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# Is Portfolio Performance Related to Whether a Manager Has an Ivy League Education?

December 2010

# ABSTRACT

In the past, a broad range of studies have been conducted that examine portfolio performance relative to manager characteristics. The examined characteristics have included the possession of an MBA, CFA, SAT score, GMAT score, tenure, and several other variables. However, none have explicitly investigated whether a manager's specific place of study leads to superior performance. This study examines 2,213 funds from 1979-2009 to find portfolio managers who attended Ivy League institutions as undergraduates had superior benchmark-adjusted returns and information ratios. Their results are not different from non-Ivy graduates.

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## I. Introduction

This paper addresses the question of whether portfolio performance is related to whether a manager has an Ivy League education at the undergraduate or graduate level. Past studies have touched upon the importance of manager education and how it affects portfolio performance. Among other variables, which included age and job tenure, Chevalier and Ellison (1999) analyzed averaged SAT scores of the manager's undergraduate school and found that those with higher scores were associated with higher returns. Gottesman and Morey (2006) extended this study by analyzing the average GMAT score of the manager's MBA program and found that that it was positively related to portfolio performance. More recently, Li, Zhao, and Zhang (2008) found that hedge fund managers with higher SAT scores had higher risk-adjusted returns.

For the most part, these and other related studies have conducted analyses solely based on average SAT scores and the possession of an MBA; conversely, none have categorized managers by the educational institution they actually attended. Using the unique PSN Database, this study does just that and examines if portfolio performance is related to whether the portfolio manager has an Ivy League education at the undergraduate or graduate level.

The remainder of this study is structured as follows: Section II provides the literature review. Section III and IV presents the data along with an analysis of the results. The paper concludes with the summary and additional comments in Section V.

## **II.** Literature Review

The importance of portfolio management and how it contributes to portfolio performance is a matter of intense debate, especially when examining managerial characteristics.

In their study of equity mutual funds from 1988-1992, Shukla and Singh (1994) examined a portfolio manager's advanced professional education, as symbolized by the CFA designation, to determine whether it resulted in superior performance. Their data were split into two categories: a CFA group of funds with at least one CFA manager and a non CFA group which were funds that had none at all. They found that portfolios with at least one CFA manager outperformed those who had none and while riskier, were better diversified. However, several issues arise after examining these results. First, funds having at least one CFA manager might have had higher returns due to non-CFA managers within that same group. Second, attaining CFA status had started to become popular beginning in the 80's. This poses the problem that only a small sample of managers had become CFA charterholders and possibly a present day examination needs to be done in order to incorporate a more accurate data set.

Soon afterwards Golec (1996) examined whether a mutual fund manager's characteristics help to explain fund performance, risk, and fees. For 530 mutual funds from 1988-1990, he found that performance (yield and alpha), risk (beta and residual return standard deviation) and fees (expense ratio, management fees, and turnover) were significantly impacted by manager age, tenure, and MBA accreditation. The results demonstrated that younger managers (less than 46 years old) who had managed for a relatively long time, (more than 7 years) with longer tenure, and MBA degrees had the best risk-adjusted performance.

Similarly, Chevalier and Ellison (1999) examined whether manager age, tenure, and MBA status had any positive correlation to portfolio performance. However, Chevalier and Ellison also included average SAT score in their research. The data consisted of 492 mutual fund managers from 1988-1994 who had sole responsibility for a growth or growth and income fund. They came to three conclusions. First, those managers who attended more selective

undergraduate programs with MBA's had higher performance than those who did not; however, the returns achieved were due to a higher systematic risk. Second, managers with higher SAT scores had higher returns. It is worth noting though that they did not examine the actual SAT score of each manager, but the average SAT score from the undergraduate school they attended. Third, younger managers outperformed older ones. They believe this distinction may be in part that younger managers must work harder than the old because they can be easily fired and have a long career ahead of them. In addition, younger managers may be more educated and the ones who are phenomenal will exit the industry before they get old.

Following the work of Chevalier and Ellison, Gottesman and Morey (2006) examined the relation between manager education and mutual fund performance. They specifically examined the average GMAT score for each MBA program and determined that managers who held MBA's from the 30 top ranked schools outperformed those with MBA's from unranked schools and those without MBA's entirely. Furthermore, SAT scores and those who possessed CFA certifications, non-MBA masters-level graduate degrees, or PhD's had no effect on fund performance. Gottesman and Morey used a data set of 518 mutual funds from 2000-2003 in a non-bullish market to contrast Chevalier and Ellison. The latter had been criticized for examining managers during a bull market from 1988-1994 where the younger managers succeeded because they took on more risk generally than the veterans and thus reaped a greater reward.

