

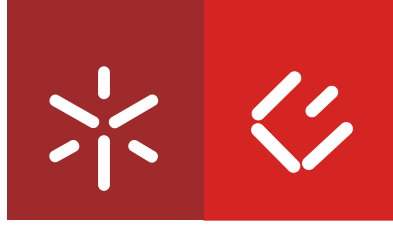
Universidade do Minho
Escola de Economia e Gestão

Ana Rita Gouveia Cunha Machado Lemos

Does Social Screening impact portfolio performance? Specific case of U.S. market

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Dissertação de Mestrado
Mestrado em Finanças

Trabalho efetuado sob a orientação da
Professora Sónia Maria da Silva Faria Nogueira da Silva

julho de 2018

Declaração

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Título da dissertação: Does Social Screening impact portfolio performance? Specific case of U.S. market.

Orientador: Professora Sónia Maria da Silva Faria Nogueira da Silva

Ano de Conclusão: 2018

Designação do Mestrado: Mestrado em Finanças

É AUTORIZADA A REPRODUÇÃO PARCIAL DESTA DISSERTAÇÃO APENAS PARA EFEITO DE INVESTIGAÇÃO, MEDIANTE DECLARAÇÃO ESCRITA DO INTERESSADO, QUE A TAL SE COMPROMETE.

Universidade do Minho. _/_/_

(Ana Rita Gouveia Cunha Machado Lemos)

Agradecimentos

Um agradecimento especial à Escola de Economia e Gestão da Universidade do Minho, direcionado a todos os docentes do Mestrado de Finanças e da licenciatura em Negócios Internacionais, que de algum modo contribuíram para o enriquecimento da minha formação académica e científica.

Um agradecimento especial à Professora Doutora Sónia Silva, pois foi a principal pessoa que me deu a confiança e motivação necessária para a finalização da tese. Foi uma Professora dedicada, incansável e sem ela nada disto seria possível.

Às minhas colegas da universidade, em especial Patrícia Pereira, Filipa Brito e Orlanda Batista, pelos conselhos e partilhas de conhecimento. Agradeço todo o auxílio e apoio manifestado.

Às minhas colegas de trabalho, que foram a minha companhia ao longo destes meses de estudo e trabalho.

Ao João, um agradecimento especial pelo apoio, carinho, por ouvir os meus desabaços e pela transmissão de confiança e de força em todos os momentos. Por tudo a minha enorme gratidão.

Aos meus irmãos Miguel e Francisco, pelo apoio prestado, pela compreensão e por estarem sempre a torcer por mim.

Aos meus pais, pelo apoio, pelo carinho e pela paciência que tiveram comigo. Ao terminar esta etapa da minha vida espero poder retribuir e compensar todo o carinho, apoio e dedicação que constantemente me ofereceram. A vocês tenho a agradecer também toda a educação que me deram, tanto a nível pessoal como a nível académico e profissional. Sem vocês, não seria o que sou hoje nem teria tido a segurança de agarrar todas as oportunidades que a vida me dá. Um enorme obrigado por acreditarem sempre em mim.

A todos dedico este meu trabalho.

“F-E-A-R has two meanings:

Fear Everything And Run

or

Face Everything And Rise”

(Zig Ziglar)

Abstract

Recent literature point out that investors are more aware about social issues and that drive them to apply socially responsible screens when building their portfolios. Therefore, the main goal of this study is to evaluate the financial performance of investments with high socially responsible ratings in comparison with low-rated investments. To test our hypotheses, we collect data from Asset4, namely (social) ratings targeting a sample of U.S. companies and formed portfolios according to different social sub-indicators, which included human rights, diversity, health and safety. Our sample covers the 2003-2016 period. We use unconditional and conditional models to evaluate performance, conditioning our models to the economic cycle.

Our results suggest that socially high-rated portfolios generate more returns comparing to low-rated portfolios; however, this difference is not significant. Comparing with two benchmark indexes - S&P500 and FTSE4GOOD – investing in the high-rated portfolios generate higher returns; once, this difference is not significant.

Furthermore, we extend our analysis across industries and observe that Retail generates higher returns in the case of high-rated portfolios and in the case of the long-short strategy (high-low rated portfolios).

Resumo

A literatura sugere que os investidores estão cada vez mais conscientes sobre questões sociais, o que os levam a querer investir em carteiras socialmente responsáveis. Portanto, o principal objetivo deste estudo é avaliar e comparar o desempenho financeiro de investimentos de carteiras constituídas por empresas com uma alta classificação social com carteiras que contêm empresas com uma menor classificação social. Para testar as nossas hipóteses, recolhemos as classificações sociais das empresas dos EUA através da plataforma Asset4 e formamos carteiras de acordo com diferentes subindicadores sociais, incluindo direitos humanos, diversidade, saúde e segurança. O período de análise é de 2003 a 2016, o que prefaz o total de 13 anos de amostra. Para avaliar o desempenho das carteiras, usamos modelos incondicionais e condicionais, de acordo com as condições económicas.

Os nossos resultados sugerem que as carteiras que contêm as empresas com uma maior classificação social geram maior retorno em comparação com as carteiras que contêm as empresas com menor classificação social. No entanto, essa diferença não é significativa. Comparando com dois índices de referência - S&P500 e FTSE4GOOD -, investir nas carteiras que contêm as empresas com maior classificação social gera retornos mais elevados; Mas mais uma vez, essa diferença não é significativa.

Além disso, estendemos nossa análise para todos os setores e observamos que o setor que gera retornos mais elevados, tanto nas carteiras com as empresas melhor classificadas em termos sociais como na estratégia long-short é o Retalho.

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List of Acronyms

CMA- Conservative Minus Aggressive

CRSP- Center for Research in Security Prices

CSR- Corporate Social Responsibility

ESG- Environmental, Social and Governance

EMH- Efficient Market Hypothesis

HML- High Minus Low

SMB- Small Minus Big

SML- Security Market Line

SR- Social Responsible

SRI- Social Responsible Investing

RMW- Robust Minus Weak

MOM- Momentum

U.S.- United States

U.S.SIF- Forum for Sustainable and Responsible Investment

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1. Introduction

This study explores an important issue about Social Responsible Investing (SRI), which is to test if stocks rated with higher SRI scores generate higher returns than low-rated stocks. SRI is defined as “an investment process that considers the social and environmental consequences of investors both positive and negative within the context of rigorous financial analysis” (Social Investment Forum, 2005). Furthermore, SRI has been considered a trending topic among investors over the past couple of decades. According to U.S. SIF¹ foundation (2016), from 40.3 trillion dollars of assets under professional management in the US market, 8.72 trillion dollars corresponds to social responsible (SR) investments, which represent around 22% of total assets in the U.S. market and since 2014; those values represent a sustainable investing growth of 33%. This kind of investment process include different purpose and causes, reflecting different types of investment criteria and goals that meet investor’s needs (even spiritual needs). In the beginning, SRI just shun financial stocks of companies from controversial business areas, such as: alcohol, tobacco, gambling, military weapons, nuclear power business, and other business industries also denominated as sin assets. However, the niche of SR investments areas became larger; managers began to include social screens into their investment decisions, based on environmental, social and governance (ESG) criteria. The top three of social and environmental issues are political spending/lobbying, climate change and human rights, representing (approximately) 375, 250 and 140 number of shareholders’ proposals, respectively. The political spending/lobbying and climate change has been on top since 2014, and human rights reached the top in 2015; human rights are an increasing issue among investors. Following this trend, we add to our research this social (human rights) filter.

Previous literature about SRI portfolio performance is not consensual. Since there are different methods to evaluate portfolio performance, that leads to different results and conclusions. Moreover, the use of different data and different periods of time difficult the comparison of results across studies. Thereby, prior SRI results may be divided into three groups: i) group of studies that advocate that performance of SRI portfolio is higher than the performance of conventional portfolios (e.g., Kempf. A.. & Osthoff. P. (2007)); ii) group of studies that defend that performance of SRI portfolio is lower than the performance of conventional portfolios (e.g., Walley, N. & Whitehead, B. (1999)); and iii) group of studies that SRI does not generate higher or

¹ Acronym for “The Forum for Sustainable and Responsible Investment”. Hereafter, USSIF.

lower returns comparing to conventional investments, i.e., the “no effect” hypothesis (e.g. Statman, M. and Glushkov, D. (2009).

In this context, we borrow the arguments from Kempf, A. & Osthoff, P. (2007), and analyse if social high-rated investments generate higher returns than low-rated investments. Hence, we collect information from database Asset4 about the (social) ratings for a sample of U.S. companies and constructed portfolios according to different social sub-indicators, such as: Product Responsibility; Community; Human Rights; Diversity and Opportunity; Employment Quality; Health and Safety; Training and Development; and Social Indicator. Based on the aggregate social indicator and in each sub-indicator, it was formed three types of portfolios: 10% top and 10% bottom, which represents the 10% high-rated companies and the 10% low-rated companies, respectively; the difference between high- and low-rated is the portfolio of interest, which represents the long-short strategy. Our dataset includes 168 observations, from January of 2003 to December of 2016.

We test our research hypotheses using conditional and unconditional performance models. Following the previous literature, the portfolio performance was evaluated using an unconditional and conditional framework based on Carhart (1997) four-factor model and Fama and French (2015) five-factor model. And motivated by conditional framework, we also collected from National Bureau of Economic Research (NBER) information about the economic cycle

Our results suggest that investors generate higher returns investing in companies with a high social score rather than investing in companies with a low social score. So, we concluded that investors can contribute for a good social value and still generate higher returns by investing in the high-rated portfolio. However, the difference between high- and low-rated portfolios returns is not significant.

Moreover, by adding information about the economic cycle, the coefficients' estimates are not significant; we conclude that performance, in general, does not change in recession periods.

Comparing the performance of high-rated portfolios with two benchmark indexes - S&P500 and FTSE4GOOD – we find evidence that high-rated portfolios generate higher returns; once, the difference between high- and low- portfolio is not significant.

Furthermore, when applying the “best-in-class” screening process, results provide evidence that retail generates higher returns in the case of high-rated portfolios and in the case of the long-short strategy (high-low rated portfolios).

In sum, although investors are increasingly concern about social issues, they also seek higher returns; in this context, investors are looking forward combining “business with pleasure”, i.e, investing in companies with higher SRI rating should translate in higher returns comparing to companies with lower SRI rating.

The remaining of this study is organized as follows. Section 2 provides a literature review divided into different subsections highliting the importance of SRI and the possible returns associated. Section 3 presents the hypotheses and the methodology applied. Section 4 describes data and empirical results. Section 5 concludes, points out limitations and some suggestions for further investigation.

2. Literature Review

2.1 Social Responsible Investing (SRI) – Definition and History

According to the U.S. SIF foundation (2016), the industry of professional financial assets management in the U.S. market represents about 40.3 trillion dollars, where 8.72 trillion dollars correspond to SRI assets, representing around 22% of total assets in the U.S. market. Also, since 2014 the world is attending to a sustainable investing growth of 33%. Thereby, the top three of social and environmental investors' issues are political spending/lobbying, climate change and human rights; those issues represent (approximately) 375, 250 and 140 number of shareholders' proposals, respectively. It is worth noting the fact that political and climate change have been on top of those issues since 2014, but human rights only became on top in 2015, which suggest an increasingly issue among investors.

According to U.S. SIF (2005), SRI is "an investment process that considers the social and environmental consequences of investors both positive and negative, within the context of rigorous financial analysis. In this context, different terminologies were adopted by researchers, depending on their meanings, such as: "community investing", for investments related with community issues (e.g., charitable giving, innovative giving, support for housing, support for education, ...); "ethical investing"; "green investing"; "impact investing", "mission-related investing", "responsible investing", "socially responsible investing", "sustainable investing", "values-based investing," , among others.

Investors have several motivations for investing in SRI, including personal values and goals, institutional mission, and the demands of clients, constituents or plan participants in the case of professionals. Besides sustainable investors pretend to maximize their return (as any rationale investor), they also believe that their investments should contribute for progress in social, environmental and governance (ESG) practices. Hence, sustainable investors are looking forward SR investments, such as community, corporate governance, diversity, employee relations, environmental, human rights and product, as well as companies that are not related to controversial business area, such as alcohol, gambling, tobacco, firearms, military and nuclear power. Sustainable investors pretend to be involved in important social, political and environmental issues to fulfil their social duties.

Furthermore, SRI reflects social and political climate, which do not affect all investors in the same way. The emphasis on a specific issue depends on social and political influences. One important example happened in the 60's, when investors were mainly concerned with

investments in causes related to women's civil rights and anti-war movements. Those concerns were pointed out in the speech of Martin Luther King Jr., who was responsible for various civil rights movements and by targeting all companies that were socially irresponsible.

The next subtopic will explain how it is evaluated the performance of SRI according to various authors, followed by their findings.

2.2 Portfolio Performance Evaluation: Theoretical Background

Previous literature on portfolio performance measurement assigned multifactor models in unconditional and conditional models. Unconditional models of performance evaluation assume that both expected returns and risk are constant overtime, independently of the market conditions. Both risk and expected returns are typically measured by averages over the period and those are independently of the market conditions, i.e, those measures do not consider publicly available information. Several studies show that public information variables about the state of the economy are relevant in predicting expected returns and risk (e.g., Fama and French (1989)). However, one of the first measures in literature is unconditional and unifactorial, known as Jensen's (1968) portfolio measure. Therefore, Fama and French (1993) and Carhart (1997) proposed multifactorial models, motivated by the criticism about the limitations of unifactorial models (like Capital Asset Pricing Model), that it is not so efficient predicting expected returns of small firms stocks or firms with higher book-to-market ratio stocks. Fama and French (1993) proposed a multifactorial model known as three-factor model, which also accounts for market premium, but includes firm size (SMB, which means small minus big), and the value (growth) factor book-to-market ratio (HML, which means high minus low). Following this previous research, Carhart (1997) extended the Fama and French (1993) and proposed a four-factor model; the author added the variable Momentum (MOM), which means stocks with high recent returns tend to outperform those with low recent returns in subsequent periods (Jegadeesh, N. & Titman, S. (1993)).

More recent, Fama and French (2015) extended their previous study dated of 1993 and proposed a five-factor model. Hence, the authors added to the previous three-factor model two independent variables to evaluate the performance of a portfolio, which are Robust Minus Weak profitability (RMW) and Conservative Minus Aggressive (CMA), where RMW represents the difference between the diversified portfolios of stocks with robust and weak profitability, and CMA represents the difference between the diversified portfolios of stocks with low (conservative) or

high (aggressive) investment firms. Thereby, the main limitation of unconditional models is that do not account for the time-varying nature of expected returns and risk. In the spirit of the conditional performance evaluation methodology, the expected returns can vary overtime with the state of the economy. The state of the economy is captured by using predetermined public information variables. Several studies (e.g. Fama and French (1989)) suggest that variables related to economic conditions are useful in predicting the returns of stocks and bonds. The underlying argument for using public information variables is based on their availability as these indicators are public and allow for an assessment of the state of the economy, investors can use them to update their predictions on expected returns. Consequently, performance measures should incorporate this information. Conditional models are expected to produce more reliable inferences about portfolio performance (e.g., Christopherson, J., Ferson, W. & Glassman, V. (1998)).

2.3 Previous Empirical Evidence

Previous evidence is not consensual regarding social and environmental screening. Some studies defend that adding social norms and values into investment decision has a cost for the company and that cost should represent an increase in the price of goods and services that firms provide, which translates into a competitive disadvantage and a lower profitability (Walley, N. & Whitehead, B. (1999)). Thereby, the main responsibilities that companies should have is to observe institutional rules/laws and act in order to maximize shareholders' profit.

Another trend of literature on this topic advocates that adding social norms and values into investment decision can generate new market opportunities, also as having an active policy concerning these issues can generate a competitive advantage because managers are able to make a sustainable cost-efficient use of resources (Porter, M. & Van der Linde, C. (1995)). Thus, a more social responsible company can generate more revenue than a less social responsible company. Moreover, some authors believe that SRI reflects the ability of the manager to predict how well the company will perform in the long term and this can be affected by the short-term thinking of the financial community. If this is true, then SRI funds may be highly profitable in the long-term.

Overall, this SRI view defends that companies with high levels of corporate social responsibility (CSR) outperform the firms with less CSR. Furthermore, high levels of CSR indicate high quality of management and reflect competitive advantages relative to less responsible firms.

In this context, previous researchers use social filters as tools for selecting companies with higher management quality. Hence, and according with Statman, M. and Glushkov, D. (2009), the results of SRI studies can be divided into three groups: i) the first group of studies found that social screening policy generate higher returns; ii) the second group of studies found that social screening policy generate lower returns; iii) the last group of studies found no difference between socially responsible investing and conventional investment.

i) First Group of Studies: Social screening generates higher returns

This trend of literature provides evidence that expected returns of socially responsible stocks are higher than the expected returns of conventional stocks. Derwall J. et al. (2005) study the environmental SRI criteria in the U.S. market across 8 years (from 1995 to 2003) and documented evidence that stocks of companies with good environmental records earned higher returns than other stocks; thus, these authors demonstrated a positive relation between CSR and abnormal stock return. Also Kempf, A. & Osthoff, P. (2007) studied social sub-indicators and found that high-rated companies performed better than low-rated companies, where companies are rated according to social sub-indicators, such as: community, diversity, employee relations, environment, human rights and products. This study is corroborated by Einolf, K. (2007), who constructed a portfolio of 978 U.S. Equities and examine whether ESG (Environmental, Social, Governmental) screening affects stock prices. He concluded that building a socially screened portfolio increases potential returns.

In this context, Statman, M. and Glushkov, D. (2009) studied the performance of SRI of U.S. market for 15 years (from 1992 to 2007) and found a positive relation between SRI and employee, as so with community variable. Those findings are corroborated by the results of Edmans, A. (2011), who study environmental and social SRI criteria in the U.S. market for 22 years and found a positive relation between SRI and employee variable.

ii) Second Group of Studies: Social screening generates lower returns

Contrary to the first, this second group of studies found that social screening generates lower returns comparing to no-screening investing. Therefore, Hong. H. & Kacperczyk. M. (2007) studied the performance of sin-stocks (publicly traded companies involved in producing controversial business area) in the U.S. market for 78 years (from 1926 to 2004); the authors argue that investors are willing to sacrifice returns aiming to not compromise their values/norms, but sin stocks are held in smaller proportions by public pension funds compared to conventional stocks and receive less coverage from analysts than other stocks. Their findings also reveal a

higher return of sin stocks relative to other stocks. The authors point out that the demand for sin stocks will decrease, increasing the supply, which in turns will lower the fundamental value of those stocks. Hence, the sin stocks will be appellative to diversify investors' portfolios. This argument is corroborated by Heinkel, R., Kraus, A. & Zechner, J. (2001), who developed an equilibrium model where socially responsible investor avoids investing in sin stocks keeping the prices lower and making higher returns. Also Hong. H. & Kacperczyk. M. (2007) uncover similar findings.

Kempf, A. & Osthoff, P. (2007) also studied the performance of sin stocks in the U.S. market for 13 years (from 1991 to 2004). Similarly, to Hong. H. & Kacperczyk. M. (2007), Kempf, A. & Osthoff, P. (2007) also found that sin stocks outperform better than comparable stocks, but their results were not statistically significant.

iii) Third Group of Studies: Social screening generates the same returns or the "no effect" hypothesis

This third group represents a neutral result: the expected returns of socially responsible stocks are equal to the expected returns of conventional stocks. This hypothesis is supported if the characteristics of social responsibility, which are consistent with the idea that expected returns of socially responsible stocks are lower than the expected returns of conventional stocks, are counterbalanced with the idea that expected returns of socially responsible stocks are higher than the expected returns of conventional stocks. Consistent with this hypothesis, Statman, M. and Glushkov, D. (2009) found that stocks of companies with good records on employee relations or similar social responsibility criteria registered higher returns comparing with stocks of companies with poor ratings; however, they also found that stocks of 'shunned' companies registered higher returns than stocks of companies in other industries; the two effects offset each other and they do not reject the "no effect" hypothesis.

Some past literature founds support for the "no effect" hypothesis. Renneboog, L., Horst, J. T. & Zhang, C. (2008) studied 17 countries for 12 years (from 1991 to 2003) and show evidence that in most countries SRI funds do not underperform the conventional funds (except European and Asia SRI funds, where SRI underperforms regarding the conventional funds), which suggests a "no effect" on the performance.

In sum, previous studies provide evidence that social screening policy generally affects portfolio performance; however, the results are mixed. Consistent with those mix findings, prior

results document that socially screening policy portfolios may result in higher returns, lower returns or no significant difference in returns when compared with conventional portfolios.

3. Hypothesis, Methodology and Data

3.1 Hypothesis

The purpose of this study is to analyze whether portfolios with higher scores of SRI rating perform better, worst or the same as portfolios with lower scores of SRI rating. According to Kempf, A. & Osthoff, P. (2007), SR portfolios outperform conventional portfolios. In the case of the high-rated portfolios, the market generates higher returns than the social portfolios. It is possible to see that investors generate higher returns when investing in companies with a high social score rather than investing in companies with a low social score. So, it can be concluded that investors can contribute for a good social value and still generate higher returns by investing in the high-rated portfolio. Hence, we formulate our first hypothesis:

Hypothesis 1: High-rated portfolios generate higher returns comparing to low-rated portfolios.

Hypothesis 2.a: SRI generate higher returns relative to the general market index.

Hypothesis 2.b: SRI generate higher returns relative to the sustainable market index.

Hypothesis 3: "Best-in-Class" screening generates high-rated portfolios that outperforms low-rated portfolio.

3.2 Methodology

According to the aim of this research, to evaluate the performance of SRI, we run unconditional and conditional performance models, explained in the next subsections.

3.2.1 Unconditional Models

Carhart (1997) four-factor model

Carhart (1997) proposed a multifactorial model known as the four-factor model, which accounts for firm market premium, size (Small Minus Big), book-to-market ratio (High Minus Low), and Momentum market premium. Following previous research, Carhart (1997) extended the Fama and French model and proposed four-factor model; the author added the variable Momentum (MOM) proposed by Jegadeesh, N. & Titman, S. (1993).

The equation (1) displays Carhart (1997) four-factor model

$$r_{i,t} = \alpha_i + \beta_{1i}(R_{M_t} - R_{F_t}) + \beta_{2i}(SMB_t) + \beta_{3i}(HML_t) + \beta_{4i}(MOM_t) + \varepsilon_{it}$$

(1)

Where the dependent variable ($r_{i,t}$) represents the excess return of portfolio i in month t (excess return over the risk-free rate). In other words, $r_{i,t}$ represents the excess return of the portfolio. α_i represents the abnormal return, which suggests that if alpha is positive and

statistically significant, the stock outperforms the market. $\beta_{1i}, \beta_{2i}, \beta_{3i}$ are the factors' coefficients, which represent the beta of each one of the independent variables, where the independent variable $r_{m,t}$ represents the excess return of the market m in the month t (excess return over the risk-free rate); the independent variable SMB_t means small firms minus big firms, i.e., difference in expected return between a portfolio of small stocks and a portfolio of large stocks; the independent variable HML_t means high minus low and represents the difference between portfolio return of a high book-to-market stocks and a portfolio return of a low book-to-market stocks; the independent variable MOM_t is momentum and means the tendency of stock price to continue rising if it is going up or to continue declining if it is going down.

Fama and French (2015) Five-Factor Model

Recently, Fama and French (2015) proposed a five-factor model. Hence, the authors added to their three-factor model (Fama and French, 1993) two independent variables to evaluate the performance of a portfolio, which are Robust Minus Weak profitability (RMW) and Conservative Minus Aggressive (CMA). Once, $\beta_{1i}, \beta_{2i}, \beta_{3i}, \beta_{4i}, \beta_{5i}$ are the factors' coefficients, which represents the beta on each of the factors, where the independent variables $r_{m,t}, SMB_t, HML_t$ represent the same variables as described before and, additionally, β_{4i} is the coefficient of RMW (Robust minus Weak), which represents the difference in returns between a portfolio of a high profitability stocks and a portfolio of a low profitability stocks, and β_{5i} is the coefficient of CMA (Conservative minus Aggressive), that is the difference in returns between a portfolio of a high investment stocks and a portfolio of a low investment stocks. Once again, α_i represents the abnormal return, which suggests that if alpha is positive and statistically significant, the stock outperforms the market.

$$r_{i,t} = \alpha_i + \beta_{1i}(R_{M_t} - R_{F_t}) + \beta_{2i}(SMB_t) + \beta_{3i}(HML_t) + \beta_{4i}(RMW_t) + \beta_{5i}(CMA_t) + \varepsilon_{it} \quad (2)$$

However, unconditional models tend to produce incorrect performance estimates, since they can mix up the normal risk variability and risk premiums with manager's performance. Furthermore, and according to previous researchers (e.g., Leite, P.A. and Cortez, M.C. (2009)), these measures have been recognized as biased, specially when portfolio managers exhibit market timing skills or engage in dynamic investment strategies resulting in time-varying risk.

Overall, previous evidence show the need of adding public information variables related to economic conditions. In this context, a new stream of literature explore conditional models, i.e, models conditioned by macroeconomic variables that were suggested by, e.g., Christopherson,

J., Ferson, W. & Glassman, V. (1998); those authors defend that those models incorporate the changes in risk over time, producing more reliable and robust estimates.

3.2.2 Conditional Models

An alternative approach to conditioning portfolio performance models to the state of economy is using a dummy variable, which can represent other variables rather than economic ones. This method represents advantages, because it avoids problems of persistent time series in the information variables and the assumptions that betas and alphas are a linear function of the information variables (Areal. N., Cortez. M. C. & Silva. F. (2013)).

According to Areal. N., Cortez. M. C. & Silva. F. (2013), the Carhart (1997) four-factor model conditional to public information can be expressed as in equation (5).

$$r_{i,t} = \alpha_i + \alpha_{rec,i}D_t + \beta_{1i} * (R_{M_t} - R_{F_t}) + \beta_{1rec,i} * r_{m,t} * D_t + \beta_{2i} * HML_t + \beta_{2rec,i} * HML_t * D_t + \beta_{3i} * SMB_t + \beta_{3rec,i} * SMB_t * D_t + \beta_{4i} * MOM_t + \beta_{4rec,i} * MOM_t * D_t + \varepsilon_{it} \quad (3)$$

where D_t represents a dummy variable that assumes a value of 0 in periods of expansion/non-crisis and a value of 1 in recessions/crisis.

Following the model before, we can conditioned the Fama and French (2015) five-factor model to public information variables, as can be seen in equation (4).

$$r_{i,t} = \alpha_i + \alpha_{rec,i}D_t + \beta_{1i} * (R_{M_t} - R_{F_t}) + \beta_{1rec,i} * r_{m,t} * D_t + \beta_{2i} * HML_t + \beta_{2rec,i} * HML_t * D_t + \beta_{3i} * SMB_t + \beta_{3rec,i} * SMB_t * D_t + \beta_{4i} * RMW_t + \beta_{4rec,i} * RMW_t * D_t + \beta_{5i} * CMA_t + \beta_{5rec,i} * CMA_t * D_t + \varepsilon_{it} \quad (4)$$

where D_t represents a dummy variable that assumes a value of 1 in certain conditions and zero otherwise.

3.3 Data

According to the purpose of this research, i.e., to examine the performance of SRI, we formed two types of screening portfolios (positive and best-in-class) based on social indicators. For the positive portfolio screening, we collected data from Asset4, which is database administer by Thomson Reuters that provides ESG (Environmental, Social and Governance) data on more

than 5000 companies. ESG Asset4 database only supplies SRI rating information since 2002, which means that data were collected since that date. Asset4 publish new ratings every year, i.e., every year ratings are updated, which means that some companies are dropped out and others are added to our database. The information about companies and respective ratings is available in Appendix A.

We collected the ratings for all companies from 2002 to 2015 (13 years), according to their SRI ratings (rated from 0 to 100). ESG supplies information regarding the overall balanced view of a company's performance using three indicators: Environmental, Social and Corporate Governance. Environmental indicator measures the company's impact on the natural systems, such as air, land and water, as well as on complete ecosystems. It reflects how well a company uses best management practices to avoid environmental risks/incidents as well as the ability to generate long term shareholder value using environmental opportunities. Social indicator measures a company's capacity to generate trust and loyalty with its workforce to customers and society, through its use of best management practices. It reflects the company's reputation and the health of its license to operate, which are key factors in determining its ability to generate long term shareholder value. Corporate governance indicator measures a company's systems and processes, which ensure that its board members and executives act in the best interests of its long-term shareholders. It reflects a company's capacity, through its use of best management practices, to direct and control its rights and responsibilities through the creation of incentives, as well as checks and balances to generate long term shareholder value. In this study we use the social indicator, which is divided into seven sub-indicators: customer/product responsibility, society/community, society/human rights, workforce/diversity and opportunity, workforce/employment quality, workforce/health and safety, workforce/training and development. All sub-indicators are fully explained in Appendix B.

Consistent with our aims, and based on the ASSET4 rating, it was formed three equally-weighted portfolios for each social sub-indicator: i) the high-rated portfolio, which consists on the top 10% of all stocks; ii) the low-rated portfolio, which consists on the bottom 10% of all stocks; iii) the long-short strategy, which consists on the difference between the high and low portfolios.

The starting point of portfolio performance evaluation is to choose the best model to estimate returns. Thus, we estimate discrete returns of stocks and two different benchmarks: S&P500 and

FTSE4GOOD. We collected from Datastream², namely the monthly “Return Index” of all companies rated in Asset4. Then we estimate discrete returns monthly, as follows:

$$R_t = \frac{P_t - P_{t-1}}{P_{t-1}} \quad (5)$$

Then we divide into three equally-weighted portfolios: i) high-rated; ii) low-rated; iii) long-short strategy (once, high-rated minus low-rated portfolios). Thus, the ratings of the companies were collected annually and the returns were collected monthly. It is important noting that, despite we collect data from 2002 to 2015, our sample only starts at 2003 because ratings were collected at the end of each year and is lagged one year. So, the returns of the companies of 2003 was classified using the ratings of 2002, and so on.

For the best-in-class screening the process was the same, but companies were assigned into ten different industries, based on their SIC codes. Then, all companies were rated according to SRI ratings of each industry class. Then we constructed equally-weighted portfolios. Appendix C displays the lists of those equally-weighted portfolios.

To assess the portfolios' performance, we estimate both Carhart (1997) four-factor Model and fama and french (2015) five-factor model; it is consensual among investors that the more suitable model for evaluating the performance of SRI funds are the Fama and French (1993) three-factor model and the Carhart (1997) four-factor model. However, Fama and French (1993) three-factor model was recently extended for a new version, the Fama and French (2015) five-factor model. The independent variables, namely, excess return of the market portfolio, size, value, momentum, profitability and investment variables, were collected from the Kenneth R. French data library available on his website (http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html). The indexes of the U.S. market (S&P500) were collected from CRSP (Center for Research in Security Prices). It was also used a sustainable index - FTSE4GOOD - aiming to understand if SRI perform better than the conventional investments and the sustainable index.

² The labels of Datastream used were: “F4TG BUS”- ftse4good; “S&Pcomp”- S&P500; “WC07021”-Sic Code; “LA4CTYUS”- Asset4 U.S. Market; “SOPR”- Customer/Product Responsibility; “SOCO”-Social/Community; “SOHR”-Social/Human Rights; “SODO”-Workforce/Diversity&Opportunity; “SOEQ”- Workforce/Employment Quality; “SOHS”- Workforce/Health&Safety; “SOTD”- Workforce/Training&Development.

Finally, motivated by conditional framework, we also collected from National Bureau of Economic Research (NBER) information about the economic cycle.

3.2.1 Data Description

According to the objectives of this work, we constructed equally-weighted portfolios for each social sub-indicator. Tables 1 and 2 describe equally-weighted portfolios for each social sub-indicator - customer/product responsibility, society/community, society/human rights, workforce/diversity and opportunity, workforce/employment quality, workforce/health and safety, workforce/training and development.

We observe that, on average, the (mean) excess returns of portfolios are negative. Skewness and kurtosis are far from their normal values. If the skewness is negative (happens frequently in time series returns), then the left tail is longer than the right tail, which suggests the underestimation of the risk. On the other hand, if the skewness is positive, the distribution has a longer right tail, which suggests the overestimation of the risk. The results for the Jarque-Bera test reject the hypothesis of the portfolios' returns being normally distributed; this evidence reinforces the use of conditional models of performance evaluation (Adcock, C. J., Cortez, M. C., Armada, M. R., & Silva, F. (2012).

Concerning the impact of extreme observations, known as outliers, the values of maximum and minimum are not consider to be "alarming".

Table 1- Descriptive Statistics I

Table 1 and 2 provide descriptive statistics for each portfolio. Each portfolio is composed by companies that ASSET4 classified according to several criterias - Social, Environmental and Governance. In our study, each portfolio is composed by companies that were rated according to seven social sub-indicators: PR means Product Responsibility; CO means Community; HR means Human Rights; DO means Diversity and Opportunity; EQ means Employment Quality; HS means Health and Safety; TD means Training and Development. SO means Social Indicator. All sub-indicators are described in Appendix C. The suffix H means “High”. The suffix L means “Low”. H-L represents the long-short strategy, it is calculated as the difference between the high and low portfolio for each sub-indicator. The period of the sample is 13 years (from January of 2003 to December of 2016), which totalizes 168 observations. Jarque-Bera test for normality performs under the null hypothesis that returns are normal distributed.

