Character Investing

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Investor-relations consultant Laura Rittenhouse has developed metrics which are supposed objective evaluations of the ethical nature of a corporation's character. We find that a portfolio of firms with the five highest Rittenhouse Rankings outperform a portfolio of firms with the five lowest Rittenhouse Rankings while controlling for changes in the risk-free rate, market return, and the systematic risk over the coming year. Meanwhile, firms experiencing an improvement in Candor scores were able to earn holding period returns and had alpha values over the following year that were significantly greater than firms experiencing declines in Candor scores over the previous year.

INTRODUCTION

When bankers lend money to a customer, they are essentially investing their money with the expectation that the customer will repay the loan with interest in a timely manner. When evaluating a potential loan application, bankers typically cite the five Cs of credit: character, capacity, capital, collateral, and conditions as significant factors influencing their decision to grant or deny the loan application. Arguably most important of the five Cs—yet most difficult to assess—is character (Koch & MacDonald, 2010). In order to assess character, lenders check credit records, subjective appraisals of the borrower's character by personal references and employers, and the accuracy of information provided in the loan application. Essentially, a loan officer must determine the customer's integrity and intent to subsequently repay the loan. If there are any serious doubts about the borrower's honesty and trustworthiness, loan applications are denied.

Lending to companies is called commercial lending. The fundamental objective of commercial lending is to make profitable loans to businesses with minimal risk. In this context, credit analysis is essentially corporate default risk analysis in which a loan officer attempts to evaluate a firm's ability and willingness to repay the loan. Similar to consumer lending, an investment analyst can learn about a firm's "character" by looking at the firm's public statements, financial statements, business references, and their Dun and Bradstreet credit report. An unfortunate reality is that some companies have aggressive, self-serving cultures that are led by CEOs that are products of those cultures. In these aggressively-led companies, the trustworthiness and reliability of the company's executive communications and financial statements might reasonably be questioned. In these instances, it is difficult to accurately determine the riskiness of lending money to those firms.

In this research, we look at the value of using character as a primary guide to investing in the equity of the firm, rather than their debt. In her book titled *Investing Between The Lines*, investor-relations consultant Ms. Laura Rittenhouse makes the case that companies that value and practice candor in their published shareholder letters and annual report outperform companies that do not (Rittenhouse, 2013) She claims that "analyzing words is as important as analyzing numbers." (Rittenhouse, 2013, p. 14) The logic of her above assertion is the chain result that the bottom line comes from accounting produced financial statements. Using professional discretion, accounting rules can be applied in a variety of ways. Thus, the professional judgments of accountants are critical to the complete and accurate disclosure of the financial performance and health of a firm. Since the professional judgment of the accountants can be heavily influenced by the corporate culture and the ethical attitudes of the CEO, the executive communications of the company may be misleading and less than helpful for investors. Ms. Rittenhouse believes that these executive communications are in fact a window into the values of the corporate culture and sometimes the competence of the CEO. She also contends that "investors who search for culture clues in executive communications can determine whether a company's financial numbers are trustworthy". (Rittenhouse, 2013, p. 14) If the numbers provided by the company are trustworthy, the riskiness of investing in the company's common stock is reduced and the value of the stock is enhanced.

LITERATURE REVIEW

In their landmark book on investment, Graham, Dodd, and Cottle (1934) say that there are only two basic questions to which stockholders should turn their attention. The first is whether the management is reasonably efficient and the second is whether the interests of the average outside shareholder are receiving proper recognition. The first question is typically addressed by analyzing the financial statements of the firm. The second question is much more difficult to determine because few stockholders will ever know the CEO personally or completely understand the true nature of the corporate culture of the firm. The implication of this second question is the issue of whether or not the people running the business feel accountable to their outside owners. To address this second question, Graham et al. simply say that top management owes stockholders the same information that a partner in a private firm should have as long as disclosing the information does not harm the competitive position of the firm.

In a 2004 article, Jason Zweig (2004) suggests that a way to address the second question posed by Graham et al. is to look at how the CEO talks to investors. He suggests that most companies tell investors what they think they want to hear. But if the people who ran public companies really thought about it, they would realize that investors want to know what they would know if they were in the inside looking out. While it is the duty of the CEO to prevent the stock price of their firm from being "unduly low", it also is also true that it is the duty of the CEO to not mislead investors by allowing stock prices to become "absurdly high". Candor in communications with stockholders will likely generate confidence in the published financial statements and over the long-run, enhance the value of the firm.

In a recent article by Ferrazzi (2012), the author supports the idea that candor is critical for organizations desiring to improve corporate performance. He found that in verbal communications within a firm, those that scored highest in candor during corporate meetings also enjoyed the highest financial returns. In his work with a limited number of large banks, those that "communicated candidly (in the company's meetings) about risky securities, lending practices, and other potential problems were best able to preserve shareholder value."

In a study that considered the connection between corporate culture and performance, Kotter and Heskett (1992) found that having a strong corporate culture frequently enhances performance but it can also be problematic if a firm is headed in the wrong direction with an inappropriate strategy. Even with an appropriate strategic direction, companies with strong corporate cultures can become resistant to information about changes in customer and market needs. Kotter and Heskett conclude that companies with strong adaptive corporate cultures did the best over the long run. Companies with corporate cultures that valued the prudent assessment of risk taking, confidence in managing change, and a collaborative approach to fact finding and developing workable solutions to problems tended to perform the best. The

implication of their research is that candid, two-way communications with the stakeholders of the firm supports superior performance.