Franco and Zhou (2007) examined whether equity analysts with CFA designation outperformed those who had none. Two important contributing factors that played a major role in their results were timeliness and boldness of the managers. Using a sample of 4,380 analysts from 1999-2003, they found that CFA charterholders issued moderately timelier and bolder

forecasts. Furthermore, with timeliness controlled, CFA managers tended to be more accurate than non-CFA's. Their tests also indicated that managers with a CFA performed at a higher level than those without one.

Switzer and Huang (2007) picked up where Shukla and Singh left off by examining whether small and mid cap mutual funds were affected by manager characteristics of tenure, investment experience, MBA, CFA, age, and gender. Switzer and Huang gathered a sample of 1,004 small and mid cap equity funds to conduct their research. Of the desired manager characteristics, the only one that had a positive effect on fund performance measured by excess returns or alpha was the CFA designation.

Dincer, Gregory-Allen, and Shawky (2010) examined portfolio managers based on three educational factors (CFA, MBA, and experience) and determined their performance while controlling for risk and style methods. A key issue they addressed was that of risk and directly measured it in order to determine if it contributed to manager performance. With a sample of funds from 2005-2007, they determined that returns were not affected by managers having CFA's, MBA's, or experience. However, using two measures of risk they did conclude that those with CFA's reduced portfolio risk while those with MBA's increased it. Furthermore, managerial experience reduced portfolio risk as well.

Costa, Jakob, and Porter (2006) varied their research from the others previously mentioned by examining how market trends and manager experience impact the ability of managers to generate positive risk-adjusted returns. They set out to find whether risk-adjusted returns from 1990-2001 were due to manager experience or market conditions. The three concluded that managers in a bull market underperformed the market and during a bear market outperformed it. In contrast to the results of Golec, managers with longer tenure did not

outperform those with shorter ones. Last, risk-adjusted returns by managers were not affected by manager experience, but by trends in the market.

Interestingly, much of the research described above concerns manager characteristics that deal with mutual funds. For the most part, hedge funds have been left untouched and is a relatively large resource that has been left untapped. As opposed to mutual funds, hedge funds are not limited to regulatory restrictions and managers often have a direct financial stake in their hedge fund investments. Therefore, it is fascinating that more studies have not been conducted to evaluate how manager characteristics affect hedge fund performance. Nevertheless, there has been some research done in this field.

Boyson (2002) examined the relation between hedge fund manager characteristics and performance, volatility, and survival. Boyson boasts that, "[her] paper provides a first look at the 'average' characteristics of a sample of hedge funds." She gathered information from 288 hedge funds from 1994-2000 and concluded that the relation between manager characteristics and volatility is more significant than manager characteristics and performance. Manager tenure had a negative relationship to returns and risk and the managers with longer tenure had worse non-volatility returns than those with shorter ones. However, there was no real difference using volatility adjusted measures. Mangers with MBA's demonstrated the same results. Another key component of Boyson's research dealt with hedge fund survival rate. She found that mangers with longer tenures possessed a higher survival rate than those with shorter ones. On the other hand, funds handled by managers with an MBA showed the same survival rate as those without.

Li, Zhao, and Zhang (2008) followed in Boyson's footsteps and examined the impact manager characteristics of education and career concern have on hedge fund performance. They used a data set highlighting personal, educational, and professional backgrounds of managers

from 1,002 hedge funds over the period 1994-2003. Specifically, the information gathered highlighted SAT scores, CFA or CPA designation, MBA status, total number of years worked, tenure, and manager age. They concluded that managers with higher SAT scores took fewer risks and had higher risk-adjusted returns. Also, to a lesser degree they discovered that more established managers engaged in fewer risks and therefore achieved lower returns.

With regard to manager education, past studies have primarily focused on the possession of an MBA or not. As mentioned above, some dove deeper and evaluated manager performance based on SAT and GMAT score; however, few have actually examined where a manager had gone to school, at an undergraduate or graduate level, and categorized accordingly. This study therefore sorts managers specifically into categories of Ivy League, public Ivy League, SUNY, and all else at both the undergraduate and graduate level. The study's main hypothesis can be stated as follows:

 $H_1$  = Investment Performance is higher when the portfolio manager has an Ivy League education.

