0,0406	-0,0871	0,0375	-0,0305	0,1179	-0,0225	-0,0034	-0,0290	0,0257	-0,0281	0,0604	0,0324
Arcor PLC		-0,0350	0,0000	-0,1008	0,0277	0,0264	0,0020	0,0652	-0,0159	-0,0161	0,0121	0,0131	0,0057	0,0212	0,0246
International Flavors & Fragrances Inc.		-0,0327	0,0086	-0,0389	-0,0211	0,0265	-0,0334	0,1002	-0,0061	0,0038	0,0004	0,0216	-0,0162	0,0033	0,0101
Total		-0,2997	0,0904	-0,2737	-0,3494	0,2335	-0,1441	0,5640	-0,0524	-0,0063	0,0534	0,1121	-0,0579	0,1222	0,1435

Sector "Information Technology"		ESG benchmark													
Company		P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Microsoft Corporation		-1,2083	-0,0364	-0,2266	-1,8083	1,2017	0,3690	0,9832	1,0896	-0,3026	0,0015	0,7742	-0,1104	0,0256	0,0183
NVIDIA Corporation		-0,1675	-0,0294	-0,1944	-0,2991	0,4687	-0,0716	0,1602	0,2293	-0,0192	-0,0483	0,2157	0,1782	0,1295	-0,0343
Cisco Systems Inc.		-0,2493	-0,0110	-0,0930	-0,0980	0,1637	0,0108	0,1174	0,0562	0,0017	-0,0681	0,0915	0,0539	0,0258	0,1177
Adobe Inc.		-0,1319	-0,0428	-0,0067	-0,2116	0,0628	-0,0706	0,1511	0,1409	-0,0001	-0,0013	0,1217	-0,0106	0,0966	0,0061
salesforce.com inc.		-0,1498	-0,0551	-0,1476	-0,0848	0,0709	-0,1190	0,2240	0,0776	-0,0790	0,0231	0,1856	-0,0386	0,0566	-0,0256
Accenture Plc Class A		-0,1735	-0,0120	-0,0804	-0,1168	0,1013	-0,0773	0,1988	-0,0187	0,0078	0,0310	0,0552	-0,0291	0,0628	0,0479
Texas Instruments Incorporated		-0,1135	-0,0087	-0,0638	-0,0808	0,0302	-0,0053	0,0782	0,0552	0,0034	-0,0376	0,0572	-0,0596	0,0486	0,0475
International Business Machines Corporation		-0,1325	-0,0188	-0,1562	-0,1173	0,1336	-0,0158	0,1438	-0,0114	0,0386	-0,0230	0,0092	-0,0364	0,0122	0,0555
Intuit Inc.		-0,0768	0,0280	-0,0389	-0,1638	0,0994	-0,0355	0,1112	0,0395	-0,0046	-0,0069	0,0531	0,0104	0,0082	0,0068
Equinix Inc.		-0,0689	0,0364	0,0111	-0,1003	0,0942	0,0278	0,0542	0,0063	-0,0077	-0,0113	0,0059	-0,0156	0,0094	0,0247
Applied Materials Inc.		-0,0451	-0,0028	-0,0581	-0,1233	0,0904	-0,0299	0,0841	0,0355	-0,0134	-0,0456	0,0719	-0,0161	0,0220	0,0180
Autodesk Inc.		-0,0223	-0,0374	-0,0363	-0,0259	-0,0178	-0,0074	0,0762	0,0398	-0,0013	-0,0124	0,0220	-0,0079	0,0341	0,0305
Lam Research Corporation		-0,0266	0,0012	-0,0400	-0,1018	0,1023	-0,0325	0,0663	0,0290	-0,0160	-0,0428	0,0466	-0,0184	0,0133	0,0173
HP Inc.		-0,0205	0,0072	-0,0481	-0,0439	0,0508	-0,0344	0,0251	-0,0069	-0,0082	-0,0047	0,0157	-0,0124	0,0351	-0,0267
Cadence Design Systems Inc.		-0,0266	-0,0049	-0,0081	-0,0274	0,0302	0,0061	0,0279	0,0226	0,0055	-0,0134	0,0202	-0,0011	0,0112	0,0141
Keysight Technologies Inc.		-0,0026	0,0024	-0,0074	-0,0174	-0,0104	0,0097	0,0208	0,0073	0,0032	-0,0068	0,0131	-0,0105	0,0137	0,0106
Hewlett Packard Enterprise Co.		-0,0126	-0,0080	-0,0228	-0,0147	0,0177	-0,0068	0,0170	-0,0100	-0,0024	-0,0007	0,0104	-0,0143	0,0008	0,0076
Iron Mountain Inc.		-0,0077	0,0029	-0,0057	-0,0130	0,0048	-0,0062	0,0150	-0,0051	-0,0038	0,0002	0,0027	-0,0057	0,0051	0,0043
Total		-2,6361	-0,1892	-1,2230	-3,4481	2,6946	-0,0889	2,5545	1,7767	-0,3979	-0,2671	1,7720	-0,1444	0,6104	0,3404