In 2003, Laura Rittenhouse (2013) and associates created a model of sustainable business. They called the model the Rittenhouse Rankings Sustainable Business Model (hereafter, referred to as the Rittenhouse Rankings Model or the Model). It organized 130 topics into seven focus areas. In three instances, two of the focus areas were connected. The resulting focus areas and connections are: Strategy & Accountability, Leadership & Vision, Relationships & Candor, and Capital Stewardship. Each of the paired factors facilitates the impact of the other. For example, a good strategy is one where measured performance meets the goals and expectations set for the strategy. Similarly, an inspiring vision is typically not possible without talented leadership and positive relationships are only maintained with consistent candid communications. The seventh area of Capital Stewardship refers to whether the CEO's actions are based upon either: a.) a healthy attitude of being entrusted with investor capital, or b.) an eventually-detrimental attitude of being entitled to investor wealth. The Model posits that sustainable long-term success is based upon attitudes of entrustment and that CEOs like Enron's Jeff Skilling and Tyco's Dennis Kozlowski are still serving time in jail for practicing the less optimal "entitlement approach".

We will use the term Candor "scores" to refer to Ms. Rittenhouse's candor evaluations, so that readers can more easily differentiate the more comprehensive Rittenhouse's Model rankings from the more limited scope Candor scores. Candor scores are only one significant part of the overall Model. Candor scores are calculated by giving positive points for the inclusion of information in public communications about cash and cash flows, business opportunities, risk assessment, and other relevant topics and then points are subtracted for what is called "FOG" in a firm's communications. FOG is defined as information included in executive communications that is determined to be nothing more than "**f**act-deficient, **o**bfuscating **g**eneralities." (Rittenhouse, 2013, p. 251) Thus, Candor scores are part of the overall Model and the Model is assumed to be an objective insight into the character of the corporate culture and the CEO's demonstrated leadership.

The "FOG" concept has recently received attention at the highest levels of the U.S. Securities and Exchange Commission (SEC). In 2011, Aurther Levitt (2011), Chairman of the SEC from 1993 to 2001 called for "plain English," because in his words most financial disclosures are written in a manner that protects the information provider. In the summer of 2013, top SEC officials announced a broad shuffling of resources in the regulator's enforcement division that increased focus on accounting fraud. According to the SEC's chief of economics Craig Lewis, companies attempting to mislead the public play a "word shell game," by "deflecting attention from core problems by talking a lot about benign issues" instead of their competitors, while "under reporting risks." (Eaglesham, 2013, p. C7) Oh (2013) discusses the SEC's new effort to develop software that analyzes management discussions and analysis sections of annual reports. Engelsham (2013, p. C7) also reports that the fraud detection system will consider off-balance sheet items, auditor change, and the less prevalent use of terms such as "I" and "we."

Although one would expect "FOG" to hide information that would put the company in a worse light, it also can be used to hide good information. A recent example is the 2009 private-equity swap of Revlon Inc., the beauty products company controlled by Ronald Perelman. Mr. Perelman agreed to pay an $850,000 settlement for hiding positive information from independent directors and misleading shareholders. Unaware shareholders swapped their common stock for preferred shares prior to a robust quarter, resulting in a surge in company share price that occurred after the uninformed shareholders had swapped out their shares (Ng and Chaudhuri, 2013).

The underlying goal of this current research is to determine whether assessing the firm's character through Model rankings and/or Candor scores is worthwhile for an investor seeking to enhance the financial performance of their equity portfolio.

RESEARCH METHOD

Research Questions

Four research questions are the focus of our investigation. Two are answered with the Rittenhouse Model rankings, while the other two are answered with its Rittenhouse Candor–related subset of scores. Two empirical research questions were developed for each measure. An explanation-oriented question that is answered using ex-post data and a prediction-oriented question is addressed using ex-ante data. The questions are as follows:

Research Question #1: Does the Rittenhouse Ranking Model explain the performance of historical share prices?

Discussion: Although the exact set of variables used by the Rittenhouse organization is not publically known, investors may be using these or highly-correlated underlying factors in the process of pricing securities. It is logical to expect an effective strategy and dynamic leadership to precede potentially positive share price reactions. Share price reactions are likely to precede press releases and financial statements, which precede Rittenhouse's evaluation and subsequent publication of their ranking results. Consequently, the Rittenhouse Rankings may simply be a means to quantify the effective, past management of a company.

Research Question #2: Can the Rittenhouse rankings be used to predict future stock performance?

Discussion: Rittenhouse Rankings may be among the first quantitative measures of the effectiveness of firm strategy, leadership, and other measured factors. It is reasonable to assume that in most cases effective leadership leads to corporate success. As a consequence, we would expect subsequent price performance to be more favorable for firms with better Rittenhouse rankings.

Research Question #3: Does the more limited scope of Rittenhouse Candor scores explain the performance of historical stock prices?

Discussion: Investment risk comes from external and internal conditions. An investor, looking from the outside, uses information provided by the firm as a means to gauge risk. The less transparent a company is, the greater the perceived uncertainty and risk of investment. Similarly, the better a firm's economic conditions, the more likely a firm is to provide a transparent view of themselves to the investing public. Before Rittenhouse reports its Candor scores, investors have had a chance to gauge company candor and price a company's common stock in proportion to the perceived risk. In these instances, Rittenhouse's candor scores would reflect investor perception of the firm and be related to prior share price performance.

Research Question #4: Can the Candor scores be used to predict future stock price performance?

Discussion: Rittenhouse Candor scores are a quantitative measure of company transparency. As such, Candor scores identify companies that either are confident about their future or (regardless of their future) are willing to fully share information regarding their firm's economic challenges with investors. The former explanation is likely to precede a period of sustained profitability, while the latter explanation would reduce the FOG of investment in a given firm. Both of these would precede higher risk-adjusted returns. Therefore, higher Rittenhouse Candor scores may be a predictor of abnormally good share price performance.

In order to provide clarity to the research questions, a short discussion of three reasons why insignificant findings may occur seems to be in order. One, Ms. Rittenhouse may have identified variables that are not priced by investors. Two, investors may have already accurately priced firm leadership, strategy, candor, etc. and therefore the additional information provided by Model rankings and Candor scores would be worthless. Three, Ms. Rittenhouse may not be accurately measuring priced factors which would negate the data's value for investors.