## III. Data & Methodology

#### Data

The PSN Database was used to collect the desired information about each manager and their level of education. PSN is an advanced database that offers financial professionals high quality, in-depth information on domestic and international investment managers. PSN is composed of approximately 2,000 investment firms who manage over 12,000 fixed income and equity portfolios. Each manager fills out a questionnaire that collects data from basic firm-level information to detailed, product specific information. The provided information is used by plan

sponsors, investment consultants, brokerages, and money managers to identify, select, and evaluate managers. As a result, providing accurate information is essential for investment managers since it is used by organizations to recognize funds for their clients (Informa).

The data gathered from PSN grouped a manager's undergraduate and graduate education separately into the following five school categories: No Response, Ivy League, Public Ivy League, SUNY, and All Else. The No Response group incorporated those funds with managers who elected not to include a place of undergraduate or graduate study. The Ivy League group consists of those managers who attended school at Brown University, Columbia University, Cornell University, Dartmouth College, Harvard University, Princeton University, University of Pennsylvania, and Yale University. The Public Ivy League group consists of those managers who went to school at College of William & Mary, Miami University, University of California, University of Michigan, University of North Carolina at Chapel Hill, University of Texas at Austin, University of Vermont, and University of Virginia (Ivy League Online). The SUNY group consists of those managers who went to school at the State University of New York at Albany, Binghamton, Buffalo, Fredonia, Geneseo, Oswego, Potsdam, and Stony Brook. Managers who attended education institutions not included in the above four groups were placed in the All Else category.

## *Methodology*

The sample set was limited by several different variables over the study period, 1979-2009. For each fund, PSN lists the Key Portfolio Manager along with as many as ten other managers. Managerial characteristics are not listed for the Key Portfolio Manager, but were for the supporting managers. Therefore, if the Key Portfolio Manager and the first manager listed

were the same, that fund was kept and if not was eliminated. This reduced the data set from the original 12,761 funds to 5,993. Next, returns were calculated for each Key Portfolio Manager depending on when they began working with their respective firm. Those managers with no returns were removed from the sample. Last, in some cases managers were listed more than once under their respective companies. Rather than have managers duplicated within a single firm, the data was filtered according to a manager's oldest inception date in order to attain the most accurate information. The final sample consisted of 2,213 funds with one manager per firm and full returns for each.

Furthermore, it is important to note that in this study managers were not categorized by the size or types of funds they managed. In other words, managers included handled domestic or international funds, fixed income or equity funds, small cap value to large cap growth funds, etc. The main focus of this study is to analyze manager performance solely on place of education; however, it would be interesting in a follow up study to analyze results based on the types of funds managed.

PSN provided raw rates of return (ROR) and benchmark-adjusted returns (BAR) for each fund. The average rate of return, benchmark-adjusted return, and Standard Deviation (Std Dev) were calculated from the available data for each manager. Risk-adjusted returns (RAR) and information ratios (IR) were also examined and calculated as follows:

RAR = (ROR) / (ROR Std Dev)

IR = (BAR) / (BAR Std Dev)

These metrics are the main determinants to establish portfolio performance and are essential for this study. The risk-adjusted return and information ratio are particularly useful because they provide additional data points that help determine performance. The risk-adjusted return enables investors to compare the performance of low risk, low return investments to high risk, high return investments while controlling for risk. The information ratio measures a portfolio manager's ability to generate excess returns relative to their benchmark, but also attempts to identify the consistency of that manager. The higher the ratio the more consistent the manager is, which is an essential characteristic for this study (Investopedia).

After calculating the average returns for each manager, the funds were grouped according to manager place of study – No Response, Ivy League, Public Ivy League, SUNY, and All Else. Once categorized, an Anova: Single Factor test was run based on each return measure to determine which education sample obtained the greatest level of performance at both the undergraduate and graduate level.

#### IV. Analysis and Results

|     |      |             |                     |                     |                     |          | ANOVA Results |         |
|-----|------|-------------|---------------------|---------------------|---------------------|----------|---------------|---------|
|     |      | No Response | Ivy League          | Public Ivy          | SUNY                | All Else | F-Stat        | P-Value |
| POP | Mean | 0.7400      | 0.7154              | 0.7557              | <mark>0.9413</mark> | 0.6887   | 1.4802        | 0.2055  |
| RUK | RAR  | 0.3016      | 0.2025              | <mark>0.3351</mark> | 0.2435              | 0.2576   | 1.6827        | 0.1512  |
| DAD | Mean | 0.1312      | <mark>0.1528</mark> | 0.1227              | 0.0556              | 0.1054   | 1.2587        | 0.2841  |
| DAR | IR   | 0.0590      | <mark>0.0771</mark> | 0.0498              | 0.0433              | 0.0694   | 0.5379        | 0.7079  |
|     | N    | 269         | 185                 | 150                 | 27                  | 1582     |               |         |

 Table 1. Undergraduate Results Using ANOVA: Single Factor

Table 1 provides the results from the undergraduate Anova: Single Factor test. The data analysis test was run for each metric to determine which fund category performed the best and to see if those results have any significance. The bottom row of the chart, labeled N, provides the number of managers within each school category.