	PRH	PRL	H-L	COH	COL	H-L	HRH	HRL	H-L	DOH	DOL	H-L
Mean	0.009555	-0.010692	-0.001137	0.009122	-0.013852	-0.00473	0.009518	-0.010624	-0.001105	0.01041	-0.010811	-0.000401
Median	0.01502	-0.010692	-0.000794	0.011909	-0.016738	-0.00351	0.010068	-0.010088	0.000737	0.010532	-0.014808	-0.000229
Std.Devi.	0.049864	0.053404	0.018327	0.044313	0.058856	0.026952	0.046363	0.059134	0.022378	0.042123	0.057449	0.023981
Skewness	-0.834843	0.282793	-0.114265	-0.716183	-0.051077	-1.767393	-0.572774	0.062961	-0.716223	-0.271783	0.189964	-0.313691
Kurtosis	6.63378	5.014988	3.597023	6.241625	7.74229	11.76718	6.725868	6.679225	5.890727	5.410586	7.382177	5.379847
Maximum	0.153375	0.203745	0.057788	0.14158	0.254707	0.0614	0.164503	0.23563	0.062132	0.170319	0.252738	0.087751
Minimum	-0.233918	-0.205183	-0.05522	-0.204095	-0.286954	-0.150466	-0.221544	-0.274483	-0.10998	-0.164987	-0.278681	-0.108361
Jarque-Bera	111.9455	30.66045	2.860631	87.91862	157.4983	625.5066	106.3606	94.86789	72.85743	42.74473	135.4348	42.40096
P-value	0.000	0.000	0.239233	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Obs.	168	168	168	168	168	168	168	168	168	168	168	168

Table 2 - Descriptive Statistics II

	EQH	EQL	H-L	HSH	HSL	H-L	TDH	TDL	H-L	SOH	SOL	H-L
Mean	0.009269	-0.013228	-0.003959	0.011443	-0.011162	0.000281	0.010139	-0.011289	-0.00115	0.009504	-0.013051	0.009504
Median	0.01225	-0.016806	-0.004001	0.014392	-0.012059	0.000161	0.01374	-0.013058	-0.001337	0.012585	-0.018757	0.012585
Std.Deviation	0.042808	0.058744	0.025646	0.049497	0.055219	0.0265	0.046325	0.058259	0.021294	0.04231	0.05671	0.04231
Skewness	-0.559708	-0.03401	-1.340545	-0.687339	0.225052	0.129448	-0.497065	0.395418	-0.147453	-0.638876	0.390255	-0.638876
Kurtosis	5.291716	6.947915	9.132503	7.093347	6.230646	2.902158	7.385829	7.252387	4.152173	6.240031	7.727312	6.240031
Maximum	0.137774	0.234425	0.060004	0.17047	0.223165	0.068793	0.197573	0.272113	0.072228	0.14354	0.262354	0.14354
Minimum	-0.174421	-0.289223	-0.152377	-0.239856	-0.244064	-0.073594	-0.218882	-0.242995	-0.075389	-0.190898	-0.265486	-0.190898
Jarque-Bera	45.53539	109.1346	313.5709	130.5166	74.47766	0.536199	141.5666	130.9575	9.901305	84.91317	160.6967	84.91317
Pvalue	0.000	0.000	0.000	0.000	0.000	0.764832	0.000	0.000	0.007079	0.000	0.000	0.000
Obs.	168	168	168	168	168	168	168	168	168	168	168	168

4. Empirical Results

4.1 Positive Screening for social indicator

Empirical analysis is conducted using unconditional and conditional models. As described in Subsection 3.2 (Methodology), we will apply both Carhart (1997) four-factor model and Fama and French (2015) five-factor model, first using an unconditional framework, and then conditioning the models to public information.

4.1.1 Unconditional Models

Table 3 shows the results using the Carhart (1997) four-factor unconditional model, comparing the performance of social indicator and sub-indicators with the general market, using S&P500 as the benchmark index.

Table 3 - Carhart (1997) Four-Factor (Unconditional) Model

This table shows the output of the *Carhart (1997) four-factor model*. $r_{i,t} = \alpha_i + \beta_{1i}(R_{M_t} - R_{F_t}) + \beta_{2i}(SMB_t) + \beta_{3i}(HML_t) + \beta_{4i}(MOM_t) + \varepsilon_{it}$. Each portfolio is composed by companies that ASSET4 classify according to several criteria - Social, Environmental and Governance. In our study, each portfolio is composed by companies that were rated according to seven social sub-indicators: PR means Product Responsibility; CO means Community; HR means Human Rights; DO means Diversity and Opportunity; EQ means Employment Quality; HS means Health and Safety; TD means Training and Development. SO means Social Indicator. All sub-indicators are described in Appendix C. The suffix H means "High". The suffix L means "Low". α_i represents the returns of each portfolio, measured as percentage. $\beta_{1i}, \beta_{2i}, \beta_{3i}, \beta_{4i}$ are the coefficients of independent variables of the Carhart (1997) four-factor model, such as excess market return, SMB, HML and Momentum, respectively. Adjusted R^2 represents the explanation power of all dependent variables. H-L represents the long-short strategy, calculated as the difference between the high and low portfolio for each sub-indicator. S&P500 is the market benchmark. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively. P -value of t Statistic is reported below each coefficient estimate; robust t Statistic based on Newey-West heteroskedasticity and autocorrelation adjusted standard errors. The period of the sample is 13 years (from January of 2003 to December of 2016), which totalizes 168 observations. Panel A reports the results using a social indicator and Panel B presents using results using seven sub-indicators.

Panel A- Social Indicator						
	α_i	β_{1i}	β_{2i}	β_{3i}	β_{4i}	Adj. R ²
SOH	0.223*** 0.004	0.973*** 0.000	0.126*** 0.000	-0.029 0.305	-0.104*** 0.000	95%
SOL	-0.370*** 0.007	-1.059*** 0.000	-0.571*** 0.000	-0.157*** 0.009	0.211*** 0.000	91%
H-L	-0.147 0.278	-0.086* 0.084	-0.445*** 0.000	-0.187*** 0.006	0.107*** 0.008	44%
Panel B - Social Sub-Indicator						
	α_i	β_{1i}	β_{2i}	β_{3i}	β_{4i}	Adj. R ²
PRH	0.092	1.099***	0.306***	-0.034	-0.118***	94%

	α_i	β_{1i}	β_{2i}	β_{3i}	β_{4i}	Adj. R ²
	0.415	0.000	0.000	0.572	0.000	
PRL	-0.176	-1.041***	-0.510***	-0.069	0.169***	90%
	0.228	0.000	0.000	0.263	0.000	
H-L	-0.085	0.057	-0.204***	-0.102**	0.051	10%
	0.488	0.240	0.000	0.092	0.220	
COH	0.144*	1.009***	0.169***	0.010	-0.085***	95%
	0.077	0.000	0.000	0.810	0.002	
COL	-0.435***	-1.097***	-0.651***	0.137*	0.279***	89%
	0.009	0.000	0.000	0.096	0.000	
H-L	-0.290**	-0.088**	-0.482***	0.147	0.194***	35%
	0.090	0.074	0.000	0.133	0.004	
HRH	0.158*	1.032***	0.221***	-0.040	-0.130***	95%
	0.053	0.000	0.000	0.311	0.000	
HRL	-0.073	-1.156***	-0.490***	-0.211***	0.207***	94%
	0.579	0.000	0.000	0.000	0.001	
H-L	0.085	-0.124***	-0.268***	-0.251***	0.077	41%
	0.516	0.001	0.000	0.000	0.184	
DOH	0.3323***	0.925***	0.126***	0.085*	-0.130***	95%
	0.000	0.000	0.003	0.068	0.000	
DOL	-0.112	-1.114****	-0.619***	-0.016	0.207***	93%
	0.348	0.000	0.000	0.751	0.000	
H-L	0.220	-0.189***	-0.494***	0.069	0.076**	48%
	0.114	0.001	0.000	0.328	0.027	
EQH	0.1786**	0.973***	0.190***	0.024	-0.070*	95%
	0.023	0.000	0.000	0.388	0.000	
EQL	-0.3542**	-1.082***	-0.650***	-0.126	0.219***	91%
	0.012	0.000	0.000	0.113	0.001	
H-L	-0.176	-0.108**	-0.460***	-0.102	0.150***	45%
	0.224	0.021	0.000	0.211	0.010	
HSH	0.311**	1.083***	0.233***	-0.028	-0.105**	89%
	0.043	0.000	0.000	0.725	0.019	
HSL	-0.200*	-1.029***	-0.595***	-0.130**	0.199***	92%
	0.070	0.000	0.000	0.047	0.000	
H-L	0.111	0.054	-0.363***	-0.158	0.095	17%
	0.556	0.399	0.000	0.157	0.140	
TDH	0.2133**	1.036***	0.223***	-0.003	-0.107***	95%
	0.015	0.000	0.000	0.919	0.009	
TDL	-0.141	-1.126***	-0.624***	-0.115	0.150***	95%
	0.323	0.000	0.000	0.160	0.001	
H-L	0.072	-0.091**	-0.401***	-0.118	0.043*	38%
	0.576	0.033	0.000	0.140	0.094	

Panel A:

Panel A reports the results using the social indicator (aggregate). We can observe that the high-rated portfolio (SOH) coefficient of alpha is positive and significant at the 1 percent level. Conversely, the low-rated portfolio (SOL) alpha coefficient is negative and significant at the 1 percent level. This suggests that investors generate higher returns when investing in portfolios composed by the top 10% of social high-ranked companies, which is consistent with the evidence provided by Kempf, A. & Osthoff, P. (2007).

The results of $\beta_{1i}(R_{M_t} - R_{F_t})$ display positive (negative) and significant estimates (at the 1 percent level) for all high-rated (low-rated) portfolios across sub-indicators. Nevertheless, our main variable of interest is the long-short strategy, denoted by H-L, presents mix results; the coefficients' estimates display mix signs, but the significant ones are negative. These results suggest that the high-rated portfolio overperformed the market.

The coefficients' estimates of $\beta_{2i}(SMB_t)$ are significant at the 1 percent level across estimations and it is positive for SOH portfolio and negative for SOL and H-L portfolio, meaning that SOH includes more small caps, and SOL and H-L include more stocks of large firms (which also stands out in H-L portfolio). Regarding the coefficient $\beta_{3i}(HML_t)$, we observe that the coefficients are negative across estimates, but only low-rated and H-L portfolios are significant at the 1 percent level; thus, those portfolios include more growth stocks than value stocks. Finally, the coefficient of variable Momentum β_{4i} is negative and significant at the 1 percent level in the case of SOH portfolio and positive and significant at the 1 percent level for both SOL and H-L portfolios. This evidence suggests that the high-rated portfolio (SOH) includes more stocks that underperformed in the last year, while the low-rated portfolio includes more stocks that overperformed in the last year; the H-L portfolio reflects this overperformance.

Panel B:

Panel B displays the results using sub-indicators, as described in Appendix C. As we can see, all high-rated portfolios present positive and significant alphas (except in the case of Product Responsibility – PRH). On the contrary, all low-rated portfolios present negative alphas, but only Community (COL) and Employment Quality (EQL) display significant estimates. Regarding the long-short strategy (H-L), only in the Community sub-indicator we find a negative and significant alpha at the 5 percent level, meaning that is indifferent to investors to use several screens at the same time (being counterproductive the use of the sub-indicator Community).

The results of $\beta_{1i}(R_{M_t} - R_{F_t})$ display positive (negative) and significant estimates (at the 1 percent level) for all high-rated (low-rated) portfolios across sub-indicators. Nevertheless, our main variable of interest is the long-short strategy, denoted by H-L, presents mix results; the coefficients' estimates display mix signs, but the significant ones are negative.

The coefficients' estimates of $\beta_{2i}(SMB_t)$ are very similar to estimates in Panel A; high-rated portfolios include more small stocks than low rated portfolios, but large firms returns overperform small caps (this is visible in the long-short strategy portfolio). Concerning coefficient $\beta_{3i}(HML_t)$, we can observe that the coefficients present mix signs across estimates, but the estimates that display higher significance (if we consider a cut-off at the 5 percent level) are negative, meaning that those low-rated and H-L portfolios include more growth stocks which outperform value stocks, i.e, growth stocks returns outperform value stock returns.

The results also document that the coefficients of variable Momentum β_{4i} are very similar to the estimates uncovered in Panel A; once, this evidence suggests that the high-rated portfolio (SOH) includes more stocks that underperformed in the last year, while the low-rated portfolio includes more stocks that overperformed in the last year; the H-L portfolio reflects this overperformance.

Following the methodology stated in the previous section, we run Fama and French (2015) five-factor model. Table 4 provide the results.

Table 4 - Fama and French (2015) Five-Factor (Unconditional) Model

This table shows the output of the *Fama and French (2015) five-factor model*: $r_{i,t} = \alpha_i + \beta_{1i}(R_{M_t} - R_{F_t}) + \beta_{2i}(SMB_t) + \beta_{3i}(HML_t) + \beta_{4i}(RMW_t) + \beta_{5i}(CMA_t)$. Each portfolio is composed by companies that ASSET4 classified according to several criterias - Social, Environmental and Governance. In our study, each portfolio is composed by companies that were rated according to seven social sub-indicators: PR means Product Responsibility; CO means Community; HR means Human Rights; DO means Diversity and Opportunity; EQ means Employment Quality; HS means Health and Safety; TD means Training and Development. SO means Social Indicator. All sub-indicators are described in Appendix C. The suffix H means "High". The suffix L means "Low". α_i represents the returns of each portfolio, measured as percentage. $\beta_{1i}, \beta_{2i}, \beta_{3i}, \beta_{4i}, \beta_{5i}$ are the coefficients of independent variables of the Fama and French (2015) five-factor model: excess market return, SMB, HML, RMW and CMA, respectively. Adjusted R² represents the explanation power of all dependent variables. H-L represents the long-short strategy, calculated as the difference between the high and low portfolio for each sub-indicator. S&P500 is the market index banckmark. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively. *P*value of *t* Statistic is reported below each coefficient'estimate; robust *t* Statistic based on Newey-West heteroskedasticity and autocorrelation adjusted standard errors. The period of the sample is 13

years (from January of 2003 to December of 2016), which totalizes 168 observations. Panel A reports the results using a social indicator and Panel B presents using results using seven sub-indicators.

Panel A- Social Indicator							
	α_i	β_{1i}	β_{2i}	β_{3i}	β_{4i}	β_{5i}	Adj. R ²
SOH	0.190** <i>0.024</i>	1.011*** <i>0.000</i>	0.129*** <i>0.001</i>	0.036 <i>0.405</i>	0.037 <i>0.561</i>	-0.018 <i>0.846</i>	94%
SOL	-0.411*** <i>0.004</i>	-1.086*** <i>0.000</i>	-0.533*** <i>0.000</i>	-0.361*** <i>0.000</i>	0.168 <i>0.125</i>	0.304** <i>0.017</i>	89%
H-L	-0.221*** <i>0.105</i>	-0.074** <i>0.072</i>	-0.404*** <i>0.000</i>	-0.325*** <i>0.000</i>	0.204* <i>0.052</i>	0.286*** <i>0.007</i>	44%
Panel B - Social Sub-Indicator							
	α_i	β_{1i}	β_{2i}	β_{3i}	β_{4i}	β_{5i}	Adj. R ²
PRH	0.127 <i>0.245</i>	1.108*** <i>0.000</i>	0.274*** <i>0.000</i>	0.075 <i>0.203</i>	-0.138* <i>0.057</i>	-0.147 <i>0.114</i>	94%
PRL	-0.202 <i>0.190</i>	-1.066*** <i>0.000</i>	-0.494*** <i>0.000</i>	-0.255*** <i>0.003</i>	0.089 <i>0.358</i>	0.333*** <i>0.001</i>	89%
H-L	-0.075 <i>0.538</i>	0.041 <i>0.399</i>	-0.220*** <i>0.000</i>	-0.181*** <i>0.007</i>	-0.048 <i>0.669</i>	0.187*** <i>0.001</i>	10%
COH	0.066 <i>0.447</i>	1.065*** <i>0.000</i>	0.216*** <i>0.000</i>	0.085** <i>0.030</i>	0.206*** <i>0.001</i>	-0.105 <i>0.141</i>	95%
COL	-0.505*** <i>0.005</i>	-1.124*** <i>0.000</i>	-0.560*** <i>0.000</i>	-0.068 <i>0.513</i>	0.343* <i>0.075</i>	0.153 <i>0.303</i>	86%
H-L	-0.439*** <i>0.010</i>	-0.059 <i>0.158</i>	-0.344*** <i>0.002</i>	0.018 <i>0.859</i>	0.549*** <i>0.010</i>	0.048 <i>0.751</i>	35%
HRH	0.099 <i>0.332</i>	1.088*** <i>0.000</i>	0.237*** <i>0.000</i>	0.044 <i>0.374</i>	0.099 <i>0.214</i>	-0.036 <i>0.743</i>	93%
HRL	-0.140 <i>0.279</i>	-1.170*** <i>0.000</i>	-0.419*** <i>0.000</i>	-0.379*** <i>0.000</i>	0.279*** <i>0.006</i>	0.175* <i>0.058</i>	92%
H-L	-0.041 <i>0.747</i>	-0.082** <i>0.062</i>	-0.182** <i>0.014</i>	-0.335*** <i>0.000</i>	0.379*** <i>0.000</i>	0.140 <i>0.177</i>	45%
DOH	0.297*** <i>0.003</i>	0.969*** <i>0.000</i>	0.117** <i>0.022</i>	0.148** <i>0.021</i>	0.007 <i>0.899</i>	0.050 <i>0.580</i>	93%
DOL	-0.107 <i>0.382</i>	-1.161*** <i>0.000</i>	-0.595*** <i>0.000</i>	-0.175** <i>0.024</i>	0.076 <i>0.493</i>	0.145* <i>0.061</i>	91%
H-L	0.189 <i>0.195</i>	-0.191*** <i>0.001</i>	-0.479*** <i>0.000</i>	-0.027 <i>0.724</i>	0.083 <i>0.447</i>	0.200* <i>0.067</i>	47%
EQH	0.186** <i>0.016</i>	0.985*** <i>0.000</i>	0.177*** <i>0.000</i>	0.081** <i>0.014</i>	-0.047 <i>0.427</i>	-0.062 <i>0.375</i>	95%
EQL	-0.357** <i>0.026</i>	-1.128*** <i>0.000</i>	-0.618*** <i>0.000</i>	-0.295*** <i>0.004</i>	0.105 <i>0.395</i>	0.153 <i>0.141</i>	88%
H-L	-0.171 <i>0.271</i>	-0.143*** <i>0.003</i>	-0.441*** <i>0.000</i>	-0.214** <i>0.028</i>	0.057 <i>0.581</i>	0.091 <i>0.389</i>	39%
HSB	0.279* <i>0.105</i>	1.121*** <i>0.000</i>	0.243*** <i>0.000</i>	0.058 <i>0.000</i>	0.054 <i>0.052</i>	-0.099 <i>0.007</i>	89%

	α_i	β_{1i}	β_{2i}	β_{3i}	β_{4i}	β_{5i}	Adj. R ²
	<i>0.075</i>	<i>0.000</i>	<i>0.000</i>	<i>0.498</i>	<i>0.517</i>	<i>0.366</i>	
HSL	-0.255**	-1.046***	-0.523***	-0.266***	0.271**	0.069	90%
	<i>0.030</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.018</i>	<i>0.530</i>	
H-L	0.024	0.075	-0.280***	-0.208***	0.325***	-0.030	17%
	<i>0.906</i>	<i>0.178</i>	<i>0.010</i>	<i>0.080</i>	<i>0.005</i>	<i>0.850</i>	
TDH	0.166**	1.081***	0.231***	0.056	0.066	0.012	94%
	<i>0.044</i>	<i>0.000</i>	<i>0.001</i>	<i>0.176</i>	<i>0.436</i>	<i>0.881</i>	
TDL	-0.155	-1.152***	-0.600***	-0.231***	0.106	0.107	90%
	<i>0.272</i>	<i>0.000</i>	<i>0.000</i>	<i>0.005</i>	<i>0.338</i>	<i>0.473</i>	
H-L	0.012	-0.071	-0.364***	-0.176**	0.172**	0.120	38%
	<i>0.929</i>	<i>0.100</i>	<i>0.000</i>	<i>0.022</i>	<i>0.015</i>	<i>0.316</i>	

Panel A:

Panel A reports the results using the social indicator (aggregate). We can observe that coefficients' estimates of alpha, β_1 , β_2 , and β_3 are very similar to the findings uncover in Panel A of Table 3. Regarding the new variable Robust Minus Weak profitability (RMW), results are not significant, and Conservative Minus Aggressive (CMA), the estimate of low-rated portfolio is positive and significant, meaning that the portfolios are composed by companies with a conservative investment behavior.

Therefore, we only find partial support of hypothesis 1; high-rated portfolios generate higher returns comparing to low-rated portfolios, but our portfolio of interest, the long-short strategy (H-L) does not display statistical significance.

Panel B:

Panel B displays the results using sub-indicators. Once, the sign and significance of coefficients of alpha, β_1 , β_2 , and β_3 are very identical to the results reported in Panel B of Table 3. Regarding RMW, most of the significant values are positive, meaning that low-rated portfolio invest in robust stocks. Concerning CMA, all significant values are positive, meaning that investors should invest in stocks with high investment (called aggressive).

Once, when adding screens we only find partial evidence that supports hypothesis 1.

4.1.2 Conditional Models

To compare the performance of unconditional with conditional models, we estimate full conditional models as previously described in Methodology (section 3). This is justified by the

evidence that conditional framework models allow alpha and betas to vary over time (Christopherson, J., Ferson, W. & Glassman, V. (1998)). To conditioning the performance to public information, and taking into account the information available in NBER, we create a dummy variable that assumes the value 1 for economic recession cycle and 0 otherwise. Table 5 provides the results

Table 5- Carhart (1997) Four-Factor (Conditional) Model

This table shows the results of equation of the following regression: $r_{i,t} = \alpha_i + \alpha_{rec,i}D_t + \beta_{1i} * (R_{M_t} - R_{F_t}) + \beta_{1rec,i} * r_{m,t} * D_t + \beta_{2i} * HML_t + \beta_{2rec,i} * HML_t * D_t + \beta_{3i} * SMB_t + \beta_{3rec,i} * SMB_t * D_t + \beta_{4i} * MOM_t + \beta_{4rec,i} * MOM_t * D_t + \epsilon_{it}$. Each portfolio is composed by companies that ASSET4 classify according to several criteria - Social, Environmental and Governance. In our study, each portfolio is composed by companies that were rated according to seven social sub-indicators: PR means Product Responsibility; CO means Community; HR means Human Rights; DO means Diversity and Opportunity; EQ means Employment Quality; HS means Health and Safety; TD means Training and Development. SO means Social Indicator. All sub-indicators are described in Appendix C. The suffix H means “High”. The suffix L means “Low”. α_i represents the returns of each portfolio, measured as percentage. $\beta_{1i}, \beta_{2i}, \beta_{3i}, \beta_{4i}$ are the coefficients of independent variables of the Carhart (1997) four-factor model,; such as excess market return, SMB, HML and Momentum, respectively. Adjusted R² represents the explanation power of all dependent variables. H-L represents the long-short strategy, calculated as the difference between the high and low portfolio for each sub-indicator. S&P500 is the market benchmark. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively. Pvalue of t Statistic is reported below each coefficient estimate; robust t Statistic based on Newey-West heteroskedasticity and autocorrelation adjusted standard errors. The period of the sample is 13 years (from January of 2003 to December of 2016), which totalizes 168 observations. To conditioning the model to public information, it was created a dummy that takes the value of 1 in expansion periods, and 0 otherwise. Panel A reports the results using a social indicator and Panel B presents using results using seven sub-indicators.

Panel A- Social Indicator											
	α_i	α_{irec}	β_{1i}	β_{1irec}	β_{2i}	β_{2irec}	β_{3i}	β_{3irec}	β_{4i}	β_{4irec}	Adj-R²
SOH	0.239 <i>0.004</i>	0.091 <i>0.708</i>	0.955 <i>0.000</i>	0.058 <i>0.149</i>	-0.043 <i>0.213</i>	0.116* <i>0.068</i>	-0.083 <i>0.006</i>	0.025 <i>0.717</i>	0.001 <i>0.708</i>	-0.006 <i>0.872</i>	96%
SOL	-0.386 <i>0.003</i>	0.783 <i>0.303</i>	-1.048 <i>0.000</i>	0.062 <i>0.612</i>	-0.180 <i>0.009</i>	-0.577* <i>0.083</i>	0.102 <i>0.007</i>	0.156 <i>0.245</i>	0.008 <i>0.303</i>	0.190*** <i>0.000</i>	92%
H-L	-0.147 <i>0.297</i>	0.874 <i>0.234</i>	-0.093 <i>0.016</i>	0.120 <i>0.387</i>	-0.222 <i>0.004</i>	-0.461 <i>0.189</i>	0.019 <i>0.724</i>	0.181 <i>0.208</i>	0.009 <i>0.234</i>	0.184*** <i>0.006</i>	46%
Panel B- Social Sub-Indicator											
	α_i	α_{irec}	β_{1i}	β_{1irec}	β_{2i}	β_{2irec}	β_{3i}	β_{3irec}	β_{4i}	β_{4irec}	Adj-R²
PRH	0.159 <i>0.090</i>	-0.225 <i>0.678</i>	1.045 <i>0.000</i>	0.169** <i>0.017</i>	0.032 <i>0.514</i>	0.224 <i>0.209</i>	-0.109 <i>0.001</i>	-0.280** <i>0.024</i>	-0.002 <i>0.678</i>	0.014 <i>0.758</i>	95%

	α_i	α_{irec}	β_{1i}	$\beta_{1i}rec$	β_{2i}	$\beta_{2i}rec$	β_{3i}	$\beta_{3i}rec$	β_{4i}	$\beta_{4i}rec$	Adj. R ²
PRL	-0.127 <i>0.392</i>	-0.618 <i>0.479</i>	-1.035 <i>0.000</i>	-0.094 <i>0.387</i>	-0.135 <i>0.019</i>	0.171 <i>0.476</i>	0.162 <i>0.000</i>	0.168 <i>0.268</i>	-0.006 <i>0.479</i>	0.003 <i>0.972</i>	90%
H-L	0.032 <i>0.787</i>	-0.843 <i>0.105</i>	0.010 <i>0.843</i>	0.075 <i>0.430</i>	-0.103 <i>0.121</i>	0.395** <i>0.028</i>	0.053 <i>0.301</i>	-0.112 <i>0.498</i>	-0.008 <i>0.105</i>	0.017 <i>0.854</i>	11%
COH	0.138 <i>0.116</i>	0.175 <i>0.489</i>	0.984 <i>0.000</i>	0.098** <i>0.031</i>	0.054 <i>0.205</i>	0.219** <i>0.026</i>	-0.040 <i>0.395</i>	-0.170** <i>0.022</i>	0.002 <i>0.489</i>	-0.044 <i>0.420</i>	95%
COL	-0.474 <i>0.003</i>	0.799 <i>0.481</i>	-1.093 <i>0.000</i>	0.072 <i>0.625</i>	0.142 <i>0.202</i>	-0.416 <i>0.265</i>	0.237 <i>0.017</i>	0.062 <i>0.716</i>	0.008 <i>0.481</i>	0.082 <i>0.495</i>	89%
H-L	-0.336 <i>0.054</i>	0.974 <i>0.416</i>	-0.108 <i>0.060</i>	0.170 <i>0.275</i>	0.196 <i>0.115</i>	-0.197 <i>0.637</i>	0.197 <i>0.139</i>	-0.108 <i>0.572</i>	0.010 <i>0.416</i>	0.038 <i>0.814</i>	34%
HRH	0.142 <i>0.084</i>	0.103 <i>0.774</i>	1.021 <i>0.000</i>	0.038 <i>0.509</i>	-0.026 <i>0.542</i>	0.253** <i>0.075</i>	-0.081 <i>0.002</i>	-0.070 <i>0.423</i>	0.001 <i>0.774</i>	-0.055 <i>0.115</i>	95%
HRL	-0.040 <i>0.730</i>	0.125 <i>0.893</i>	-1.155 <i>0.000</i>	0.037 <i>0.699</i>	-0.251 <i>0.000</i>	0.072 <i>0.623</i>	0.097 <i>0.006</i>	0.089 <i>0.421</i>	0.001 <i>0.893</i>	0.228*** <i>0.009</i>	94%
H-L	0.102 <i>0.464</i>	0.228 <i>0.794</i>	-0.133 <i>0.010</i>	0.075 <i>0.453</i>	-0.277 <i>0.000</i>	0.325** <i>0.027</i>	0.016 <i>0.705</i>	0.019 <i>0.884</i>	0.002 <i>0.794</i>	0.173* <i>0.082</i>	42%
DOH	0.238 <i>0.003</i>	0.272 <i>0.199</i>	0.961 <i>0.000</i>	-0.105** <i>0.013</i>	0.088 <i>0.057</i>	0.166 <i>0.136</i>	-0.068 <i>0.013</i>	0.015 <i>0.841</i>	0.003 <i>0.199</i>	-0.108*** <i>0.003</i>	95%
DOL	-0.147 <i>0.178</i>	0.617 <i>0.541</i>	-1.085 <i>0.000</i>	-0.016 <i>0.905</i>	-0.056 <i>0.348</i>	-0.391* <i>0.088</i>	0.113 <i>0.001</i>	0.193 <i>0.106</i>	0.006 <i>0.541</i>	0.162* <i>0.051</i>	93%
H-L	0.090 <i>0.476</i>	0.889 <i>0.397</i>	-0.125 <i>0.007</i>	-0.120 <i>0.430</i>	0.033 <i>0.590</i>	-0.225 <i>0.428</i>	0.046 <i>0.214</i>	0.207 <i>0.198</i>	0.009 <i>0.397</i>	0.053 <i>0.544</i>	49%
EQH	0.166 <i>0.073</i>	-0.050 <i>0.901</i>	0.977 <i>0.000</i>	-0.027 <i>0.647</i>	0.028 <i>0.440</i>	0.011 <i>0.932</i>	-0.038 <i>0.111</i>	-0.003 <i>0.962</i>	0.000 <i>0.901</i>	-0.063** <i>0.040</i>	95%
EQL	-0.325 <i>0.029</i>	0.774 <i>0.367</i>	-1.092 <i>0.000</i>	0.129 <i>0.297</i>	-0.185 <i>0.057</i>	-0.417* <i>0.071</i>	0.089 <i>0.104</i>	0.231 <i>0.150</i>	0.008 <i>0.367</i>	0.267*** <i>0.000</i>	91%

	α_i	α_{irec}	β_{1i}	$\beta_{1i}rec$	β_{2i}	$\beta_{2i}rec$	β_{3i}	$\beta_{3i}rec$	β_{4i}	$\beta_{4i}rec$	Adj. R ²
H-L	-0.159 <i>0.336</i>	0.724 <i>0.195</i>	-0.115 <i>0.011</i>	0.103 <i>0.317</i>	-0.158 <i>0.136</i>	-0.407* <i>0.050</i>	0.051 <i>0.355</i>	0.228 <i>0.160</i>	0.007 <i>0.195</i>	0.204*** <i>0.003</i>	47%
HSB	0.343 <i>0.019</i>	-0.083 <i>0.896</i>	1.035 <i>0.000</i>	0.187** <i>0.028</i>	0.111 <i>0.069</i>	0.126 <i>0.272</i>	-0.100 <i>0.129</i>	-0.498*** <i>0.000</i>	-0.001 <i>0.896</i>	0.005 <i>0.954</i>	90%
HSL	-0.206 <i>0.069</i>	1.270 <i>0.092</i>	-1.075 <i>0.000</i>	0.292** <i>0.012</i>	-0.081 <i>0.273</i>	-0.449 <i>0.203</i>	0.146 <i>0.002</i>	-0.093 <i>0.468</i>	0.013 <i>0.092</i>	0.152** <i>0.022</i>	92%
H-L	0.137 <i>0.496</i>	1.187** <i>0.016</i>	-0.041 <i>0.380</i>	0.479*** <i>0.000</i>	0.030 <i>0.778</i>	-0.324 <i>0.331</i>	0.046 <i>0.658</i>	-0.591*** <i>0.000</i>	0.012 <i>0.016</i>	0.157 <i>0.222</i>	27%
TDH	0.217 <i>0.005</i>	-0.294 <i>0.563</i>	1.025 <i>0.000</i>	-0.008 <i>0.914</i>	0.000 <i>0.997</i>	0.464** <i>0.010</i>	-0.037 <i>0.085</i>	-0.072 <i>0.288</i>	-0.003 <i>0.563</i>	-0.096** <i>0.025</i>	95%
TDL	-0.208 <i>0.046</i>	1.472 <i>0.103</i>	-1.109 <i>0.000</i>	0.085 <i>0.517</i>	-0.192 <i>0.022</i>	-0.499 <i>0.126</i>	0.074 <i>0.095</i>	0.358** <i>0.014</i>	0.015 <i>0.103</i>	0.184*** <i>0.005</i>	92%
H-L	0.008 <i>0.947</i>	1.178 <i>0.012</i>	-0.084 <i>0.009</i>	0.077 <i>0.360</i>	-0.192 <i>0.010</i>	-0.035 <i>0.918</i>	0.037 <i>0.406</i>	0.285** <i>0.016</i>	0.012 <i>0.012</i>	0.088* <i>0.075</i>	39%

Panel A:

Panel A reports the results using the social indicator (aggregate). When the model is conditioned to public available information, the coefficients' estimates lose their significance across estimation.

Panel B:

Panel B displays the results using sub-indicators. Once, when we conditioned the model to public information, coefficients lose (in most cases) their significance across estimation. However, alpha display insignificant estimates both in expansion (α_i) and recession (α_{rec}) periods; this evidence suggests that the performance does not change in recession periods.

Results from conditional analysis are consistent with previous research, which provide evidence of stocks present underperformance or neutral performance relative to the market. One potential explanation is that estimates from unconditional models can be considered biased. This survivorship bias might overestimate results, leading to a superior performance of stocks that do not exist in reality.

Following the previous analysis, we run Fama and French (2015) five-factor conditional model. Table 6 presents the results.