Research Sample

Given the amount of time and effort that goes into evaluating the company reports, it is not surprising that Ms. Laura Rittenhouse has greatly limited the amount of information shared with the general public. Clients of the Rittenhouse management advising organization benefit from the rating applied to their firm but they are not included in the 100 firms ranked by the Rittenhouse Rankings because of conflict of interest concerns. In fact, a careful reading through Ms. Rittenhouse's book *Investing Between the Lines* found little in the way of specific procedures used to create the firm rankings. We used Ms. Rittenhouse's book, press releases by Rittenhouse Incorporated, and external reports regarding Rittenhouse rankings to fuse together an appropriate but incomplete sample.

Two samples were constructed, one for each of the set of questions identified above. The top five and bottom five companies in the Rittenhouse rankings were found for the five-year period from 2007 through 2011. A portfolio was created of each set of firms. The "Top5 Portfolio" consists of the five firms with the highest (most favorable) Rittenhouse rankings, while the "Bottom5 Portfolio" consists of the firms with the lowest Rittenhouse rankings.

Portfolio membership was updated annually. Portfolio membership is presented in Table 1, contained in the Appendix with all other tables, with the average beta of the firms in each given portfolio. The only company to be in the "Top5" and "Bottom5" portfolios is Target Corporation. This firm was ranked fifth in 2007 and ninety-seventh in 2010, a short three years later. During the intervening time period, concerns arose regarding Target Corporation's use of corrupt judges (Flint, 2008), dumping hazardous waste in landfills (Kertai, 2009), selling toys with lead paint (Crosby, 2009), and questionable political contributions (Connor, 2010).

Portfolios were created to diversify away unique company events unrelated to the Rittenhouse rankings. The only instance in which a portfolio does not have five firms is the "Bottom5 portfolio" in 2007. Service Master was obtained by Clayton, Dubilier & Rice on July 24, 2007, which is shortly after its assignment to the 2007 "Bottom5" portfolio. Therefore, we are unable to estimate the performance of this company after being identified by the Rittenhouse organization as one of the five companies with the worst Rittenhouse rankings.

Candor scores are only available for a few, select individual firms. A listing of the firms with the greatest increase or decrease in Candor scores is not published by the Rittenhouse organization. Without the extreme Candor scores, we were forced to examine changes in the published Candor scores of individual firms. In some instances, we were able to locate a press release indicating which companies had the largest increase and decrease in candor scores (Dandow, 2010). However, in order to keep the results from being biased by unique company events overshadowing its candor score during a single year, we sought to maximize the number of companies for which we had the most years of data possible. We were able to locate six companies with a complete set of Candor scores over nine years, a period that runs from 2003 through 2011. As of this writing, Candor scores for 2012 have not been published. Expanding the sample period through the addition of earlier years would have reduced the sample size below six.

Information about the six firms used to study the value of the Candor scores is displayed in Table 2. The first two data columns give the number of times the firm's annual Candor score rose and fell, respectively, while the third column shows the change in Candor score from 2003 to 2011. These six firms were divided into a group of three firms whose Candor scores had the most positive year-to-year change and the three firms with the most negative change in Candor scores. We labeled these portfolios the "MostUp3" and "MostDown3," respectively. If four firms experienced a positive change in their Candor score, the one with the lowest increase was included in the MostDown3 Portfolio. Likewise, if

over three firms experienced a negative change, the one with the least negative Candor score change was included in the MostUp3 Portfolio. This practice kept the size of the MostUp3 Portfolio and MostDown3 Portfolio equal, maximizing the limited amount of diversification possible with a total of six stocks.

In multiple years, three Candor scores rose and three fell, making for an easy split into the MostUp3 Portfolio and MostDown3 Portfolio. Despite our limited sample, in each year there was at least one company with a positive change and one company with a negative change in the candor scores. Across the nine years, or 54 Candor score changes (i.e., 9 years x 6 companies), 25 changes were positive and 29 changes were negative. The average increase of the three firms in the MostUp3 Portfolio was 16 ranks, while the average ranking change of the firms in the MostDown3 Portfolio was a decline of 17 ranks. Hence, the typical relative change of the MostUp3 Portfolio and MostDown3 Portfolio was 33 rankings.

Return Measurements

Although portfolio membership is updated annually, Rittenhouse Incorporated does not indicate when the rankings are updated. The best glimpse of the interval used can be found in Figure 11.2 and Figure 11.3 of Ms. Rittenhouse's book, which examines candor-based performance over the ensuing twelve and twenty-four months. (Rittenhouse, 2013, pp. 255 and 256) Rittenhouse's presentation runs "from Q2 to Q2." For consistency, we updated our portfolios on June 30.

Holding period returns over the prior and subsequent years were computed for each portfolio. Market-excess returns were obtained by reducing annual holding period returns for the return on the Standard & Poor's 500 over the same year. Neither measure included dividends. These excess returns can be modeled using Equation 1:

$$ER_i = R_i - S\&P500 \tag{1}$$

Where: ER_i = 12-month excess percentage rate of return of the ith stock
R_i = 12-month percentage change in the ith stock's price
S&P500 = 12-month percentage change in the Standard & Poor's 500 Composite

As shown in Table 1, sample firms come from a broad range of the systematic risk continuum. Therefore, Jensen's alphas were computed for individual companies and summed together for each portfolio. Alphas were obtained by reducing raw return by the rolling one-year Treasury yield as of June 30 each year and the firm beta multiplied by S&P 500 return in excess of the Treasury yield. Specifically,

$$Apha_i = R_i - R_f - B_i(S\&P500 - R_f) \tag{2}$$

Where: R_i = 12-month percentage change in the ith stock's price
R_f = 12-month Treasury yield as of the close on June 30
B_i = systematic risk of the ith stock
S&P500 = 12-month percentage change in the Standard & Poor's 500 Composite

Share prices (adjusted for stock splits and stock dividends) were obtained from the finance.yahoo portal. Systematic risk was computed by regressing monthly share prices in the Standard & Poor's 500 Index. Standard and Poor's 500 Index changes and Treasury yields were obtained from the economagic.com web site.