Sector "Utilities"		ESG benchmark													
Company		P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
NextEra Energy Inc.		-0,0945	0,0855	-0,1952	-0,1421	0,2213	-0,0469	0,1126	0,0042	-0,0281	-0,0557	0,0124	-0,0086	0,0278	0,0980
Southern Company		-0,0667	0,0575	-0,1028	-0,0751	0,1109	-0,0547	0,1066	-0,0252	0,0024	-0,0307	0,0098	-0,0275	0,0272	0,0243
Exelon Corporation		-0,0422	0,0160	-0,0652	-0,0492	0,0485	-0,0259	0,0653	-0,0060	-0,0160	-0,0073	0,0152	-0,0191	0,0186	0,0132
Xcel Energy Inc.		-0,0357	0,0374	-0,0141	-0,0708	0,0479	-0,0046	0,0433	0,0040	-0,0114	-0,0110	-0,0090	-0,0120	0,0128	0,0230
Eversource Energy		-0,0239	0,0276	-0,0182	-0,0550	0,0445	-0,0176	0,0483	0,0039	-0,0132	-0,0187	-0,0063	-0,0043	0,0065	0,0180
Public Service Enterprise Group Inc		-0,0329	0,0152	-0,0442	-0,0309	0,0402	-0,0006	0,0442	0,0072	-0,0136	-0,0087	-0,0030	-0,0155	0,0133	0,0138
Consolidated Edison Inc.		-0,0261	0,0253	0,0004	-0,0385	0,0160	0,0000	0,0283	0,0041	-0,0170	-0,0143	-0,0087	-0,0113	0,0018	0,0153
CMS Energy Corporation		-0,0172	0,0181	-0,0119	-0,0302	0,0257	-0,0093	0,0209	0,0020	-0,0087	-0,0085	-0,0017	-0,0043	0,0064	0,0079
AES Corporation		-0,0149	0,0004	-0,0174	-0,0067	0,0102	-0,0069	0,0155	-0,0083	-0,0015	0,0005	0,0004	-0,0067	0,0032	0,0016
Total		-0,3539	0,2831	-0,4685	-0,4985	0,5653	-0,1664	0,4849	-0,0142	-0,1071	-0,1545	0,0092	-0,1093	0,1175	0,2151

Appendix 6: “ESG effect” per period

P1							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_B \text{ to } ESG,k$
Communication Services	12,0302	12,0302	-1,1215	-1,1752	-0,1349	-0,1414	-0,0065
Consumer Discretionary	10,4771	10,4771	-1,1317	-1,1820	-0,1186	-0,1238	-0,0053
Consumer Staples	7,1356	7,1356	-0,7353	-0,7092	-0,0525	-0,0506	0,0019
Energy	3,0117	3,0117	-0,4540	-0,5872	-0,0137	-0,0177	-0,0040
Financials	10,2795	10,2795	-1,3451	-1,4269	-0,1383	-0,1467	-0,0084
Health Care	15,1436	15,1436	-1,5857	-1,1991	-0,2401	-0,1816	0,0586
Industrials	7,6039	7,6039	-0,8841	-0,7072	-0,0672	-0,0538	0,0135
Information Technology	27,0521	27,0521	-2,9732	-2,6361	-0,8043	-0,7131	0,0912
Materials	2,5714	2,5714	-0,3250	-0,2997	-0,0084	-0,0077	0,0007
Real Estate	1,5626	1,5626	-0,2044	-0,2222	-0,0032	-0,0035	-0,0003
Utilities	3,1324	3,1324	-0,3541	-0,3539	-0,0111	-0,0111	0,0000
Total	100	100	-1,5922	-1,4509	-1,5922	-1,4509	0,1413