The managers who attended SUNY schools had the highest performance based on a mean raw rate of return of 0.9413. Those from Public Ivy Leagues had the highest mean risk-adjusted return of 0.3351. Managers who attended Ivy League institutions boasted the highest performance for the last two categories of mean benchmark-adjusted return and information ratio with 0.1528 and 0.0771. Even though the differences among the average returns were fairly minute, it seems that those managers with Ivy League educations have the best portfolio performance when it is examined relative to their benchmark. However, the Anova results also determined that the tests are not significant because each p-value is greater than the desired confidence level of 0.1. Accordingly, it cannot be safely concluded that a manager's undergraduate place of study affects portfolio performance.

|   |     |      |                     |                     |                     |        | ANOVARESUILS |        |         |
|---|-----|------|---------------------|---------------------|---------------------|--------|--------------|--------|---------|
| _ |     |      | No Response         | Ivy League          | Public Ivy          | SUNY   | All Else     | F-Stat | P-Value |
|   | ROR | Mean | 0.6962              | <mark>0.7796</mark> | 0.7606              | 0.8387 | 0.6860       | 1.2334 | 0.2945  |
|   |     | RAR  | <mark>0.2916</mark> | 0.2112              | 0.2299              | 0.2405 | 0.2545       | 1.4125 | 0.2273  |
|   | BAR | Mean | 0.1239              | 0.1161              | <mark>0.1285</mark> | 0.4646 | 0.0989       | 1.5178 | 0.1943  |
|   |     | IR   | <mark>0.0722</mark> | 0.0499              | 0.0538              | 0.1810 | 0.0680       | 0.8106 | 0.5182  |
|   |     | N    | 902                 | 254                 | 110                 | 3**    | 944          |        |         |

 Table 2. Graduate Results Using ANOVA: Single Factor

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ANOVA Poculto

Table 2 shows the results from the graduate Anova: Single Factor test. Unlike the undergraduate data set which included a fair manager sample for each school category, the SUNY grouping only boasts 3 participants out of 2,213 funds. With such a infinitesimal

sampling it is difficult to say if they provide an accurate forecast of returns for the SUNY class as a whole. For this reason the SUNY grouping is not included in the data analysis.

Not including the SUNY grouping, the Ivy League managers boasted the highest mean rate of return with 0.7796. The managers included in the No Response category put up the highest mean risk-adjusted return of 0.2916 and information ratio of 0.0722. Those who attended Public Ivy League institutions won the last metric with a 0.1285 mean benchmark-adjusted return. However, the differences between the means for each metric are just as minuscule as the results for the undergraduate tests. Furthermore, according to this table the results are not significant either. The p-value for each measuring metric is greater than the desired confidence level of 0.1, establishing that a manager's graduate place of study does not affect portfolio performance.

To sum up the results, it seems that only at the undergraduate level managers with an Ivy League education boast superior performance relative to benchmark-adjusted returns and information ratios; however, since the tests are not significant we cannot rightfully assume this and thus the null hypothesis must be accepted.

#### V. Conclusion

Studies in the past examined various manager characteristics, such as the possession of an MBA or CFA; but, never has one specifically categorized managers by their educational place of study. This study examined just that concept to see if it has an effect on portfolio performance, specifically at the undergraduate and graduate levels.

The end results were fairly ambiguous; however, those managers that attended Ivy League universities as undergraduates demonstrated highest portfolio performance. When

testing for benchmark-adjusted returns and the information ratio, the Ivy League group took top rank suggesting they are the most consistent in outperforming their benchmark. Unfortunately, none of the results proved to be significant and thus cannot be rightfully assumed to be correct.

To further enhance this study, I propose future ones could possibly include related variables, like CFA credentials, to determine if these variables, coupled with a manager's institution of education, have any effect on portfolio performance. The results may not have been significant in this study; nevertheless, adding more factors in this analysis may have changed the overall outcome.

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