Statistical Analysis

Mean annual returns are computed for the Top5 Portfolio, Bottom5 Portfolio, MostUp3 Portfolio, and MostDown3 Portfolios. Given the limited number of firms in each portfolio, and therefore the chance for a single firm's abnormal return to bias the average findings, median returns are also presented. Standard deviation, minimum annual returns, and maximum annual returns are presented in order to give an indication of the distribution of returns for each of the four portfolios. A similar array of descriptive

statistics is presented for the alphas computed using Equation 2 above. Student's t-tests were used to estimate whether mean returns are statistically different from zero and whether the systematic risks (i.e., the betas) of the two portfolios are different from each other.

Return information is presented for each of these four portfolios individually, with holding period returns, market-excess returns, and alphas serving as the performance measure. We also created two comparative return series in order to provide additional insight regarding relative returns. In one instance the returns of the Bottom5 Portfolio were subtracted from the Top5 Portfolio, while in the other instance the returns of the MostDown3 Portfolio were subtracted from the MostUp3 Portfolio. The same descriptive statistics and Student t-tests are computed for these return differences.

FINDINGS

Value of the Rittenhouse Model Rankings

Based on the Rittenhouse Model rankings, across the five-year 2007-2011 period Sherwin Williams was the best company. As shown in Table 1, it is listed in the Top5 Portfolio three times, and awarded the top spot in 2008 and 2009. Three companies (i.e., Entergy in 2007 and 2008; Novartis in 2007 and 2009; Ford in 2010 and 2011) are listed twice. In the Bottom5 Portfolio, Humana is listed three times and five companies are listed twice. Corporations listed twice include AIG, Boeing, Cisco Systems, Citigroup, and Motorola. As discussed earlier, Target is the only firm that managed to fall from the Top5 Portfolio to the Bottom5 Portfolio in three years.

No single industry appears to dominate either portfolio. However, there is a large difference in the beta in of the two portfolios. The beta of the Top5 Portfolio ranges from 0.55 to 1.17, with an average of 0.81. The beta of the Bottom5 Portfolio ranges from 0.72 to 1.47, with an average of 1.15. Applying a t-test statistic to the two distributions, they are statistically different at the 0.09 level.

Rittenhouse Ranking Model-Based Holding Period Returns

In Table 3, information regarding the Top5 Portfolio is presented in the first two columns. Column 1 presents the performance of this portfolio over the prior year, while Column 2 presents the performance of the portfolio over the following year. During the prior year, the average return of the Top5 Portfolio is 15.9 percent. The higher median value indicates that skewness in the distribution (i.e., any outliers) would fall on the lower side of 15.9 percent. Further down this column, we see that this negative return is a loss of 9.7 percent. Despite the loss, the other returns are large enough and the standard deviation is small enough to result in a distribution that is statistically different from zero at the 0.05 level. The Rittenhouse Rankings may be implicitly using stock price success as an indicator of good performance on the management variables that go into the Rittenhouse Rankings (i.e., significant positive price performance suggests the firms have strong leadership, good strategy, etc.).

Holding period return information for the Bottom5 Portfolio is exhibited in Column 3 and Column 4 of Table 3. The mean annual returns both before and after the Rittenhouse ranking date are negative. A positive median return before the ranking date implies that there was a large negative ex-post return in the preceding year. By scanning to the minimum return row of Column 3, one can see that this loss was 53.1 percent. However, by scanning across to the right column, one can see that the largest loss in a single year was 65.8 percent. The largest variation in portfolio returns was earned by the Bottom5 Portfolio, with a positive 19.1 percent in one year and negative 65.8 percent in another. Hence, it is no surprise that the Bottom5 Portfolio experienced the largest variation in holding period returns. Neither of these return distributions is significant at the 0.10 level, suggesting that low Rittenhouse rankings are not based on holding period returns over the past year and cannot be used to predict losses in the future.

Rittenhouse Ranking Model-Based Market-Excess Returns

Although the above section indicated that the Rittenhouse ranking cannot be used to predict losses, they might be able to forecast returns that are less than the market average. Returns for both the Top5 Portfolio and Bottom5 Portfolio were reduced by the contemporaneous return on the Standard & Poor's

500 Index. The annual return of the S&P 500 over the June 2006 to June 2012 period was 5.7 percent. It should be pointed out that one cannot simply subtract 5.7 percent from the holding period return values in Table 3, because the "prior year" period covers 2006-2011, while the "following year" column covers 2007-2012. Given the five year overlap, out of six total years, it is not surprising that there is a lot of similarity between the statistics derived from holding period returns (Table 3) and market-excess returns (Table 4). Once again, the market-excess mean annual returns for the Top5 Portfolio are positive though lower; whereas, the market-excess mean annual return of the Bottom5 Portfolio is negative and likewise lower.

Due to the variation in market returns, more variation from median holding period returns is witnessed in the second row of Table 4. However, market-excess median annual returns follow the same pattern as witnessed earlier. Only the Bottom5 Portfolio has a negative median return value, which occurs in the year following the Rittenhouse rankings. The magnitude of its decline (i.e., -13.8%) is approximately the same change as the positive market-excess return experienced by the Top5 Portfolio (i.e., 13.3%) in the year before the Rittenhouse ranking.

Market-excess return standard deviations are higher for the Bottom5 Portfolio than the Top5 Portfolio. They also are higher in the year following the Rittenhouse ranking than before, which one would expect given the uncertainty of future performance. However, the highest market-excess return in a single year occurs during the prior year for the Bottom5 Portfolio (i.e., 53.7%). Despite this large market-excess return, the negative 13.4 percent return of the mean annual market-excess return is significant at the 0.10 level. Even more significant is the negative 18.0 percent average annual market-excess return during the year following release of the Rittenhouse ratings. The relatively low maximum market-excess return (i.e., 10.2%) is a primary contributing factor to the following year's distribution being significantly less than zero at the 0.05 level. Given the similar value of the Bottom5 Portfolio's Student t-statistic, one can probably claim that the poor management recognized by the Rittenhouse rankings continued into the following year.