Table 6- Fama and French (2015) Five-Factor (Conditional) Model

This table shows the results of equation of the following regression: $r_{i,t} = \alpha_i + \alpha_{rec,i}D_t + \beta_{1i} * (R_{M_t} - R_{F_t}) + \beta_{1rec,i} * r_{m,t} * D_t + \beta_{2i} * HML_t + \beta_{2rec,i} * HML_t * D_t + \beta_{3i} * SMB_t + \beta_{3rec,i} * SMB_t * D_t + \beta_{4i} * RMW_t + \beta_{4rec,i} * RMW_t * D_t + \beta_{5i} * CMA_t + \beta_{5rec,i} * CMA_t * D_t \varepsilon_{it}$. Each portfolio is composed by companies that ASSET4 classify according to several criteria - Social, Environmental and Governance. In our study, each portfolio is composed by companies that were rated according to seven social sub-indicators: PR means Product Responsibility; CO means Community; HR means Human Rights; DO means Diversity and Opportunity; EQ means Employment Quality; HS means Health and Safety; TD means Training and Development. SO means Social Indicator. All sub-indicators are described in Appendix C. The suffix H means “High”. The suffix L means “Low”. α_i represents the returns of each portfolio, measured as percentage. $\beta_{1i}, \beta_{2i}, \beta_{3i}, \beta_{4i}, \beta_{5i}$ are the coefficients of independent variables of the Fama and French (2015) five-factor model: such as excess market return, SMB, HML, RMW and CMA, respectively. Adjusted R² represents the explanation power of all dependent variables. H-L represents the long-short strategy, calculated as the difference between the high and low portfolio for each sub-indicator. S&P500 is the market benchmark. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively. P-value of t Statistic is reported below each coefficient estimate; robust t Statistic based on Newey-West heteroskedasticity and autocorrelation adjusted standard errors. The period of the sample is 13 years (from January of 2003 to December of 2016), which totalizes 168 observations. To conditioning the model to public information, it was created a dummy that takes the value of 1 in recession periods, and 0 otherwise.. Panel A reports the results using a social indicator and Panel B presents using results using seven sub-indicators.

Panel A- Social Indicator													
	α_i	α_{irec}	β_{1i}	$\beta_{1i}rec$	β_{2i}	$\beta_{2i}rec$	β_{3i}	$\beta_{3i}rec$	β_{4i}	$\beta_{4i}rec$	β_{5i}	$\beta_{5i}rec$	Adj. R ²
SOH	0.183	0.008***	0.977	0.019	0.117	0.133	-0.047	0.090	0.081	-0.532***	0.135	-0.139	95%
	<i>0.032</i>	<i>0.004</i>	<i>0.000</i>	<i>0.744</i>	<i>0.005</i>	<i>0.112</i>	<i>0.244</i>	<i>0.351</i>	<i>0.161</i>	<i>0.004</i>	<i>0.107</i>	<i>0.484</i>	
SOL	-0.416	0.005	-1.036	-0.108	-0.421	-0.822*	-0.271	-0.051	0.259	-0.725	0.138	0.744	91%
	<i>0.002</i>	<i>0.564</i>	<i>0.000</i>	<i>0.447</i>	<i>0.000</i>	<i>0.098</i>	<i>0.000</i>	<i>0.784</i>	<i>0.000</i>	<i>0.172</i>	<i>0.142</i>	<i>0.226</i>	
H-L	-0.233	0.013*	-0.059	-0.089	-0.304	-0.689	-0.318	0.039	0.340	-1.257***	0.273	0.605	49%
	<i>0.097</i>	<i>0.053</i>	<i>0.108</i>	<i>0.579</i>	<i>0.000</i>	<i>0.136</i>	<i>0.000</i>	<i>0.781</i>	<i>0.000</i>	<i>0.004</i>	<i>0.020</i>	<i>0.399</i>	
Panel B- Social Sub-Indicator													
	α_i	α_{irec}	β_{1i}	$\beta_{1i}rec$	β_{2i}	$\beta_{2i}rec$	β_{3i}	$\beta_{3i}rec$	β_{4i}	$\beta_{4i}rec$	β_{5i}	$\beta_{5i}rec$	Adj. R ²
PRH	0.143	0.008***	1.052	0.019	0.258	0.133	0.093	0.090	-0.099	-0.532***	-0.032	-0.139	95%
	<i>0.125</i>	<i>0.004</i>	<i>0.000</i>	<i>0.744</i>	<i>0.000</i>	<i>0.112</i>	<i>0.137</i>	<i>0.351</i>	<i>0.136</i>	<i>0.004</i>	<i>0.699</i>	<i>0.484</i>	
PRL	-0.114	-0.003	-1.050	-0.108	-0.461	-0.822*	-0.316	-0.051	0.171	-0.725	0.318	0.744	90%

	α_i	α_{irec}	β_{1i}	β_{1irec}	β_{2i}	β_{2irec}	β_{3i}	β_{3irec}	β_{4i}	β_{4irec}	β_{5i}	β_{5irec}	Adj. R ²
H-L	<i>0.445</i>	<i>0.564</i>	<i>0.000</i>	<i>0.447</i>	<i>0.000</i>	<i>0.098</i>	<i>0.000</i>	<i>0.784</i>	<i>0.064</i>	<i>0.172</i>	<i>0.008</i>	<i>0.226</i>	
	0.028	0.013*	0.002	-0.089	-0.203	-0.689	-0.224	0.039	0.072	-1.257***	0.286	0.605	20%
	<i>0.809</i>	<i>0.053</i>	<i>0.971</i>	<i>0.579</i>	<i>0.002</i>	<i>0.136</i>	<i>0.004</i>	<i>0.781</i>	<i>0.478</i>	<i>0.004</i>	<i>0.012</i>	<i>0.399</i>	
COH	0.068	0.008***	1.022	0.019	0.198	0.133	0.088	0.090	0.215	-0.532***	-0.034	-0.139	95%
	<i>0.415</i>	<i>0.004</i>	<i>0.000</i>	<i>0.744</i>	<i>0.000</i>	<i>0.112</i>	<i>0.007</i>	<i>0.351</i>	<i>0.001</i>	<i>0.004</i>	<i>0.663</i>	<i>0.484</i>	
COL	-0.501	0.003	-1.072	-0.108	-0.443	-0.822*	0.036	-0.051	0.467	-0.725	0.002	0.744	87%
	<i>0.003</i>	<i>0.564</i>	<i>0.000</i>	<i>0.447</i>	<i>0.000</i>	<i>0.098</i>	<i>0.743</i>	<i>0.784</i>	<i>0.006</i>	<i>0.172</i>	<i>0.987</i>	<i>0.226</i>	
H-L	-0.433	0.013*	-0.051	-0.089	-0.245	-0.689	0.124	0.039	0.682	-1.257***	-0.032	0.605	39%
	<i>0.009</i>	<i>0.053</i>	<i>0.301</i>	<i>0.579</i>	<i>0.000</i>	<i>0.136</i>	<i>0.242</i>	<i>0.781</i>	<i>0.001</i>	<i>0.004</i>	<i>0.833</i>	<i>0.399</i>	
HRH	0.078	0.008***	1.047	0.019	0.201	0.133	-0.033	0.090	0.115	-0.532***	0.139	-0.139	94%
	<i>0.343</i>	<i>0.004</i>	<i>0.000</i>	<i>0.744</i>	<i>0.000</i>	<i>0.112</i>	<i>0.505</i>	<i>0.351</i>	<i>0.149</i>	<i>0.004</i>	<i>0.115</i>	<i>0.484</i>	
HRL	-0.085	-0.008	-1.130	-0.108	-0.374	-0.822*	-0.299	-0.051	0.318	-0.725	0.020	0.744	93%
	<i>0.468</i>	<i>0.564</i>	<i>0.000</i>	<i>0.447</i>	<i>0.000</i>	<i>0.098</i>	<i>0.000</i>	<i>0.784</i>	<i>0.000</i>	<i>0.172</i>	<i>0.826</i>	<i>0.226</i>	
H-L	-0.006	0.013*	-0.083	-0.089	-0.173	-0.689	-0.332	0.039	0.433	-1.257***	0.159	0.605	45%
	<i>0.962</i>	<i>0.053</i>	<i>0.083</i>	<i>0.579</i>	<i>0.019</i>	<i>0.136</i>	<i>0.000</i>	<i>0.781</i>	<i>0.000</i>	<i>0.004</i>	<i>0.183</i>	<i>0.399</i>	
DOH	0.205	0.008***	0.969	0.019	0.069	0.133	0.069	0.090	0.011	-0.532***	0.153	-0.139	94%
	<i>0.009</i>	<i>0.004</i>	<i>0.000</i>	<i>0.744</i>	<i>0.171</i>	<i>0.112</i>	<i>0.224</i>	<i>0.351</i>	<i>0.845</i>	<i>0.004</i>	<i>0.037</i>	<i>0.484</i>	
DOL	-0.156	0.004	-1.079	-0.108	-0.504	-0.822*	-0.120	-0.051	0.205	-0.725	0.042	0.744	92%
	<i>0.208</i>	<i>0.564</i>	<i>0.000</i>	<i>0.447</i>	<i>0.000</i>	<i>0.098</i>	<i>0.033</i>	<i>0.784</i>	<i>0.000</i>	<i>0.172</i>	<i>0.601</i>	<i>0.226</i>	
H-L	0.049	0.013*	-0.110	-0.089	-0.435	-0.689	-0.052	0.039	0.216	-1.257***	0.195	0.605	55%
	<i>0.717</i>	<i>0.053</i>	<i>0.010</i>	<i>0.579</i>	<i>0.000</i>	<i>0.136</i>	<i>0.402</i>	<i>0.781</i>	<i>0.002</i>	<i>0.004</i>	<i>0.058</i>	<i>0.399</i>	
EQH	0.166	0.008***	0.976	0.019	0.160	0.133	0.049	0.090	-0.058	-0.532***	-0.014	-0.139	95%
	<i>0.059</i>	<i>0.004</i>	<i>0.000</i>	<i>0.744</i>	<i>0.000</i>	<i>0.112</i>	<i>0.215</i>	<i>0.351</i>	<i>0.362</i>	<i>0.004</i>	<i>0.872</i>	<i>0.484</i>	
EQL	-0.345	0.000	-1.081	-0.108	-0.519	-0.822*	-0.240	-0.051	0.207	-0.725	0.047	0.744	89%
	<i>0.028</i>	<i>0.564</i>	<i>0.000</i>	<i>0.447</i>	<i>0.000</i>	<i>0.098</i>	<i>0.025</i>	<i>0.784</i>	<i>0.031</i>	<i>0.172</i>	<i>0.639</i>	<i>0.226</i>	
H-L	-0.179	0.013*	-0.105	-0.089	-0.359	-0.689	-0.190	0.039	0.149	-1.257***	0.033	0.605	41%

	α_i	α_{irec}	β_{1i}	β_{1irec}	β_{2i}	β_{2irec}	β_{3i}	β_{3irec}	β_{4i}	β_{4irec}	β_{5i}	β_{5irec}	Adj. R ²
	<i>0.292</i>	<i>0.053</i>	<i>0.028</i>	<i>0.579</i>	<i>0.000</i>	<i>0.136</i>	<i>0.109</i>	<i>0.781</i>	<i>0.109</i>	<i>0.004</i>	<i>0.796</i>	<i>0.399</i>	
HSH	0.284	0.008***	1.065	0.019	0.247	0.133	0.177	0.090	0.082	-0.532***	-0.049	-0.139	90%
	<i>0.062</i>	<i>0.004</i>	<i>0.000</i>	<i>0.744</i>	<i>0.000</i>	<i>0.112</i>	<i>0.013</i>	<i>0.351</i>	<i>0.315</i>	<i>0.004</i>	<i>0.689</i>	<i>0.484</i>	
HSL	-0.233	-0.002	-1.058	-0.108	-0.427	-0.822*	-0.150	-0.051	0.325	-0.725	0.012	0.744	91%
	<i>0.057</i>	<i>0.564</i>	<i>0.000</i>	<i>0.447</i>	<i>0.000</i>	<i>0.098</i>	<i>0.054</i>	<i>0.784</i>	<i>0.000</i>	<i>0.172</i>	<i>0.906</i>	<i>0.226</i>	
H-L	0.051	0.013*	0.007	-0.089	-0.180	-0.689	0.027	0.039	0.407	-1.257***	-0.036	0.605	28%
	<i>0.817</i>	<i>0.053</i>	<i>0.866</i>	<i>0.579</i>	<i>0.060</i>	<i>0.136</i>	<i>0.819</i>	<i>0.781</i>	<i>0.000</i>	<i>0.004</i>	<i>0.813</i>	<i>0.399</i>	
TDH	0.191	0.008***	1.031	0.019	0.165	0.133	-0.030	0.090	0.032	-0.532***	0.143	-0.139	95%
	<i>0.008</i>	<i>0.004</i>	<i>0.000</i>	<i>0.744</i>	<i>0.000</i>	<i>0.112</i>	<i>0.425</i>	<i>0.351</i>	<i>0.602</i>	<i>0.004</i>	<i>0.063</i>	<i>0.484</i>	
TDL	-0.211	0.014	-1.104	-0.108	-0.534	-0.822*	-0.207	-0.051	0.129	-0.725	-0.055	0.744	91%
	<i>0.044</i>	<i>0.564</i>	<i>0.000</i>	<i>0.447</i>	<i>0.000</i>	<i>0.098</i>	<i>0.010</i>	<i>0.784</i>	<i>0.088</i>	<i>0.172</i>	<i>0.576</i>	<i>0.226</i>	
H-L	-0.020	0.013*	-0.072	-0.089	-0.368	-0.689	-0.237	0.039	0.161	-1.257***	0.088	0.605	42%
	<i>0.870</i>	<i>0.053</i>	<i>0.034</i>	<i>0.579</i>	<i>0.000</i>	<i>0.136</i>	<i>0.001</i>	<i>0.781</i>	<i>0.031</i>	<i>0.004</i>	<i>0.357</i>	<i>0.399</i>	

Panel A:

Panel A reports the results using the social indicator (aggregate). The results are very similar to the ones uncover in Table 5; when we use the conditional approach, coefficients' estimates lose their significance across estimation. However, in this case alpha (α_i) display a positive and insignificant estimate in the expansion period and a positive and significant coefficient (α_{rec}) in the recession period for the high-rated portfolio; this evidence suggests that the high-rated portfolio outperforms in recession periods.

Panel B:

Panel B displays the results using sub-indicators. Once, when we conditioned the model to public information, coefficients lose (in most cases) their significance across estimation. Once, alpha (α_i) display insignificant estimates both in expansion and recession (α_{rec}) periods; this evidence suggests that the performance does not change in recession periods.

4.2 Different cut-offs

The (positive) screening of social indicator analysed before consists in portfolios formed by the top 10% stocks and the bottom 10% stocks. We will examine now if portfolios returns, mainly the long-short strategy portfolio, depends on the chosen level of cut-off. Hence, Table 7 reports the results for cut-offs of 10%, 30% and 50%, using the Carhart (1997) four-factor (unconditional) model and Fama and French (2015) five-factor (unconditional) model also two benchmark indexes: a general market index (S&P500) and a sustainable market index (FTSE4GOOD).

Results displayed in Table 7 are very similar to results provided before in Table 3: the sign and significance of alphas are consistent using different cut-offs and models. Other outputs are presented in Appendix D.

Comparing the estimates of β_1 (general market (S&P500) and sustainable market (FTSE4GOOD)), the coefficients are very similar in sign, significance and magnitude. Results suggests that high-rated portfolios performs better than the market, however the portfolio of interest (H-L) does not display significant coefficients' estimates; once, we only find partial support of hypothesis 2.

Table 7- Alternative Cut-offs

This table represents the values of the social indicator' alphas for different cut-offs: 10%, 30%, 50%. Each portfolio is composed by companies that ASSET4 classify according to several criteria - Social, Environmental and Governance. The suffix H means "High". The suffix L means "Low". α_i represents the returns of each portfolio, measured as percentage. Market represents the coefficient β_1 in the Carhart (1997) four-factor model and in the Fama and French (2015) five-factor model. H-L represents the long-short strategy, calculated as the difference between the high and low portfolio for each sub-indicator. S&P500 is the market benchmark. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively. P value of t Statistic is reported below each coefficient' estimate; robust t Statistic based on Newey-West heteroskedasticity and autocorrelation adjusted standard errors. The period of the sample is 13 years (from January of 2003 to December of 2016), which totalizes 168 observations. Panel A reports the results using the Carhart (1997) four-factor model and Panel B presents results using the Fama and French (2015) five-factor model.

Panel A: Carhart 4 Factor Model

	10%		30%				50%					
	S&P500		FTSE4GOOD		S&P500		FTSE4GOOD		S&P500		FTSE4GOOD	
	Alpha	Market	Alpha	Market	Alpha	Market	Alpha	Market	Alpha	Market	Alpha	Market
SOH	0.223*** <i>0.004</i>	0.973*** <i>0.000</i>	0.284** <i>0.012</i>	0.901*** <i>0.000</i>	0.255*** <i>0.001</i>	1.043*** <i>0.000</i>	0.322*** <i>0.007</i>	0.960*** <i>0.000</i>	0.298** <i>0.013</i>	1.049*** <i>0.000</i>	0.298** <i>0.013</i>	0.966*** <i>0.000</i>
SOL	-0.370*** <i>0.007</i>	-1.059*** <i>0.000</i>	-0.440** <i>0.012</i>	-0.971*** <i>0.000</i>	-0.215* <i>0.080</i>	-1.066*** <i>0.000</i>	-0.287** <i>0.080</i>	-0.974*** <i>0.000</i>	-0.267** <i>0.082</i>	-1.097*** <i>0.000</i>	-0.267** <i>0.082</i>	-1.002*** <i>0.000</i>
H-L	-0.147 <i>0.278</i>	-0.086* <i>0.084</i>	-0.156 <i>0.246</i>	-0.071 <i>0.114</i>	0.040 <i>0.679</i>	-0.024 <i>0.506</i>	0.035 <i>0.719</i>	-0.014 <i>0.673</i>	0.031 <i>0.639</i>	-0.048 <i>0.071</i>	0.031 <i>0.639</i>	-0.036 <i>0.151</i>

Panel B: Fama and French 5 factor model

	10%				30%				50%			
	S&P500		FTSE4GOOD		S&P500		FTSE4GOOD		S&P500		FTSE4GOOD	
	Alpha	Market	Alpha	Market	Alpha	Market	Alpha	Market	Alpha	Market	Alpha	Market
SOH	0.190**	1.011***	0.026**	0.932***	0.203***	1.095***	0.279***	1.005***	0.183***	1.106***	0.258***	1.017***
	<i>0.024</i>	<i>0.000</i>	<i>0.026</i>	<i>0.000</i>	<i>0.0119</i>	<i>0.0119</i>	<i>0.0232</i>	<i>0.0232</i>	<i>0.034</i>	<i>0.034</i>	<i>0.039</i>	<i>0.039</i>
SOL	-0.411***	-1.086***	-0.005***	-0.995***	-0.223*	-1.100*	-0.305*	-1.003*	-0.192*	-1.136*	-0.277*	-1.035*
	<i>0.004</i>	<i>0.000</i>	<i>0.005</i>	<i>0.000</i>	<i>0.077</i>	<i>0.077</i>	<i>0.060</i>	<i>0.060</i>	<i>0.093</i>	<i>0.093</i>	<i>0.071</i>	<i>0.071</i>
H-L	-0.221	-0.074**	-0.002	-0.063*	-0.0202	-0.000	-0.0263	-0.002	-0.009	0.000	-0.019	0.000
	<i>0.105</i>	<i>0.072</i>	<i>0.973</i>	<i>0.072</i>	<i>0.824</i>	<i>0.855</i>	<i>0.767</i>	<i>0.935</i>	<i>0.747</i>	<i>0.187</i>	<i>0.747</i>	<i>0.354</i>

4.3 “Best-in-Class” Screening

Per hypothesis 3, we expect that the “best-in-class” screening augmented the alphas because assures that the generated portfolios are balanced across industries (Kempf, A. & Osthoff, P. (2007)). So, we will divide our sample according to each SIC code, consider a total of 10 different industries. Table 8 presents all the results from each industry.

Table 8- "Best-in-class" Screening, using Carhart (1997) Four-Factor Model

This table shows the output of the *Carhart (1997) four-factor model*. $r_{i,t} = \alpha_i + \beta_{1i}(R_{M_t} - R_{F_t}) + \beta_{2i}(SMB_t) + \beta_{3i}(HML_t) + \beta_{4i}(MOM_t) + \varepsilon_{it}$. across industries All companies in the sample (rated by ASSET4) were assigned into ten industries, such as: Agriculture, Forestry & Fishing (no observations); Mining (M); Transportation&Public Utilities (T); Wholesale Trade (W); Retail Trade (R); Finance (F); Services (S); Public Administration (P). The suffix H means “High”. The suffix L means “Low”. α_i represents the returns of each portfolio, measured as percentage. $\beta_{1i}, \beta_{2i}, \beta_{3i}, \beta_{4i}$ are the coefficients of independent variables of the Carhart (1997) four-factor model, such as excess market return, SMB, HML and Momentum, respectively. Adjusted R² represents the explanation power of all dependent variables. H-L represents the long-short strategy, calculated as the difference between the high and low portfolio for each sub-indicator. S&P500 is the market benchmark. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively. *P*value of *t*Statistic is reported below each coefficient estimate; robust *t* Statistic based on Newey-West heteroskedasticity and autocorrelation adjusted standard errors. The period of the sample is 13 years (from January of 2003 to December of 2016), which totalizes 168 observations.

	Alpha	S&P500	SMB	HML	MOM	Adj.R²
MH	0.008 <i>0.987</i>	1.015*** <i>0.000</i>	0.351*** <i>0.000</i>	-0.038 <i>0.690</i>	-0.093*** <i>0.002</i>	90%
ML	-0.313 <i>0.605</i>	-0.927*** <i>0.000</i>	-0.569*** <i>0.000</i>	-0.072 <i>0.446</i>	0.155*** <i>0.000</i>	84%
H-L	-0.100 <i>0.172</i>	0.088*** <i>0.000</i>	-0.219*** <i>0.000</i>	-0.110 <i>0.446</i>	0.062*** <i>0.000</i>	14%
CH	0.210* <i>0.071</i>	0.928*** <i>0.000</i>	0.212*** <i>0.000</i>	0.007 <i>0.926</i>	-0.063** <i>0.040</i>	90%
CL	-0.509** <i>0.014</i>	-1.002*** <i>0.000</i>	-0.701*** <i>0.000</i>	0.139 <i>0.163</i>	0.256*** <i>0.000</i>	85%
H-L	-0.299** <i>0.014</i>	-0.074*** <i>0.000</i>	-0.489*** <i>0.000</i>	0.146 <i>0.163</i>	0.194*** <i>0.000</i>	36%
MAH	0.220* <i>0.069</i>	0.958*** <i>0.000</i>	0.261*** <i>0.000</i>	-0.045 <i>0.478</i>	-0.105*** <i>0.000</i>	91%
MAL	-0.148 <i>0.394</i>	-1.063*** <i>0.000</i>	-0.539*** <i>0.000</i>	-0.207*** <i>0.009</i>	0.182** <i>0.010</i>	90%
H-L	0.072 <i>0.394</i>	-0.105*** <i>0.000</i>	-0.278*** <i>0.000</i>	-0.253*** <i>0.009</i>	0.077** <i>0.010</i>	42%
TH	0.383*** <i>0.000</i>	0.869*** <i>0.000</i>	0.156*** <i>0.000</i>	0.079 <i>0.162</i>	-0.105*** <i>0.005</i>	93%
TL	-0.186	-1.022***	-0.668***	-0.013	0.183***	89%

	Alpha	S&P500	SMB	HML	MOM	Adj.R²
	<i>0.257</i>	<i>0.000</i>	<i>0.000</i>	<i>0.874</i>	<i>0.003</i>	
H-L	0.197	-0.153***	-0.512***	0.065	0.078***	47%
	<i>0.257</i>	<i>0.000</i>	<i>0.000</i>	<i>0.874</i>	<i>0.003</i>	
WH	0.241**	0.897***	0.230***	0.021	-0.047*	90%
	<i>0.030</i>	<i>0.000</i>	<i>0.000</i>	<i>0.705</i>	<i>0.055</i>	
WL	-0.432**	-0.980***	-0.703***	-0.126	0.199***	87%
	<i>0.018</i>	<i>0.000</i>	<i>0.000</i>	<i>0.242</i>	<i>0.004</i>	
H-L	-0.191**	-0.084***	-0.472***	-0.105	0.152***	45%
	<i>0.018</i>	<i>0.000</i>	<i>0.000</i>	<i>0.242</i>	<i>0.004</i>	
RH	0.400*	0.960***	0.297***	-0.024	-0.091*	81%
	<i>0.052</i>	<i>0.000</i>	<i>0.000</i>	<i>0.828</i>	<i>0.085</i>	
RL	-0.248*	-0.982***	-0.622***	-0.120*	0.167***	91%
	<i>0.058</i>	<i>0.000</i>	<i>0.000</i>	<i>0.065</i>	<i>0.000</i>	
H-L	0.152*	-0.022***	-0.325***	-0.144*	0.076***	18%
	<i>0.058</i>	<i>0.000</i>	<i>0.000</i>	<i>0.065</i>	<i>0.000</i>	
FH	0.279**	0.956***	0.266***	-0.007	-0.083*	90%
	<i>0.030</i>	<i>0.000</i>	<i>0.000</i>	<i>0.898</i>	<i>0.064</i>	
FL	-0.214	-1.036***	-0.672***	-0.112	0.125**	88%
	<i>0.226</i>	<i>0.000</i>	<i>0.000</i>	<i>0.287</i>	<i>0.011</i>	
H-L	0.065	-0.081***	-0.407***	-0.119	0.041**	39%
	<i>0.226</i>	<i>0.000</i>	<i>0.000</i>	<i>0.287</i>	<i>0.011</i>	
SH	0.284**	0.901***	0.165***	-0.033	-0.081***	91%
	<i>0.012</i>	<i>0.000</i>	<i>0.000</i>	<i>0.448</i>	<i>0.001</i>	
SL	-0.440**	-0.971***	-0.618***	-0.155**	0.188***	88%
	<i>0.012</i>	<i>0.000</i>	<i>0.000</i>	<i>0.046</i>	<i>0.000</i>	
H-L	-0.156**	-0.071***	-0.453***	-0.188**	0.107***	45%
	<i>0.012</i>	<i>0.000</i>	<i>0.000</i>	<i>0.046</i>	<i>0.000</i>	
PH	-1.367	1.835	-0.119	0.178	0.486	20%
	<i>0.518</i>	<i>0.276</i>	<i>0.920</i>	<i>0.877</i>	<i>0.725</i>	
PL	2.583	-3.382***	1.078	0.382	0.689	72%
	<i>0.374</i>	<i>0.002</i>	<i>0.268</i>	<i>0.441</i>	<i>0.194</i>	
H-L	1.216	-1.548***	0.959	0.560	1.175	16%
	<i>0.374</i>	<i>0.002</i>	<i>0.268</i>	<i>0.441</i>	<i>0.194</i>	

Results in Table 8 suggest that high-rated portfolios that includes stocks from specific industries, such as Retail and Transportation generate higher returns (although the coefficient estimate for Retail is only significant at the 10 percent level), followed by Services and Wholesale. However, we cannot extrapolate our results for only industries. Also, our variable of interest (H-L) only display significance in the case of Retail, which coefficient is positive and significant at the 10 percent level. Hence, results only support partially hypothesis 3.

Is worth noting that Table 8 only listed 9 of the 10 industries because “Agriculture, Forestry and Fishing” was dropped out of our dataset because only has information about 1 company in 2015 and in 2016. Also, Public Administration displays a low R^2 since it is available in ESG database since 2015.

5. Concluding Remarks

Social issues, like issues related with gender, race, education or other social aspect are increasingly relevant in nowadays. Social movements as “#MeToo” can “might be steering more local survivors to seek help” (Lauren, B. (2018)); and “When activism Replaces Education: The rise of New Civics” (Lewis, C.C. (2018)). These are some examples of the most recent social movements, which affects, not only the contemporaneous society, but also investments’ decisions. Thereby, more and more investors pretend to include SR stocks in their portfolios, and incorporate SRI screens in their investments (Kempf, A. & Osthoff, P. (2007)).

In this context, the purpose of this research is to evaluate the financial performance of social high-rated investments and compare it with low-rated companies. According to this aim, we collect from database Asset4 the (social) ratings for a sample of U.S. companies and formed portfolios according to different social sub-indicators, such as: Product Responsibility; Community; Human Rights; Diversity and Opportunity; Employment Quality; Health and Safety; Training and Development; and Social Indicator. Based on each sub-indicator, it was formed three types of portfolios: 10% top and 10% bottom, which represents the 10% high-rated companies and the 10% low-rated companies, respectively; the difference between high- and low-rated is the portfolio of interest, which represents the long-short strategy. The sample covers the period from January of 2003 to December of 2016 (13 years), which corresponds to 168 observations.

Following the previous literature, the portfolio performance was evaluated using an unconditional and conditional framework based on Carhart (1997) four-factor model and Fama and French (2015) five-factor model. And motivated by conditional framework, we also collected from National Bureau of Economic Research (NBER) information about the economic cycle.

Our results suggest that investors generate higher returns investing in companies with a high social score rather than investing in companies with a low social score. So, we concluded that investors can contribute for a good social value and still generate higher returns by investing in the high-rated portfolio. However, the difference between high- and low-rated portfolios returns is not significant, which means that we only get partial support for our research hypotheses.

We also conducted a conditional analysis of performance; results are not significant, what drive us to conclude that, in general, the performance does not change in recession periods (*versus* expansion periods).

Comparing the performance of high-rated portfolios with two benchmark indexes - S&P500 and FTSE4GOOD – we find evidence that high-rated portfolios generate higher returns; once, the difference between high- and low- portfolio is not significant.

Furthermore, when applying the “best-in-class” screening process, results provide evidence that retail generates higher returns in the case of high-rated portfolios and in the case of the long-short strategy (high-low rated portfolios).

Finally, it is worth noting that this study has some limitations, as it was ignored the sin stocks, stocks of companies that were involved in at least one controversial business areas, which means that although there are companies in my sample with a good social Asset4 score, that same company could be involved in some controversial business area, such as alcohol, tobacco, gambling, military, among others.

One hot topic for further research is to identify which high-rated companies were formerly involved in controversial business areas. Another open door for future research is to expand the period of the sample (e.g., by using other databases) to analyse which past period generated higher returns for investors.

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Appendix A- List of companies rated by ASSET4 from 2002 to 2015

Note: Asset4 rank companies according to different criteria, including social indicators. Every year the information is adjusted, meaning that the fact that a certain company is rated in 2002, does not mean that it is going to be rated in the following year. This table presents all companies that have passed through an evaluation in one, in several or in all years (from 2002 to 2015).

