

Enhancing the Finance Curriculum with an Applied Learning Experience: The CFA Institute Research Challenge

Kevin Bracker, Pittsburg State University
Laurian Lytle, University of Kansas

ABSTRACT

Preparing students to transition from the classroom to their careers requires higher education to provide students with opportunities to engage in relevant, real-world activities. One of these opportunities is the CFA Institute Research Challenge. This activity engages student teams from across the globe in a competition to conduct an in-depth investment analysis report and presentation on an actual company in real-time with the active participation of the company, faculty advisors, and an industry mentor which is judged by investment professionals. We conduct a survey of faculty advisors to gauge their perceptions on the benefits to students and the participating universities of engaging in the Research Challenge. The survey shows support for skill development beyond the classroom experience, improved job opportunities, and benefits from the involvement of industry professionals. While some schools find challenges in fielding a team, faculty advisors find that the rules and structure of the competition to a good job in creating a level playing field.

INTRODUCTION

Given the criticism of business programs since the Ford and Carnegie studies were published in 1959 (Gordon & Howell; Pierson) and subsequent reports of an overemphasis of theory versus practical application, business school academics have been challenged to incorporate more rigor and relevance into their classes. Bennis and O'Toole (2009) urge business schools to use a professional model to design the curriculum, such as that taken in medicine and law, versus the path of arts and sciences colleges. A professor of medicine is expected to have experience seeing patients, just as law professors are expected to have experience practicing law to some degree.

The field of finance lends itself to incorporating the practical application of financial decision-making in the classroom, but to provide a more realistic experience requires a detailed experience of the nature of the decision faced by the financial professional. The cases and scenarios presented in textbooks are typically simplified to narrow students' focus to one or two aspects of the decision. Financial statements shown in textbooks are typically standardized and often don't reflect what is actually reported in company financial reports, as discussed by Lytle and Payne (2015). Constructing more in-depth applied learning experiences requires a considerable investment of time by faculty.

There is no doubt that bridging theory and practice through classroom experience, internships and other experiences enhances the value of the degree program for finance and

accounting majors. Percival (1993), Weaver (1993), and Aggarwal (1993) discuss the roles of practice and theory in the finance curriculum. Block (1999) specifically examined the differences between theories taught in finance courses and whether these theories were widely used by practicing financial analysts in security analysis. Pactwa, Wong and Moore (2007) describe the development of an intercollegiate investment research competition, initially sponsored by the New York Society of Security Analysts (NYSSA). Faculty and students participating in this competition viewed the experience as another way to bridge the gap between theory and practice, while helping to development some of the soft skills needed to succeed in the finance industry, including effective teamwork. The competition was subsequently adopted (2006-2007) by the CFA Institute and extended to a global field. The competition not only bridges the theory-practice gap, but also brings students, university faculty and investment professionals together to provide a unique applied learning experience that students and faculty alike tout as the highlight of students' collegiate education.

This paper contributes to the literature on bringing theory and practice together within the university framework by providing an analysis of survey results of North American faculty serving as advisors to university teams participating in the Research Challenge over the last nine years. The survey (provided in appendix A) is being sent to nearly 325 faculty advisors for the Research Challenge using the Qualtrics survey package.

CFA INSTITUTE RESEARCH CHALLENGE

The CFA Institute Research Challenge is an equity research competition among university teams in which a local publicly-traded firm, the subject company, is analyzed. The subject company is selected by the sponsoring local CFA Society. Working with a faculty advisor and an industry mentor, the teams prepare a 10-page sell-side research report on the subject company, which is graded by investment industry professionals. Then, the teams make a formal presentation of their investment recommendation and supporting analysis, which includes a question-and-answer session from a panel of judges, who are high-level investment professionals. During the process, the teams interact with executives from the firm they are evaluating, read through multiple reports on the company's performance, evaluate the firm's opportunities and risks, forecast financial statements, estimate the value of the firm's stock and make a buy/sell/hold recommendation. The winners of the local Research Challenge competitions advance to one of three Regional Research Challenges (Americas, EMEA, and Asia-Pacific). The winners of the Regional Challenges advance to compete in the Global Research Challenge. According to a Factsheet published by the CFA Institute, over 4,500 students from more than 865 universities in 70 countries competed in the 2014-2015 Research Challenge.