The most enlightening information in Table 4 is the Top5 Portfolio's positive minimum market-excess return. A positive value means that this portfolio never underperformed the market. As a consequence, it is not surprising that we can say with ninety-nine percent confidence that the Rittenhouse rankings picked out companies that outperformed the market. This is not surprising, because we would expect firms with effective managers to outperform the market. However, there does not appear to be a guarantee that this performance will continue into the following year.

Risk-Adjusted Market-Excess Returns

Alpha values for the four portfolios are presented in Table 5, where the mean alpha value of the Top5 Portfolio is 10.6 percent during the year preceding the Rittenhouse Model ranking. To the extent that the good management would continue across time, it is not surprising that a positive alpha exists in the following year. In fact, the Top5 Portfolio's median alpha is higher the following year than in the prior year (i.e., 6.0% v. 5.1%). However, during one of the years after the Rittenhouse ranking, the alpha of the Top5 Portfolio is -30.7 percent. Although the Top5 Portfolio alpha significance is just short of 0.01, the large range in alphas after the ranking results in no carryover of significance to the following year. As observed for holding period returns and market-excess returns, the Rittenhouse rankings appear to identify reasons why stocks of highly ranked firms have done well, but the potential investment benefit arising from investing in this insight into firm management appears to be fleeting.

Mean and median alpha values of the Bottom5 Portfolio are negative, whether looking at returns over the past year or future year. During at least one year, the alpha value of this portfolio is positive (i.e., 5.1% over the prior year and 3.3% over the subsequent year). However, the negative market excess returns have much larger absolute values (i.e., -34.8% over the prior year and -38.7% over the subsequent year). Based on the probability statistics, we can say with a ninety-five percent level of confidence that Rittenhouse has selected and measured key management variables which are able to explain abnormally poor returns over both the prior year and coming year.

Rittenhouse Ranking Model-Based Top5 v. Bottom5 Comparison of Returns

In the investigation described above, the research issue was one of whether a specified extreme set of five Rittenhouse rankings provided insight to holding period returns, market-excess returns, and alphas. In this final stage of the analysis of the Rittenhouse Model's rankings, we compare the performance of the Top5 Portfolio directly to the performance of the Bottom5 Portfolio. Column 1 and column 2 of Table 6 present statistics which are based on excess returns derived by subtracting the annual return of the Bottom5 Portfolio from the Top5 Portfolio. Column 3 and column 4 of Table 6 present statistics which are based on excess risk-adjusted returns derived by subtracting the alpha of the Top5 Portfolio from the Bottom5 Portfolio. Stated another way, while the prior information primarily focused on performance before and after the Rittenhouse rankings, Table 6 focuses on the Top5 Portfolio versus the Bottom5 Portfolio. For instance, subtracting the Bottom5 Portfolio return (i.e., -11.1% found in the third column of Table 3) from the Top5 Portfolio return (i.e., 15.9% found in the first column of Table 3) results in the mean comparative annual return (i.e., 27.0% found in the first column of Table 6).

Considering that only five years of data are available and being used in this study, the benefit of selecting the Top5 Portfolio is amazing! The Top5 Portfolio's mean annual return is 27.0 percent better before the Rittenhouse rankings and 21.3 percent better after the rankings. The maximum comparative benefit from investing in the Top5 Portfolio exceeds fifty percent during both the year prior to and following the Rittenhouse rankings. Finally, positive values in the minimum row indicate that the annual returns were always better for the Top5 Portfolio. Hence, it is not surprising that the historical holding period returns are different at the 0.01 level using, and forecast holding period returns are different at the 0.05 percent level.

Risk-adjusted, market-excess returns--the alphas--exhibit a similar pattern. The mean and median alpha differences always exceed sixteen percent. The maximum difference in alphas reaches 48.4%, which it should be pointed out occurs in the year following Rittenhouse Model ranking. Meanwhile, during each year the Top5 Portfolio's alpha exceeds the Bottom5 Portfolio's alpha. Consequently, regardless if whether one is using the Rittenhouse rankings to explain past returns or predict future returns, one can say with at least ninety-five percent level of confidence that the Top5 Portfolio's alpha exceeds the Bottom5 Portfolio's alpha. There appears to be slightly more skill explaining why certain stocks have performed differently than predicting future performance, but the fact that such levels of significance exist given only five observations is remarkable.

Value of the Rittenhouse's Candor Scores

A key variable in the Rittenhouse ranking system is its measure of corporate candor. As exhibited in Table 2, the firm with the most improved candor score was DuPont, which experienced an increase during six years, no change in one year, and a decline in only two years. Its overall ranking went from 88 (i.e., 12 from the bottom) to 28. At the other extreme, AIG registered a Candor-score decline in seven of nine years, while Hewlett-Packard experienced a decline in six of nine years. In terms of ranking, the largest drop was experienced by Target, which went from being ranked 18 to 65. The other two companies are Dell, whose negative 7.7 percent annualized rate of return only outpaced AIG, and General Mills whose 8.6 percent rate of return was the best among the sample firms. By comparison, the S&P 500 Index's return over the 2002-2012 period, which is shown in the bottom row, was 2.3 percent or lower than all but AIG and Dell.

This section of the report follows the same outline as used above, however the Top5 Portfolio and Bottom5 Portfolio are replaced by the MostUp3 Portfolio and MostDown3 Portfolio. Annual returns for nine years before and after publication of Rittenhouse Candor scores between 2003 and 2011 serve as the sample. Holding period returns for these portfolios will be studied before market-excess returns. Alphas will then be presented, using the betas shown in the right column of Table 2. Across the six companies, the average beta is 1.03, with three firms above and three below the market average.