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
2U Inc	Servi.														1318°
3D Systems Corporation	Servi.														1377°
3M Co	Manu.	9°	12°	23°	54°	9°	42°	34°	23°	6°	41°	2°	39°	79°	12°
58.com Inc (ADR)	Servi.														1338°
A. O. Smith Corp	Manu.														1023°
AAON, Inc.	Manu.														1165°
Aaron's, Inc.	Servi.								432°	488°	613°	615°	622°	753°	719°
Abbott Laboratories	Manu.	13°	95°	30°	38°	48°	20°	35°	39°	33°	47°	45°	67°	91°	67°
AbbVie Inc	Manu.												156°	206°	136°
Abercrombie & Fitch Co.	Ret.			364°	442°	388°	516°	669°	573°	625°	617°	394°	486°	512°	537°
ABM Industries, Inc.	Servi.														867°
Acadia Healthcare Company Inc	Servi.														1209°
ACADIA Pharmaceuticals Inc.	Manu.														1149°
Acadia Realty Trust	Finan.														1260°
Accelerate Diagnostics Inc	Manu.														1240°
Acceleron Pharma Inc	Manu.														1326°
Accenture Plc	Servi.			120°	176°	162°	62°	77°	28°	42°	21°	50°	10°	9°	17°
ACCO Brands Corporation	Manu.														928°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
ACI Worldwide Inc	Servi.														994°
Activision Blizzard, Inc.	Servi.				413°	426°	246°	379°	390°	449°	668°	680°	493°	464°	415°
Acuity Brands, Inc.	Manu.													885°	1073°
Acxiom Corporation	Servi.								449°	505°	535°	635°	682°	645°	686°
Addus Homecare Corporation	Servi.														1440°
Adobe Systems Incorporated	Servi.	62°	87°	80°	80°	131°	122°	174°	216°	220°	287°	297°	238°	300°	272°
Adtalem Global Education Inc	Servi.							638°	679°	724°	523°	580°	631°	646°	670°
Advance Auto Parts, Inc.	Ret.			328°	407°	452°	422°	548°	462°	687°	587°	609°	637°	649°	638°
Advanced Energy Industries, Inc.	Manu.														943°
Advanced Micro Devices, Inc.	Manu.	82°	115°	93°	36°	51°	56°	52°	72°	28°	44°	74°	20°	52°	59°
Aecom	Servi.								170°	225°	294°	304°	247°	287°	235°
AerCap Holdings N.V.	Servi.													904°	1452°
Aerie Pharmaceuticals Inc	Manu.														1373°
Aerojet Rocketdyne Holdings Inc	Manu.														1012°
Aeropostale Inc	Ret.								431°	504°	561°	220°	237°	282°	334°
AES Corp	Transp.				241°	252°	308°	352°	306°	354°	472°	279°	388°	355°	404°
Aetna Inc	Finan.				139°	144°	96°	235°	250°	412°	397°	601°	356°	384°	497°
Affiliated Managers Group, Inc.	Finan.							681°	778°	817°	842°	832°	847°	859°	1036°
AFLAC Incorporated	Finan.	74°	46°	59°	119°	62°	156°	196°	194°	253°	164°	312°	198°	208°	306°
AGCO Corporation	Manu.						442°	383°	517°	461°	203°	156°	181°	161°	214°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Agilent Technologies Inc	Manu.	194°	105°	18°	11°	5°	7°	9°	35°	52°	63°	49°	19°	96°	23°
Agios Pharmaceuticals Inc	Manu.														1303°
AGNC Investment Corp	Finan.									824°	847°	851°	874°	894°	1374°
Air Lease Corp	Servi.										774°	815°	838°	843°	937°
Air Products & Chemicals, Inc.	Manu.				29°	50°	9°	10°	36°	25°	8°	12°	54°	72°	56°
Aircastle Limited	Servi.														1257°
AK Steel Holding Corporation	Manu.							471°	626°	653°	674°	409°	449°	379°	453°
Akamai Technologies, Inc.	Servi.			363°	434°	268°	375°	532°	574°	619°	686°	708°	658°	671°	710°
Akorn, Inc.	Manu.														1369°
AlarmCom Hldg Inc	Manu.														975°
Alaska Air Group, Inc.	Transp.														875°
Albany International Corp.	Manu.														995°
Albemarle Corporation	Manu.	110°	158°	189°	148°	297°	263°	150°	270°	164°	92°	34°	117°	98°	75°
Alder															1413°
Biopharmaceuticals Inc	Manu.											643°	567°	638°	559°
Alexander & Baldwin Inc	Finan.														
Alexander's, Inc.	Finan.														1522°
Alexandria Real Estate Equities Inc	Finan.							723°	777°	646°	714°	717°	703°	673°	
Alexion Pharmaceuticals, Inc.	Manu.							493°	510°	443°	642°	645°	640°	521°	
Align Technology, Inc.	Manu.														1027°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Alkermes Plc	Manu.													897°	1345°
Alleghany Corporation	Finan.							671°	754°	802°	830°	838°	855°	856°	952°
Allegheny Technologies Incorporated	Manu.	207°	213°	410°	471°	328°	255°	293°	373°	549°	495°	719°	414°	480°	536°
Allegiant Travel Company	Transp.														1188°
Allegion PLC	Servi.												629°	637°	597°
Allergan plc	Manu.	251°	275°	420°	484°	476°	349°	513°	466°	561°	551°	637°	647°	559°	381°
ALLETE Inc	Transp.														1273°
Alliance Data Systems Corporation	Servi.						248°	371°	327°	322°	422°	526°	385°	304°	413°
Alliant Energy Corporation	Transp.			118°	185°	169°	119°	220°	293°	340°	371°	373°	399°	352°	377°
Allison Transmission Holdings Inc	Manu.														865°
Allscripts Healthcare Solutions Inc	Servi.								700°	698°	620°	683°	583°	675°	635°
Allstate Corp	Finan.	63°	49°	37°	114°	122°	173°	209°	107°	139°	167°	153°	100°	211°	192°
Ally Financial Inc	Finan.													880°	1133°
Anylam Pharmaceuticals, Inc.	Manu.													883°	1140°
Alphabet Inc	Servi.			108°	159°	211°	257°	417°	313°	391°	351°	467°	601°	621°	548°
Altaba Inc	Servi.	181°	148°	201°	350°	479°	368°	248°	264°	362°	363°	587°	431°	566°	444°
Altria Group Inc	Manu.	28°	42°	54°	85°	128°	162°	314°	224°	44°	29°	80°	26°	120°	22°
Amazon.com, Inc.	Ret.	138°	135°	229°	395°	375°	406°	552°	642°	558°	678°	626°	749°	651°	616°
AMC Entertainment Holdings Inc	Servi.														1470°
AMC Networks Inc	Transp.										835°	823°	830°	865°	965°
Amdocs Limited	Servi.								359°	310°	230°	325°	477°	494°	563°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Amedisys Inc	Servi.														1371°
AMERCO	Transp.														1541°
Ameren Corp	Transp.	178°	211°	236°	297°	357°	250°	386°	582°	227°	321°	273°	175°	212°	311°
American Airlines Group Inc	Transp.												331°	288°	239°
American Assets Trust, Inc	Finan.														1465°
American Campus Communities, Inc.	Finan.														1499°
American Eagle Outfitters	Ret.			209°	189°	221°	244°	384°	267°	417°	274°	475°	430°	487°	446°
American Electric Power Company Inc	Transp.	95°	163°	141°	181°	107°	63°	181°	108°	240°	207°	132°	121°	110°	131°
American Equity Investment Life Holding Company	Finan.														1408°
American Express Company	Finan.	35°	51°	74°	65°	94°	203°	171°	163°	189°	282°	262°	447°	415°	565°
American Financial Group Inc	Finan.							672°	766°	809°	834°	624°	665°	669°	706°
American Homes 4 Rent	Finan.														1494°
American International Group Inc	Finan.	203°	263°	160°	125°	49°	30°	269°	353°	759°	832°	809°	841°	676°	795°
American National Insurance Company	Finan.							659°	759°	723°	784°	768°	787°	788°	792°
American States Water Co	Transp.														1060°
American Tower Corp	Finan.			356°	403°	364°	467°	447°	334°	552°	467°	549°	535°	578°	492°
American Water Works Company Inc	Transp.							432°	399°	34°	11°	51°	8°	34°	31°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Ameriprise Financial, Inc.	Finan.				262°	219°	188°	129°	263°	414°	474°	426°	407°	378°	448°
Ameris Bancorp	Finan.														1241°
AmerisourceBergen Corp.	Whol.		299°	343°	411°	408°	290°	369°	239°	283°	327°	369°	428°	469°	505°
AMETEK, Inc.	Manu.	248°						480°	593°	520°	510°	481°	460°	474°	467°
Amgen, Inc.	Manu.	64°	98°	50°	44°	36°	117°	239°	253°	238°	334°	214°	219°	278°	186°
Amicus Therapeutics, Inc.	Manu.														1324°
Amkor Technology, Inc.	Manu.														824°
AMN Healthcare Services, Inc.	Servi.														1305°
Amphenol Corporation	Manu.			206°	288°	343°	390°	462°	597°	634°	692°	724°	755°	758°	841°
AmTrust Financial Services Inc	Finan.														1227°
Anadarko Petroleum Corporation	Min.				194°	237°	365°	422°	434°	361°	343°	387°	318°	252°	288°
Analog Devices, Inc.	Manu.				337°	166°	73°	59°	44°	50°	101°	182°	138°	160°	124°
Analogic Corporation	Manu.														1081°
Andeavor	Manu.			267°	245°	154°	141°	315°	227°	377°	190°	232°	194°	256°	220°
Anixter International Inc.	Whol.														845°
Annaly Capital Management, Inc.	Finan.						470°	618°	756°	791°	803°	834°	865°	870°	1214°
ANSYS, Inc.	Servi.								617°	663°	687°	697°	714°	727°	757°
Antero Resources Corp	Min.													864°	877°
Anthem Inc	Finan.				227°	156°	59°	53°	121°	159°	227°	281°	257°	309°	327°
Aon PLC	Finan.	176°	253°	241°	240°	319°	441°	320°	406°	580°	421°	528°	254°	359°	549°
Apache Corporation	Min.				332°	433°	452°	212°	321°	403°	335°	301°	325°	197°	228°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Apartment Investment and Management Co	Finan.	221°	235°	220°	203°	293°	346°	456°	377°	556°	533°	504°	473°	483°	561°
Apollo Commercial Real Est. Finance Inc	Finan.														1388°
Apple Hospitality REIT Inc	Finan.														1550°
Apple Inc.	Manu.				182°	260°	304°	294°	363°	397°	450°	365°	434°	558°	418°
Applied Materials, Inc.	Manu.	25°	70°	46°	118°	28°	25°	29°	56°	67°	59°	104°	66°	59°	32°
AptarGroup, Inc.	Manu.								696°	741°	754°	783°	380°	356°	344°
Aptiv PLC	Manu.										635°	599°	405°	478°	445°
Aqua America Inc	Transp.			275°	360°	411°	521°	598°	379°	459°	448°	315°	324°	335°	362°
Aramark	Ret.													877°	1558°
Arch Capital Group Ltd.	Finan.							613°	694°	756°	791°	820°	831°	863°	908°
Archer Daniels Midland Co	Manu.				202°	207°	101°	237°	61°	141°	165°	194°	234°	174°	169°
Archrock Inc	Servi.			415°	273°	306°	334°	434°	507°	470°	401°	546°	545°	687°	846°
Arconic Inc	Manu.				77°	39°	50°	90°	42°	45°	67°	82°	29°	89°	3°
Ares Capital Corporation	Finan.									827°	852°	856°	877°	906°	1534°
Argo Group International Holdings, Ltd.	Finan.														1166°
Arista Networks Inc	Manu.														1033°
Armstrong World Industries Inc	Manu.							321°	471°	453°	525°	396°	371°	520°	501°
ARRIS International plc	Manu.														830°
Arrow Electronics, Inc.	Whol.			312°	225°	218°	385°	402°	454°	606°	652°	440°	442°	441°	335°
Arthur J Gallagher & Co	Finan.							475°	497°	521°	588°	439°	464°	522°	531°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Artisan Partners Asset Management Inc	Finan.														1206°
Ashland Global Holdings Inc	Manu.	85°	97°	81°	106°	176°	378°	169°	181°	216°	246°	249°	146°	195°	153°
Aspen Insurance Holdings Limited	Finan.								670°	490°	395°	450°	525°	489°	478°
Associated Banc Corp	Finan.			246°	346°	383°	260°	168°	283°	289°	627°	395°	360°	403°	471°
Assurant, Inc.	Finan.			331°	325°	210°	313°	230°	261°	327°	309°	494°	619°	577°	517°
Assured Guaranty Ltd.	Finan.									736°	789°	790°	806°	819°	915°
Astec Industries, Inc.	Manu.														896°
AT&T Inc.	Transp.	103°	89°	254°	56°	87°	165°	73°	111°	160°	212°	105°	139°	170°	76°
Atento SA	Servi.														599°
athenahealth, Inc	Servi.														1017°
Atlantica Yield PLC	Transp.														860°
Atmos Energy Corporation	Transp.								523°	636°	356°	487°	416°	479°	474°
Autodesk, Inc.	Servi.	239°	280°	419°	444°	363°	224°	278°	309°	259°	240°	144°	99°	24°	36°
Autoliv Inc.	Manu.							160°	169°	151°	172°	222°	228°	261°	312°
Automatic Data Processing	Servi.	80°	111°	122°	105°	168°	371°	388°	297°	277°	349°	430°	469°	472°	520°
AutoNation, Inc.	Ret.	164°	79°	78°	165°	189°	213°	340°	423°	468°	628°	571°	589°	625°	489°
AutoZone, Inc.	Ret.	198°	166°	178°	375°	395°	289°	341°	325°	553°	577°	463°	393°	420°	447°
AvalonBay Communities Inc	Finan.			413°	427°	471°	397°	562°	622°	493°	609°	330°	295°	294°	386°
Avangrid Inc	Transp.														454°
Avery Dennison Corp	Manu.	280°	227°	335°	486°	482°	231°	108°	182°	47°	9°	30°	94°	58°	129°
Avis Budget Group Inc.	Servi.	133°	156°	273°	149°	178°	296°	412°	362°	281°	243°	284°	242°	387°	318°
Avista Corp	Transp.														858°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Avnet, Inc.	Whol.			392°	327°	381°	140°	180°	201°	200°	272°	158°	162°	184°	140°
Avon Products, Inc.	Manu.	94°	43°	19°	39°	198°	229°	94°	104°	129°	103°	168°	93°	87°	91°
AVX Corporation	Manu.								538°	586°	544°	584°	603°	627°	644°
Axalta Coating Systems Ltd	Manu.													861°	889°
Axis Capital Holdings Limited	Finan.			305°	367°	454°	504°	620°	690°	799°	770°	810°	821°	830°	1104°
Axon Enterprise Inc	Manu.														969°
B&G Foods, Inc.	Manu.														929°
Babcock & Wilcox Enterprises Inc	Manu.														831°
Baidu Inc (ADR)	Servi.							640°	698°	664°	780°	773°	788°	838°	932°
Baker Hughes A GE Co	Manu.	49°	100°	156°	312°	415°	71°	236°	147°	99°	4°	134°	12°	130°	88°
Balchem Corporation	Manu.														1100°
Ball Corporation	Manu.	195°	168°	207°	234°	206°	72°	105°	29°	46°	20°	81°	85°	64°	135°
BancFirst Corporation	Finan.														1433°
BancorpSouth, Inc.	Finan.							632°	730°	793°	837°	843°	864°	873°	1116°
Bank of America Corp	Finan.	50°	113°	114°	209°	98°	167°	219°	209°	217°	205°	227°	297°	218°	232°
Bank of Hawaii Corporation	Finan.							496°	560°	674°	777°	679°	570°	615°	665°
Bank of New York Mellon Corp	Finan.	71°	68°	110°	69°	104°	99°	249°	180°	142°	261°	192°	166°	115°	160°
BankUnited	Finan.										797°	769°	810°	858°	859°
Banner Corporation	Finan.														1328°
Barclays PLC	Pub.Ad.														63°
Barnes & Noble, Inc.	Ret.							391°	491°	400°	545°	482°	421°	365°	439°
Barnes Group Inc.	Manu.														1138°
Baxter International	Manu.	11°	16°	2°	9°	17°	22°	11°	8°	88°	39°	3°	18°	8°	73°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Inc															
BB&T Corporation	Finan.	208°	268°	371°	298°	188°	210°	176°	396°	381°	358°	451°	392°	437°	430°
Beacon Roofing Supply, Inc.	Whol.														1393°
Becton Dickinson and Co	Manu.	73°	24°	33°	58°	105°	12°	24°	32°	72°	7°	36°	22°	10°	79°
Bed Bath & Beyond Inc.	Ret.	68°	155°	195°	251°	417°	486°	636°	662°	332°	359°	371°	415°	496°	493°
Belden Inc.	Manu.														1170°
Belmond Ltd	Servi.														1460°
Bemis Company, Inc.	Manu.	165°	210°	293°	218°	326°	137°	177°	192°	181°	171°	229°	248°	321°	379°
Benchmark Electronics, Inc.	Manu.														816°
Beneficial Bancorp Inc	Finan.														1346°
Berkshire Hathaway Inc.	Finan.	249°	266°	360°	467°	458°	529°	690°	787°	828°	844°	857°	878°	907°	1409°
Berry Global Group Inc	Manu.														999°
Best Buy Co Inc	Ret.	143°	187°	268°	143°	175°	208°	202°	146°	116°	266°	206°	212°	322°	299°
BGC Partners, Inc.	Finan.														1215°
Big Lots, Inc.	Ret.	278°	204°	313°	447°	455°	465°	425°	288°	349°	298°	344°	348°	444°	462°
Biogen Inc	Manu.	171°	104°	136°	112°	174°	220°	254°	160°	186°	78°	165°	43°	54°	96°
BioMarin Pharmaceutical Inc.	Manu.								647°	697°	425°	498°	440°	396°	431°
Bio-Rad Laboratories, Inc.	Manu.								542°	533°	568°	621°	590°	460°	427°
BIO-TECHNE Corp	Manu.								715°	774°	659°	700°	718°	786°	756°
Black Hills Corp	Transp.														985°
Blackbaud, Inc.	Servi.														1274°
Blackhawk Network	Finan.														1372°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Holdings Inc															
BlackRock, Inc.	Finan.							476°	439°	480°	582°	665°	581°	541°	504°
Bloomin' Brands Inc	Ret.														1061°
Blue Buffalo Pet Products Inc	Manu.														1212°
bluebird bio Inc	Servi.														1233°
Boeing Co	Manu.	21°	32°	44°	68°	143°	283°	156°	167°	127°	87°	219°	102°	253°	154°
BOK Financial Corporation	Finan.							682°	781°	800°	831°	831°	853°	860°	1024°
Booz Allen Hamilton Holding Corporation	Servi.											432°	482°	456°	519°
BorgWarner Inc.	Manu.						209°	242°	342°	296°	301°	367°	418°	417°	296°
Boston Beer Company Inc	Manu.														956°
Boston Private Financial Hldg Inc	Finan.														1508°
Boston Properties, Inc.	Finan.	261°	238°	348°	455°	461°	458°	472°	558°	648°	618°	734°	680°	636°	613°
Boston Scientific Corporation	Manu.		233°	125°	100°	136°	142°	229°	210°	375°	447°	210°	235°	188°	224°
Boyd Gaming Corporation	Servi.	116°													1448°
Brandywine Realty Trust	Finan.							559°	636°	622°	497°	597°	696°	665°	623°
Bright Horizons Family Solutions Inc	Servi.														1178°
Brinker International, Inc.	Ret.								384°	445°	369°	435°	492°	458°	421°
Brink's Company	Transp.							668°	771°	681°	818°	779°	815°	842°	815°
Bristol-Myers Squibb	Manu.	3°	6°	3°	14°	16°	46°	69°	38°	103°	62°	78°	133°	148°	58°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Co															
Brixmor Property Group Inc	Finan.													900°	1302°
Broadcom Ltd	Manu.									496°	541°	422°	488°	390°	461°
Brookdale Senior Living, Inc.	Servi.							572°	659°	704°	745°	715°	753°	807°	543°
Brookfield Property Partners LP	Finan.												839°	740°	785°
Brown & Brown, Inc.	Finan.			340°	394°	428°	497°	634°	744°	754°	805°	706°	782°	735°	933°
Brown-Forman Corporation	Manu.		190°	217°	335°	278°	232°	231°	279°	178°	160°	72°	64°	135°	178°
Bruker Corporation	Manu.	223°								755°	798°	822°	840°	845°	983°
Brunswick Corporation	Manu.	86°	91°	111°	164°	196°	386°	400°	433°	548°	519°	311°	390°	341°	321°
Bunge Ltd	Manu.			378°	453°	438°	151°	132°	100°	69°	181°	76°	125°	35°	41°
BWX Technologies Inc	Manu.									245°	329°	354°	455°	320°	372°
C.H. Robinson Worldwide Inc	Transp.			181°	287°	334°	432°	451°	532°	596°	454°	490°	509°	509°	554°
CA, Inc.	Servi.	60°	127°	53°	157°	72°	180°	85°	106°	108°	121°	47°	84°	100°	237°
Cable One Inc	Transp.														1031°
Cabot Corp	Manu.	70°	122°	199°	199°	275°	303°	211°	341°	51°	163°	97°	92°	119°	141°
Cabot Oil & Gas Corporation	Min.						498°	607°	706°	731°	711°	737°	770°	811°	768°
Cadence Design Systems Inc	Servi.				306°	373°	412°	601°	671°	727°	612°	722°	742°	748°	769°
California Water Service Group	Transp.														1039°
Callaway Golf Co	Manu.														855°
Callon Petroleum Company	Min.														1046°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Calpine Corporation	Transp.							449°	483°	592°	650°	671°	690°	641°	692°
Cambrex Corporation	Manu.														1284°
Camden Property Trust	Finan.			285°	391°	401°	426°	487°	556°	497°	506°	567°	546°	632°	650°
Campbell Soup Company	Manu.	241°	269°	333°	294°	387°	51°	66°	14°	22°	26°	23°	16°	14°	11°
Cantel Medical Corp.	Manu.														1197°
Capital One Financial Corp.	Finan.				75°	74°	233°	297°	203°	273°	175°	320°	308°	270°	259°
Capital Senior Living Corporation	Servi.														1457°
Capitol Federal Financial, Inc.	Finan.								438°	512°	584°	605°	667°	667°	691°
CARBO Ceramics Inc.	Min.									529°	595°	647°	705°	720°	796°
Cardinal Health Inc	Whol.	39°	106°	82°	129°	216°	410°	311°	200°	275°	446°	308°	372°	555°	631°
Cardtronics PLC	Servi.														1282°
Career Education Corp.	Servi.			264°	321°	382°	507°	670°	741°	457°	637°	808°	774°	779°	857°
Carlisle Companies, Inc.	Manu.							500°	628°	623°	704°	612°	648°	656°	702°
CarMax, Inc	Ret.				120°	132°	297°	279°	300°	279°	251°	372°	276°	327°	482°
Carnival Corp	Transp.	284°	173°	147°	226°	201°	239°	330°	271°	143°	242°	181°	157°	150°	110°
Carpenter Technology Corporation	Manu.								404°	450°	493°	540°	556°	586°	632°
Carrizo Oil & Gas Inc	Min.														1554°
Carter's, Inc.	Ret.														1019°
Caterpillar Inc.	Manu.				46°	115°	198°	142°	289°	107°	154°	136°	220°	194°	150°
Cathay General Bancorp	Finan.														1444°
Cavium Inc	Manu.														820°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CBL & Associates Properties, Inc.	Finan.							679°	773°	811°	841°	849°	870°	891°	1054°
Cboe Global Markets Inc	Finan.									608°	657°	792°	732°	791°	771°
CBRE Group Inc	Finan.			158°	213°	195°	40°	41°	57°	121°	209°	88°	91°	85°	49°
CBS Corporation	Transp.					322°	163°	221°	302°	198°	355°	408°	338°	427°	351°
CDK Global Inc	Servi.														1224°
CDW Corp	Ret.														989°
Celanese Corporation	Manu.				229°	217°	183°	201°	193°	124°	118°	197°	147°	277°	315°
Celgene Corporation	Manu.			200°	174°	177°	291°	378°	443°	448°	501°	370°	411°	523°	308°
Centene Corp	Finan.													898°	1228°
CenterPoint Energy, Inc.	Transp.	173°	185°	262°	313°	332°	293°	183°	222°	345°	204°	202°	375°	220°	331°
Central Garden & Pet Co	Manu.														1032°
Centurylink Inc	Transp.	229°	165°	218°	272°	299°	294°	374°	500°	471°	201°	167°	246°	202°	157°
Cerner Corporation	Servi.							423°	409°	290°	372°	302°	441°	533°	465°
CF Industries Holdings, Inc.	Manu.						395°	329°	411°	508°	569°	472°	612°	393°	407°
Charles River Laboratories Intl. Inc	Servi.			279°	381°	394°	400°	270°	284°	368°	341°	438°	417°	459°	400°
Charles Schwab Corp	Finan.	87°	65°	62°	131°	301°	192°	385°	421°	551°	424°	537°	334°	539°	390°
Charter Communications Inc	Transp.										558°	628°	676°	572°	622°
Check Point Software Technologies Ltd.	Servi.							630°	721°	763°	809°	807°	828°	832°	821°
Cheesecake Factory Inc	Ret.							453°	481°	286°	222°	190°	217°	138°	156°
Chemed Corporation	Servi.														1549°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Chemical Financial Corporation	Finan.														1389°
Chemours Co	Manu.														1340°
Cheniere Energy, Inc.	Transp.												719°	739°	766°
Chesapeake Energy Corporation	Min.	277°	386°	380°	232°	399°	296°	317°	456°	256°	318°	406°	338°	387°	
Chesapeake Lodging Trust	Finan.														1481°
Chevron Corporation	Manu.	1°	18°	26°	17°	45°	227°	185°	80°	261°	184°	250°	291°	292°	185°
Chicago Bridge & Iron Company N.V.	Cons.										548°	677°	666°	503°	590°
Chico's FAS, Inc.	Ret.			57°	101°	153°	342°	399°	479°	546°	626°	543°	591°	433°	515°
Chimera Investment Corporation	Finan.								765°	807°	838°	846°	868°	879°	1029°
Chipotle Mexican Grill, Inc.	Ret.								550°	610°	530°	431°	426°	439°	420°
Choice Hotels International Inc	Servi.							354°	304°	294°	461°	499°	402°	419°	506°
Chubb Ltd	Finan.	254°	146°	132°	324°	318°	417°	306°	414°	297°	265°	251°	279°	495°	433°
Church & Dwight Co., Inc.	Manu.							331°	350°	226°	188°	171°	186°	173°	243°
Churchill Downs, Inc.	Servi.														1313°
Ciena Corporation	Manu.	128°	196°	250°	187°	279°	405°	418°	589°	587°	571°	613°	613°	337°	365°
CIGNA Corporation	Finan.				254°	265°	360°	337°	544°	382°	562°	393°	323°	192°	182°
Cimarex Energy Co	Min.			345°	402°	470°	483°	678°	776°	813°	807°	821°	848°	841°	930°
Cimpress NV	Finan.									489°	591°	455°	423°	376°	437°
Cincinnati Financial Corporation	Finan.		279°	253°	329°	372°	348°	511°	553°	611°	640°	662°	691°	705°	716°
Cinemark Holdings,	Servi.	253°													1245°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Inc.															
Cintas Corporation	Servi.	255°	178°	311°	255°	341°	190°	146°	119°	144°	68°	65°	32°	28°	40°
CIRCOR International, Inc.															787°
Cisco Systems, Inc.	Manu.														
CIT Group Inc.	Manu.	20°	7°	7°	2°	4°	18°	3°	15°	2°	10°	62°	21°	7°	28°
Citigroup Inc	Finan.								355°	360°	543°	449°	554°	518°	612°
Citigroup Inc	Finan.	57°	64°	98°	61°	52°	47°	130°	183°	192°	174°	293°	270°	190°	89°
Citrix Systems, Inc.	Servi.	272°	220°	169°	196°	240°	177°	204°	272°	308°	214°	248°	240°	210°	200°
Clean Harbors Inc	Transp.														1477°
Clear Channel Outdoor Holdings, Inc.								596°	689°	720°	782°	634°	566°	658°	672°
Cleveland-Cliffs Inc	Servi.						77°	63°	99°	49°	77°	57°	89°	76°	196°
Clorox Co	Min.														
Clorox Co	Manu.	206°	209°	166°	296°	263°	139°	157°	178°	29°	89°	139°	131°	25°	78°
Clovis Oncology Inc	Manu.														1314°
CME Group Inc	Finan.			326°	155°	158°	354°	227°	252°	260°	324°	388°	345°	446°	355°
CMS Energy Corporation			186°	235°	338°	451°	302°	192°	191°	251°	258°	253°	319°	225°	246°
Cna Financial Corp	Transp.	291°													
CNO Financial Group Inc	Finan.							396°	428°	437°	453°	553°	436°	497°	510°
CNO Financial Group Inc	Finan.														997°
CNX Resources Corp	Min.			232°	331°	316°	343°	430°	389°	609°	330°	493°	539°	318°	392°
Cobalt International Energy, Inc.										773°	814°	802°	758°	707°	800°
Coca-Cola Bottling Co Consolidated	Min.														1289°
Coca-Cola European Partners PLC	Manu.														
Coca-Cola European Partners PLC	Manu.	273°	295°	387°	142°	76°	102°	82°	37°	56°	17°	19°	17°	6°	15°
Coeur Mining Inc	Min.							647°	677°	708°	604°	514°	277°	369°	290°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Cogent Communications Holdings Inc	Servi.														1461°
Cognex Corporation	Manu.														1319°
Cognizant Technology Solutions Corp	Servi.			148°	200°	199°	273°	255°	218°	137°	128°	39°	56°	49°	143°
Cohen & Steers, Inc.	Finan.														1187°
Coherent, Inc.	Manu.														1083°
Colfax Corp	Manu.														1010°
Colgate-Palmolive Company	Manu.	12°	8°	25°	94°	71°	8°	20°	9°	9°	23°	112°	25°	26°	9°
Colony NorthStar Inc	Finan.														1294°
Columbia Banking System Inc	Finan.														1277°
Columbia Property Trust Inc	Finan.														1556°
Columbia Sportswear Company	Manu.														871°
Comcast Corporation	Transp.	232°	296°	182°	233°	287°	150°	233°	255°	266°	215°	237°	306°	306°	270°
Comerica Incorporated	Finan.	147°	117°	154°	171°	281°	315°	380°	361°	31°	98°	56°	140°	178°	158°
Commerce Bancshares, Inc.	Finan.							304°	343°	328°	470°	462°	547°	516°	570°
Commercial Metals Company	Manu.								335°	462°	305°	497°	298°	440°	374°
Commscope Holding Company Inc	Transp.														587°
Community Bank System, Inc.	Finan.														1410°
Community Health Systems	Servi.			286°	409°	311°	252°	474°	314°	341°	303°	485°	358°	413°	423°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Compass Minerals International, Inc.	Min.								699°	752°	840°	506°	499°	556°	578°
Comstock Resources Inc	Min.								750°	803°	812°	828°	843°	854°	1095°
Conagra Brands Inc	Manu.				47°	20°	136°	58°	53°	128°	60°	162°	114°	185°	102°
Concho Resources Inc	Min.								717°	688°	642°	707°	692°	654°	681°
CONMED Corporation	Manu.														1070°
ConocoPhillips Consolidated Communications Holdings Inc	Manu.	99°	33°	8°	26°	60°	89°	47°	113°	114°	88°	52°	74°	33°	90°
Consolidated Edison, Inc.	Transp.														1152°
Consolidated Water Co. Ltd.	Transp.	100°	126°	39°	160°	336°	133°	148°	149°	204°	111°	130°	101°	134°	120°
Constellation Brands, Inc.	Manu.		287°	295°	370°	439°	242°	191°	251°	439°	392°	429°	376°	371°	572°
Continental Resources, Inc.	Min.							646°	740°	540°	619°	531°	632°	591°	585°
Convergys Corp	Servi.	269°	184°	203°	356°	365°	314°	286°	115°	188°	400°	359°	361°	293°	405°
Cooper Companies Inc	Manu.			205°	295°	352°	457°	639°	725°	738°	801°	723°	708°	696°	730°
Cooper Tire & Rubber Co	Manu.		144°	224°	387°	324°	329°	393°	444°	590°	531°	285°	382°	351°	307°
Cooper-Standard Holdings Inc	Manu.	121°													1015°
Copa Holdings, S.A.	Transp.								692°	742°	505°	600°	616°	633°	646°
Copart, Inc.	Servi.								675°	693°	700°	747°	796°	834°	851°
Core Laboratories N.V.	Min.									579°	643°	510°	507°	291°	354°
Corecivic Inc	Servi.						457°		541°	572°	594°	653°	618°	661°	532°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Corelogic Inc	Servi.			309°	412°	447°	337°	591°	638°	701°	699°	776°	793°	721°	627°
Core-Mark Holding Company, Inc.	Whol.														1229°
CoreSite Realty Corp	Finan.														1427°
Cornerstone OnDemand, Inc.	Servi.														970°
Corning Incorporated	Manu.	140°	119°	52°	175°	241°	41°	121°	120°	68°	182°	186°	344°	244°	301°
Corporate Office Properties Trust	Finan.								604°	571°	575°	684°	558°	524°	658°
CoStar Group Inc	Servi.														1113°
Costco Wholesale Corporation	Ret.	22°	26°	97°	113°	140°	258°	348°	358°	317°	381°	495°	409°	447°	550°
Coty Inc	Manu.														828°
Cousins Properties Inc	Finan.														1428°
Covanta Holding Corp	Transp.							370°	226°	112°	147°	149°	158°	158°	211°
Cracker Barrel Old Country Store, Inc.	Ret.														1347°
Crane Co.	Manu.							325°	385°	428°	402°	521°	353°	476°	367°
Credicorp Ltd.	Finan.								570°	613°	600°	654°	593°	668°	685°
Credit Acceptance Corp.	Finan.														1459°
Cree, Inc.	Manu.								575°	612°	675°	742°	678°	695°	840°
Crown Holdings, Inc.	Manu.							542°	543°	534°	483°	346°	303°	314°	345°
CSG Systems International, Inc.	Servi.														1192°
CSRA Inc	Servi.														1003°
CSX Corporation	Transp.	118°	179°	225°	231°	180°	48°	106°	49°	130°	16°	85°	35°	30°	47°
Ctrip.Com International Ltd (ADR)	Servi.									795°	786°	825°	856°	862°	1103°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CubeSmart	Finan.														1201°
Cubic Corporation	Manu.														878°
Cullen/Frost Bankers, Inc.	Finan.							439°	485°	426°	592°	675°	687°	690°	699°
Cummins Inc.	Manu.	54°	67°	109°	66°	73°	67°	23°	123°	66°	64°	129°	65°	153°	51°
Curtiss-Wright Corp.	Manu.														898°
CVB Financial Corp.	Finan.														1531°
CVR Energy, Inc.	Manu.														1280°
CVS Health Corp	Ret.	162°	138°	84°	90°	220°	121°	123°	136°	250°	95°	175°	180°	177°	111°
Cypress Semiconductor Corporation	Manu.							407°	407°	458°	566°	420°	391°	455°	368°
CyrusOne Inc	Servi.														1454°
CYS Investments Inc	Finan.														1190°
D. R. Horton Inc	Cons.	231°	273°	96°	186°	244°	460°	615°	648°	691°	757°	728°	721°	763°	749°
Dana Inc	Manu.														980°
Danaher Corporation	Manu.				252°	292°	350°	429°	450°	506°	598°	524°	422°	546°	481°
Darden Restaurants, Inc.	Ret.		101°	90°	158°	183°	187°	313°	67°	96°	158°	177°	190°	245°	208°
Darling Ingredients Inc	Manu.	123°													833°
Davita Inc	Servi.			170°	268°	327°	120°	99°	117°	337°	247°	355°	463°	372°	359°
DCT Industrial Trust Inc	Finan.														1520°
DDR Corp	Finan.			385°	448°	490°	508°	573°	525°	576°	518°	570°	579°	564°	666°
Dean Foods Co	Manu.	182°	243°	319°	351°	410°	16°	135°	86°	267°	489°	427°	478°	538°	456°
Deckers Outdoor Corp	Manu.									276°	299°	470°	359°	389°	470°
Deere & Company	Manu.				87°	44°	79°	92°	94°	41°	36°	38°	68°	23°	42°
Delek US Holdings Inc	Manu.														1142°
Delta Air Lines, Inc.	Transp.							382°	212°	315°	136°	205°	62°	141°	101°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Deluxe Corporation	Servi.														862°
Denbury Resources Inc.	Min.			388°	465°	453°	481°	576°	308°	367°	281°	335°	312°	310°	342°
DENTSPLY SIRONA Inc	Manu.			381°	464°	487°	448°	303°	311°	378°	361°	452°	454°	301°	326°
Depomed Inc	Manu.														1308°
Dermira Inc	Manu.														1182°
Devon Energy Corp	Min.	137°	160°	171°	133°	141°	285°	268°	346°	424°	290°	423°	321°	360°	428°
DexCom, Inc.	Manu.														1320°
Diamond Offshore Drilling Inc	Min.			240°	316°	370°	462°	428°	469°	565°	608°	511°	522°	543°	647°
Diamondback Energy Inc	Min.														1239°
DiamondRock Hospitality Company	Finan.														1378°
Dicks Sporting Goods Inc	Ret.							558°	598°	638°	767°	529°	761°	683°	654°
Diebold Nixdorf Inc	Manu.							394°	473°	620°	494°	379°	462°	345°	443°
Digital Realty Trust, Inc.	Finan.								722°	769°	764°	796°	819°	857°	876°
Dillard's, Inc.	Ret.	199°	302°	426°	487°	496°	488°	419°	480°	630°	666°	577°	670°	648°	700°
DineEquity Inc	Ret.														1175°
Diplomat Pharmacy Inc	Whol.														1473°
Discover Financial Services	Finan.						259°	397°	536°	509°	409°	350°	261°	361°	460°
Discovery Communications Inc.	Transp.				452°	468°	403°	547°	656°	454°	559°	341°	307°	249°	274°
DISH Network Corp	Transp.			407°	457°	469°	530°	648°	752°	654°	727°	813°	817°	752°	784°
Dolby Laboratories, Inc.	Manu.							663°	760°	713°	740°	763°	792°	765°	838°
Dollar General Corp.	Ret.								786°	670°	660°	333°	468°	595°	440°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Dollar Tree, Inc.	Ret.			126°	172°	235°	327°	287°	332°	427°	307°	576°	551°	584°	516°
Dominion Energy Inc	Transp.	130°	201°	215°	147°	118°	100°	95°	93°	149°	249°	152°	170°	112°	137°
Domino's Pizza, Inc.	Whol.														917°
Domtar Corp (USA)	Manu.			291°	140°	148°	87°	179°	215°	210°	166°	163°	268°	248°	276°
Donaldson Company, Inc.	Manu.								243°	214°	280°	357°	229°	201°	187°
Dorman Products Inc.	Manu.														899°
Douglas Emmett, Inc.	Finan.							688°	784°	825°	849°	854°	876°	902°	1441°
Dover Corp	Manu.	250°	278°	318°	275°	346°	444°	557°	425°	501°	429°	513°	518°	580°	366°
Dr Pepper Snapple Group Inc.	Manu.							257°	48°	122°	107°	21°	130°	48°	72°
Dril-Quip, Inc.	Manu.														1084°
DST Systems, Inc.	Servi.			395°	328°	386°	330°	435°	463°	502°	606°	539°	555°	606°	619°
DSW Inc.	Ret.									770°	796°	666°	728°	634°	606°
DTE Energy Co	Transp.	262°	301°	177°	228°	200°	81°	165°	237°	331°	276°	235°	231°	217°	277°
Duke Energy Corp	Transp.	42°	75°	51°	239°	46°	107°	119°	24°	134°	96°	94°	113°	21°	25°
Duke Realty Corp	Finan.			417°	301°	203°	402°	537°	530°	567°	477°	436°	625°	484°	614°
Dun & Bradstreet Corp	Servi.			357°	436°	282°	443°	491°	474°	526°	267°	421°	337°	324°	373°
Dunkin Brands Group Inc	Ret.										289°	221°	244°	280°	247°
DXC Technology Co	Servi.	246°	212°	342°	426°	385°	525°	611°	654°	282°	191°	269°	251°	193°	226°
Dycom Industries, Inc.	Cons.														1394°
Dynegy Inc	Min.	298°	232°	283°	253°	290°	226°	342°	291°	339°	411°	547°	536°	548°	588°
E*TRADE Financial Corp	Finan.	235°	276°	394°	466°	351°	501°	523°	603°	722°	746°	844°	775°	734°	960°
E. W. Scripps Co	Manu.	52°	39°	119°	146°	109°	286°	353°	565°	637°	426°	518°	563°	575°	593°
Eagle Bancorp, Inc.	Finan.														1463°
Eagle Materials, Inc.	Manu.							709°	717°	722°	770°	801°	812°	842°	