The competition differs from many student-managed investment funds as teams must incorporate real-world equity analysis and valuation techniques, which differ from those presented in finance textbooks (Lytle and Payne, 2015). Thus, the Research Challenge provides an opportunity for students to extend their classroom education into the real-world through the guidance of the industry mentors, the feedback from the graders of the written reports, the questions from the panel of judges, and interactions with the subject company management. The panel of graders evaluate the reports and panel of judges evaluate the presentations, both by current investment industry practice standards.

SURVEY

In this survey we examine the effect of the Research Challenge on the learning experience, the value of the interaction between investment professionals and students, the value of participation in the Research Challenge to a university, as well as university recognition of the value of the experience to student and service by faculty. One challenge in distributing the survey is to identify the faculty members who served in the role of faculty advisors to their university's Research Challenge team in the 2014-15 competition. The CFA Institute assisted in the process by sending out an email announcement to 97 faculty members who had opted in to sponsor communication. The original announcement was distributed on July 8, 2015 and a follow-up announcement was distributed on August, 27 2015. This process resulted in 31 responses (a 32% response rate). We are currently in the process of trying to identify other faculty advisors and preparing an email request to those faculty. However, the results presented in this paper are based on the 31 responses received by September 1st, 2015.

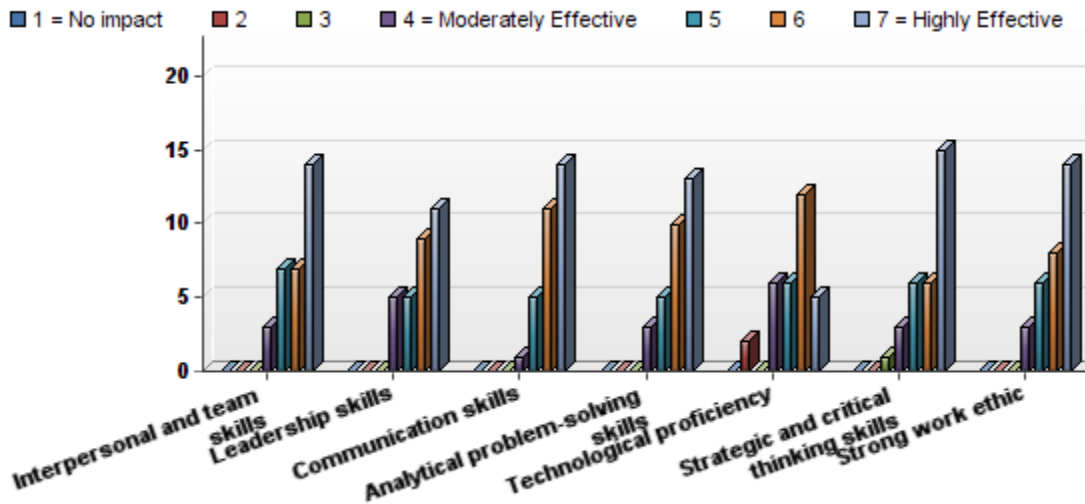
RESULTS

Role in Developing Student Skill Sets

At this point, we view these as preliminary results as our goal is to increase the number of responses with a follow-up email to the faculty advisors who were not included in the original survey request. With that caveat, there are some important findings from the initial 31 responses. Based on the evidence, addressed in more detail later in the paper, we find that the Research Challenge is a valuable tool for enhancing student skills and the learning experience beyond the traditional classroom environment, the Research Challenge is an important asset to students entering the job market, the industry mentor and judges are a key aspect in enhancing the experience of student participants, the ability and challenges associated with recruiting students to join the team vary dramatically across schools, top reasons for students dropping out of the competition include time commitment, loss of interest, and personal conflicts while there is a feeling that some teams have inherent advantages, overall the rules and grading associated with the Research Challenge keep the competition on as level of a playing field as possible, the majority of student participants are undergraduate accounting and finance majors from mid/large size schools.