Rittenhouse Candor Score-Based Holding Period Returns

The three firms in the MostUp3 Portfolio had a positive holding period return of 6.4 percent, as exhibited in the first row of Table 7. The following year, after the Candor scores were released, this portfolio's return dropped slightly to 5.2 percent. The median returns were slightly higher, suggesting that there is only a small amount of skewness on the negative side. The absolute value of the maximum and minimum holding period returns is similar, for instance being a positive 30.3 percent at a high and -27.0 percent at the low end. With such a wide range, it is not surprising that the mean return is not significantly greater than zero. Incremental changes in the Candor scores for a fixed set of firms do not appear to explain ex-post or ex-ante share price changes.

For the MostDown3 Portfolio mean annual holding period returns are again positive, with median returns actually higher than those earned by the MostUp3 Portfolio. However, the mean annual return is only a small fraction of the standard deviation, resulting in a lack of statistical significance. For this sample, with the range in holding period returns exceeding sixty percent one can confidently say that use of decreases in Rittenhouse's Candor score does not explain historical or future returns.

Rittenhouse Candor Score-Based Market-Excess Returns

The MostUp3 Portfolio had the only positive mean market-excess annual return (i.e., 3.1%), as shown in Table 8. If one considers medians, this value rises to 6.2 percent. However, the maximum and minimum market-excess return is approximately evenly spread across zero, resulting in a lack of significance. After the Candor scores are released, the MostUp3 Portfolio's average market-excess return is close to zero (i.e., -0.9%). Hence, it does not appear that positive changes in Rittenhouse rankings can be used to explain or forecast market-excess returns.

A similar conclusion can be made with regard to the MostDown3 Portfolio, which consistently has a negative mean excess return (i.e., -0.6% using ex-post data and -5.5% using ex-ante data). Although the median market-excess loss during the following year is -6.3 percent, in one year the maximum return was 20.3 percent. Unlike the Rittenhouse rankings described above, changes in Candor scores do not appear to be related to historical or future market-excess returns.

Rittenhouse Candor Score-Based Risk-Adjusted Market-Excess Returns

Firms displaying improved levels of candor are likely to be those with recent positive financial results. As shown in the first column of Table 9, these firms had a positive alpha value exceeding one percent (i.e., 1.4%). During the 2007-2011 timeframe, annual alpha values of the MostUp3 Portfolio ranged widely from 21.5 percent to -22.4 percent, contributing to an overall lack of significance. During the year following release of the Candor scores, the mean alpha was -1.3 percent, which dropped as low as -29.8 percent in one of the five years. As a consequence, a significant relationship was not observed between improvement in Candor scores and risk-adjusted, market-excess performance.

A lack of value attached to positive changes in Candor scores does not automatically negate value derived from investing (e.g., probably shorting) firms with declines in Candor scores. The MostDown3 Portfolio's summary statistics, exhibited in Column 3 and Column 4 of Table 9, display negative mean alpha values, with the largest decline occurring for the MostDown3 Portfolio in the year following release of the Candor scores. The median is -4.6 percent, which is the largest absolute value in the median row of Table 9. However, even this portfolio has a large alpha value in one of the five years studied (i.e., 16.8%). Consequently, with a t-statistic of 0.095, only a low level of significance can be tied to the return distribution of the MostDown3 Portfolio during the year following Candor score publication.

Rittenhouse Candor-Based MostUp3 v. MostDown3 Comparison of Returns

Prior sections have examined the value of basing investments on rising or falling Candor scores. This section's analysis combines the information found in these two portfolios by subtracting the returns of the MostDown3 Portfolio from the MostUp3 Portfolio. Price changes are the focus of Column 1 and Column 2 in Table 10, which consider the year preceding and following the Candor score used in portfolio creation, respectively. The difference in mean annual returns is at least four percent and surprisingly

higher during the year following the assignment (i.e., 4.9%). Perhaps the most important aspect of these columns is the low standard deviation of the return difference, being as high as 13.5 percent in one year, and is never less than 9.2 percent below the MostDown3 Portfolio in any year. A high comparative return and relatively low variation, results in a significance level of 0.05. We can with ninety-five percent confidence assert that firms with rising Candor scores exhibit will have better return performance over the following year.

Column 3 and Column 4 take this analysis one step further by adjusting returns for the risk-free rate, market return, and systematic risk, through the application of Equation 2. The alpha for the relative performance of the MostUp3 Portfolio versus the MostDown3 Portfolio over the following year is 5.5 percent, the highest value in the first row of Table 10. Although the highest median alpha value is found in the prior year column, that column also has a much higher standard deviation. With a t-statistic of 0.065, which is the last value in Table 10, there appears to the rudiments of the conclusion that a higher risk-adjusted, market-excess return was earned by the MostUp3 Portfolio. Rittenhouse Candor scores appear to be able to segregate companies that will perform relatively worse from those that will perform relatively better over the following year.

CONCLUSION

Effective management is necessary for success in corporate affairs. Historic successes and failures are often explained in terms of the lack of a good strategy, leadership, and follow-through. Meanwhile, investors are constantly seeking new methods to assess company management skill in an effort to earn abnormal rates of return. An uncharted path to ex-post return explanation and ex-ante return prediction is the Rittenhouse rankings created by Ms. Laura Rittenhouse and described in her book titled *Investing Between the Lines*. This study examines the success of both the broader-scope Rittenhouse Model rankings, which captures multiple dimensions of corporate character, and the more limited-scope Candor scores of executive communications.

In this study, portfolios with high marks on Rittenhouse character measures and low marks on each measure were created. Holding period returns, market-excess returns, and risk-adjusted market-excess returns were measured. We contrasted the returns of the portfolios with high rankings with portfolios with low rankings. Two sample periods were studied, the year prior to Rittenhouse rating publication and the year after. In total, sixteen measures (two portfolios x 2 sample periods x 4 measures of return performance) were obtained. The following table presents a tally of the number of times a given selection tool provided returns which were significant at the 0.05 level.