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Eagle Pharmaceuticals Inc	Manu.														1350°
East West Bancorp, Inc.	Finan.							584°	615°	680°	738°	625°	643°	657°	569°
Eastgroup Properties Inc	Finan.														1544°
Eastman Chemical Company	Manu.	33°	38°	88°	132°	125°	33°	49°	55°	100°	141°	60°	59°	55°	52°
Eastman Kodak Company	Manu.												136°	157°	172°
Eaton Corporation PLC	Manu.			47°	128°	58°	116°	38°	228°	155°	193°	127°	73°	299°	109°
Eaton Vance Corp	Finan.							498°	586°	669°	713°	812°	751°	762°	810°
eBay Inc	Servi.	124°	143°	257°	212°	246°	279°	326°	348°	519°	337°	425°	223°	340°	395°
Ebix Inc	Servi.														1176°
Echostar Corporation	Manu.								769°	818°	761°	636°	641°	653°	690°
Ecolab Inc.	Manu.			127°	138°	78°	69°	65°	157°	36°	94°	121°	178°	51°	105°
Edgewell Personal Care Co	Manu.			211°	300°	360°	510°	482°	634°	547°	444°	342°	397°	394°	432°
Edison International	Transp.	24°	27°	69°	150°	338°	307°	414°	351°	442°	433°	468°	684°	571°	547°
Education Realty Trust, Inc.	Finan.														1265°
Edwards Lifesciences Corp	Manu.							266°	268°	304°	317°	310°	357°	224°	167°
El Paso Electric Company	Transp.														1311°
Electronic Arts Inc.	Servi.				309°	191°	216°	421°	476°	481°	498°	602°	557°	525°	580°
Electronics For Imaging, Inc.	Manu.														1242°
Eli Lilly and Co	Manu.	19°	29°	20°	12°	35°	75°	40°	59°	24°	30°	32°	50°	90°	18°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Ellie Mae Inc	Servi.														1120°
Emcor Group Inc	Cons.														861°
Emergent Biosolutions Inc	Manu.														1218°
Emerson Electric Co.	Manu.	215°	54°	61°	110°	214°	382°	223°	225°	244°	288°	405°	252°	490°	328°
Empire State Realty Trust Inc	Finan.														1542°
Encompass Health Corp	Servi.														1219°
Encore Wire Corporation	Manu.														1109°
Endo International PLC	Manu.							308°	344°	285°	539°	479°	627°	551°	397°
Energen Corporation	Transp.						434°	452°	515°	603°	661°	639°	661°	666°	709°
Energizer Holdings Inc	Manu.														939°
Engility Holdings Inc	Servi.														926°
EnPro Industries, Inc.	Manu.														801°
Enstar Group Ltd.	Finan.														1261°
Entegris Inc	Manu.														688°
Entergy Corporation	Transp.	93°	94°	87°	89°	202°	196°	141°	77°	86°	2°	138°	41°	62°	27°
Enterprise Products Partners L.P.	Transp.							541°	620°	588°	689°	668°	747°	689°	608°
Envestnet Inc	Servi.														1127°
EOG Resources Inc	Min.	258°	264°	216°	433°	291°	264°	190°	205°	258°	232°	265°	346°	298°	398°
EP Energy Corp	Min.														1421°
EPAM Systems Inc	Servi.														1472°
EPR Properties	Finan.														1263°
EQT Corporation	Transp.			244°	342°	398°	440°	316°	301°	389°	159°	317°	413°	297°	356°
Equifax Inc.	Servi.	201°	137°	174°	214°	280°	438°	526°	278°	247°	389°	410°	495°	336°	363°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Equinix Inc	Transp.								554°	582°	441°	505°	512°	454°	222°
Equity Commonwealth Equity Lifestyle Properties, Inc.	Finan.							654°	747°	787°	827°	829°	844°	855°	962°
Equity Residential Erie Indemnity Company	Finan.	119°	162°	237°	266°	377°	328°	460°	524°	495°	560°	751°	756°	672°	731°
ESCO Technologies Inc.	Finan.							332°	451°	438°	434°	476°	450°	482°	528°
Essent Group Ltd	Manu.														1132°
Essex Property Trust Inc	Finan.							675°	767°	737°	781°	765°	794°	784°	884°
Estee Lauder Companies Inc	Manu.	247°	252°	310°	441°	486°	90°	118°	165°	125°	139°	108°	69°	63°	34°
Esterline Technologies Corporation	Manu.														826°
Etsy Inc	Servi.														1101°
Euronet Worldwide, Inc.	Finan.														1396°
Evercore Inc	Finan.														1292°
Everest Re Group Ltd	Finan.			402°	477°	493°	515°	676°	775°	815°	750°	784°	804°	809°	825°
Eversource Energy EXACT Sciences Corporation	Transp.							210°	232°	75°	123°	208°	152°	198°	193°
EXCO Resources Inc	Servi.														1147°
Exelixis, Inc.	Min.							644°	737°	659°	802°	740°	811°	757°	850°
Exelon Corporation	Servi.														1271°
ExlService Holdings, Inc.	Transp.	148°	132°	73°	91°	119°	176°	317°	101°	162°	97°	114°	112°	145°	98°
	Servi.														976°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Expedia Inc	Transp.				421°	366°	446°	358°	505°	692°	759°	729°	623°	650°	625°
Expeditors International of Washington	Transp.			123°	333°	403°	409°	609°	592°	408°	365°	362°	328°	475°	475°
Exponent, Inc.	Servi.														1543°
Express Scripts Holding Co	Ret.	226°	282°	425°	469°	488°	321°	416°	455°	463°	367°	733°	701°	732°	678°
Extended Stay America Inc	Servi.														1553°
Extra Space Storage, Inc.	Finan.													905°	1438°
Exxon Mobil Corporation	Manu.	17°	21°	29°	19°	66°	76°	154°	43°	53°	102°	113°	82°	31°	134°
F.N.B. Corp	Finan.														1278°
F5 Networks, Inc.	Servi.								595°	538°	346°	491°	429°	358°	371°
Facebook Inc	Servi.											764°	781°	775°	701°
FactSet Research Systems Inc.	Servi.								254°	313°	440°	501°	506°	508°	502°
Fair Isaac Corporation	Servi.								468°	494°	624°	620°	574°	607°	576°
Fairmount Santrol Holdings Inc	Min.														560°
Fang Holdings Ltd	Servi.														1548°
Fastenal Company	Ret.			353°	428°	465°	392°	508°	569°	564°	718°	500°	301°	468°	389°
FBL Financial Group	Finan.														1163°
FCB Financial Holdings Inc	Finan.														1467°
Federal Realty Investment Trust	Finan.			373°	451°	474°	512°	660°	618°	665°	752°	780°	799°	806°	835°
Federated Investors Inc	Finan.	222°	254°	389°	323°	409°	408°	545°	535°	652°	677°	748°	773°	772°	822°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
FedEx Corporation	Transp.	188°	139°	58°	107°	231°	111°	194°	62°	197°	145°	160°	176°	203°	302°
Ferro Corporation	Manu.														903°
Ferroglobe PLC	Min.														887°
FibroGen Inc	Manu.														1236°
Fidelity National Financial Inc	Finan.				161°	209°	423°	589°	624°	743°	806°	800°	807°	847°	900°
Fidelity National Information Servcs Inc	Servi.					448°	482°	650°	708°	788°	829°	699°	743°	711°	740°
Fifth Third Bancorp	Finan.		112°	144°	292°	333°	261°	256°	241°	291°	394°	386°	458°	486°	412°
Financial Engines Inc	Finan.														1234°
FireEye Inc	Servi.												844°	977°	
First American Financial Corp	Finan.														1159°
First Citizens BancShares Inc.	Finan.							478°	534°	518°	616°	656°	672°	742°	687°
First Data Corp	Servi.														1018°
First Financial Bancorp	Finan.														1354°
First Financial Bankshares Inc	Finan.														1446°
First Horizon National Corp	Finan.		123°	89°	108°	190°	219°	327°	262°	376°	473°	502°	456°	534°	476°
First Industrial Realty Trust, Inc.	Finan.	78°													1435°
First Interstate Bancsystem Inc	Finan.														1268°
First Merchants Corporation	Finan.														1511°
First Midwest Bancorp Inc	Finan.														1148°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
First Republic Bank	Finan.									760°	799°	757°	739°	769°	721°
First Solar, Inc.	Manu.					283°	439°	489°	520°	269°	524°	419°	437°	251°	330°
FirstCash Inc	Finan.														1505°
FirstEnergy Corp.	Transp.	202°	217°	204°	152°	130°	91°	170°	185°	278°	271°	316°	451°	241°	285°
Fiserv Inc	Servi.	244°	231°	349°	473°	459°	418°	569°	616°	642°	605°	651°	655°	604°	652°
Fitbit Inc	Manu.														1482°
Five Below Inc	Ret.														1093°
Five Prime Therapeutics Inc	Servi.														1333°
Flagstar Bancorp Inc	Finan.														1468°
FleetCor Technologies, Inc.	Servi.									747°	768°	805°	820°	825°	866°
Flex Ltd	Manu.				284°	135°	377°	401°	235°	118°	217°	321°	265°	367°	166°
FLIR Systems, Inc.	Manu.							420°	501°	475°	603°	558°	594°	609°	677°
Flowers Foods, Inc.	Manu.								673°	644°	529°	447°	484°	585°	496°
Flowserve Corp	Manu.						214°	104°	238°	92°	162°	170°	172°	116°	151°
Fluor Corporation (NEW)	Servi.	117°	150°	219°	173°	95°	184°	12°	1°	3°	31°	66°	37°	39°	19°
FMC Corp	Manu.	185°	131°	172°	37°	15°	57°	120°	109°	89°	45°	6°	3°	125°	43°
Foot Locker, Inc.	Ret.			260°	339°	374°	493°	666°	712°	801°	821°	686°	688°	718°	674°
Ford Motor Company	Manu.				31°	19°	37°	114°	134°	115°	168°	95°	191°	140°	146°
Forest City Realty Trust Inc	Finan.			300°	392°	418°	485°	603°	584°	584°	688°	738°	759°	714°	618°
FormFactor, Inc.	Manu.			298°	369°	266°	431°	566°	629°	766°	748°	785°	786°	778°	786°
Fortinet Inc	Manu.									535°	574°	709°	578°	596°	557°
Fortune Brands Home & Security Inc	Manu.										585°	619°	564°	590°	579°
Forum Energy	Manu.														990°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Technologies Inc															
Forward Air Corporation	Transp.														1168°
Fossil Group Inc	Manu.									666°	708°	717°	737°	749°	789°
Four Corners Property Trust Inc	Finan.														1540°
Franklin Electric Co.	Manu.														945°
Franklin Resources, Inc.	Finan.				248°	100°	287°	282°	329°	235°	304°	400°	378°	449°	435°
Franklin Street Properties Corp.	Finan.														1524°
Franks International NV	Cons.														906°
Freeport-McMoRan Inc	Min.	96°	171°	274°	179°	350°	146°	134°	88°	48°	176°	117°	120°	151°	163°
Fresh Del Monte Produce Inc	Agr.														882°
Frontier Communications Corp	Transp.		199°	292°	336°	390°	424°	543°	422°	485°	445°	562°	532°	536°	406°
FTI Consulting, Inc.	Servi.	167°						599°	688°	647°	669°	590°	552°	574°	583°
Fulton Financial Corp	Finan.								502°	559°	439°	519°	604°	443°	490°
GameStop Corp. Gaming and Leisure Properties Inc	Ret.				430°	362°	447°	582°	381°	478°	665°	611°	722°	730°	610°
Gannett Co Inc	Finan.														1181°
Gap Inc	Servi.														1537°
Garmin Ltd.	Ret.				45°	134°	13°	18°	27°	98°	65°	172°	128°	199°	147°
Gartner Inc	Manu.			256°	270°	323°	281°	349°	441°	523°	464°	258°	243°	233°	148°
GasLog Ltd	Servi.									721°	758°	766°	798°	796°	836°
GATX Corporation	Transp.														1193°
	Servi.						445°	494°	491°	567°	534°	553°	557°		556°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Generac Holdings Inc.	Manu.														1154°	
General Cable Corporation	Manu.							468°	576°	207°	245°	223°	148°	181°	209°	
General Dynamics Corporation	Manu.		228°	163°	357°	181°	238°	310°	132°	433°	257°	204°	209°	222°	197°	
General Electric Company	Manu.	157°	36°	94°	8°	18°	38°	4°	4°	59°	14°	7°	27°	117°	37°	
General Mills, Inc.	Manu.	31°	14°	34°	38°	53°	59°	160°	81°	95°	17°	40°	115°	30°	71°	44°
General Motors Company	Manu.									524°	482°	295°	384°	374°	349°	
Genesee & Wyoming Inc	Transp.														1011°	
Genpact Limited	Servi.								369°	356°	18°	55°	38°	136°	64°	
Gentex Corporation	Manu.							614°	658°	469°	499°	348°	288°	234°	263°	
Genuine Parts Company	Whol.	265°	170°	245°	246°	358°	479°	606°	716°	772°	734°	789°	805°	814°	883°	
Genworth Financial Inc	Finan.			100°	135°	149°	245°	343°	371°	359°	383°	461°	523°	392°	539°	
GGP Inc	Finan.				250°	213°	372°	424°	508°	718°	690°	760°	754°	599°	648°	
Gibraltar Industries Inc	Manu.														1021°	
Gilead Sciences, Inc.	Manu.				361°	179°	278°	361°	527°	633°	235°	245°	335°	128°	118°	
Glacier Bancorp, Inc.	Finan.														1506°	
Global Net Lease Inc	Finan.														1370°	
Global Payments Inc	Servi.								687°	784°	671°	720°	731°	745°	752°	
Globant SA	Servi.														819°	
Globus Medical Inc	Manu.														1323°	
GNC Holdings Inc	Ret.														1210°	
Godaddy Inc	Servi.														1074°	
Goldman Sachs Group	Finan.	56°	108°	75°	98°	79°	148°	184°	188°	334°	252°	261°	283°	325°	273°	