P2							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_B \text{ to } ESG,k$
Communication Services	12,0302	12,0302	-0,0958	-0,3792	-0,0115	-0,0456	-0,0341
Consumer Discretionary	10,4771	10,4771	-0,0208	0,3388	-0,0022	0,0355	0,0377
Consumer Staples	7,1356	7,1356	0,4634	0,4426	0,0331	0,0316	-0,0015
Energy	3,0117	3,0117	-0,1951	-0,1073	-0,0059	-0,0032	0,0026
Financials	10,2795	10,2795	-0,3457	-0,1920	-0,0355	-0,0197	0,0158
Health Care	15,1436	15,1436	0,7986	0,8454	0,1209	0,1280	0,0071
Industrials	7,6039	7,6039	-0,0897	0,0420	-0,0068	0,0032	0,0100
Information Technology	27,0521	27,0521	0,2158	-0,1892	0,0584	-0,0512	-0,1095
Materials	2,5714	2,5714	0,0534	0,0904	0,0014	0,0023	0,0010
Real Estate	1,5626	1,5626	0,0422	0,0280	0,0007	0,0004	-0,0002
Utilities	3,1324	3,1324	0,2579	0,2831	0,0081	0,0089	0,0008
Total	100	100	0,1605	0,0902	0,1605	0,0902	-0,0704

P3							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_B \text{ to } ESG,k$
Communication Services	12,0302	12,0302	-0,7692	-0,7427	-0,0925	-0,0894	0,0032
Consumer Discretionary	10,4771	10,4771	-0,9681	-1,1642	-0,1014	-0,1220	-0,0206
Consumer Staples	7,1356	7,1356	-0,5392	-0,5102	-0,0385	-0,0364	0,0021
Energy	3,0117	3,0117	-0,7001	-0,7856	-0,0211	-0,0237	-0,0026
Financials	10,2795	10,2795	-0,9663	-0,7317	-0,0993	-0,0752	0,0241
Health Care	15,1436	15,1436	-1,0023	-1,0641	-0,1518	-0,1611	-0,0093
Industrials	7,6039	7,6039	-0,9128	-0,6443	-0,0694	-0,0490	0,0204
Information Technology	27,0521	27,0521	-1,3127	-1,2230	-0,3551	-0,3308	0,0243
Materials	2,5714	2,5714	-0,3327	-0,2737	-0,0086	-0,0070	0,0015
Real Estate	1,5626	1,5626	-0,2270	-0,1692	-0,0035	-0,0026	0,0009
Utilities	3,1324	3,1324	-0,4336	-0,4685	-0,0136	-0,0147	-0,0011
Total	100	100	-0,9548	-0,9119	-0,9548	-0,9119	0,0429

P4							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_B \text{ to } ESG,k$
Communication Services	12,0302	12,0302	-1,4950	-1,4505	-0,1798	-0,1745	0,0054
Consumer Discretionary	10,4771	10,4771	-1,1423	-2,3988	-0,1197	-0,2513	-0,1316
Consumer Staples	7,1356	7,1356	-0,7709	-0,9513	-0,0550	-0,0679	-0,0129
Energy	3,0117	3,0117	-0,5832	-0,5780	-0,0176	-0,0174	0,0002
Financials	10,2795	10,2795	-1,8263	-1,8656	-0,1877	-0,1918	-0,0040
Health Care	15,1436	15,1436	-1,9714	-1,1266	-0,2985	-0,1706	0,1279
Industrials	7,6039	7,6039	-1,3344	-1,3361	-0,1015	-0,1016	-0,0001
Information Technology	27,0521	27,0521	-4,0940	-3,4481	-1,1075	-0,9328	0,1747
Materials	2,5714	2,5714	-0,3156	-0,3494	-0,0081	-0,0090	-0,0009
Real Estate	1,5626	1,5626	-0,3978	-0,3244	-0,0062	-0,0051	0,0011
Utilities	3,1324	3,1324	-0,5262	-0,4985	-0,0165	-0,0156	0,0009
Total	100	100	-2,0982	-1,9376	-2,0982	-1,9376	0,1606