One of the key themes we are seeking to address is the impact of the Research Challenge on students. While we address this through multiple questions, the first set examines specific skills which can be enhanced beyond the classroom through participation in the Research Challenge. What we find is that the Research Challenge does an outstanding job of developing a variety of important skills. The average response (on a scale of 1 = no impact to 7 = highly effective) for interpersonal and team skills, communication skills, analytical problem-solving skills, strategic and critical thinking skills,

Figure 1 – Development of Skills



and work ethic were all 6 or higher. Leadership skills were just below 6 (5.87) and technological proficiency came in the lowest at 5.32. Technological proficiency was also the only category where the mode response was not the maximum choice of 7.

In addition to the specific skills, the vast majority of respondents (77%) selected somewhat agree (13%), agree (19%), or strongly agree (45%) to the statement “The students’ experience in the Research Challenge exceeds what can be accomplished in college courses.” The results from these two questions indicate that faculty advisors see the Research Challenge as an important component of the learning experience which pushes the educational opportunity beyond the classroom.

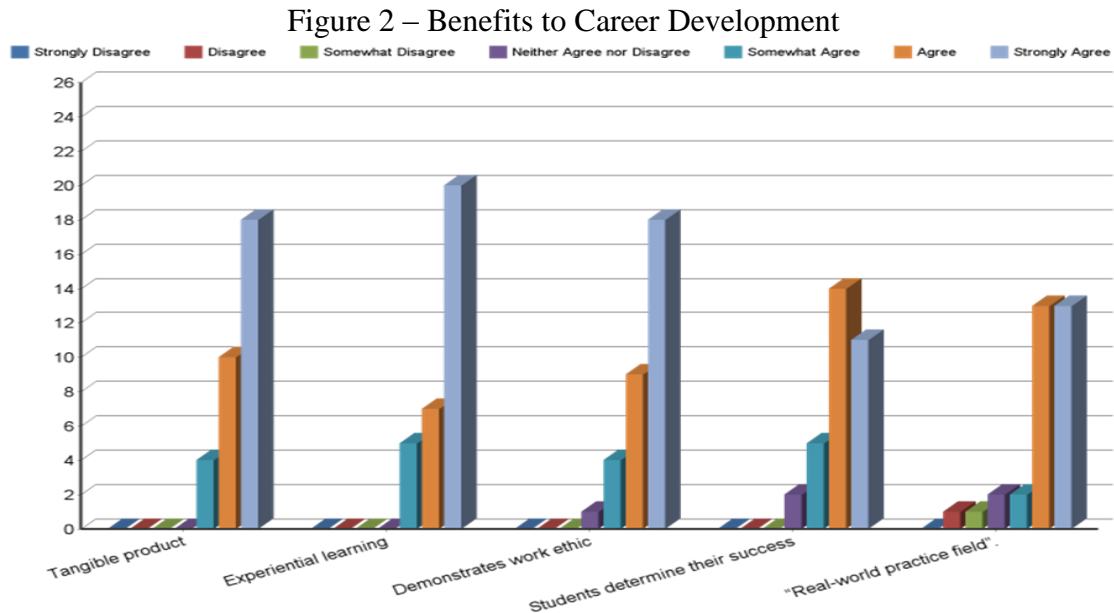
Role in Preparing Students for Careers

A second important area explored in the survey is the role of the Research Challenge has in preparing students for the job market. One question that looked at this issue compared the Research Challenge to an internship. Here, both were seen as valuable to students with the most popular choice (57%) as equally valuable. Another 23% rated the internship experience as more valuable while 19% rated the Research Challenge as more valuable.