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Inc															
Goodyear Tire & Rubber Co	Manu.	51°	107°	168°	283°	99°	206°	127°	158°	242°	208°	123°	171°	283°	83°
GoPro Inc	Manu.														957°
Government Properties Income Trust	Finan.														1401°
Graco Inc.	Manu.							520°	683°	632°	653°	466°	502°	582°	544°
Graham Holdings Co	Servi.			145°	221°	242°	414°	488°	484°	544°	681°	646°	765°	712°	763°
Gramercy Property Trust	Finan.														1341°
Gran Tierra Energy Inc.	Min.												789°	766°	895°
Grand Canyon Education Inc	Servi.														1474°
Granite Construction Inc.	Cons.														935°
Graphic Packaging Holding Company	Manu.							253°	273°	333°	414°	444°	352°	506°	458°
Great Plains Energy Incorporated	Transp.							560°	655°	628°	726°	741°	763°	803°	823°
Great Western Bancorp Inc	Finan.														1079°
Green Dot Corporation	Servi.									780°	817°	830°	845°	853°	1071°
Greenhill & Co., Inc.	Finan.								664°	711°	638°	690°	707°	719°	738°
Greif, Inc.	Manu.								643°	672°	462°	557°	519°	521°	267°
Group 1 Automotive, Inc.	Ret.														1334°
Groupon Inc	Servi.										785°	827°	871°	890°	1098°
GrubHub Inc	Ret.														1362°
Guess?, Inc.	Ret.							461°	510°	330°	410°	471°	494°	465°	636°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Guidewire Software Inc	Servi.														1088°
Gulfport Energy Corporation	Min.														1498°
H & R Block Inc	Servi.	224°	249°	372°	347°	345°	318°	516°	504°	594°	576°	630°	614°	552°	592°
Hain Celestial Group Inc	Manu.														961°
Halliburton Company	Min.	114°	86°	231°	88°	111°	26°	97°	164°	104°	173°	151°	292°	213°	168°
Halozyme Therapeutics, Inc.	Manu.														1225°
Halyard Health Inc	Manu.														755°
Hancock Holding Company	Finan.														1533°
Hanesbrands Inc.	Manu.					96°	153°	218°	129°	77°	104°	141°	124°	149°	113°
Hanover Insurance Group Inc	Finan.							363°	420°	396°	573°	565°	636°	540°	617°
Harley-Davidson Inc	Manu.				191°	239°	299°	217°	184°	325°	291°	352°	470°	425°	394°
Harris Corporation	Manu.				201°	255°	109°	186°	124°	193°	297°	313°	395°	333°	221°
Harsco Corporation	Min.			212°	299°	294°	155°	299°	324°	393°	311°	563°	529°	660°	626°
Hartford Financial Services Group Inc	Finan.	89°	76°	56°	330°	164°	326°	158°	177°	268°	379°	340°	332°	412°	487°
Hasbro, Inc.	Manu.	141°	242°	185°	170°	192°	27°	19°	7°	16°	82°	14°	9°	3°	7°
Hawaiian Electric Industries, Inc.	Transp.							387°	336°	399°	564°	527°	419°	461°	477°
Hawaiian Holdings, Inc.	Transp.														1397°
HB Fuller Co	Manu.														829°
HCA Healthcare Inc	Servi.										607°	533°	465°	467°	514°
HCP, Inc.	Finan.			350°	429°	473°	526°	661°	761°	758°	794°	374°	503°	346°	380°
HD Supply Holdings Inc	Whol.														988°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Healthcare Realty Trust Inc	Finan.														1385°
Healthcare Services Group, Inc.	Servi.														1013°
Healthcare Trust Of America Inc	Finan.														1488°
Heartland Express, Inc.	Transp.														1058°
Hecla Mining Company	Min.														1237°
Heico Corp	Manu.														955°
Helen of Troy Limited	Manu.														1538°
Helix Energy Solutions Group Inc	Min.							571°	645°	525°	655°	703°	760°	761°	853°
Helmerich & Payne, Inc.	Min.						435°	622°	701°	775°	749°	817°	833°	799°	791°
Henry Schein, Inc.	Whol.						221°	251°	248°	407°	373°	503°	349°	328°	329°
Herbalife Ltd.	Whol.							437°	482°	371°	438°	486°	540°	504°	416°
Herman Miller, Inc.	Manu.						92°	88°	63°	35°	110°	103°	111°	94°	61°
Hershey Co	Manu.	260°	290°	152°	238°	262°	234°	272°	2°	58°	52°	22°	23°	5°	10°
Hertz Global Holdings Inc	Servi.														1252°
Hess Corp.	Manu.	175°	110°	196°	279°	83°	60°	31°	41°	13°	19°	15°	61°	46°	39°
Hewlett Packard Enterprise Co	Servi.														913°
Hexcel Corporation	Manu.														925°
Highwoods Properties Inc	Finan.														1489°
Hillenbrand, Inc.	Manu.								635°	685°	552°	622°	610°	644°	566°
Hill-Rom Holdings, Inc.	Manu.			308°	474°	435°	461°	627°	607°	725°	458°	488°	573°	544°	535°
Hilltop Holdings Inc.	Finan.														1298°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Hilton Worldwide Holdings Inc	Servi.													717°	864°
HMS Holdings Corp	Servi.														1085°
HNI Corp	Manu.							404°	417°	169°	221°	305°	224°	296°	313°
HollyFrontier Corp	Manu.							477°	572°	621°	706°	568°	565°	527°	511°
Hologic, Inc.	Manu.				334°	285°	351°	546°	477°	527°	511°	661°	697°	600°	595°
Home Bancshares Inc	Finan.														1507°
Home Depot Inc	Ret.	41°	48°	60°	74°	137°	179°	285°	269°	306°	218°	203°	489°	481°	434°
Honeywell			14°	27°	24°	112°	93°	149°	282°	194°	357°	169°	233°	307°	173°
International Inc.	Manu.	187°													
Horace Mann Educators Corporation	Finan.														1415°
Horizon Pharma PLC	Manu.														1199°
Hormel Foods Corp	Manu.						118°	139°	26°	43°	54°	42°	48°	15°	21°
Hospitality Properties Trust	Finan.							655°	748°	789°	828°	839°	857°	866°	1042°
Host Hotels and Resorts Inc	Finan.			186°	258°	305°	362°	515°	552°	398°	430°	507°	490°	563°	601°
Houghton Mifflin Harcourt Co	Servi.														1231°
Howard Hughes Corp	Finan.									779°	810°	836°	849°	850°	1002°
HP Inc	Manu.	32°	5°	15°	22°	8°	1°	51°	64°	90°	46°	31°	57°	80°	65°
HRG Group Inc	Manu.														1358°
Hub Group Inc	Transp.														1329°
Hubbell Incorporated	Manu.							602°	710°	614°	663°	579°	602°	639°	594°
HubSpot Inc	Servi.														964°
Hudson Pacific Properties Inc	Finan.														1478°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Humana Inc	Finan.	297°	214°	153°	205°	248°	310°	289°	378°	466°	225°	188°	80°	101°	104°
Huntington Bancshares Incorporated	Finan.		281°	370°	420°	391°	267°	261°	367°	347°	636°	545°	500°	429°	472°
Huntington Ingalls Industries Inc	Manu.	283°									487°	696°	374°	514°	500°
Huntsman Corporation	Manu.						265°	276°	326°	541°	436°	290°	272°	286°	205°
Hyatt Hotels Corporation	Servi.								418°	615°	149°	198°	81°	273°	206°
IAC/InterActiveCorp	Servi.			396°	450°	466°	430°	592°	551°	682°	691°	788°	872°	895°	1089°
IBERIABANK Corp	Finan.														1272°
ICU Medical, Incorporated	Manu.														1143°
IDACORP Inc	Transp.														1056°
IDEX Corporation	Manu.							415°	465°	380°	478°	345°	365°	368°	513°
IDEXX Laboratories, Inc.	Manu.							570°	639°	555°	621°	667°	677°	628°	643°
IHS Markit Ltd	Servi.														1072°
ILG Inc	Transp.														1325°
Illinois Tool Works Inc.	Manu.	238°	288°	327°	322°	85°	222°	208°	244°	350°	186°	247°	285°	205°	251°
Illumina, Inc.	Manu.							531°	610°	598°	632°	407°	491°	528°	403°
Impax Laboratories Inc	Manu.														911°
Imperva Inc	Servi.														1184°
Incyte Corporation	Servi.													884°	1151°
Independent Bank Corp	Finan.														1285°
Infinera Corp.	Manu.														761°
Ingersoll-Rand PLC	Manu.				305°	102°	212°	60°	58°	65°	6°	236°	11°	68°	24°
Ingredion Inc	Manu.							368°	395°	218°	131°	217°	159°	175°	175°
Innophos Holdings, Inc.	Manu.														942°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Innospec Inc.	Manu.														773°
Inogen Inc	Manu.														1008°
Inovalon Holdings Inc	Servi.														1171°
Inphi Corporation	Manu.														1456°
Insperity Inc	Servi.														1129°
Insulet Corporation	Manu.														1382°
Integra Lifesciences Holdings Corp	Manu.														739°
Integrated Device Technology Inc	Manu.								612°	597°	352°	413°	210°	231°	227°
Intel Corporation	Manu.	4°	13°	36°	15°	11°	14°	6°	31°	11°	27°	26°	36°	37°	29°
Interactive Brokers Group, Inc.	Finan.								764°	804°	741°	781°	808°	824°	879°
Intercept Pharmaceuticals Inc	Manu.														1164°
InterDigital, Inc.	Finan.														1299°
Interface, Inc.	Manu.														1546°
International Bancshares Corp	Finan.														1276°
International Business Machines Corp.	Servi.		118°	42°	1°	25°	3°	50°	20°	4°	33°	101°	115°	131°	99°
International Flavors & Fragrances Inc	Manu.	5°	257°	354°	358°	342°	336°	339°	430°	208°	86°	120°	72°	75°	127°
International Game Technology PLC	Manu.	252°													164°
International Paper Co	Servi.														
International Speedway Corp	Manu.				95°	86°	66°	182°	295°	211°	156°	75°	88°	22°	26°
Interpublic Group of	Servi.							642°	703°	776°	800°	682°	802°	794°	834°
	Servi.	158°	222°	278°	352°	392°	433°	301°	287°	373°	323°	412°	412°	515°	378°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Companies Inc															
Intrepid Potash, Inc.	Min.								580°	627°	602°	641°	669°	677°	734°
Intrexon Corp	Servi.														1355°
Intuit Inc.	Servi.	84°	149°	239°	210°	243°	223°	259°	240°	274°	318°	241°	266°	295°	287°
Intuitive Surgical, Inc.	Manu.						262°	438°	487°	464°	503°	382°	386°	450°	408°
Invesco Ltd.	Finan.						254°	284°	365°	575°	684°	582°	634°	652°	657°
Invesco Mortgage Capital Inc	Finan.														1402°
Investors Bancorp Inc	Finan.														1156°
Ionis Pharmaceuticals Inc	Manu.													874°	1097°
IPG Photonics Corporation	Manu.									585°	629°	638°	660°	688°	679°
Iqvia Holdings Inc	Servi.													787°	811°
iRobot Corporation	Manu.														891°
Iron Mountain Incorporated	Transp.			159°	261°	257°	475°	372°	410°	255°	419°	264°	282°		
Ironwood Pharmaceuticals, Inc.	Manu.														1043°
istar Inc	Finan.			355°	476°	492°	518°	689°	785°	826°	851°	855°	875°	903°	1484°
Itron, Inc.	Manu.								427°	241°	390°	384°	381°	308°	352°
ITT Corp	Manu.	146°	223°	223°	86°	47°	54°	15°	10°	150°	125°	126°	205°	242°	
ITT Educational Services, Inc.	Servi.							585°	661°	673°	732°	775°	791°	813°	797°
J & J Snack Foods Corp	Manu.														1157°
J B Hunt Transport Services Inc	Transp.							530°	630°	394°	514°	645°	600°	562°	574°
J C Penney Company	Ret.	237°	236°	233°	193°	84°	175°	96°	208°	312°	248°	294°	255°	317°	303°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Inc															
J M Smucker Co	Manu.							392°	429°	451°	295°	173°	143°	105°	114°
J2 Global Inc	Transp.														1226°
Jabil Inc	Manu.	163°	176°	270°	291°	339°	398°	481°	408°	365°	427°	368°	410°	348°	181°
Jack Henry & Associates, Inc.	Servi.														1300°
Jack in the Box Inc.	Ret.														1068°
Jacobs Engineering Group Inc	Cons.			213°	223°	249°	359°	263°	76°	173°	202°	124°	135°	53°	183°
Jazz Pharmaceuticals PLC	Manu.													881°	967°
JD.Com Inc(ADR)	Ret.													886°	1153°
JetBlue Airways Corporation	Transp.														1055°
John Bean Technologies Corp	Manu.														1418°
John Wiley & Sons Inc	Manu.								172°	184°	236°	364°	351°	410°	324°
Johnson & Johnson	Manu.	6°	11°	4°	23°	1°	32°	26°	50°	21°	70°	70°	44°	18°	6°
Johnson Controls International PLC	Manu.		4°	14°	18°	29°	11°	16°	21°	14°	15°	59°	28°	41°	45°
Jones Lang LaSalle Inc	Finan.							131°	145°	93°	115°	89°	109°	108°	123°
JPMorgan Chase & Co.	Finan.	144°	151°	321°	82°	103°	44°	91°	166°	237°	194°	147°	187°	176°	152°
Juniper Networks, Inc.	Manu.			238°	144°	238°	325°	346°	156°	292°	161°	146°	164°	126°	171°
Juno Therapeutics Inc	Servi.														1344°
Kaiser Aluminum Corp.	Manu.														959°
Kaman Corporation	Manu.														886°
Kansas City Southern	Transp.							455°	415°	583°	589°	629°	657°	614°	483°
KapStone Paper and	Manu.														680°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Packaging Corp.															
KAR Auction Services Inc	Ret.									649°	705°	710°	699°	715°	758°
KB Home	Cons.	300°	215°	383°	432°	256°	228°	367°	503°	298°	452°	548°	542°	611°	602°
KBR, Inc.	Cons.						373°	504°	531°	243°	378°	299°	204°	137°	159°
Kellogg Company	Manu.	177°	218°	265°	319°	160°	28°	8°	22°	20°	25°	18°	70°	11°	5°
Kemper Corp	Finan.							656°	742°	790°	836°	847°	852°	871°	1064°
Kennametal Inc.	Manu.								400°	432°	354°	441°	401°	364°	401°
Kennedy-Wilson Holdings Inc	Finan.														1442°
KeyCorp	Finan.	220°	237°	322°	385°	380°	292°	215°	294°	370°	416°	390°	471°	404°	488°
Keysight Technologies Inc	Manu.														499°
Kilroy Realty Corp	Finan.							623°	704°	750°	792°	745°	698°	647°	660°
Kimberly Clark Corp	Manu.	76°	3°	10°	7°	57°	24°	1°	11°	7°	22°	35°	15°	50°	13°
Kimco Realty Corp	Finan.	277°	285°	418°	446°	450°	509°	616°	640°	699°	709°	743°	748°	750°	662°
Kinder Morgan Inc	Transp.										386°	477°	679°	704°	732°
Kirby Corporation	Transp.							431°	518°	411°	388°	282°	294°	319°	360°
Kite Realty Group Trust	Finan.														1434°
KLA-Tencor Corp	Manu.	245°	258°	248°	184°	286°	270°	347°	383°	363°	283°	257°	264°	302°	231°
Knight-Swift Transportation Holdings Inc	Transp.														1096°
Knowles Corp	Manu.														776°
Kohl's Corporation	Ret.	69°	71°	71°	84°	142°	243°	280°	213°	233°	228°	195°	253°	262°	264°
Kosmos Energy Ltd	Min.											484°	459°	453°	343°
Kraft Heinz Co	Manu.														1005°
Kraton Corp	Manu.														1091°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Kroger Co	Ret.	151°	169°	193°	21°	31°	108°	42°	51°	168°	76°	128°	151°	154°	230°
Kronos Worldwide, Inc.	Manu.										739°	772°	780°	792°	873°
L Brands Inc	Ret.				267°	204°	182°	163°	174°	196°	241°	358°	232°	236°	236°
L3 Technologies Inc	Manu.	264°	262°	320°	373°	321°	503°	577°	453°	677°	428°	437°	550°	401°	451°
La Quinta Holdings Inc	Servi.														1080°
Laboratory Corp. of America Holdings	Servi.		153°	164°	236°	288°	247°	375°	339°	364°	342°	328°	350°	366°	459°
Ladder Capital Corp	Finan.	184°													1115°
Lam Research Corporation	Manu.				382°	269°	393°	309°	352°	358°	211°	187°	24°	32°	16°
Lamar Advertising Co	Servi.				384°	446°	513°	673°	772°	810°	839°	826°	842°	829°	854°
Lancaster Colony Corp.	Manu.														1130°
Landstar System, Inc.	Transp.							505°	566°	607°	648°	678°	711°	722°	753°
Laredo Petroleum Inc	Min.														1422°
Las Vegas Sands Corp.	Servi.			252°	303°	347°	345°	390°	512°	581°	670°	586°	656°	679°	545°
LaSalle Hotel Properties	Finan.														1383°
Lattice Semiconductor Corp	Manu.														936°
Lazard Ltd	Finan.							605°	693°	728°	772°	799°	829°	831°	918°
LCI Industries	Manu.														1062°
Lear Corporation	Manu.								467°	482°	488°	391°	314°	329°	256°
LegacyTexas Financial Group Inc	Finan.														1436°
Legg Mason Inc	Finan.	230°	224°	162°	263°	449°	322°	213°	260°	232°	362°	231°	400°	432°	402°
Leggett & Platt, Inc.	Manu.	210°	255°	351°	422°	424°	524°	590°	666°	735°	339°	515°	408°	471°	525°
Leidos Holdings Inc	Servi.							101°	81°	91°	119°	215°	214°	200°	74°
Lennar Corporation	Cons.	155°	181°	173°	307°	379°	517°	649°	714°	715°	730°	767°	767°	771°	790°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Lennox International Inc.	Manu.							550°	680°	595°	508°	445°	444°	350°	286°
Leucadia National Corp.	Manu.			316°	401°	416°	502°	686°	735°	814°	822°	840°	851°	851°	1076°
Lexicon Pharmaceuticals, Inc.	Manu.														1207°
Lexington Realty Trust	Finan.														1429°
Liberty Broadband Corp	Transp.														1469°
Liberty Global PLC	Transp.			398°	438°	419°	456°	677°	204°	762°	132°	135°	90°	182°	115°
Liberty Interactive QVC Group	Transp.					485°	492°	684°	780°	822°	846°	508°	640°	691°	651°
Liberty Media Formula One	Transp.												858°	868°	1047°
Liberty Property Trust	Finan.			296°	378°	432°	496°	410°	464°	511°	527°	520°	511°	561°	667°
Liberty TripAdvisor Holdings Inc	Servi.														1514°
Life Storage Inc	Finan.														1485°
LifePoint Health Inc	Servi.							524°	591°	323°	398°	338°	505°	416°	466°
Ligand Pharmaceuticals Inc.	Manu.														1479°
Lincoln Electric Holdings, Inc.	Manu.							295°	435°	318°	345°	332°	305°	330°	293°
Lincoln National Corporation	Finan.		251°	390°	169°	228°	241°	406°	393°	418°	350°	538°	439°	426°	384°
Lions Gate Entertainment Corp. (USA)	Servi.	296°													1437°
Lithia Motors Inc	Ret.														1155°
Littelfuse, Inc.	Manu.														818°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Live Nation Entertainment, Inc.	Servi.														1287°
LKQ Corporation	Whol.								707°	761°	702°	771°	710°	767°	848°
Lockheed Martin Corporation			93°	31°	124°	81°	353°	188°	125°	175°	148°	292°	215°	104°	112°
Loews Corporation	Manu.	97°													
LogMeIn Inc	Finan.	274°	189°	234°	340°	393°	506°	662°	649°	746°	639°	727°	800°	724°	799°
Louisiana-Pacific Corporation	Servi.														1321°
Lowe's Companies, Inc.			234°	190°	137°	80°	82°	125°	82°	39°	137°	218°	481°	391°	411°
LPL Financial Holdings Inc	Manu.	225°													
LTC Properties Inc	Ret.	38°	52°	103°	109°	171°	266°	197°	199°	256°	393°	174°	322°	230°	294°
Lululemon Athletica inc.											418°	606°	663°	685°	762°
Lumentum Holdings Inc	Finan.														
Lydall, Inc.	Finan.														1486°
LyondellBasell Industries NV	Ret.										570°	672°	608°	751°	675°
M&T Bank Corporation	Manu.														1179°
M.D.C. Holdings, Inc.	Manu.														1040°
Macerich Co										170°	197°	119°	127°	121°	199°
Mack Cali Realty Corp	Manu.														
MACOM Technology Solutions Holdings Inc	Finan.	135°	136°	143°	198°	259°	317°	302°	394°	425°	481°	385°	609°	485°	540°
Macquarie Infrastructure Corp	Cons.							499°	472°	503°	625°	555°	584°	576°	639°
Macy's Inc	Finan.			347°	376°	431°	478°	561°	625°	507°	719°	713°	784°	744°	746°
Madison Square	Finan.							683°	779°	819°	843°	816°	827°	852°	987°
	Manu.														847°
	Manu.														
	Whol.														1490°
	Ret.	179°	167°	249°	92°	33°	166°	107°	141°	264°	263°	176°	313°	284°	336°
	Servi.														1363°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Garden Co															
Magellan Health Inc	Servi.														1121°
Maiden Holdings, Ltd.	Finan.														1526°
Mallinckrodt PLC	Manu.												826°		938°
Manhattan Associates, Inc.	Servi.														1386°
Manitowoc Company Inc	Manu.				145°	53°	131°	195°	103°	97°	268°	166°	373°	316°	438°
ManpowerGroup Inc.	Servi.	102°	103°	167°	51°	56°	114°	241°	307°	95°	146°	142°	132°	81°	125°
Mantech International Corp	Servi.														954°
Marathon Oil Corporation	Manu.	2°	2°	5°	25°	139°	110°	5°	16°	23°	79°	40°	76°	106°	233°
Marathon Petroleum Corp	Manu.										50°	69°	86°	88°	202°
Markel Corporation	Finan.							593°	665°	626°	715°	581°	633°	613°	694°
MarketAxess Holdings Inc.	Finan.														1016°
Marriott International Inc	Servi.	75°	10°	34°	57°	77°	83°	68°	71°	123°	124°	116°	202°	143°	84°
Marriott Vacations Worldwide Corp	Finan.										471°	453°	435°	323°	358°
Marsh & McLennan Companies, Inc.	Finan.		195°	341°	419°	308°	490°	506°	548°	422°	507°	509°	516°	488°	611°
Martin Marietta Materials, Inc.	Min.			230°	326°	261°	288°	446°	546°	499°	554°	559°	560°	597°	591°
Marvell Technology Group Ltd.	Manu.			287°	354°	396°	420°	408°	529°	589°	536°	573°	580°	510°	598°
Masco Corp	Manu.	170°	17°	41°	208°	284°	249°	128°	137°	136°	135°	191°	250°	434°	452°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Masimo Corporation	Manu.														1403°
Masonite International Corp	Manu.														874°
MasTec, Inc.	Cons.														974°
Mastercard Inc	Servi.					404°	305°	262°	281°	303°	112°	178°	144°	127°	128°
Matador Resources Co	Min.														1123°
Match Group Inc	Servi.														1525°
Matson Inc	Transp.														944°
Mattel, Inc.	Manu.	218°	40°	150°	355°	43°	31°	56°	114°	60°	143°	11°	98°	27°	282°
Matthews International Corp	Manu.														1322°
Maxim Integrated Products Inc.	Manu.				269°	146°	363°	351°	242°	311°	292°	347°	467°	180°	218°
MAXIMUS, Inc.	Servi.														1160°
MaxLinear, Inc.	Manu.														1025°
MB Financial Inc	Finan.														1309°
MBIA Inc.	Finan.	211°	244°	149°	219°	272°	459°	595°	685°	757°	793°	732°	836°	846°	863°
McClatchy Co	Manu.			368°	415°	330°	466°	610°	711°	749°	773°	731°	769°	840°	924°
McCormick & Company, Incorporated	Manu.		192°	332°	400°	467°	319°	238°	303°	336°	264°	183°	141°	159°	138°
McDermott International Inc	Manu.			405°	475°	315°	324°	568°	719°	707°	534°	288°	443°	342°	555°
McDonald's Corporation	Ret.		19°	11°	6°	7°	68°	48°	33°	154°	71°	213°	309°	238°	254°
McKesson Corporation	Whol.	23°				162°	138°	194°	328°	151°	172°	127°	234°	249°	271°
MDU Resources Group Inc	Transp.							170°	206°	246°	223°	348°	289°	310°	275°
Medical Properties Trust, Inc.	Finan.														1518°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Medidata Solutions Inc	Servi.														1185°
MEDNAX Inc	Servi.							466°	461°	566°	610°	660°	683°	692°	663°
Medtronic PLC	Manu.	30°	47°	67°	156°	170°	97°	72°	179°	161°	180°	68°	103°	65°	35°
Merck & Co., Inc.	Manu.	15°	23°	28°	42°	10°	23°	61°	12°	32°	84°	41°	31°	12°	8°
Mercury General Corporation	Finan.							549°	623°	660°	751°	744°	813°	755°	751°
Meredith Corporation	Manu.	266°	283°	401°	206°	230°	376°	443°	458°	353°	491°	343°	479°	418°	484°
Meritage Homes Corp	Cons.														1092°
Metlife Inc	Finan.	48°	61°	77°	97°	127°	74°	102°	231°	324°	231°	404°	333°	339°	337°
Mettler-Toledo International Inc.	Manu.							490°	561°	409°	466°	459°	218°	209°	225°
MFA Financial, Inc.	Finan.							635°	732°	729°	769°	798°	826°	822°	897°
MGE Energy, Inc.	Transp.														1128°
MGIC Investment Corp.	Finan.	286°	180°	255°	388°	441°	463°	556°	579°	641°	442°	578°	611°	587°	676°
MGM Resorts International	Servi.	111°	73°	91°	48°	113°	276°	275°	266°	366°	380°	489°	526°	513°	393°
Michael Kors Holdings Ltd	Manu.												646°	670°	671°
Michaels Companies Inc	Ret.														993°
Microchip Technology Inc.	Manu.			251°	280°	276°	357°	307°	315°	355°	58°	157°	83°	61°	82°
Micron Technology, Inc.	Manu.		197°	259°	317°	224°	335°	333°	337°	348°	333°	448°	383°	501°	265°
Microsemi Corporation	Manu.	209°													940°
Microsoft Corporation	Servi.	91°	85°	22°	33°	13°	86°	79°	131°	113°	100°	27°	60°	45°	162°
MicroStrategy Incorporated	Servi.														1186°
Mid-America	Finan.														1286°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Apartment Communities Inc															
Middleby Corp	Manu.														1536°
Minerals Technologies Inc	Manu.														805°
Mitel Networks Corp	Manu.													876°	1136°
MKS Instruments, Inc.	Manu.														1235°
Mobile Mini Inc	Manu.														1390°
Mobileye BV	Manu.														978°
Moelis & Co	Finan.														1118°
Mohawk Industries, Inc.	Manu.			284°	320°	273°	200°	78°	140°	64°	32°	122°	58°	93°	106°
Molina Healthcare, Inc.	Finan.														1509°
Molson Coors Brewing Co	Manu.		259°	422°	468°	353°	124°	122°	19°	30°	49°	10°	106°	44°	133°
Mondelez International Inc	Manu.	276°	77°	107°	5°	6°	2°	22°	54°	135°	126°	111°	126°	144°	68°
Monolithic Power Systems, Inc.	Manu.	131°													902°
Monsanto Company	Manu.	108°	28°	135°	104°	152°	61°	87°	40°	63°	80°	125°	197°	113°	86°
Monster Beverage Corp	Manu.						500°	652°	743°	786°	826°	782°	803°	815°	931°
Moody's Corporation	Servi.			176°	310°	193°	352°	551°	568°	410°	455°	242°	286°	267°	309°
Moog Inc	Manu.														869°
Morgan Stanley	Finan.	67°	59°	83°	78°	117°	168°	244°	176°	319°	238°	298°	290°	265°	325°
Morningstar, Inc.	Finan.								446°	500°	502°	588°	562°	589°	589°
Mosaic Co	Manu.				277°	329°	370°	519°	198°	171°	196°	107°	96°	82°	103°
Motorola Solutions Inc	Manu.	8°	57°	1°	30°	14°	5°	21°	45°	80°	56°	17°	71°	92°	57°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
MRC Global Inc	Whol.														1527°
MSA Safety Inc	Manu.														992°
MSC Industrial Direct Co Inc	Whol.								526°	591°	457°	535°	528°	491°	491°
Msci Inc	Servi.							581°	681°	702°	714°	756°	772°	774°	817°
MSG Networks Inc	Transp.								683°	771°	569°	596°	603°	655°	
Mueller Industries, Inc.	Manu.														1535°
Mueller Water Products, Inc.	Manu.														1450°
Murphy Oil Corporation	Manu.	190°	205°	301°	389°	440°	401°	440°	496°	537°	735°	574°	723°	622°	682°
Murphy USA Inc	Transp.														1137°
Mylan NV	Manu.	112°	152°	266°	349°	361°	519°	597°	599°	678°	694°	725°	738°	699°	754°
Myriad Genetics, Inc.	Manu.							521°	587°	604°	723°	640°	671°	598°	621°
Nabors Industries Ltd.	Min.	134°	124°	155°	276°	354°	468°	522°	632°	694°	516°	669°	740°	549°	640°
Nasdaq Inc	Finan.						514°	533°	602°	710°	682°	566°	716°	680°	624°
National CineMedia, Inc.	Servi.														1146°
National Fuel Gas Co.	Transp.								563°	695°	696°	726°	745°	737°	760°
National General Holdings Corp	Finan.														1395°
National Health Investors Inc	Finan.														1404°
National Instruments Corp	Servi.							147°	207°	70°	91°	24°	42°	38°	55°
National Retail Properties, Inc.	Finan.														1335°
National-Oilwell Varco, Inc.	Manu.	281°	300°	424°	362°	313°	453°	514°	528°	295°	353°	402°	498°	550°	664°
Nationstar Mortgage	Finan.														1086°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Holdings Inc															
Natus Medical Inc	Manu.														949°
Navient Corp	Finan.													899°	1246°
Navigators Group Inc	Finan.														1419°
Navistar International Corp	Manu.	159°	129°	228°	482°	407°	271°	175°	214°	357°	347°	278°	342°	385°	320°
NBT Bancorp Inc.	Finan.														1416°
NCR Corporation	Manu.	120°	128°	194°	274°	208°	199°	373°	305°	234°	199°	230°	241°	315°	283°
Neenah Inc	Manu.														986°
Nektar Therapeutics	Manu.														1342°
Nelnet, Inc.	Finan.														1038°
NetApp Inc.	Manu.	233°	246°	361°	431°	420°	275°	240°	392°	229°	306°	323°	363°	386°	216°
NetEase Inc (ADR)	Servi.														1500°
Netflix, Inc.	Servi.								768°	816°	848°	853°	863°	878°	1014°
NetGear, Inc.	Manu.														812°
Neurocrine Biosciences, Inc.	Manu.														1191°
Nevro Corp	Manu.														1359°
New Jersey Resources Corp	Transp.														927°
New Oriental Education & Tech Grp (ADR)	Servi.								596°	624°	707°	735°	762°	760°	781°
New Residential Investment Corp	Finan.														1529°
New Wei Inc	Min.								401°	415°	233°	224°	196°	191°	
New York Community Bancorp, Inc.	Finan.			399°	443°	463°	494°	628°	702°	753°	778°	795°	822°	801°	919°
New York REIT Inc	Finan.														1343°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
New York Times Co	Manu.	183°	229°	258°	207°	422°	230°	222°	357°	402°	480°	417°	496°	567°	464°
Newell Brands Inc	Manu.	200°	284°	323°	256°	413°	205°	84°	70°	132°	170°	275°	188°	258°	341°
Newfield Exploration Co.	Min.			314°	178°	226°	312°	232°	319°	239°	325°	378°	534°	388°	419°
NewMarket Corporation	Manu.														982°
Newmont Mining Corp	Min.				52°	32°	19°	27°	5°	10°	13°	8°	6°	43°	46°
News Corp	Manu.												835°	793°	804°
Nexstar Media Group Inc	Transp.														1430°
NextEra Energy Inc	Transp.	136°	50°	65°	62°	101°	154°	126°	68°	74°	53°	67°	46°	16°	30°
NIC Inc.	Servi.														1220°
Nielsen Holdings PLC	Servi.										537°	530°	543°	630°	304°
NII Holdings Inc	Transp.														1124°
Nike Inc	Manu.				115°	24°	84°	25°	92°	81°	28°	20°	34°	57°	53°
NiSource Inc.	Transp.	295°	298°	334°	462°	430°	341°	528°	195°	205°	108°	109°	154°	103°	142°
Noble Corporation PLC	Min.	107°	88°	105°	81°	120°	235°	228°	276°	342°	630°	618°	652°	738°	568°
Noble Energy, Inc.	Min.			365°	440°	427°	455°	336°	366°	219°	200°	212°	245°	243°	238°
Nordson Corporation	Manu.										368°	406°	394°	400°	429°
Nordstrom, Inc.	Ret.	132°	265°	210°	435°	212°	105°	57°	116°	84°	134°	86°	108°	172°	212°
Norfolk Southern Corp.	Transp.				215°	124°	29°	33°	143°	101°	239°	161°	263°	254°	255°
Northern Trust Corporation	Finan.		191°	184°	220°	258°	64°	155°	161°	249°	130°	83°	52°	95°	92°
Northfield Bancorp Inc	Finan.	90°													1351°
Northrop Grumman Corporation	Manu.		81°	138°	64°	157°	172°	133°	65°	163°	109°	92°	104°	66°	77°
Northstar Realty Europe Corp	Finan.	43°													1495°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Northwest Bancshares, Inc.	Finan.														1545°
Northwest Natural Gas Co	Transp.														1107°
NorthWestern Corp	Transp.														979°
Norwegian Cruise Line Holdings Ltd	Transp.													848°	1020°
Novavax, Inc.	Manu.														1126°
NOW Inc	Min.														777°
NRG Energy Inc	Transp.						301°	350°	338°	440°	463°	296°	273°	229°	268°
NRG Yield Inc	Transp.														1547°
Nu Skin Enterprises, Inc.	Whol.														968°
Nuance Communications Inc.	Servi.							617°	697°	517°	599°	685°	662°	643°	645°
Nucor Corporation	Manu.	214°	274°	307°	244°	348°	215°	274°	153°	82°	178°	225°	199°	189°	165°
NuVasive, Inc.	Manu.														1131°
NVIDIA Corporation	Manu.	268°	247°	379°	439°	368°	95°	243°	221°	182°	187°	131°	107°	133°	207°
NVR, Inc.	Cons.			391°	454°	478°	387°	512°	486°	563°	601°	633°	653°	673°	772°
NXP Semiconductors NV	Manu.												438°	448°	364°
NxStage Medical, Inc.	Manu.														953°
Oasis Petroleum Inc.	Min.									719°	816°	695°	694°	713°	703°
Occidental Petroleum Corporation	Min.		44°	49°	20°	69°	127°	203°	73°	167°	5°	4°	4°	4°	4°
Oceaneering International	Min.	47°						536°	608°	236°	313°	268°	271°	264°	333°
Ocwen Financial Corp	Finan.												744°	756°	767°
Office Depot Inc	Ret.	204°	260°	106°	154°	151°	144°	166°	162°	203°	177°	263°	184°	353°	357°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
OGE Energy Corp.	Transp.							575°	613°	515°	596°	592°	630°	629°	735°
Oil States International, Inc.	Manu.								318°	265°	332°	366°	369°	457°	582°
Old Dominion Freight Line	Transp.														1172°
Old National Bancorp	Finan.														1366°
Old Republic International Corporation	Finan.			306°	397°	405°	520°	685°	762°	805°	823°	841°	861°	872°	1059°
Olin Corporation	Manu.	7°	25°	66°	151°	22°	300°	409°	416°	430°	515°	353°	427°	375°	369°
OM Asset Management PLC	Pub.Ad.														1108°
Omega Healthcare Investors Inc	Finan.														1223°
Omnicom Group Inc.	Servi.				368°	389°	169°	298°	223°	270°	270°	398°	474°	500°	370°
On Assignment, Inc.	Servi.														1392°
ON Semiconductor Corp	Manu.								312°	309°	250°	271°	260°	255°	213°
ONE Gas Inc	Transp.														973°
OneMain Holdings Inc	Finan.														1211°
ONEOK, Inc.	Transp.						311°	335°	322°	293°	344°	336°	281°	239°	229°
Ophthotech Corp	Manu.														1306°
Opko Health Inc.	Manu.														1275°
Oracle Corporation	Servi.	122°	147°	214°	59°	93°	43°	136°	256°	231°	237°	201°	163°	167°	198°
Orbital ATK Inc	Manu.								445°	423°	405°	363°	515°	405°	449°
O'Reilly Automotive Inc	Ret.							459°	533°	522°	581°	663°	639°	701°	693°
Ormat Technologies, Inc.	Transp.								549°	616°	538°	631°	624°	620°	641°
Otter Tail Corporation	Transp.														1105°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Outfront Media Inc	Finan.														1000°
Overseas Shipholding Group Inc.	Pub.Ad.														316°
Owens & Minor, Inc.	Whol.														991°
Owens Corning	Manu.							214°	130°	185°	113°	145°	123°	132°	85°
Owens-Illinois Inc	Manu.			222°	289°	303°	225°	260°	265°	202°	370°	360°	445°	214°	291°
P H Glatfelter Co	Manu.														724°
PACCAR Inc	Manu.	153°	208°	281°	318°	349°	449°	288°	299°	329°	315°	512°	448°	362°	281°
Pacira															1069°
Pharmaceuticals Inc	Manu.														
Packaging Corp Of America	Manu.							441°	498°	516°	547°	496°	549°	583°	551°
PacWest Bancorp	Finan.														1510°
Palo Alto Networks Inc	Servi.													896°	1026°
Pandora Media Inc	Servi.											850°	866°	882°	1065°
Papa John's Int'l, Inc.	Ret.														1066°
Paramount Group Inc	Finan.														1475°
Park National Corporation	Finan.														1451°
Parker-Hannifin Corp	Manu.	172°	245°	375°	458°	300°	338°	250°	234°	272°	314°	148°	300°	207°	350°
Parsley Energy Inc	Min.														1551°
Party City Holdco Inc	Ret.														1075°
Patrick Industries, Inc.	Manu.														1316°
Pattern Energy Group Inc	Transp.														1483°
Patterson Companies, Inc.	Whol.	242°	272°	346°	371°	412°	366°	586°	611°	486°	611°	598°	452°	511°	383°
Patterson-UTI Energy,	Min.			299°	383°	425°	523°	680°	777°	785°	824°	692°	621°	664°	714°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Inc.															
Paychex, Inc.	Servi.	282°	289°	367°	379°	436°	411°	365°	368°	492°	469°	483°	487°	470°	522°
Paycom Software Inc	Servi.														905°
Paypal Holdings Inc	Finan.														1248°
PBF Energy Inc	Manu.														1348°
PDC Energy Inc	Min.														1216°
PDL BioPharma Inc	Manu.			412°	386°	402°	356°	517°	364°	436°	528°	544°	586°	601°	630°
Pebblebrook Hotel Trust	Finan.														1258°
Pegasystems Inc.	Servi.														1139°
Penn National Gaming, Inc	Servi.							658°	749°	706°	808°	676°	757°	808°	827°
Pennsylvania R.E.I.T.	Finan.														1332°
Penske Automotive Group, Inc.	Ret.							653°	736°	679°	712°	681°	702°	662°	723°
Pentair PLC	Manu.			128°	167°	245°	380°	283°	296°	254°	316°	337°	420°	581°	
Penumbra Inc	Manu.														1044°
People's United Financial, Inc.	Finan.			397°	449°	477°	295°	405°	557°	369°	504°	655°	674°	678°	720°
PepsiCo, Inc.	Manu.	34°	30°	13°	4°	38°	21°	144°	79°	26°	81°	96°	173°	83°	33°
PerkinElmer, Inc.	Manu.			146°	195°	194°	361°	359°	144°	174°	99°	193°	161°	122°	204°
Pfizer Inc.	Manu.	66°	56°	129°	134°	82°	164°	32°	128°	199°	223°	255°	201°	215°	121°
PG&E Corporation	Transp.				71°	70°	53°	112°	89°	165°	83°	46°	49°	183°	107°
Philip Morris International Inc.	Manu.							193°	316°	307°	286°	286°	259°	276°	248°
Phillips 66	Manu.												341°	331°	284°
Physicians Realty Trust	Finan.														1336°
Piedmont Office Realty	Finan.									778°	819°	811°	832°	836°	1035°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Trust, Inc.															
Pilgrim's Pride Corporation	Manu.														1006°
Pinnacle Financial Partners	Finan.														1462°
Pinnacle Foods Inc	Manu.														885°
Pinnacle West Capital Corporation	Transp.	109°	58°	24°	34°	75°	34°	46°	78°	156°	117°	140°	142°	97°	126°
Pioneer Natural Resources	Min.			227°	259°	340°	379°	495°	583°	562°	563°	604°	668°	498°	564°
Pitney Bowes Inc.	Manu.	270°	293°	366°	341°	270°	55°	14°	18°	27°	48°	33°	63°	29°	50°
Plains GP Holdings LP	Transp.														1360°
Planet Fitness Inc	Servi.														1307°
Platform Specialty Products Corp	Manu.														1293°
Ply Gem Holdings Inc	Manu.														1090°
PNC Financial Services Group Inc	Finan.	88°	41°	70°	224°	92°	135°	246°	229°	230°	260°	324°	370°	383°	414°
PNM Resources Inc	Transp.														1295°
Polaris Industries Inc.	Manu.									379°	396°	465°	404°	430°	518°
PolyOne Corporation	Manu.														733°
Pool Corporation	Whol.														916°
Popular Inc	Finan.							485°	522°	421°	459°	349°	354°	349°	529°
Portland General Electric Company	Transp.														1244°
Potbelly Corp	Ret.														1200°
Potlatch Corporation	Finan.														1249°
Power Integrations Inc	Manu.														1238°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
PPG Industries, Inc.	Manu.	161°	200°	247°	232°	264°	78°	187°	173°	117°	133°	48°	150°	156°	95°
PPL Corp	Transp.	92°	125°	271°	76°	64°	106°	111°	60°	153°	142°	266°	317°	219°	201°
Pra Group Inc	Servi.														1202°
PRA Health Sciences Inc	Servi.														807°
Praxair, Inc.	Whol.				204°	65°	152°	2°	6°	18°	3°	1°	2°	1°	2°
Premier Inc	Servi.														1317°
Priceline Group Inc	Servi.						469°	674°	739°	716°	756°	591°	693°	569°	698°
PriceSmart, Inc.	Ret.														1414°
Primerica, Inc.	Finan.														1134°
Principal Financial Group Inc	Finan.		142°	191°	216°	355°	284°	300°	245°	287°	157°	209°	225°	240°	275°
ProAssurance Corporation	Finan.	150°													1417°
Procter & Gamble Co	Manu.	10°	15°	17°	32°	3°	52°	54°	34°	38°	93°	102°	116°	42°	122°
Progress Software Corporation	Servi.														1048°
Progressive Corp	Finan.	101°	62°	86°	121°	155°	269°	225°	220°	138°	183°	319°	275°	266°	361°
Prologis Inc	Finan.			404°	478°	483°	450°	494°	360°	288°	387°	443°	472°	373°	457°
Proofpoint Inc	Servi.														1266°
Prosperity Bancshares, Inc.	Finan.														1492°
Prothena Corporation PLC	Manu.														1198°
Proto Labs Inc	Manu.														996°
Provident Financial Services, Inc.	Finan.														1222°
Prudential Financial Inc	Finan.	46°	78°	63°	166°	116°	132°	45°	112°	145°	269°	326°	299°	246°	261°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
PS Business Parks Inc	Finan.														1445°
PTC Inc	Servi.	166°	96°	134°	177°	295°	495°	563°	682°	667°	731°	523°	595°	560°	745°
Public Service Enterprise Group Inc.			82°	115°	83°	55°	178°	67°	17°	8°	34°	77°	51°	114°	258°
Public Storage	Transp.	55°													
PulteGroup, Inc.	Finan.	292°	226°	329°	406°	397°	367°	502°	402°	513°	553°	627°	597°	616°	649°
Puma Biotechnology Inc	Cons.	180°	194°	263°	278°	325°	195°	151°	285°	338°	259°	492°	289°	402°	424°
PVH Corp	Manu.														
Q2 Holdings Inc	Manu.							117°	127°	102°	69°	13°	14°	36°	54°
QEP Resources Inc	Servi.														1150°
Qorvo Inc	Min.									570°	549°	688°	635°	693°	596°
QTS Realty Trust Inc	Manu.														1067°
Quad/Graphics, Inc.	Finan.														1501°
Quaker Chemical Corp	Manu.														947°
QUALCOMM, Inc.	Whol.														849°
Qualys Inc	Manu.	145°	134°	130°	99°	222°	103°	137°	102°	71°	57°	9°	7°	78°	71°
Quanta Services Inc	Servi.														1119°
Quest Diagnostics Inc	Cons.							539°	585°	554°	572°	691°	575°	612°	689°
Quotient Technology Inc	Servi.	156°	172°	183°	243°	289°	143°	167°	298°	133°	192°	200°	274°	129°	177°
Radian Group Inc	Servi.														1315°
Radius Health Inc	Finan.			336°	424°	464°	419°	450°	539°	671°	788°	758°	797°	795°	798°
Ralph Lauren Corp	Servi.														1250°
Rambus Inc.	Whol.			277°	343°	271°	413°	544°	516°	532°	695°	658°	768°	782°	794°
Ramco-Gershenson Properties Trust	Manu.							588°	514°	483°	641°	759°	681°	697°	788°
Range Resources Corp.	Finan.														1512°
	Min.			400°	480°	495°	436°	580°	387°	528°	340°	456°	538°	452°	485°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Raymond James Financial, Inc.	Finan.								413°	573°	404°	532°	650°	531°	615°
Rayonier Inc.	Finan.							403°	442°	314°	374°	327°	476°	499°	581°
Raytheon Company	Manu.	45°	99°	99°	127°	145°	197°	110°	90°	83°	85°	71°	174°	111°	189°
Realogy Holdings Corp	Finan.												533°	532°	523°
RealPage Inc	Servi.														1111°
Realty Income Corp	Finan.								774°	812°	725°	721°	733°	768°	775°
Red Hat Inc	Servi.								460°	531°	586°	552°	569°	631°	628°
Regal Beloit Corp	Manu.									443°	407°	397°	387°	462°	534°
Regal Entertainment Group	Servi.							587°	667°	676°	743°	644°	685°	702°	727°
Regency Centers Corp	Finan.			408°	456°	367°	471°	538°	627°	655°	579°	649°	709°	553°	711°
Regeneron Pharmaceuticals Inc	Manu.									568°	556°	594°	588°	579°	571°
Regions Financial Corp	Finan.	256°	239°	411°	192°	123°	211°	178°	275°	321°	302°	383°	330°	247°	314°
Reinsurance Group of America Inc	Finan.								479°	540°	479°	597°	657°	673°	681°
Reliance Steel & Aluminum Co	Whol.							493°	562°	569°	676°	702°	720°	747°	750°
RenaissanceRe Holdings Ltd.	Finan.			403°	460°	494°	391°	534°	609°	640°	733°	778°	790°	800°	837°
Renasant Corp.	Finan.														1502°
Republic Services, Inc.	Transp.			157°	242°	298°	445°	510°	641°	599°	565°	659°	689°	573°	600°
ResMed Inc.	Manu.								619°	668°	550°	154°	118°	74°	70°
Retail Opportunity Investments Corp	Finan.														1391°
Retail Properties of America Inc	Finan.														1497°
Revlon Inc	Manu.														1049°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Rexford Industrial Realty Inc	Finan.														1380°
RingCentral Inc	Servi.														1144°
Rite Aid Corporation	Ret.							507°	426°	617°	614°	711°	620°	505°	629°
RLI Corp.	Finan.														1290°
RLJ Lodging Trust	Finan.														1523°
Robert Half International Inc.	Servi.		241°	290°	308°	312°	369°	366°	488°	444°	500°	464°	403°	409°	495°
Rockwell Automation	Manu.	168°	114°	102°	28°	54°	36°	37°	52°	57°	73°	184°	177°	162°	176°
Rockwell Collins, Inc.	Manu.	154°	145°	242°	286°	253°	58°	173°	155°	209°	37°	63°	160°	86°	93°
Rogers Corporation	Manu.														707°
Rollins, Inc.	Servi.														1398°
Roper Technologies Inc	Manu.			161°	230°	274°	427°	651°	758°	744°	779°	793°	837°	789°	892°
Ross Stores, Inc.	Ret.			393°	479°	480°	389°	463°	424°	477°	521°	375°	389°	421°	450°
Rowan Companies PLC	Min.	259°	297°	421°	483°	491°	491°	564°	547°	690°	590°	595°	582°	438°	530°
Royal Caribbean Cruises Ltd	Transp.			338°	405°	443°	429°	484°	555°	689°	406°	351°	355°	268°	217°
Royal Gold, Inc (USA)	Min.							728°	782°	804°	819°	814°	810°	810°	868°
RPC, Inc.	Min.								726°	776°	803°	824°	827°	827°	946°
RPM International Inc.	Manu.	228°	291°	358°	363°	429°	384°	619°	651°	771°	787°	787°	834°	835°	832°
RR Donnelley & Sons Co	Manu.		182°	188°	211°	186°	149°	93°	98°	126°	144°	180°	179°	186°	179°
RSP Permian Inc	Min.														1141°
Rush Enterprises, Inc.	Ret.														1312°
Ryder System, Inc.	Servi.	192°	198°	179°	418°	223°	201°	62°	66°	54°	153°	283°	167°	187°	190°
Ryman Hospitality Properties Inc	Servi.														1196°
S&P Global Inc	Manu.				364°	309°	181°	355°	258°	78°	216°	137°	211°	67°	174°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sabra Health Care REIT Inc	Finan.														1487°
Sabre Corp	Servi.														910°
SAGE Therapeutics Inc	Servi.														1381°
salesforce.com, inc.	Servi.						344°	467°	356°	352°	384°	252°	311°	305°	280°
Sally Beauty Holdings, Inc.	Ret.										737°	786°	818°	821°	923°
Sanderson Farms, Inc.	Manu.														1339°
Sanmina Corp	Manu.	196°	188°	280°	345°	378°	480°	492°	374°	392°	435°	424°	466°	451°	509°
Santander Consumer USA Holdings Inc	Finan.														1051°
Sarepta Therapeutics Inc	Manu.														1259°
Saul Centers Inc	Finan.														1387°
SBA Communications Corporation	Transp.							594°	669°	600°	673°	698°	725°	731°	770°
SCANA Corporation	Transp.			175°	282°	227°	358°	344°	345°	384°	408°	480°	544°	547°	567°
Schlumberger Limited.	Min.	44°	80°	113°	103°	23°	35°	28°	87°	222°	105°	73°	95°	164°	155°
Schnitzer Steel Industries, Inc.	Manu.								459°	514°	492°	610°	537°	517°	524°
Schweitzer-Mauduit International, Inc.	Manu.														894°
Science Applications International Corp	Servi.														948°
Scientific Games Corp	Servi.							637°	733°	768°	795°	794°	812°	818°	914°
Scotts Miracle-Gro Co	Manu.								511°	484°	224°	389°	315°	313°	322°
Scripps Networks Interactive, Inc.	Transp.							624°	705°	228°	326°	403°	501°	473°	455°
Seaboard Corp	Finan.														1539°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Seacor Holdings, Inc.	Transp.							600°	674°	646°	703°	673°	825°	823°	880°
Seagate Technology PLC				40°	3°	2°	10°	44°	85°	37°	72°	29°	33°	20°	20°
Sealed Air Corp	Manu.														
Sears Holdings Corp	Manu.	290°	250°	317°	437°	359°	396°	247°	280°	302°	432°	433°	326°	492°	480°
Sears Holdings Corp	Ret.		69°	104°	188°	184°	158°	159°	290°	386°	364°	280°	327°	357°	399°
Seattle Genetics, Inc.	Manu.														1037°
SeaWorld Entertainment Inc															1004°
SEI Investments Company	Servi.						374°	318°	328°	401°	437°	428°	480°	463°	538°
Select Income REIT	Finan.														
Select Medical Holdings Corporation	Finan.														1530°
Selective Insurance Group	Servi.														1174°
SemGroup Corp	Finan.														1117°
Sempra Energy	Min.														1281°
Senior Housing Properties Trust	Transp.	279°	248°	288°	393°	314°	115°	199°	135°	224°	75°	110°	110°	99°	80°
Sensata Technologies Holding N.V.									763°	806°	825°	837°	854°	867°	1030°
Sensient Technologies Corporation	Finan.										520°	623°	651°	659°	705°
Seritage Growth Properties	Manu.														907°
Service Corporation International	Manu.														1411°
Servicemaster Global Holdings Inc	Finan.							427°	506°	452°	542°	650°	664°	780°	695°
	Servi.														1161°
	Servi.														