P5							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_B \text{ to } ESG,k$
Communication Services	12,0302	12,0302	0,7203	0,4522	0,0867	0,0544	-0,0323
Consumer Discretionary	10,4771	10,4771	1,2413	2,4290	0,1301	0,2545	0,1244
Consumer Staples	7,1356	7,1356	0,5140	0,6471	0,0367	0,0462	0,0095
Energy	3,0117	3,0117	0,3792	0,5247	0,0114	0,0158	0,0044
Financials	10,2795	10,2795	1,2896	1,4962	0,1326	0,1538	0,0212
Health Care	15,1436	15,1436	1,3445	1,1892	0,2036	0,1801	-0,0235
Industrials	7,6039	7,6039	1,2111	0,9269	0,0921	0,0705	-0,0216
Information Technology	27,0521	27,0521	2,9111	2,6946	0,7875	0,7289	-0,0586
Materials	2,5714	2,5714	0,2535	0,2335	0,0065	0,0060	-0,0005
Real Estate	1,5626	1,5626	0,3101	0,3621	0,0048	0,0057	0,0008
Utilities	3,1324	3,1324	0,5566	0,5653	0,0174	0,0177	0,0003
Total	100	100	1,5094	1,5335	1,5094	1,5335	0,0242

P6							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_B \text{ to } ESG,k$
Communication Services	12,0302	12,0302	-0,1268	-0,1647	-0,0153	-0,0198	-0,0046
Consumer Discretionary	10,4771	10,4771	-0,4468	-0,7311	-0,0468	-0,0766	-0,0298
Consumer Staples	7,1356	7,1356	0,2621	0,2867	0,0187	0,0205	0,0018
Energy	3,0117	3,0117	0,1669	-0,2660	0,0050	-0,0080	-0,0130
Financials	10,2795	10,2795	-0,6676	-0,4579	-0,0686	-0,0471	0,0216
Health Care	15,1436	15,1436	0,3112	0,5003	0,0471	0,0758	0,0286
Industrials	7,6039	7,6039	-0,3111	-0,0876	-0,0237	-0,0067	0,0170
Information Technology	27,0521	27,0521	-0,5041	-0,0889	-0,1364	-0,0241	0,1123
Materials	2,5714	2,5714	-0,0990	-0,1441	-0,0025	-0,0037	-0,0012
Real Estate	1,5626	1,5626	-0,2282	-0,1394	-0,0036	-0,0022	0,0014
Utilities	3,1324	3,1324	-0,2132	-0,1664	-0,0067	-0,0052	0,0015
Total	100	100	-0,2327	-0,0971	-0,2327	-0,0971	0,1356

P7							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_B \text{ to } ESG,k$
Communication Services	12,0302	12,0302	1,2731	1,2491	0,1532	0,1503	-0,0029
Consumer Discretionary	10,4771	10,4771	1,4542	1,4916	0,1524	0,1563	0,0039
Consumer Staples	7,1356	7,1356	0,3719	0,3193	0,0265	0,0228	-0,0038
Energy	3,0117	3,0117	0,4191	0,6664	0,0126	0,0201	0,0074
Financials	10,2795	10,2795	2,0220	1,7163	0,2079	0,1764	-0,0314
Health Care	15,1436	15,1436	1,4987	0,8583	0,2270	0,1300	-0,0970
Industrials	7,6039	7,6039	0,9881	0,8766	0,0751	0,0667	-0,0085
Information Technology	27,0521	27,0521	2,9124	2,5545	0,7879	0,6910	-0,0968
Materials	2,5714	2,5714	0,5502	0,5640	0,0141	0,0145	0,0004
Real Estate	1,5626	1,5626	0,4816	0,4222	0,0075	0,0066	-0,0009
Utilities	3,1324	3,1324	0,5424	0,4849	0,0170	0,0152	-0,0018
Total	100	100	1,6811	1,4498	1,6811	1,4498	-0,2314

P8							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_B \text{ to } ESG,k$
Communication Services	12,0302	12,0302	0,5025	0,7176	0,0605	0,0863	0,0259
Consumer Discretionary	10,4771	10,4771	0,8777	0,3332	0,0920	0,0349	-0,0571
Consumer Staples	7,1356	7,1356	0,3081	0,3202	0,0220	0,0228	0,0009
Energy	3,0117	3,0117	0,0031	0,0075	0,0001	0,0002	0,0001
Financials	10,2795	10,2795	-0,3877	-0,2004	-0,0399	-0,0206	0,0193
Health Care	15,1436	15,1436	0,9651	1,1517	0,1462	0,1744	0,0283
Industrials	7,6039	7,6039	0,0051	0,0030	0,0004	0,0002	-0,0002
Information Technology	27,0521	27,0521	1,3196	1,7767	0,3570	0,4806	0,1237
Materials	2,5714	2,5714	-0,0518	-0,0524	-0,0013	-0,0013	0,0000
Real Estate	1,5626	1,5626	-0,0692	-0,0392	-0,0011	-0,0006	0,0005
Utilities	3,1324	3,1324	-0,0120	-0,0142	-0,0004	-0,0004	-0,0001
Total	100	100	0,6354	0,7766	0,6354	0,7766	0,1412