FIGURE 1
FREQUENCY OF SIGNIFICANCE

Instances where the portfolios provided a significant finding at the 0.05 level or better[a]

Rittenhouse Character Measure	Explanation of Prior Year Return	Forecast of Future Year Return	Instances without Statistical Significance
Rittenhouse Ranking	6	4	6
Candor Score	0	1	15

[a]The Rittenhouse ranking and Candor Score also provided returns which were significant at the 0.10 level one time and two times, respectively.

The Rittenhouse Ranking measures provided returns which were significantly different from zero sixty-two percent of the time. Excluding holding period returns which had no guarantee of rising in an economy characterized by low S&P Index growth, the Rittenhouse ranking provided insights which are

statistically significant nine of twelve times, or seventy-five percent of the time. As one would expect, there is a higher frequency of Rittenhouse rankings of historical excess returns than future returns. If we exclude raw returns, we could say that there is a relationship between Rittenhouse rankings and excess portfolio returns with at least ninety-five percent confidence two-thirds (i.e., four out of six) of the time. A firm's character appears to be related to both past and future company stock price performance.

We found that the Candor scores were only significant seven percent of the time. The only time in which the Candor scores were able to provide significant performance at the 0.05 level is when we compared the holding period returns of those companies advancing in candor versus those whose candor score decreased over the past year. Interestingly, Candor scores were found to be better at forecasting performance, than describing recent performance. Although the Candor scores seem to have limited value, these findings of potential value are based upon a very limited sample.

The greatest level of significance appears when we contrasted companies with high levels on Rittenhouse's character measures to those with low values on these measures. In these instances, the Rittenhouse character measures were equally able to explain ex-post share price performance and predict future relative performance. Consistently significant performance makes sense because we would expect that effective managerial practices would continue into the future, resulting in continued benefits of corporate character. Or, conversely, ineffective managerial practices will continue into the future resulting in relatively lower financial success. Rittenhouse has been able to identify instances of poor historical management, which appears to carry over into the future. We assume the knowledgeable investors would observe this difference and buy the well-run companies, pushing up their stock prices. Meanwhile, they would sell selling ineffective companies lacking corporate character, resulting in dropping share prices.

Due the proprietary nature of the Rittenhouse information, our sample is relatively incomplete. We only have access to the public information regarding which companies were in the top and bottom five levels over the 2007 through 2011 period, plus Candor scores for six companies over nine years. Future research based on a more complete sample of Rittenhouse rankings, or similar rankings by other experts in this field, would undoubtedly be of benefit to investors seeking to achieve investment performance results.

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APPENDIX

TABLE 1
SAMPLE USED TO EMPIRICALLY TEST RITTENHOUSE MODEL RANKINGS

Firms Listed in Order of Rittenhouse Model Ranking[a]
Beta Values are the average beta of firms in each portfolio

	2007	2008	2009	2010	2011
Top 5 Portfolio	Eaton Entergy Wells Fargo Novartis Target	Sherwin Williams Entergy 3M ConocoPhilips Kellogg	Edison Int'l Novartis Lowes General Mills Sherwin Williams	Sherwin Williams Honeywell Costco DuPont Ford	Church& Dwight Alcoa Southwest Airlines Google Ford
	Average Beta:0.82	Average Beta: 0.64	Average Beta: 0.55	Average Beta:0.86	Average Beta: 1.17
Bottom 5 Portfolio	Humana Service Master Boeing Estee Lauder News Corp	Citigroup Humana Lehman Brothers AIG Boeing	E-bay Pepsico Motorola Citigroup Humana	Motorola Target Merck Wal-Mart Cisco Systems	Hewlett-Packard CSX Cisco Systems Bank of America AIG
	Average Beta: 1.15	Average Beta: 1.45	Average Beta: 0.97	Average Beta: 0.72	Average Beta: 1.47

[a]The Bottom5 Portfolio consists of firms ranked 96 to 100 in Rittenhouse's hundred-firm listing.

TABLE 2
SAMPLE USED TO EMPIRICALLY TEST CANDOR SCORES

Firms	Number of Times Candor Score Rose	Number of Times Candor Score Fell	Candor RankingScore Change from 2003-2011	Mean Annualized return over 6/2003 – 6/2011 Period	Beta
AIG	2	7	65 to 100 (worst)	-36.67%	1.90
Dell	5	4	30 to 59	-7.7%	1.34
DuPont[a]	6	2	80 to 28	7.3%	1.01
General Mills	5	4	22 to 13	8.6%	0.44
Hewlett-Packard	3	6	73 to 96	7.8%	0.68
Target	4	5	18 to 65	3.7%	0.80
S&P 500	na	Na	Na	2.3%	1.00

[a]DuPont's Candor score was the same in one year.

TABLE 3
ANNUAL HOLDING PERIOD RETURNS OF
RITTENHOUSE RANKING-BASED PORTFOLIOS

Top5 Portfolio: Five Firms with highest Rittenhouse ranking
Bottom5 Portfolio: Five Firms with lowest Rittenhouse ranking

	Top5 Portfolio		Bottom5 Portfolio	
	Prior Year	Following Year	Prior Year	Following Year
Mean return	15.9%	6.4%	-11.1%	-15.0%
Median return	25.4%	-7.9%	0.7%	-13.0%
Standard deviation	20.9%	25.4%	29.9%	33.9%
Maximum return	37.8%	45.0%	14.2%	19.1%
Minimum return	-9.7%	-15.5%	-53.1%	-65.8%
t-test statistic	0.063**	0.295	0.215	0.176

*, **, *** = significant at 0.10 level, 0.05 level, and 0.01 level respectively

TABLE 4
ANNUAL MARKET-EXCESS RETURNS OF
RITTENHOUSE RATINGS-BASED PORTFOLIOS

Top5 Portfolio: Five Firms with highest Rittenhouse ranking
Bottom5 Portfolio: Five Firms with lowest Rittenhouse ranking