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
ServiceNow Inc	Servi.												746°	682°	715°
ServisFirst Bancshares, Inc.	Finan.														1519°
Shake Shack Inc	Ret.														1087°
Shenandoah Telecommunications Company	Transp.														1052°
Sherwin-Williams Co	Ret.			45°	122°	147°	280°	264°	380°	271°	129°	106°	258°	146°	170°
Ship Finance International Limited	Transp.														1431°
Shutterfly, Inc.	Servi.														1099°
Shutterstock Inc	Servi.														1379°
Signature Bank	Finan.														1301°
Signet Jewelers Ltd.	Ret.	29°	63°	21°	93°	106°	123°	200°	197°	246°	385°	309°	287°	347°	388°
Silgan Holdings Inc.	Manu.									605°	651°	674°	686°	783°	809°
Silicon Laboratories	Manu.							483°	644°	257°	391°	415°	379°	397°	436°
Simmons First National Corporation	Finan.														1399°
Simon Property Group Inc	Finan.				136°	161°	364°	454°	567°	530°	685°	648°	724°	565°	469°
Simpson Manufacturing Co, Inc.	Manu.														893°
Sinclair Broadcast Group Inc	Transp.														1251°
Sirius XM Holdings Inc	Transp.	263°	206°	276°	348°	457°	474°	633°	738°	751°	762°	797°	778°	837°	852°
Six Flags Entertainment Corp	Servi.														1264°
Skechers USA Inc	Manu.														1009°
SkyWest, Inc.	Transp.														1423°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Skyworks Solutions Inc	Manu.									206°	293°	164°	155°	165°	219°
SL Green Realty Corp	Finan.			406°	445°	481°	527°	641°	734°	748°	765°	752°	771°	726°	759°
SM Energy Co	Min.							518°	601°	550°	631°	687°	695°	706°	659°
Smart & Final Stores Inc	Ret.														793°
Snap-on Incorporated	Manu.	129°	175°	221°	314°	331°	186°	86°	186°	152°	253°	287°	284°	279°	223°
Snyder's-Lance Inc	Manu.														1515°
Sonoco Products Co	Manu.							55°	105°	166°	122°	37°	77°	60°	62°
Sothebys	Servi.														1254°
South Jersey Industries Inc	Transp.														966°
South State Corp	Finan.														1449°
Southern Co	Transp.	53°	37°	79°	13°	27°	98°	70°	96°	140°	229°	189°	340°	216°	279°
Southern Copper Corp	Min.							76°	91°	79°	198°	276°	183°	171°	194°
Southwest Airlines Co	Transp.	240°	256°	359°	365°	376°	88°	140°	159°	85°	66°	133°	87°	109°	130°
Southwest Gas Holdings Inc	Transp.														1169°
Southwestern Energy Company	Min.			344°	417°	406°	347°	411°	447°	487°	451°	381°	368°	381°	353°
Spark Therapeutics Inc	Servi.														1453°
SpartanNash Co	Whol.														972°
Spectrum Brands Holdings, Inc.	Manu.														872°
Spire Inc	Transp.														1112°
Spirit AeroSystems Holdings, Inc.	Manu.							271°	217°	183°	284°	244°	222°	221°	149°
Spirit Airlines Incorporated	Transp.														1145°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Spirit Realty Capital Inc	Finan.														1480°
Splunk Inc	Servi.													901°	1001°
Sprint Corp	Transp.												134°	124°	48°
Sprouts Farmers Market Inc	Ret.														921°
SPS Commerce, Inc.	Servi.														1204°
SPX Corp	Manu.			315°	390°	369°	282°	357°	419°	300°	486°	550°	513°	554°	696°
SPX Flow Inc	Manu.														951°
Square Inc	Servi.														1158°
SRC Energy Inc	Min.														1552°
SS&C Technologies Holdings, Inc.	Servi.														1114°
St. Joe Co	Finan.	205°	261°	339°	472°	400°	499°	643°	731°	794°	850°	835°	869°	893°	1528°
Stag Industrial Inc	Finan.														1364°
Stamps.com Inc.	Ret.														1082°
Stanley Black & Decker, Inc.	Manu.		133°	165°	217°	236°	129°	115°	247°	109°	220°	270°	278°	428°	252°
Starbucks Corporation	Ret.	299°													
Starwood Property Trust, Inc.	Ret.	18°	9°	12°	67°	233°	17°	103°	83°	73°	189°	87°	262°	166°	161°
State Street Corp	Finan.														1493°
Steel Dynamics, Inc.	Finan.	65°	35°	32°	63°	30°	65°	43°	74°	105°	74°	53°	55°	73°	108°
Steelcase Inc.	Manu.						333°	458°	621°	618°	667°	712°	734°	729°	747°
Stepan Company	Manu.							334°	397°	106°	179°	93°	105°	69°	184°
Stericycle Inc	Manu.														971°
Sterling Bancorp	Transp.							501°	564°	661°	672°	614°	598°	736°	526°
Steven Madden, Ltd.	Finan.														1405°
Stifel Financial Corp	Manu.														1045°
	Finan.														1255°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Store Capital Corp	Finan.														1425°
Strayer Education Inc	Servi.								782°	823°	845°	852°	873°	888°	984°
Stryker Corporation	Manu.	234°	159°	272°	222°	215°	217°	216°	211°	305°	300°	478°	433°	477°	479°
Sturm Ruger & Company Inc	Manu.														1476°
Summit Materials Inc	Manu.														1555°
Sun Communities Inc	Finan.														1521°
Sun Hydraulics Corporation	Manu.														1194°
SunPower Corporation	Manu.						332°	395°	330°	157°	219°	246°	221°	289°	210°
Sunstone Hotel Investors Inc	Servi.														1503°
SunTrust Banks, Inc.	Finan.				315°	165°	236°	376°	452°	472°	546°	608°	576°	746°	609°
Superior Energy Services, Inc.	Min.							338°	490°	460°	593°	392°	561°	502°	603°
SUPERVALU INC.	Ret.	186°	219°	374°	414°	434°	218°	503°	437°	429°	476°	517°	577°	610°	742°
SVB Financial Group	Finan.														1352°
Symantec Corporation	Servi.	227°	270°	423°	485°	356°	134°	124°	126°	12°	51°	44°	40°	84°	38°
Synchronoss Technologies, Inc.	Servi.														1365°
Synchrony Financial	Finan.													828°	920°
Syneos Health Inc	Servi.														881°
SYNNEX Corporation	Whol.														1180°
Synopsys, Inc.	Servi.			269°	304°	320°	425°	553°	633°	709°	583°	607°	592°	602°	558°
Synovus Financial Corp.	Finan.		193°	226°	344°	437°	464°	444°	577°	635°	683°	617°	735°	709°	726°
Syntel, Inc.	Servi.	149°													1243°
SYSCO Corporation	Whol.	27°	74°	124°	293°	41°	128°	172°	138°	111°	140°	118°	119°	142°	249°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
T. Rowe Price Group Inc	Finan.	288°	216°	324°	302°	371°	272°	226°	277°	346°	320°	259°	256°	257°	289°
Tableau Software Inc	Servi.														1458°
Take-Two Interactive Software Inc	Servi.														1327°
TAL Education Group (ADR)	Servi.														1516°
Tanger Factory Outlet Centers Inc.	Finan.														1496°
Tapestry Inc	Manu.	160°	183°	282°	41°	90°	316°	433°	412°	467°	278°	414°	193°	332°	203°
Targa Resources Corp	Transp.														1406°
Target Corporation	Ret.	189°	140°	16°	73°	21°	80°	109°	139°	131°	106°	84°	239°	179°	253°
Taubman Centers, Inc.	Finan.							629°	720°	601°	716°	704°	642°	694°	722°
Taylor Morrison Home Corp	Cons.														1253°
TCF Financial Corporation	Finan.			133°	183°	172°	298°	398°	405°	419°	479°	575°	599°	623°	684°
TD Ameritrade Holding Corp.	Finan.				416°	456°	528°	667°	729°	821°	664°	754°	741°	593°	656°
TE Connectivity Ltd	Whol.						138°	98°	154°	5°	55°	79°	79°	19°	69°
Tech Data Corp	Whol.							509°	581°	476°	557°	274°	296°	260°	260°
Teekay Corporation	Transp.							292°	333°	343°	366°	300°	316°	312°	297°
Tegna Inc	Manu.				285°	310°	339°	360°	521°	465°	555°	583°	524°	626°	713°
Teledyne Technologies Incorporated	Servi.														1173°
Teleflex Incorporated	Manu.							578°	660°	703°	790°	556°	483°	624°	441°
Telephone & Data Systems, Inc.	Transp.			142°	180°	247°	416°	464°	388°	498°	512°	560°	626°	588°	634°
Tempur Sealy	Manu.									639°	698°	739°	712°	728°	844°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
International Inc															
Tenet Healthcare Corp	Servi.	193°	202°	297°	398°	317°	240°	265°	375°	221°	254°	256°	227°	259°	241°
Tennant Company	Manu.														661°
Tenneco Inc	Manu.														802°
Teradata Corporation	Manu.						394°	100°	168°	15°	35°	16°	13°	13°	97°
Teradyne, Inc.	Manu.	293°	203°	294°	374°	302°	130°	267°	403°	280°	336°	322°	329°	227°	240°
Terex Corporation	Manu.			261°	290°	307°	355°	324°	456°	390°	509°	473°	548°	570°	375°
TerraForm Power Inc	Transp.														1183°
TESARO Inc	Manu.														1205°
Tesla Inc	Manu.									734°	747°	845°	867°	849°	1034°
Tetra Tech, Inc.	Servi.														950°
Texas Capital Bancshares Inc	Finan.														1504°
Texas Instruments Incorporated	Manu.	61°	20°	6°	49°	26°	4°	7°	3°	1°	1°	5°	1°	2°	1°
Texas Roadhouse Inc	Ret.														981°
Textron Inc.	Manu.	83°	141°	101°	50°	150°	320°	245°	206°	284°	138°	155°	169°	204°	250°
TFS Financial Corporation	Finan.							631°	724°	712°	766°	762°	777°	776°	736°
The Coca-Cola Co	Manu.	104°	83°	76°	10°	42°	15°	36°	75°	40°	61°	25°	45°	56°	81°
The GEO Group Inc	Finan.														963°
The Medicines Company	Manu.														1230°
The Ultimate Software Group, Inc.	Servi.														1078°
The Western Union Company	Servi.					254°	473°	473°	499°	536°	644°	525°	541°	605°	527°
TherapeuticsMD Inc	Manu.														1384°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Theravance Biopharma Inc	Manu.														1368°
Thermo Fisher Scientific Inc.	Manu.		267°	380°	481°	442°	340°	319°	398°	248°	376°	228°	182°	139°	119°
Third Point Reinsurance Ltd	Finan.	271°													1517°
Thor Industries, Inc.	Manu.								678°	696°	633°	730°	700°	684°	642°
Tidewater Inc.	Min.								509°	557°	522°	551°	587°	635°	683°
Tiffany & Co.	Ret.	219°	207°	303°	377°	423°	454°	381°	323°	413°	468°	179°	97°	155°	100°
Tile Shop Holdings Inc	Whol.														1217°
Time Warner Inc	Servi.	26°	55°	116°	27°	12°	39°	143°	189°	191°	213°	240°	208°	232°	116°
Timken Co	Manu.							80°	171°	146°	185°	260°	168°	363°	295°
TiVo Corp	Manu.								571°	645°	658°	761°	785°	710°	803°
TJX Companies Inc	Ret.				153°	182°	112°	234°	133°	187°	210°	143°	153°	147°	278°
T-Mobile Us Inc	Transp.						388°	567°	663°	650°	622°	272°	302°	281°	310°
Toll Brothers Inc	Cons.			362°	461°	475°	484°	612°	691°	745°	496°	652°	605°	698°	725°
Tootsie Roll Industries, Inc.	Manu.														1447°
TopBuild Corp	Cons.														1125°
Torchmark Corporation	Finan.	287°	294°	416°	366°	421°	505°	657°	745°	792°	744°	801°	823°	805°	856°
Toro Co	Manu.								376°	441°	417°	411°	510°	442°	347°
Total System Services, Inc.	Servi.				141°	205°	268°	323°	372°	190°	279°	446°	396°	408°	425°
TowneBank	Finan.														1464°
Tractor Supply Company	Ret.							258°	286°	201°	277°	211°	236°	223°	298°
TransDigm Group Incorporated	Manu.								676°	730°	755°	777°	809°	816°	941°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Transocean LTD	Min.	289°	230°	208°	281°	251°	404°	486°	436°	700°	310°	329°	453°	271°	340°
TransUnion	Servi.														1022°
Travelers Companies Inc	Finan.		174°	384°	353°	163°	253°	224°	274°	335°	431°	334°	424°	407°	473°
Travelport Worldwide Ltd	Servi.	213°													1162°
TreeHouse Foods Inc.	Manu.														843°
Trex Company Inc	Manu.														1367°
TRI Pointe Group Inc	Cons.														1330°
TriMas Corp	Manu.														1420°
Trimble Inc	Manu.							604°	637°	714°	721°	442°	425°	423°	422°
TriNet Group Inc	Servi.														1291°
Trinity Industries Inc	Manu.							645°	746°	767°	815°	755°	727°	781°	708°
Trinseo S.A.	Manu.														808°
Tripadvisor Inc	Transp.										811°	848°	816°	875°	888°
Triumph Group Inc	Manu.														1213°
Tronox Ltd	Manu.														783°
Trustmark Corp	Finan.														1353°
TTEC Holdings Inc	Servi.														1094°
TTM Technologies, Inc.	Manu.														774°
Tupperware Brands Corporation	Manu.							152°	148°	213°	244°	233°	362°	303°	305°
Tutor Perini Corp	Cons.														1532°
Twenty-First Century Fox Inc	Transp.			302°	311°	384°	511°	621°	727°	808°	820°	806°	859°	797°	890°
Twitter Inc	Servi.													887°	1167°
Two Harbors Investment Corp	Finan.														1557°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Tyler Technologies, Inc.	Servi.														1337°
Tyson Foods, Inc.	Manu.			202°	43°	114°	159°	198°	233°	252°	331°	226°	145°	269°	292°
U.S. Bancorp	Finan.	59°	60°	95°	102°	63°	193°	153°	202°	387°	403°	243°	267°	411°	319°
U.S. Silica Holdings Inc	Min.														1050°
Ubiquiti Networks Inc	Manu.														1375°
UDR, Inc.	Finan.			330°	372°	399°	451°	436°	495°	542°	649°	693°	706°	723°	743°
UGI Corp	Transp.								684°	740°	623°	694°	715°	708°	668°
Ulta Beauty Inc	Ret.								405°	413°	434°	457°	466°	486°	486°
Ultragenyx															1195°
Pharmaceutical Inc	Servi.														
UMB Financial Corp	Finan.														1356°
Umpqua Holdings Corp	Finan.														1349°
Under Armour Inc	Manu.									593°	654°	536°	572°	545°	553°
UniFirst Corp	Servi.														607°
Union Bankshares Corp	Finan.														1262°
Union Pacific Corporation	Transp.		1°	92°	55°	88°	157°	161°	259°	195°	226°	303°	280°	290°	382°
Unisys Corporation	Servi.	40°													
Unit Corporation	Servi.	36°	31°	64°	359°	335°	277°	345°	513°	416°	399°	416°	485°	529°	417°
Unit Corporation	Min.							608°	695°	675°	753°	814°	750°	773°	782°
United Bankshares, Inc.	Finan.														1443°
United Community Banks, Inc.	Finan.														1432°
United Continental Holdings Inc	Transp.							277°	187°	385°	377°	541°	347°	493°	396°
United Natural Foods, Inc.	Whol.							362°	349°	406°	322°	418°	364°	377°	426°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
United Parcel Service, Inc.	Transp.	16°	22°	43°	117°	126°	145°	74°	118°	110°	114°	98°	203°	168°	215°
United Rentals, Inc.	Servi.													839°	912°
United States Cellular Corp	Transp.							273°	354°	374°	513°	307°	432°	395°	442°
United States Steel Corporation	Manu.	197°	116°	197°	271°	344°	174°	377°	331°	539°	275°	207°	293°	311°	262°
United Technologies Corporation	Manu.	37°	72°	55°	35°	133°	191°	83°	30°	55°	43°	64°	129°	118°	66°
United Therapeutics Corporation	Manu.								590°	629°	647°	616°	606°	542°	562°
Uniti Group Inc	Servi.														1439°
Univar Inc	Whol.														712°
Universal Display Corporation	Manu.														1361°
Universal Forest Products, Inc.	Manu.														1053°
Universal Health Services, Inc.	Servi.							540°	605°	431°	578°	542°	568°	617°	552°
Unum Group	Finan.	142°	84°	131°	197°	185°	202°	281°	249°	263°	285°	306°	336°	344°	348°
Urban Edge Properties	Finan.														1424°
Urban Outfitters, Inc.	Ret.						381°	525°	489°	574°	693°	746°	638°	686°	780°
US Concrete Inc	Manu.														1110°
USANA Health Sciences, Inc.	Manu.														1028°
USG Corporation	Manu.							205°	230°	212°	262°	185°	185°	235°	244°
Vail Resorts, Inc.	Servi.														1267°
Valero Energy Corporation	Manu.	105°	45°	48°	70°	121°	113°	356°	292°	179°	155°	254°	226°	237°	269°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Validus Holdings, Ltd.	Finan.								713°	764°	775°	750°	779°	770°	741°
Valley National Bancorp	Finan.							527°	631°	545°	656°	749°	766°	759°	744°
Valmont Industries, Inc.	Manu.								588°	656°	760°	753°	776°	790°	839°
Varian Medical Systems, Inc.	Manu.			198°	247°	277°	309°	389°	347°	158°	234°	216°	216°	326°	410°
Vector Group Ltd	Manu.														1106°
Vectren Corp	Transp.							469°	537°	404°	412°	454°	530°	594°	300°
Veeva Systems Inc	Servi.														1135°
Ventas, Inc.	Finan.						487°	664°	757°	781°	813°	833°	783°	733°	779°
VEON Ltd (ADR)	Transp.												269°	354°	339°
Vereit Inc	Finan.												860°	820°	1077°
VeriFone Systems Inc	Manu.								726°	783°	742°	774°	850°	802°	870°
Verisign, Inc.	Servi.	217°	292°	289°	404°	484°	476°	579°	653°	733°	485°	564°	615°	568°	512°
Verisk Analytics, Inc.	Servi.								686°	739°	634°	689°	703°	716°	494°
Verizon Communications Inc.	Transp.	79°	102°	9°	40°	110°	45°	71°	122°	61°	116°	91°	53°	70°	132°
Vertex Pharmaceuticals Incorporated	Manu.			304°	396°	460°	421°	497°	448°	473°	375°	554°	617°	435°	391°
VF Corp	Manu.	72°	92°	137°	163°	337°	306°	312°	310°	420°	308°	457°	304°	272°	346°
Viacom, Inc.	Transp.	113°	90°	139°	249°	225°	207°	322°	386°	372°	415°	356°	508°	431°	577°
ViaSat, Inc.	Manu.														764°
Viavi Solutions Inc	Manu.	257°	286°	369°	470°	489°	437°	555°	657°	602°	697°	561°	644°	526°	573°
Vipshop Holdings Ltd - ADR	Ret.														813°
Virtu Financial Inc	Finan.														1304°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Visa Inc	Servi.							413°	440°	344°	420°	522°	517°	507°	575°
Vishay Intertechnology	Manu.								614°	651°	680°	705°	729°	741°	584°
Vishay Precision Group Inc	Manu.								658°	717°	701°	726°	743°	717°	
Vista Outdoor Inc	Manu.														934°
Visteon Corp	Manu.														728°
VMware, Inc.	Servi.						472°	583°	668°	434°	532°	458°	559°	370°	266°
Vonage Holdings Corp.	Transp.														1310°
Vornado Realty Trust	Finan.	267°	240°	377°	459°	472°	531°	691°	770°	820°	729°	824°	846°	798°	901°
Voya Financial Inc	Finan.													804°	998°
Vulcan Materials Company	Min.	191°	66°	151°	168°	234°	185°	305°	320°	215°	273°	150°	206°	263°	242°
W W Grainger Inc	Whol.	139°	177°	121°	265°	91°	104°	252°	236°	180°	296°	376°	165°	169°	188°
W. R. Berkley Corp	Finan.			414°	399°	444°	477°	625°	718°	765°	763°	791°	795°	785°	909°
W. R. Grace & Co	Manu.									395°	423°	380°	320°	398°	546°
WABCO Holdings Inc.	Manu.								340°	383°	319°	399°	514°	424°	533°
Waddell & Reed Financial, Inc.	Finan.								492°	560°	540°	589°	607°	618°	653°
Wageworks Inc	Servi.														1189°
Walgreens Boots Alliance Inc	Ret.	98°	109°	112°	235°	97°	171°	113°	190°	262°	382°	199°	367°	334°	376°
Walmart Inc	Ret.	106°	157°	85°	130°	129°	189°	116°	196°	177°	206°	61°	200°	228°	139°
Walt Disney Co	Transp.	58°	120°	117°	79°	159°	237°	75°	142°	120°	150°	54°	192°	163°	191°
Washington Federal Inc.	Finan.								751°	796°	580°	670°	659°	700°	718°
Washington Prime Group Inc	Finan.														1491°
Washington Real Estate	Finan.														1455°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Investment Trust															
Waste Management, Inc.	Transp.				116°	67°	125°	145°	84°	176°	38°	239°	189°	152°	195°
Waters Corporation	Manu.	236°	121°	243°	257°	304°	251°	164°	257°	326°	312°	361°	504°	406°	498°
Watsco Inc	Whol.														1376°
Watts Water Technologies Inc	Manu.														806°
Wayfair Inc	Ret.														1269°
Webster Financial Corporation	Finan.														1296°
WEC Energy Group Inc	Transp.			68°	72°	89°	85°	17°	47°	76°	151°	43°	75°	102°	117°
Weight Watchers International, Inc.	Servi.							535°	600°	447°	456°	469°	475°	619°	508°
Weingarten Realty Investors	Finan.							626°	672°	686°	724°	736°	713°	777°	765°
Weis Markets, Inc.	Ret.														904°
WellCare Health Plans, Inc.	Finan.							529°	606°	643°	615°	401°	497°	380°	468°
Wells Fargo & Co	Finan.	174°	164°	140°	60°	61°	49°	138°	152°	320°	255°	291°	343°	422°	317°
Welltower Inc	Finan.							574°	652°	732°	783°	818°	764°	817°	922°
Wendys Co	Ret.								594°	657°	710°	664°	628°	414°	507°
Werner Enterprises, Inc.	Transp.														1208°
WesBanco Inc	Finan.														1412°
Wesco Aircraft Holdings Inc	Whol.														1041°
WESCO International, Inc.	Whol.							470°	545°	455°	517°	516°	585°	642°	669°
West Pharmaceutical	Manu.														1057°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Services Inc.															
Westamerica Bancorporation	Finan.														1471°
Westar Energy Inc	Transp.								478°	543°	449°	585°	521°	535°	604°
Western Alliance Bancorporation	Finan.														1407°
Western Digital Corp	Manu.			382°	423°	445°	161°	189°	175°	119°	169°	277°	122°	107°	180°
Westinghouse Air Brake Technologies Corp	Manu.								646°	684°	645°	314°	366°	436°	409°
Westlake Chemical Corporation	Manu.							364°	382°	301°	360°	474°	377°	445°	541°
WestRock Co	Manu.														958°
WEX Inc	Servi.														1279°
Weyerhaeuser Co	Manu.				16°	40°	94°	89°	25°	87°	12°	28°	5°	40°	60°
WGL Holdings Inc	Transp.														1400°
Whirlpool Corporation	Manu.	125°	130°	192°	123°	68°	204°	39°	46°	62°	42°	100°	149°	123°	87°
White Mountains Insurance Group Ltd	Finan.						489°	665°	753°	798°	833°	842°	862°	869°	1063°
Whiting Petroleum Corp	Min.								755°	797°	736°	804°	736°	833°	704°
Williams Companies Inc	Transp.		271°	376°	463°	250°	415°	207°	219°	351°	465°	603°	704°	725°	637°
Williams-Sonoma, Inc.	Ret.	243°		352°	410°	414°	407°	426°	559°	388°	484°	377°	398°	399°	385°
Willis Towers Watson PLC	Finan.			409°	260°	296°	428°	554°	391°	446°	460°	460°	461°	530°	605°
Windstream Holdings Inc	Transp.					187°	383°	565°	650°	705°	701°	596°	531°	663°	620°
Wintrust Financial Corp	Finan.														1466°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
WisdomTree Investments, Inc.	Finan.														1232°
Wolverine World Wide, Inc.	Manu.														814°
Woodward Inc	Manu.														748°
Workday Inc	Servi.												446°	343°	323°
World Fuel Services Corp	Whol.														1102°
World Wrestling Entertainment, Inc.	Servi.														1331°
Worldpay Inc	Servi.												675°	674°	737°
WP Carey Inc	Finan.														1247°
WPX Energy Inc	Min.										526°	572°	571°	608°	542°
Wright Medical Group NV	Manu.														1270°
WSFS Financial Corporation	Finan.														1426°
Wyndham Worldwide Corporation	Servi.					197°	256°	291°	370°	316°	490°	196°	195°	226°	257°
Wynn Resorts, Limited	Servi.			337°	425°	462°	522°	687°	783°	577°	720°	593°	649°	592°	586°
X5 Retail Group NV (EDR)	Ret.							465°	475°	435°	475°	238°	213°	196°	144°
Xcel Energy Inc	Transp.	212°	221°	72°	96°	108°	147°	162°	110°	148°	120°	99°	137°	77°	145°
Xenia Hotels & Resorts Inc	Finan.														1256°
Xerox Corp	Servi.				111°	37°	6°	13°	13°	19°	24°	58°	47°	17°	14°
Xilinx, Inc.	Manu.	275°	225°	325°	408°	34°	126°	64°	97°	94°	90°	159°	207°	250°	234°
XL Group Ltd	Finan.	126°	161°	187°	190°	229°	274°	442°	470°	662°	728°	716°	752°	754°	729°
XPO Logistics Inc	Transp.														1007°

Company	Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Xylem Inc	Manu.										195°	267°	230°	274°	245°
Yelp Inc	Manu.														1288°
Yum! Brands, Inc.	Ret.				126°	173°	70°	30°	69°	147°	152°	90°	78°	47°	94°
YY Inc (ADR)	Servi.														1283°
Zayo Group Holdings Inc	Transp.														1297°
Zebra Technologies Corp.	Manu.								457°	474°	338°	339°	339°	382°	332°
Zendesk Inc	Servi.														1221°
Zillow Group Inc	Servi.													889°	1122°
Zimmer Biomet Holdings Inc	Manu.	81°	53°	35°	237°	167°	323°	290°	150°	299°	328°	331°	527°	537°	503°
Zions Bancorp	Finan.	115°	154°	180°	264°	267°	331°	448°	519°	578°	662°	632°	654°	655°	697°
Zoetis Inc	Manu.												520°	519°	463°
Zynga Inc	Servi.														1357°

Appendix B - Categories of Social Pillars

Information collected from <https://financial.thomsonreuters.com/en/products/data-analytics/company-data/esg-research-data.html>. [Accessed at 20th October 2017].

✓ Customer/Product Responsibility

The customer/product responsibility category measures a company's management commitment and effectiveness towards creating value-added products and services upholding the customer's security. It reflects a company's capacity to maintain its license to operate by producing quality goods and services integrating the customer's health and safety and preserving its integrity and privacy also through accurate product information and labelling.

✓ Society/Community

The society/community category measures a company's management commitment and effectiveness towards maintaining the company's reputation within the general community (local, national and global). It reflects a company's capacity to maintain its license to operate by being a good citizen (donations of cash, goods or staff time, etc.), protecting public health (avoidance of industrial accidents, etc.) and respecting business ethics (avoiding bribery and corruption, etc.).

✓ Society/Human Rights

The society/human rights category measures a company's management commitment and effectiveness towards respecting the fundamental human rights conventions. It reflects a company's capacity to maintain its license to operate by guaranteeing the freedom of association and excluding child, forced or compulsory labour.

✓ Workforce/Diversity and Opportunity

The workforce/diversity and opportunity category measures a company's management commitment and effectiveness towards maintaining diversity and equal opportunities in its workforce. It reflects a company's capacity to increase its workforce loyalty and productivity by promoting an effective life-work balance, a family friendly environment and equal opportunities regardless of gender, age, ethnicity, religion or sexual orientation.

✓ Workforce/Employment Quality

The workforce/employment quality category measures a company's management commitment and effectiveness towards providing high-quality employment benefits and job conditions. It

reflects a company's capacity to increase its workforce loyalty and productivity by distributing rewarding and fair employment benefits, and by focusing on long-term employment growth and stability by promoting from within, avoiding lay-offs and maintaining relations with trade unions

✓ Workforce/Health & Safety

The workforce/health & safety category measures a company's management commitment and effectiveness towards providing a healthy and safe workplace. It reflects a company's capacity to increase its workforce loyalty and productivity by integrating into its day-to-day operations a concern for the physical and mental health, well-being and stress level of all employees.

✓ Workforce/Training and Development

The workforce/training and development category measures a company's management commitment and effectiveness towards providing training and development (education) for its workforce. It reflects a company's capacity to increase its intellectual capital, workforce loyalty and productivity by developing the workforce's skills, competences, employability and careers in an entrepreneurial environment.