P9							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_{B \text{ to } ESG,k}$
Communication Services	12,0302	12,0302	0,0030	-0,0297	0,0004	-0,0036	-0,0039
Consumer Discretionary	10,4771	10,4771	-0,0169	0,0539	-0,0018	0,0057	0,0074
Consumer Staples	7,1356	7,1356	-0,2233	-0,2499	-0,0159	-0,0178	-0,0019
Energy	3,0117	3,0117	0,0605	0,0595	0,0018	0,0018	0,0000
Financials	10,2795	10,2795	-0,3104	-0,3399	-0,0319	-0,0349	-0,0030
Health Care	15,1436	15,1436	-0,0327	-0,0930	-0,0049	-0,0141	-0,0091
Industrials	7,6039	7,6039	-0,1841	-0,1630	-0,0140	-0,0124	0,0016
Information Technology	27,0521	27,0521	-0,1936	-0,3979	-0,0524	-0,1076	-0,0552
Materials	2,5714	2,5714	-0,0179	-0,0063	-0,0005	-0,0002	0,0003
Real Estate	1,5626	1,5626	-0,0784	-0,0545	-0,0012	-0,0009	0,0004
Utilities	3,1324	3,1324	-0,1120	-0,1071	-0,0035	-0,0034	0,0002
Total	100	100	-0,1240	-0,1874	-0,1240	-0,1874	-0,0634

P10							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_{B \text{ to } ESG,k}$
Communication Services	12,0302	12,0302	0,2188	0,3860	0,0263	0,0464	0,0201
Consumer Discretionary	10,4771	10,4771	-0,1174	0,2742	-0,0123	0,0287	0,0410
Consumer Staples	7,1356	7,1356	-0,1269	-0,1073	-0,0091	-0,0077	0,0014
Energy	3,0117	3,0117	0,1030	0,0707	0,0031	0,0021	-0,0010
Financials	10,2795	10,2795	0,1506	0,3325	0,0155	0,0342	0,0187
Health Care	15,1436	15,1436	-0,3803	-0,3727	-0,0576	-0,0564	0,0012
Industrials	7,6039	7,6039	0,0959	0,0375	0,0073	0,0029	-0,0044
Information Technology	27,0521	27,0521	0,0780	-0,2671	0,0211	-0,0723	-0,0934
Materials	2,5714	2,5714	0,0462	0,0534	0,0012	0,0014	0,0002
Real Estate	1,5626	1,5626	0,0652	-0,0211	0,0010	-0,0003	-0,0013
Utilities	3,1324	3,1324	-0,1308	-0,1545	-0,0041	-0,0048	-0,0007
Total	100	100	-0,0075	-0,0258	-0,0075	-0,0258	-0,0183

P11							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_{B \text{ to } ESG,k}$
Communication Services	12,0302	12,0302	0,4412	0,6147	0,0531	0,0739	0,0209
Consumer Discretionary	10,4771	10,4771	0,4649	0,7002	0,0487	0,0734	0,0247
Consumer Staples	7,1356	7,1356	0,0672	0,0716	0,0048	0,0051	0,0003
Energy	3,0117	3,0117	0,2572	0,1903	0,0077	0,0057	-0,0020
Financials	10,2795	10,2795	0,1398	0,2932	0,0144	0,0301	0,0158
Health Care	15,1436	15,1436	0,2970	0,4012	0,0450	0,0608	0,0158
Industrials	7,6039	7,6039	0,1029	0,1194	0,0078	0,0091	0,0013
Information Technology	27,0521	27,0521	1,8114	1,7720	0,4900	0,4794	-0,0107
Materials	2,5714	2,5714	0,0952	0,1121	0,0024	0,0029	0,0004
Real Estate	1,5626	1,5626	0,0338	0,0438	0,0005	0,0007	0,0002
Utilities	3,1324	3,1324	0,0197	0,0092	0,0006	0,0003	-0,0003
Total	100	100	0,6751	0,7413	0,6751	0,7413	0,0662