	Top5 Portfolio		Bottom5 Portfolio	
	Prior Year	Following Year	Prior Year	Following Year
Mean return	13.1%	3.3%	-13.4%	-18.0%
Median return	13.3%	10.5%	5.6%	-13.8%
Standard deviation	10.1%	19.5%	17.1%	20.3%
Maximum return	28.9%	19.4%	53.7%	10.2%
Minimum return	3.1%	-30.6%	-37.0%	-39.7%
t-test statistic	0.008***	0.355	0.059*	0.041**

*, **, *** = significant at 0.10 level, 0.05 level, and 0.01 level respectively

TABLE 5
ALPHAS OF RITTENHOUSE RATINGS-BASED PORTFOLIOS

Top5 Portfolio: Five Firms with highest Rittenhouse ranking
Bottom5 Portfolio: Five Firms with lowest Rittenhouse ranking

	Top5 Portfolio		Bottom5 Portfolio	
	Prior Year	Following Year	Prior Year	Following Year
Mean alpha	10.6%	2.0%	-13.6%	-19.1%
Median alpha	5.1%	6.0%	-8.4%	-13.9%
Standard deviation	10.6%	19.1%	16.1%	17.8%
Maximum alpha	2.9%	19.3%	5.1%	3.3%
Minimum alpha	28.7%	-30.7%	-34.8%	-38.7%
t-test statistic	0.027**	0.412	0.048**	0.022**

*, **, *** = significant at 0.10 level, 0.05 level, and 0.01 level respectively

TABLE 6
**DIRECT COMPARISON OF TOP5 PORTFOLIO AND
BOTTOM5 PORTFOLIO: ANNUAL RETURNS AND
CAPITAL ASSET PRICING MODEL-BASED ALPHA VALUES**

Top5 Portfolio: Five Firms with highest Rittenhouse ranking
Bottom5 Portfolio: Five Firms with lowest Rittenhouse ranking

	Annual Holding Period Returns		Alpha values	
	Prior Year	Following Year	Prior Year	Following Year
Mean return	27.0%	21.3%	24.3%	21.0%
Median return	23.6%	17.8%	23.6%	16.2%
Standard deviation	14.4%	20.6%	14.4%	19.5%
Maximum return	50.3%	50.2%	46.3%	48.4%
Minimum return	11.4%	0.2%	9.7%	2.2%
t-test statistic	0.002***	0.025**	0.003***	0.021**

*, **, *** = significant at 0.10 level, 0.05 level, and 0.01 level respectively

TABLE 7
HOLDING PERIOD RETURNS OF CANDOR SCORE-BASED PORTFOLIOS

MostUp3 Portfolio: Three Firms with the most positive change in Candor Score
MostDown3 Portfolio: Three Firms with the most negative change in Candor Score

	MostUp3		MostDown3	
	Prior Year	Following Year	Prior Year	Following Year
Mean return	6.4%	5.2%	2.3%	0.3%
Median return	8.4%	5.6%	14.1%	8.4%
Standard deviation	18.2%	17.8%	23.4%	22.2%
Maximum return	30.3%	29.6%	20.9%	29.2%
Minimum return	-27.0%	-27.0%	-40.3%	-40.3%
t-test statistic	0.162	0.202	0.387	0.485

TABLE 8
ANNUAL MARKET-EXCESS RETURNS
OF CANDOR SCORE-BASED PORTFOLIOS

MostUp3 Portfolio: Three Firms with the most positive change in Candor Score
MostDown3 Portfolio: Three Firms with the most negative change in Candor Score

	MostUp3		MostDown3	
	Prior Year	Following Year	Prior Year	Following Year
Mean Annual Return	3.1%	-0.9%	-0.6%	-5.5%
Median	6.2%	0.3%	0.7%	-6.3%
Standard Deviation	10.2%	9.7%	12.4%	15.5%
Maximum	19.4%	11.1%	17.0%	20.3%
Minimum	-13.2%	-21.6%	-15.6%	-35.1%
t-test statistic	0.188	0.433	0.411	0.151

TABLE 9
ALPHAS OF CANDOR SCORE-BASED PORTFOLIOS

MostUp3 Portfolio: Three Firms with the most positive change in Candor Score
MostDown3 Portfolio: Three Firms with the most negative change in Candor Score

	MostUp3		MostDown3	
	Prior Year	Following Year	Prior Year	Following Year
Mean alpha	1.4%	-1.3%	-1.2%	-6.8%
Median alpha	1.0%	-0.5%	-0.3%	-4.6%
Standard Deviation	12.7%	12.6%	12.0%	14.2%
Maximum alpha	21.5%	15.3%	16.9%	16.8%
Minimum alpha	-22.4%	-29.8%	-16.2%	-28.8%
t-test statistic	0.377	0.382	0.389	0.095*

*, **, *** = significant at 0.10 level, 0.05 level, and 0.01 level respectively

TABLE 10
DIRECT COMPARISON OF MostUp3 AND MostDown3 PORTFOLIO ANNUAL RETURNS AND CAPITAL ASSET PRICING MODEL-BASED ALPHA VALUES

MostUp3 Portfolio: Three Firms with the most positive change in Candor Score
MostDown3 Portfolio: Three Firms with the most negative change in Candor Score

	Annual Holding Period Returns		Alpha values	
	Prior Year	Following Year	Prior Year	Following Year
Mean Annual Return	4.0%	4.9%	2.9%	5.5%
Median	7.4%	6.6%	8.1%	2.9%
Standard Deviation	15.3%	7.8%	17.7%	10.4%
Maximum	25.0%	13.5%	28.0%	22.1%
Minimum	-23.7%	-9.2%	-23.8%	-7.4%
t-test statistic	0.221	0.039**	0.333	0.065*

*, **, *** = significant at 0.10 level, 0.05 level, and 0.01 level respectively