Beyond the comparison to an internship, the survey addresses five specific potential benefits of the Research Challenge. Specifically,

- The Research Challenge provides a tangible product students can show and discuss with potential employers.
- The Research Challenge provides students with an in-depth experiential learning process that they can discuss in detail with potential employers.
- The Research Challenge requires students to put forth effort under their own initiative, demonstrating work ethic to potential employers.
- The Research Challenge provides an opportunity for students to determine their success given the limited time involvement of both the faculty advisor and industry mentor.
- The Research Challenge provides a “real-world practice field” that is difficult to create in a typical course.

As shown in the graph below, the results are overwhelmingly positive towards the recognition that the Research Challenge provides a variety of benefits to students in terms of employability. All five specific items have a mean score of 6 or higher on a 7-point scale with 7 being strongly agree.

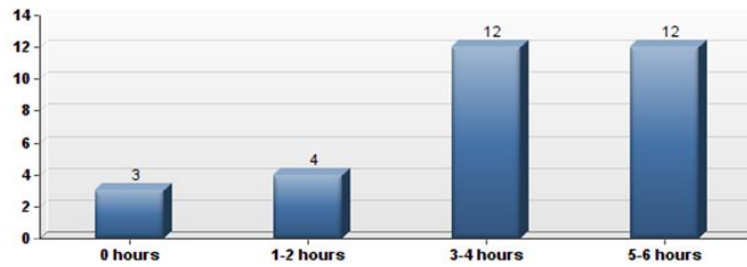


Finally with respect to the job search benefits of the Research Challenge, the mean response to the statement “Participation in the Research Challenge has positively impacted the ability of participating students to obtain a job in finance and/or accounting” was 6.06 on a scale 7 point scale with 7 being strongly agree. Of the 31 responses, 97% were in the categories of somewhat agree (26%), agree (32%), or strongly agree (39%).

Role of the Industry Mentor and Judges

A third area of interest in the survey results relates to the industry mentor and judges used in the Research Challenge. As part of the competition, each team is assigned a professional in the investments field to serve as an industry mentor. The teams are allowed to spend up to 6 hours over the course of the competition getting advice, feedback, and suggestions from their mentor in preparing their written equity research report and additional two hours in preparation for their final presentation. Based on feedback from faculty advisors, this mentor serves a valuable role in the Research Challenge experience. Specifically, on a scale of 1 to 4 (with 3 being moderately important and 4 being very important), 27 of 31 respondents (87%) responded with a 3 (26%) or 4 (61%) to the request to rate “the importance of the industry mentor to the educational experience of the Research Challenge.” Most teams used their industry mentor from 3-6 hours.

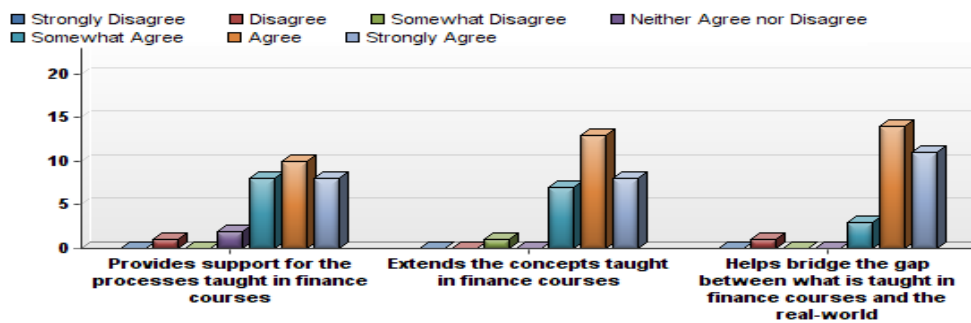
Figure 3 – Time Spent with Industry Mentor



While only about half of advisors had an opportunity to work with more than one industry mentor, there is evidence that the benefit from different mentors can vary. This could be due to experience, motivation of team to contact their mentor, area of expertise, convenience (how closely the team is located to their mentor), outside demands on the mentor, or many other factors. However, only 2 of 16 advisors that had worked with more than one mentor noted that there was no significant difference in contributions and 7 of the 16 noted significant differences in the contributions of their industry mentor.