P12							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_{B \text{ to } ESG,k}$
Communication Services	12,0302	12,0302	-0,1621	-0,1147	-0,0195	-0,0138	0,0057
Consumer Discretionary	10,4771	10,4771	-0,0915	0,0583	-0,0096	0,0061	0,0157
Consumer Staples	7,1356	7,1356	-0,1010	-0,0824	-0,0072	-0,0059	0,0013
Energy	3,0117	3,0117	-0,2262	-0,3157	-0,0068	-0,0095	-0,0027
Financials	10,2795	10,2795	-0,5621	-0,3400	-0,0578	-0,0350	0,0228
Health Care	15,1436	15,1436	0,1638	0,1884	0,0248	0,0285	0,0037
Industrials	7,6039	7,6039	-0,4378	-0,3949	-0,0333	-0,0300	0,0033
Information Technology	27,0521	27,0521	-0,3746	-0,1444	-0,1013	-0,0391	0,0623
Materials	2,5714	2,5714	-0,0830	-0,0579	-0,0021	-0,0015	0,0006
Real Estate	1,5626	1,5626	-0,1396	-0,1311	-0,0022	-0,0020	0,0001
Utilities	3,1324	3,1324	-0,0784	-0,1093	-0,0025	-0,0034	-0,0010
Total	100	100	-0,2175	-0,1056	-0,2175	-0,1056	0,1119

P13							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_{B \text{ to } ESG,k}$
Communication Services	12,0302	12,0302	0,5627	0,3391	0,0677	0,0408	-0,0269
Consumer Discretionary	10,4771	10,4771	0,4460	0,1488	0,0467	0,0156	-0,0311
Consumer Staples	7,1356	7,1356	0,0267	-0,0606	0,0019	-0,0043	-0,0062
Energy	3,0117	3,0117	0,2131	0,3019	0,0064	0,0091	0,0027
Financials	10,2795	10,2795	0,4605	0,3422	0,0473	0,0352	-0,0122
Health Care	15,1436	15,1436	-0,0914	-0,2091	-0,0138	-0,0317	-0,0178
Industrials	7,6039	7,6039	0,5692	0,4161	0,0433	0,0316	-0,0116
Information Technology	27,0521	27,0521	0,9082	0,6104	0,2457	0,1651	-0,0806
Materials	2,5714	2,5714	0,1139	0,1222	0,0029	0,0031	0,0002
Real Estate	1,5626	1,5626	0,1303	0,1097	0,0020	0,0017	-0,0003
Utilities	3,1324	3,1324	0,1028	0,1175	0,0032	0,0037	0,0005
Total	100	100	0,4534	0,2700	0,4534	0,2700	-0,1834

P14							
Sectors	$W_{B,k}$	$W_{ESG,k}$	$R_{B,k}$	$R_{ESG,k}$	$CR_{B,k}$	$CR_{ESG,k}$	$CR_{B \text{ to } ESG,k}$
Communication Services	12,0302	12,0302	0,1302	0,1652	0,0157	0,0199	0,0042
Consumer Discretionary	10,4771	10,4771	0,2137	0,2932	0,0224	0,0307	0,0083
Consumer Staples	7,1356	7,1356	0,2192	0,1907	0,0156	0,0136	-0,0020
Energy	3,0117	3,0117	0,0403	0,2612	0,0012	0,0079	0,0067
Financials	10,2795	10,2795	0,6842	0,5339	0,0703	0,0549	-0,0154
Health Care	15,1436	15,1436	0,5262	0,4740	0,0797	0,0718	-0,0079
Industrials	7,6039	7,6039	0,4675	0,4446	0,0355	0,0338	-0,0017
Information Technology	27,0521	27,0521	0,4190	0,3404	0,1133	0,0921	-0,0213
Materials	2,5714	2,5714	0,1192	0,1435	0,0031	0,0037	0,0006
Real Estate	1,5626	1,5626	0,0692	0,0724	0,0011	0,0011	0,0000
Utilities	3,1324	3,1324	0,1779	0,2151	0,0056	0,0067	0,0012
Total	100	100	0,3635	0,3362	0,3635	0,3362	-0,0274