Appendix C- List of portfolios

Aggregated Portfolio		
Social Indicator	<i>High Rated (10% Top)</i>	SOH
	<i>Low Rated (10% Bottom)</i>	SOL
	<i>High Minus Low (H-L)</i>	H-L
Positive Screening		
Customer/Product Responsibility	<i>High Rated (10% Top)</i>	PRH
	<i>Low Rated (10% Bottom)</i>	PRL
	<i>High Minus Low (H-L)</i>	H-L
Society/Community	<i>High Rated (10% Top)</i>	COH
	<i>Low Rated (10% Bottom)</i>	COL
	<i>High Minus Low (H-L)</i>	H-L
Society/Human Rights	<i>High Rated (10% Top)</i>	HRH
	<i>Low Rated (10% Bottom)</i>	HRL
	<i>High Minus Low (H-L)</i>	H-L
Workforce/Diversity and Opportunity	<i>High Rated (10% Top)</i>	DOH
	<i>Low Rated (10% Bottom)</i>	DOL
	<i>High Minus Low (H-L)</i>	H-L
Workforce/Employment Quality	<i>High Rated (10% Top)</i>	EQH
	<i>Low Rated (10% Bottom)</i>	EQL
	<i>High Minus Low (H-L)</i>	H-L
Workforce/Health & Safety	<i>High Rated (10% Top)</i>	HSH
	<i>Low Rated (10% Bottom)</i>	HSL
	<i>High Minus Low (H-L)</i>	H-L
Workforce/Training and Development	<i>High Rated (10% Top)</i>	TDH
	<i>Low Rated (10% Bottom)</i>	TDL
	<i>High Minus Low (H-L)</i>	H-L
Best-in-class Screening Portfolio		
Agriculture. Forestry. Fishing	<i>High Rated (10% Top)</i>	AH

	<i>Low Rated (10% Bottom)</i>	AL
	<i>High Minus Low (H-L)</i>	H-L
Mining	<i>High Rated (10% Top)</i>	MH
	<i>Low Rated (10% Bottom)</i>	ML
	<i>High Minus Low (H-L)</i>	H-L
Construction	<i>High Rated (10% Top)</i>	CH
	<i>Low Rated (10% Bottom)</i>	CL
	<i>High Minus Low (H-L)</i>	H-L
Manufacturing	<i>High Rated (10% Top)</i>	MH
	<i>Low Rated (10% Bottom)</i>	ML
	<i>High Minus Low (H-L)</i>	H-L
Transportation&Public Utilities	<i>High Rated (10% Top)</i>	TH
	<i>Low Rated (10% Bottom)</i>	TL
	<i>High Minus Low (H-L)</i>	H-L
Wholesale Trade	<i>High Rated (10% Top)</i>	WH
	<i>Low Rated (10% Bottom)</i>	WL
	<i>High Minus Low (H-L)</i>	H-L
Retail Trade	<i>High Rated (10% Top)</i>	RH
	<i>Low Rated (10% Bottom)</i>	RL
	<i>High Minus Low (H-L)</i>	H-L
Finance. Insurance. Real Estate	<i>High Rated (10% Top)</i>	FH
	<i>Low Rated (10% Bottom)</i>	FL
	<i>High Minus Low (H-L)</i>	H-L
Services	<i>High Rated (10% Top)</i>	SH
	<i>Low Rated (10% Bottom)</i>	SL
	<i>High Minus Low (H-L)</i>	H-L
Public Administration	<i>High Rated (10% Top)</i>	PH
	<i>Low Rated (10% Bottom)</i>	PL
	<i>High Minus Low (H-L)</i>	H-L

Appendix D - Some outputs, using FTSE4GOOD index

• **Unconditional Carhart (1997) Four-Factor Model, using FTSE4GOOD**

Panel A- Social Indicator						
	α_i	β_{1i}	β_{2i}	β_{3i}	β_{4i}	Adj. R²
SOH	0.284** <i>0.012</i>	0.901*** <i>0.000</i>	0.165*** <i>0.000</i>	-0.033 <i>0.448</i>	-0.081*** <i>0.001</i>	91%
SOL	-0.440** <i>0.012</i>	-0.971*** <i>0.000</i>	-0.618*** <i>0.000</i>	-0.155** <i>0.046</i>	0.188*** <i>0.000</i>	88%
H-L	-0.156 <i>0.246</i>	-0.071 <i>0.114</i>	-0.453*** <i>0.000</i>	-0.188*** <i>0.006</i>	0.107*** <i>0.009</i>	44%
Panel B - Social Sub-Indicator						
	α_i	β_{1i}	β_{2i}	β_{3i}	β_{4i}	Adj. R²
PRH	0.160 <i>0.318</i>	1.015*** <i>0.000</i>	0.351*** <i>0.000</i>	-0.038 <i>0.690</i>	-0.093*** <i>0.002</i>	90%
PRL	-0.260 <i>0.172</i>	-0.927*** <i>0.000</i>	-0.569*** <i>0.000</i>	-0.072 <i>0.446</i>	0.155*** <i>0.000</i>	84%
H-L	-0.100 <i>0.392</i>	0.088** <i>0.044</i>	-0.219*** <i>0.000</i>	-0.110* <i>0.077</i>	0.062 <i>0.121</i>	12%
COH	0.210* <i>0.071</i>	0.928*** <i>0.000</i>	0.212*** <i>0.000</i>	0.007 <i>0.926</i>	-0.063** <i>0.040</i>	90%
COL	-0.509** <i>0.014</i>	-1.002*** <i>0.000</i>	-0.701*** <i>0.000</i>	0.139 <i>0.163</i>	0.256*** <i>0.000</i>	85%
H-L	-0.299* <i>0.087</i>	-0.074* <i>0.098</i>	-0.489*** <i>0.000</i>	0.146 <i>0.132</i>	0.194*** <i>0.004</i>	34%
HRH	0.220* <i>0.069</i>	0.958*** <i>0.000</i>	0.261*** <i>0.000</i>	-0.045 <i>0.478</i>	-0.105*** <i>0.000</i>	91%
HRL	-0.148 <i>0.394</i>	-1.063*** <i>0.000</i>	-0.539*** <i>0.000</i>	-0.207*** <i>0.009</i>	0.182** <i>0.010</i>	90%
H-L	0.072 <i>0.587</i>	-0.105*** <i>0.002</i>	-0.278*** <i>0.000</i>	-0.253*** <i>0.000</i>	0.077 <i>0.196</i>	40%
DOH	0.383*** <i>0.000</i>	0.869*** <i>0.000</i>	0.156*** <i>0.000</i>	0.079 <i>0.162</i>	-0.105*** <i>0.005</i>	92%
DOL	-0.186 <i>0.257</i>	-1.022*** <i>0.000</i>	-0.668*** <i>0.000</i>	-0.013 <i>0.874</i>	0.183*** <i>0.003</i>	89%
H-L	0.197 <i>0.173</i>	-0.153*** <i>0.004</i>	-0.512*** <i>0.000</i>	0.065 <i>0.386</i>	0.078** <i>0.027</i>	45%
EQH	0.241** <i>0.030</i>	0.897*** <i>0.000</i>	0.230*** <i>0.000</i>	0.021 <i>0.705</i>	-0.047* <i>0.055</i>	90%
EQL	-0.432** <i>0.018</i>	-0.980*** <i>0.000</i>	-0.703*** <i>0.000</i>	-0.126 <i>0.242</i>	0.199*** <i>0.004</i>	86%
H-L	-0.191 <i>0.187</i>	-0.084* <i>0.060</i>	-0.472*** <i>0.000</i>	-0.105 <i>0.211</i>	0.152*** <i>0.009</i>	44%

	α_i	β_{1i}	β_{2i}	β_{3i}	β_{4i}	Adj. R ²
HSH	0.400* <i>0.052</i>	0.960*** <i>0.000</i>	0.297*** <i>0.000</i>	-0.024 <i>0.828</i>	-0.091* <i>0.085</i>	81%
HSL	-0.248* <i>0.058</i>	-0.982*** <i>0.000</i>	-0.622 <i>0.000</i>	-0.120** <i>0.065</i>	0.167*** <i>0.000</i>	91%
H-L	0.152 <i>0.433</i>	-0.022 <i>0.723</i>	-0.325*** <i>0.000</i>	-0.144 <i>0.188</i>	0.076 <i>0.229</i>	16%
TDH	0.279** <i>0.030</i>	0.956*** <i>0.000</i>	0.266*** <i>0.000</i>	-0.007 <i>0.898</i>	-0.083* <i>0.064</i>	90%
TDL	-0.214 <i>0.226</i>	-1.036*** <i>0.000</i>	-0.672*** <i>0.000</i>	-0.112 <i>0.287</i>	0.125** <i>0.011</i>	88%
H-L	0.065 <i>0.607</i>	-0.081** <i>0.025</i>	-0.407*** <i>0.000</i>	-0.119 <i>0.144</i>	0.041 <i>0.106</i>	37%

- **Unconditional Fama and French (2015) Five-Factor Model, using FTSE4GOOD**

Panel A - Social Indicator							
	α_i	β_{1i}	β_{2i}	β_{3i}	β_{4i}	β_{5i}	Adj. R ²
SOH	0.026** <i>0.026</i>	0.932*** <i>0.000</i>	0.170*** <i>0.000</i>	0.020 <i>0.698</i>	0.034 <i>0.615</i>	-0.033 <i>0.707</i>	90%
SOL	-0.005*** <i>0.005</i>	-0.995*** <i>0.000</i>	-0.577*** <i>0.000</i>	-0.346*** <i>0.000</i>	0.176 <i>0.122</i>	0.323*** <i>0.007</i>	86%
H-L	-0.002 <i>0.973</i>	-0.063* <i>0.072</i>	-0.409*** <i>0.000</i>	-0.326** <i>0.022</i>	0.209** <i>0.012</i>	0.290 <i>0.297</i>	44%

Panel B - Social Sub-Indicator							
	α_i	β_{1i}	β_{2i}	β_{3i}	β_{4i}	β_{5i}	Adj. R ²
PRH	0.203 <i>0.173</i>	1.018*** <i>0.000</i>	0.318*** <i>0.000</i>	0.059 <i>0.548</i>	-0.143* <i>0.064</i>	-0.165* <i>0.083</i>	90%
PRL	-0.302 <i>0.116</i>	-0.945*** <i>0.000</i>	-0.545*** <i>0.000</i>	-0.256** <i>0.041</i>	0.126 <i>0.239</i>	0.368*** <i>0.006</i>	83%
H-L	-0.099 <i>0.400</i>	0.072* <i>0.098</i>	-0.227*** <i>0.000</i>	-0.197*** <i>0.003</i>	-0.017 <i>0.872</i>	0.203** <i>0.087</i>	11%
COH	0.142 <i>0.238</i>	0.976*** <i>0.000</i>	0.259*** <i>0.000</i>	0.072 <i>0.365</i>	0.198*** <i>0.002</i>	-0.124 <i>0.166</i>	90%
COL	-0.006*** <i>0.006</i>	-1.027*** <i>0.000</i>	-0.606*** <i>0.000</i>	-0.054 <i>0.656</i>	0.354* <i>0.085</i>	0.174 <i>0.237</i>	83%
H-L	-0.005*** <i>0.011</i>	-0.052 <i>0.226</i>	-0.347*** <i>0.002</i>	0.017 <i>0.859</i>	0.552** <i>0.013</i>	0.050 <i>0.735</i>	35%
HRH	0.168 <i>0.207</i>	1.007*** <i>0.000</i>	0.279*** <i>0.000</i>	0.025 <i>0.720</i>	0.101 <i>0.257</i>	-0.050 <i>0.614</i>	90%
HRL	-0.223	-1.072***	-0.467***	-0.364***	0.288***	0.196**	89%

	α_i	β_{1i}	β_{2i}	β_{3i}	β_{4i}	β_{5i}	Adj. R ²
	<i>0.182</i>	<i>0.000</i>	<i>0.000</i>	<i>0.001</i>	<i>0.005</i>	<i>0.059</i>	
H-L	-0.055	-0.065	-0.188**	-0.340***	0.388***	0.146	45%
	<i>0.668</i>	<i>0.115</i>	<i>0.011</i>	<i>0.000</i>	<i>0.000</i>	<i>0.166</i>	
DOH	0.350***	0.909***	0.151***	0.126*	0.019	0.042	91%
	<i>0.001</i>	<i>0.000</i>	<i>0.001</i>	<i>0.079</i>	<i>0.724</i>	<i>0.619</i>	
DOL	-0.190	-1.064***	-0.642***	-0.160	0.084	0.166*	87%
	<i>0.261</i>	<i>0.000</i>	<i>0.000</i>	<i>0.154</i>	<i>0.448</i>	<i>0.082</i>	
H-L	0.160	-0.155***	-0.491***	-0.034	0.103	0.208*	45%
	<i>0.281</i>	<i>0.002</i>	<i>0.000</i>	<i>0.670</i>	<i>0.330</i>	<i>0.051</i>	
EQH	0.257**	0.901***	0.217***	0.069	-0.056	-0.081	90%
	<i>0.017</i>	<i>0.000</i>	<i>0.000</i>	<i>0.252</i>	<i>0.416</i>	<i>0.333</i>	
EQL	-0.446**	-1.022***	-0.667***	-0.285**	0.124	0.179	85%
	<i>0.021</i>	<i>0.000</i>	<i>0.000</i>	<i>0.033</i>	<i>0.340</i>	<i>0.117</i>	
H-L	-0.189	-0.121*	-0.450***	-0.217***	0.067	0.098	38%
	<i>0.400</i>	<i>0.098</i>	<i>0.000</i>	<i>0.003</i>	<i>0.872</i>	<i>0.087</i>	
HSH	0.390*	0.986***	0.300***	0.063	0.009	-0.139	80%
	<i>0.058</i>	<i>0.000</i>	<i>0.000</i>	<i>0.608</i>	<i>0.929</i>	<i>0.352</i>	
HSL	0.299**	-0.998***	-0.556***	-0.234***	0.243**	0.069	90%
	<i>0.021</i>	<i>0.000</i>	<i>0.000</i>	<i>0.002</i>	<i>0.028</i>	<i>0.456</i>	
H-L	0.009	-0.012	-0.257**	-0.171	0.252**	-0.070	17%
	<i>0.661</i>	<i>0.829</i>	<i>0.017</i>	<i>0.133</i>	<i>0.035</i>	<i>0.662</i>	
TDH	0.241*	0.994***	0.274***	0.040	0.061	-0.006	90%
	<i>0.059</i>	<i>0.000</i>	<i>0.000</i>	<i>0.515</i>	<i>0.497</i>	<i>0.949</i>	
TDL	-0.237	-1.056***	-0.642***	-0.216**	0.114	0.128	87%
	<i>0.163</i>	<i>0.000</i>	<i>0.000</i>	<i>0.039</i>	<i>0.328</i>	<i>0.381</i>	
H-L	0.004	-0.062*	-0.368***	-0.176**	0.175**	0.122	38%
	<i>0.661</i>	<i>0.829</i>	<i>0.017</i>	<i>0.133</i>	<i>0.035</i>	<i>0.662</i>	

• **Carhart (1997) Four-Factor Model with dummy variable to distinguish market states, using FTSE4GOOD**

Panel A- Social Indicator											
	α_i	α_{irec}	β_{1i}	β_{1irec}	β_{2i}	β_{2irec}	β_{3i}	β_{3irec}	β_{4i}	β_{4irec}	Adj-R²
SOH	0.284** <i>0.012</i>	-0.305 <i>0.508</i>	0.901*** <i>0.000</i>	0.066 <i>0.270</i>	0.165*** <i>0.000</i>	-0.072 <i>0.522</i>	-0.033 <i>0.448</i>	-0.149 <i>0.140</i>	-0.081*** <i>0.001</i>	-0.048 <i>0.390</i>	91%
SOL	-0.440** <i>0.012</i>	1.266 <i>0.232</i>	-0.971*** <i>0.000</i>	0.060 <i>0.666</i>	-0.618*** <i>0.000</i>	-0.404 <i>0.200</i>	-0.155** <i>0.046</i>	0.328* <i>0.059</i>	0.188*** <i>0.000</i>	0.240*** <i>0.001</i>	88%
H-L	-0.156** <i>0.012</i>	0.960 <i>0.183</i>	-0.071*** <i>0.000</i>	0.126 <i>0.289</i>	-0.453*** <i>0.000</i>	-0.476 <i>0.163</i>	-0.188** <i>0.046</i>	0.178 <i>0.215</i>	0.107*** <i>0.000</i>	0.192*** <i>0.006</i>	46%
Panel B- Social Sub-Indicator											
	α_i	α_{irec}	β_{1i}	β_{1irec}	β_{2i}	β_{2irec}	β_{3i}	β_{3irec}	β_{4i}	β_{4irec}	Adj-R²
PRH	0.160 <i>0.318</i>	-0.673 <i>0.448</i>	1.015*** <i>0.000</i>	0.169 <i>0.151</i>	0.351*** <i>0.000</i>	0.003 <i>0.987</i>	-0.038 <i>0.690</i>	-0.484** <i>0.017</i>	-0.093*** <i>0.002</i>	-0.033 <i>0.577</i>	91%
PRL	-0.260 <i>0.172</i>	0.063 <i>0.959</i>	-0.927*** <i>0.000</i>	-0.049 <i>0.688</i>	-0.569*** <i>0.000</i>	0.324 <i>0.226</i>	-0.072 <i>0.446</i>	0.348 <i>0.153</i>	0.155*** <i>0.000</i>	0.069 <i>0.530</i>	84%
H-L	-0.100 <i>0.172</i>	-0.610 <i>0.224</i>	0.088*** <i>0.000</i>	0.120 <i>0.159</i>	-0.219*** <i>0.000</i>	0.328** <i>0.039</i>	-0.110 <i>0.446</i>	-0.136 <i>0.436</i>	0.062*** <i>0.000</i>	0.036 <i>0.677</i>	13%
COH	0.210* <i>0.071</i>	-0.303 <i>0.480</i>	0.928*** <i>0.000</i>	0.084 <i>0.305</i>	0.212*** <i>0.000</i>	0.038 <i>0.828</i>	0.007 <i>0.926</i>	-0.350** <i>0.018</i>	-0.063** <i>0.040</i>	-0.094 <i>0.127</i>	90%
COL	-0.509** <i>0.014</i>	1.348 <i>0.348</i>	-1.002*** <i>0.000</i>	0.088 <i>0.588</i>	-0.701*** <i>0.000</i>	-0.251 <i>0.447</i>	0.139 <i>0.163</i>	0.236 <i>0.279</i>	0.256*** <i>0.000</i>	0.139 <i>0.332</i>	85%
H-L	-0.299** <i>0.014</i>	1.045 <i>0.360</i>	-0.074*** <i>0.000</i>	0.171 <i>0.178</i>	-0.489*** <i>0.000</i>	-0.214 <i>0.599</i>	0.146 <i>0.163</i>	-0.114 <i>0.533</i>	0.194*** <i>0.000</i>	0.045 <i>0.776</i>	34%
HRH	0.220* <i>0.014</i>	-0.306 <i>0.360</i>	0.958*** <i>0.000</i>	0.045 <i>0.178</i>	0.261*** <i>0.000</i>	0.056 <i>0.599</i>	-0.045 <i>0.163</i>	-0.254 <i>0.533</i>	-0.105*** <i>0.000</i>	-0.100** <i>0.776</i>	91%

	α_i	α_{irec}	β_{1i}	$\beta_{1i}rec$	β_{2i}	$\beta_{2i}rec$	β_{3i}	$\beta_{3i}rec$	β_{4i}	$\beta_{4i}rec$	Adj- R ²
	<i>0.069</i>	<i>0.625</i>	<i>0.000</i>	<i>0.641</i>	<i>0.000</i>	<i>0.716</i>	<i>0.478</i>	<i>0.065</i>	<i>0.000</i>	<i>0.036</i>	
HRL	-0.148	0.660	-1.063***	0.056	-0.539***	0.257	-0.207***	0.280**	0.182**	0.288**	91%
	<i>0.394</i>	<i>0.585</i>	<i>0.000</i>	<i>0.613</i>	<i>0.000</i>	<i>0.112</i>	<i>0.009</i>	<i>0.090</i>	<i>0.010</i>	<i>0.013</i>	
H-L	0.072	0.354	-0.105***	0.100	-0.278***	0.313**	-0.253***	0.027	0.077**	0.188*	42%
	<i>0.394</i>	<i>0.675</i>	<i>0.000</i>	<i>0.249</i>	<i>0.000</i>	<i>0.036</i>	<i>0.009</i>	<i>0.842</i>	<i>0.01</i>	<i>0.056</i>	
DOH	0.383***	-0.010	0.869***	-0.082*	0.156***	-0.012	0.079	-0.143*	-0.105***	-0.144***	93%
	<i>0.000</i>	<i>0.978</i>	<i>0.000</i>	<i>0.089</i>	<i>0.000</i>	<i>0.915</i>	<i>0.162</i>	<i>0.091</i>	<i>0.005</i>	<i>0.003</i>	
DOL	-0.186	1.280	-1.022***	0.059	-0.668***	-0.256	-0.013	0.369*	0.183***	0.237**	90%
	<i>0.257</i>	<i>0.336</i>	<i>0.000</i>	<i>0.714</i>	<i>0.000</i>	<i>0.256</i>	<i>0.874</i>	<i>0.082</i>	<i>0.003</i>	<i>0.039</i>	
H-L	0.197	1.271	-0.153***	-0.022	-0.512***	-0.269	0.065	0.226	0.078***	0.093	47%
	<i>0.257</i>	<i>0.234</i>	<i>0.000</i>	<i>0.879</i>	<i>0.000</i>	<i>0.297</i>	<i>0.874</i>	<i>0.245</i>	<i>0.003</i>	<i>0.306</i>	
EQH	0.241**	-0.459	0.897***	-0.023	0.230***	-0.162	0.021	-0.169	-0.047*	-0.107*	90%
	<i>0.030</i>	<i>0.523</i>	<i>0.000</i>	<i>0.786</i>	<i>0.000</i>	<i>0.296</i>	<i>0.705</i>	<i>0.188</i>	<i>0.055</i>	<i>0.065</i>	
EQL	-0.432**	1.261	-0.980***	0.108	-0.703***	-0.237	-0.126	0.402*	0.199***	0.314***	87%
	<i>0.018</i>	<i>0.262</i>	<i>0.000</i>	<i>0.481</i>	<i>0.000</i>	<i>0.286</i>	<i>0.242</i>	<i>0.079</i>	<i>0.004</i>	<i>0.002</i>	
H-L	-0.191**	0.802	-0.084***	0.085	-0.472***	-0.399*	-0.105	0.234	0.152***	0.207***	46%
	<i>0.018</i>	<i>0.160</i>	<i>0.000</i>	<i>0.393</i>	<i>0.000</i>	<i>0.065</i>	<i>0.242</i>	<i>0.151</i>	<i>0.004</i>	<i>0.003</i>	
HSH	0.400*	-0.706	0.960***	0.184	0.297***	-0.075	-0.024	-0.696***	-0.091*	-0.048	83%
	<i>0.052</i>	<i>0.474</i>	<i>0.000</i>	<i>0.129</i>	<i>0.000</i>	<i>0.621</i>	<i>0.828</i>	<i>0.000</i>	<i>0.085</i>	<i>0.690</i>	
HSL	-0.248*	1.477	-0.982***	0.255*	-0.622	-0.265	-0.120**	0.063	0.167***	0.186***	92%
	<i>0.058</i>	<i>0.124</i>	<i>0.000</i>	<i>0.050</i>	<i>0.000</i>	<i>0.433</i>	<i>0.065</i>	<i>0.621</i>	<i>0.000</i>	<i>0.002</i>	
H-L	0.152*	0.772	-0.022***	0.439***	-0.325***	-0.341	-0.144**	-0.633***	0.076***	0.138	26%
	<i>0.058</i>	<i>0.117</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.377</i>	<i>0.065</i>	<i>0.000</i>	<i>0.000</i>	<i>0.290</i>	
TDH	0.279**	-0.780	0.956***	-0.021	0.266***	0.294*	-0.007	-0.246*	-0.083*	-0.149**	91%
	<i>0.030</i>	<i>0.334</i>	<i>0.000</i>	<i>0.845</i>	<i>0.000</i>	<i>0.064</i>	<i>0.898</i>	<i>0.075</i>	<i>0.064</i>	<i>0.038</i>	
TDL	-0.214	2.005*	-1.036***	0.117	-0.672***	-0.340	-0.112	0.533***	0.125**	0.246***	89%

	α_i	α_{irec}	β_{1i}	$\beta_{1i}rec$	β_{2i}	$\beta_{2i}rec$	β_{3i}	$\beta_{3i}rec$	β_{4i}	$\beta_{4i}rec$	Adj. R ²
	0.226	0.095	0.000	0.437	0.000	0.274	0.287	0.002	0.011	0.007	
H-L	0.065	1.225**	-0.081***	0.096	-0.407***	-0.046	-0.119	0.287**	0.041**	0.098*	40%
	0.226	0.011	0.000	0.192	0.000	0.889	0.287	0.013	0.011	0.054	

• **Fama and French (2015) Five-Factor Model with dummy variable to distinguish market states, using FTSE4GOOD**

• Panel A- Social Indicator													
	α_i	α_{irec}	β_{1i}	$\beta_{1i}rec$	β_{2i}	$\beta_{2i}rec$	β_{3i}	$\beta_{3i}rec$	β_{4i}	$\beta_{4i}rec$	β_{5i}	$\beta_{5i}rec$	Adj. R ²
SOH	0.026**	0.000	0.932***	0.044	0.170***	-0.019	0.020	-0.027	0.034	-0.160	-0.033	-0.462	91%
	0.026	0.956	0.000	0.719	0.000	0.866	0.698	0.876	0.615	0.615	0.707	0.197	
SOL	-0.005***	0.013	-0.995***	-0.159	-0.577***	-0.637	-0.346***	0.089	0.176	-1.187*	0.323***	1.094**	87%
	0.005	0.249	0.000	0.346	0.000	0.171	0.000	0.751	0.122	0.084	0.007	0.036	
H-L	-0.002***	0.014	-0.063***	-0.115	-0.409***	-0.656	-0.326***	0.063	0.210	-1.347***	0.290***	0.632	49%
	0.005	0.056	0.000	0.443	0.000	0.157	0.000	0.701	0.122	0.002	0.007	0.337	
Panel B- Social Sub-Indicator													
	α_i	α_{irec}	β_{1i}	$\beta_{1i}rec$	β_{2i}	$\beta_{2i}rec$	β_{3i}	$\beta_{3i}rec$	β_{4i}	$\beta_{4i}rec$	β_{5i}	$\beta_{5i}rec$	Adj. R ²
PRH	0.203	-0.005	1.018***	0.137	0.318***	0.125	0.059	-0.385	-0.143*	0.055	-0.165*	-0.503	91%
	0.173	0.655	0.000	0.289	0.000	0.479	0.548	0.133	0.064	0.899	0.083	0.129	
PRL	-0.302	0.007	-0.945***	-0.177	-0.545***	0.126	-0.256**	0.235	0.126	-1.326**	0.368***	1.063**	85%
	0.116	0.567	0.000	0.387	0.000	0.672	0.041	0.403	0.239	0.050	0.006	0.026	
H-L	-0.099	0.002	0.072***	-0.040	-0.227***	0.251	-0.197**	-0.150	-0.017	-1.271***	0.203***	0.560*	20%
	0.116	0.751	0.000	0.783	0.000	0.205	0.041	0.254	0.239	0.001	0.006	0.091	
COH	0.142	-0.003	0.976***	0.162	0.259***	0.012	0.072	-0.311	0.198***	0.192	-0.124	-0.209	90%
	0.238	0.652	0.000	0.203	0.000	0.942	0.365	0.151	0.002	0.598	0.166	0.514	
COL	-0.006***	0.013	-1.027***	-0.209	-0.606***	-0.554	-0.054	0.039	0.354*	-1.452**	0.174	1.032**	84%

	α_i	α_{irec}	β_{1i}	β_{1irec}	β_{2i}	β_{2irec}	β_{3i}	β_{3irec}	β_{4i}	β_{4irec}	β_{5i}	β_{5irec}	Adj. R ²
H-L	0.006	0.376	0.000	0.216	0.000	0.281	0.656	0.899	0.085	0.058	0.237	0.052	39%
	-0.005***	0.010	-0.052***	-0.046	-0.347***	-0.543	0.017	-0.272	0.552*	-1.260**	0.050	0.823	
HRH	0.006	0.308	0.000	0.720	0.000	0.306	0.656	0.138	0.085	0.017	0.237	0.108	90%
	0.168	-0.002	1.007***	0.089	0.279***	0.120	0.025	-0.077	0.101	0.213	-0.050	-0.752**	
HRL	0.207	0.804	0.000	0.519	0.000	0.489	0.720	0.737	0.257	0.654	0.614	0.015	89%
	-0.223	0.002	-1.072***	-0.153	-0.467***	0.009	-0.364***	0.011	0.288***	-0.739	0.196**	0.903**	
H-L	0.182	0.884	0.000	0.474	0.000	0.980	0.001	0.970	0.005	0.338	0.059	0.047	44%
	-0.055	0.000	-0.065***	-0.064	-0.188***	0.128	-0.340***	-0.066	0.388***	-0.526	0.146*	0.151	
DOH	0.182	0.943	0.000	0.702	0.000	0.599	0.001	0.612	0.005	0.250	0.059	0.632	91%
	0.350***	0.007	0.909***	0.022	0.151***	0.037	0.126*	-0.037	0.019	-0.126	0.042	-0.122	
DOL	0.001	0.225	0.000	0.818	0.001	0.786	0.079	0.842	0.724	0.765	0.619	0.719	89%
	-0.190	0.015	-1.064***	-0.334	-0.642***	-0.410	-0.160	0.223	0.084	-1.583**	0.166*	0.706	
H-L	0.261	0.188	0.000	0.106	0.000	0.205	0.154	0.504	0.448	0.030	0.082	0.118	52%
	0.160	0.022***	-0.155***	-0.318**	-0.491***	-0.373	-0.034	0.185	0.103	-1.709***	0.208*	0.584**	
EQH	0.261	0.007	0.000	0.027	0.000	0.162	0.154	0.359	0.448	0.000	0.082	0.018	90%
	0.257**	-0.005	0.901***	0.059	0.217***	-0.087	0.069	-0.069	-0.056	0.427	-0.081	-0.435	
EQL	0.017	0.448	0.000	0.518	0.000	0.627	0.252	0.701	0.416	0.227	0.333	0.106	85%
	-0.446**	0.010	-1.022***	-0.268	-0.667***	-0.418	-0.285**	0.202	0.124	-1.265	0.179	0.696	
H-L	0.021	0.427	0.000	0.213	0.000	0.250	0.033	0.566	0.340	0.135	0.117	0.169	41%
	-0.189**	0.005	-0.121***	-0.208	-0.450***	-0.505*	-0.217**	0.133	0.067	-0.838	0.098	0.262	
HSH	0.021	0.498	0.000	0.159	0.000	0.056	0.033	0.518	0.340	0.122	0.117	0.503	82%
	0.390*	-0.008	0.986***	0.200	0.300***	0.010	0.063	-0.577**	0.009	0.385	-0.139	-0.744	
HSL	0.058	0.268	0.000	0.321	0.000	0.961	0.608	0.027	0.929	0.379	0.352	0.166	90%
	0.299**	0.005	-0.998***	0.018	-0.556***	-0.430	-0.234***	-0.002	0.243**	-0.331	0.069	-0.036	
H-L	0.021	0.623	0.000	0.886	0.000	0.414	0.002	0.991	0.028	0.579	0.456	0.934	28%
	0.009**	-0.003	-0.012***	0.217	-0.257***	-0.421	-0.171***	-0.580***	0.252**	0.055	-0.070	-0.780	

	α_i	α_{irec}	β_{1i}	β_{1irec}	β_{2i}	β_{2irec}	β_{3i}	β_{3irec}	β_{4i}	β_{4irec}	β_{5i}	β_{5irec}	Adj. R ²
	<i>0.021</i>	<i>0.578</i>	<i>0.000</i>	<i>0.331</i>	<i>0.000</i>	<i>0.412</i>	<i>0.002</i>	<i>0.000</i>	<i>0.028</i>	<i>0.872</i>	<i>0.456</i>	<i>0.313</i>	
TDH	0.241*	-0.007	0.994***	0.142	0.274***	0.336	0.040	-0.116	0.061	0.479	-0.006	-0.430	90%
	<i>0.059</i>	<i>0.362</i>	<i>0.000</i>	<i>0.399</i>	<i>0.000</i>	<i>0.112</i>	<i>0.515</i>	<i>0.606</i>	<i>0.497</i>	<i>0.253</i>	<i>0.949</i>	<i>0.228</i>	
TDL	-0.237	0.0225*	-1.056***	0.009	-0.642***	-0.574	-0.216**	0.148	0.114	-0.971	0.128	1.688***	88%
	<i>0.163</i>	<i>0.054</i>	<i>0.000</i>	<i>0.962</i>	<i>0.000</i>	<i>0.182</i>	<i>0.039</i>	<i>0.596</i>	<i>0.328</i>	<i>0.195</i>	<i>0.381</i>	<i>0.002</i>	
H-L	0.004	0.016	-0.062***	0.151	-0.368***	-0.238	-0.176**	0.032	0.175	-0.492	0.122	1.258**	43%
	<i>0.163</i>	<i>0.001</i>	<i>0.000</i>	<i>0.248</i>	<i>0.000</i>	<i>0.449</i>	<i>0.039</i>	<i>0.801</i>	<i>0.328</i>	<i>0.190</i>	<i>0.381</i>	<i>0.042</i>	