Appendix 7: “ESG effect” per sector

S&P 500 index

Sectors	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Multi-period returns
Communication Services	-0,1349	-0,0115	-0,0925	-0,1798	0,0867	-0,0153	0,1532	0,0605	0,0004	0,0263	0,0531	-0,0195	0,0677	0,0157	0,0093
Consumer Discretionary	-0,1186	-0,0022	-0,1014	-0,1197	0,1301	-0,0468	0,1524	0,0920	-0,0018	-0,0123	0,0487	-0,0096	0,0467	0,0224	0,0794
Consumer Staples	-0,0525	0,0331	-0,0385	-0,0550	0,0367	0,0187	0,0265	0,0220	-0,0159	-0,0091	0,0048	-0,0072	0,0019	0,0156	-0,0189
Energy	-0,0137	-0,0059	-0,0211	-0,0176	0,0114	0,0050	0,0126	0,0001	0,0018	0,0031	0,0077	-0,0068	0,0064	0,0012	-0,0155
Financials	-0,1383	-0,0355	-0,0993	-0,1877	0,1326	-0,0686	0,2079	-0,0399	-0,0319	0,0155	0,0144	-0,0578	0,0473	0,0703	-0,1717
Health Care	-0,2401	0,1209	-0,1518	-0,2985	0,2036	0,0471	0,2270	0,1462	-0,0049	-0,0576	0,0450	0,0248	-0,0138	0,0797	0,1259
Industrials	-0,0672	-0,0068	-0,0694	-0,1015	0,0921	-0,0237	0,0751	0,0004	-0,0140	0,0073	0,0078	-0,0333	0,0433	0,0355	-0,0545
Information Technology	-0,8043	0,0584	-0,3551	-1,1075	0,7875	-0,1364	0,7879	0,3570	-0,0524	0,0211	0,4900	-0,1013	0,2457	0,1133	0,2856
Materials	-0,0084	0,0014	-0,0086	-0,0081	0,0065	-0,0025	0,0141	-0,0013	-0,0005	0,0012	0,0024	-0,0021	0,0029	0,0031	0,0002
Real Estate	-0,0032	0,0007	-0,0035	-0,0062	0,0048	-0,0036	0,0075	-0,0011	-0,0012	0,0010	0,0005	-0,0022	0,0020	0,0011	-0,0033
Utilities	-0,0111	0,0081	-0,0136	-0,0165	0,0174	-0,0067	0,0170	-0,0004	-0,0035	-0,0041	0,0006	-0,0025	0,0032	0,0056	-0,0064

ESG benchmark

Sectors	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Multi-period returns
Communication Services	-0,1414	-0,0456	-0,0894	-0,1745	0,0544	-0,0198	0,1503	0,0863	-0,0036	0,0464	0,0739	-0,0138	0,0408	0,0199	-0,0165
Consumer Discretionary	-0,1238	0,0355	-0,1220	-0,2513	0,2545	-0,0766	0,1563	0,0349	0,0057	0,0287	0,0734	0,0061	0,0156	0,0307	0,0666
Consumer Staples	-0,0506	0,0316	-0,0364	-0,0679	0,0462	0,0205	0,0228	0,0228	-0,0178	-0,0077	0,0051	-0,0059	-0,0043	0,0136	-0,0281
Energy	-0,0177	-0,0032	-0,0237	-0,0174	0,0158	-0,0080	0,0201	0,0002	0,0018	0,0021	0,0057	-0,0095	0,0091	0,0079	-0,0168
Financials	-0,1467	-0,0197	-0,0752	-0,1918	0,1538	-0,0471	0,1764	-0,0206	-0,0349	0,0342	0,0301	-0,0350	0,0352	0,0549	-0,0870
Health Care	-0,1816	0,1280	-0,1611	-0,1706	0,1801	0,0758	0,1300	0,1744	-0,0141	-0,0564	0,0608	0,0285	-0,0317	0,0718	0,2331
Industrials	-0,0538	0,0032	-0,0490	-0,1016	0,0705	-0,0067	0,0667	0,0002	-0,0124	0,0029	0,0091	-0,0300	0,0316	0,0338	-0,0356
Information Technology	-0,7131	-0,0512	-0,3308	-0,9328	0,7289	-0,0241	0,6910	0,4806	-0,1076	-0,0723	0,4794	-0,0391	0,1651	0,0921	0,3518
Materials	-0,0077	0,0023	-0,0070	-0,0090	0,0060	-0,0037	0,0145	-0,0013	-0,0002	0,0014	0,0029	-0,0015	0,0031	0,0037	0,0035
Real Estate	-0,0035	0,0004	-0,0026	-0,0051	0,0057	-0,0022	0,0066	-0,0006	-0,0009	-0,0003	0,0007	-0,0020	0,0017	0,0011	-0,0010
Utilities	-0,0111	0,0089	-0,0147	-0,0156	0,0177	-0,0052	0,0152	-0,0004	-0,0034	-0,0048	0,0003	-0,0034	0,0037	0,0067	-0,0062

“ESG effect”

Sectors	$R_{S\&P\ 500}$	R_{ESG}	ESG effect
Communication Services	0,0093	-0,0165	-0,0258
Consumer Discretionary	0,0794	0,0666	-0,0128
Consumer Staples	-0,0189	-0,0281	-0,0092
Energy	-0,0155	-0,0168	-0,0013
Financials	-0,1717	-0,0870	0,0847
Health Care	0,1259	0,2331	0,1072
Industrials	-0,0545	-0,0356	0,0189
Information Technology	0,2856	0,3518	0,0662
Materials	0,0002	0,0035	0,0033
Real Estate	-0,0033	-0,0010	0,0023
Utilities	-0,0064	-0,0062	0,0002

Appendix 8: Standard deviations S&P 500 & ESG benchmark

S&P 500			
Date	Variation	Deviation of the variation from the average	Square of the gap
P1	-1,59	-1,61	0,0259
P2	0,16	0,14	0,0002
P3	-0,95	-0,97	0,0095
P4	-2,10	-2,12	0,0448
P5	1,51	1,49	0,0222
P6	-0,23	-0,25	0,0006
P7	1,68	1,66	0,0277
P8	0,64	0,62	0,0038
P9	-0,12	-0,14	0,0002
P10	-0,01	-0,03	0,0000
P11	0,68	0,66	0,0043
P12	-0,22	-0,24	0,0006
P13	0,45	0,44	0,0019
P14	0,36	0,35	0,0012
Average variation			0,018
Mean squares of deviations (variance)			0,0102
Standard deviation (volatility)			1,01026721
ESG Benchmark			
Date	Variation	Deviation of the variation from the average	Square of the gap
P1	-1,45	-1,49	0,0221
P2	0,09	0,06	0,0000
P3	-0,91	-0,95	0,0090
P4	-1,94	-1,97	0,0389
P5	1,53	1,50	0,0225
P6	-0,10	-0,13	0,0002
P7	1,45	1,42	0,0200
P8	0,78	0,74	0,0055
P9	-0,19	-0,22	0,0005
P10	-0,03	-0,06	0,0000
P11	0,74	0,71	0,0050
P12	-0,11	-0,14	0,0002
P13	0,27	0,24	0,0006
P14	0,34	0,30	0,0009
Average variation			0,034
Mean squares of deviations (variance)			0,0090
Standard deviation (volatility)			0,946084448

Appendix 9: Sharpe Ratios and risk-free rate

Sharpe ratios:

$$Sharpe Ratio_{S\&P\ 500} = \frac{0,1802 - 0,8633}{1,0103} = -0,6762$$

$$Sharpe Ratio_{ESG\ index} = \frac{0,4193 - 0,8633}{0,9461} = -0,4693$$

Risk-free rate: 10-year S&P 500

Date	R_f
11/02/20	1,59
18/02/20	1,55
25/02/20	1,23
3/03/20	1,02
9/03/29	0,54
16/03/20	0,73
23/03/20	0,76
30/03/20	0,7
6/04/20	0,67
13/04/20	0,76
20/04/20	0,63
27/04/20	0,67
4/05/20	0,64
11/05/20	0,73
18/05/20	0,73
Mean	0,8633

Appendix 10: M^2 computation

<i>Standard deviation</i> $S\&P\ 500$	1,0103
<i>Sharpe Ratio</i> $ESG\ index$	-0,4693
R_f	0,8633

$$R'_{ESG\ index} = R_f + \sigma_{S\&P\ 500} \times Sharpe\ ratio_{ESG\ index} = R_f + \sigma_{S\&P\ 500} \times \left(\frac{R_{ESG\ index} - R_f}{\sigma_{ESG\ index}} \right)$$

$$R'_{ESG\ index} = 0,8633 + 1,0103 \times (-0,4693) = 0,3892$$

$$M^2 = R'_{ESG\ index} - R_{S\&P\ 500} = 0,3892 - 0,1802 = 0,2090$$