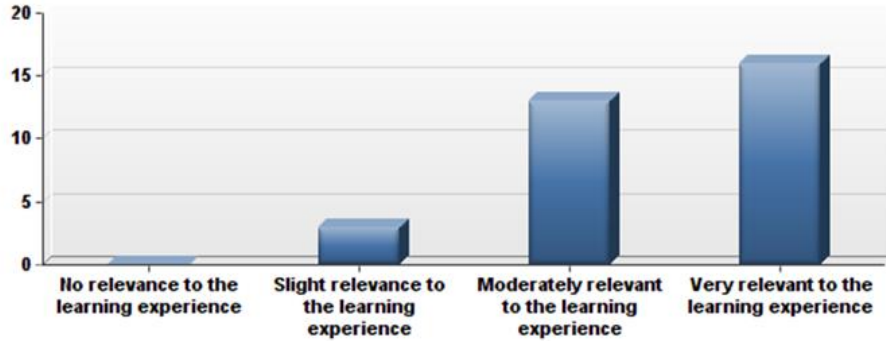
Finally, the mentor provides multiple dimensions of benefit to the process as seen in the graph below.

Figure 4 – Benefits From Industry Mentor



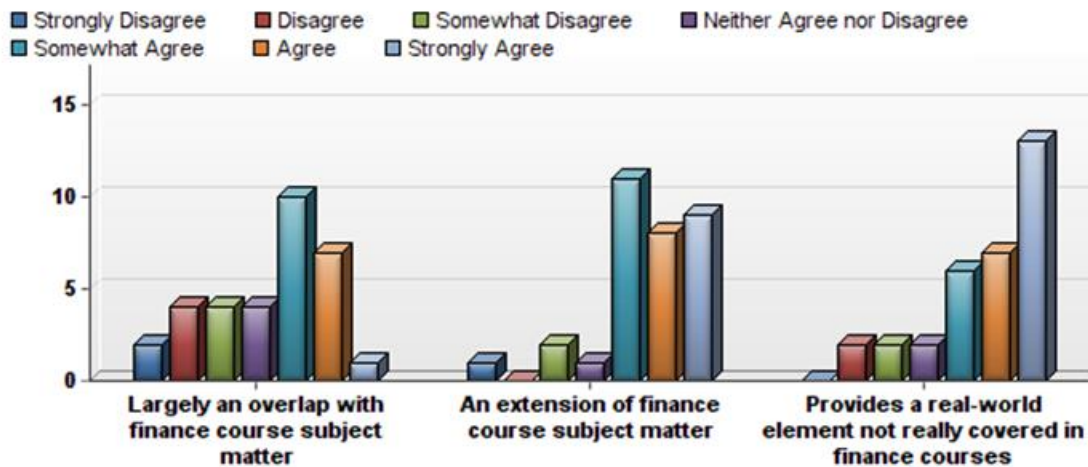
In addition to having an industry professional serve as a mentor to each team, the Research Challenge is graded/judged by industry professionals who provide significant feedback to each team regarding the strengths and weaknesses of both their reports and presentations. Our survey finds that the faculty advisors consider this feedback to be a vital element to enhancing the student experience in the Research Challenge. Specifically,

Figure 5 – Relevance of Feedback from Judges/Graders



28 of 31 respondents (90%) identify it as moderately (43%) to very (57%) relevant to the learning process. Further, we try to identify where the relevance comes into the picture with a few follow-up questions. While there is some feeling that the judges feedback overlaps with what is taught in class, the consensus is not very strong with a mean response of 4.28 on a scale of 1 (strongly disagree) to 7 (strongly agree). On the other hand, the view is much clearer that the judges' feedback provides both an extension of subject matter and a real-world element not sufficiently covered in coursework. The mean response on the extension of subject matter is 5.53 with 28 of 32 responses falling in the categories of somewhat agree (34%), agree (25%),

Figure 6 – Source of Benefit from Judge/Grader Feedback

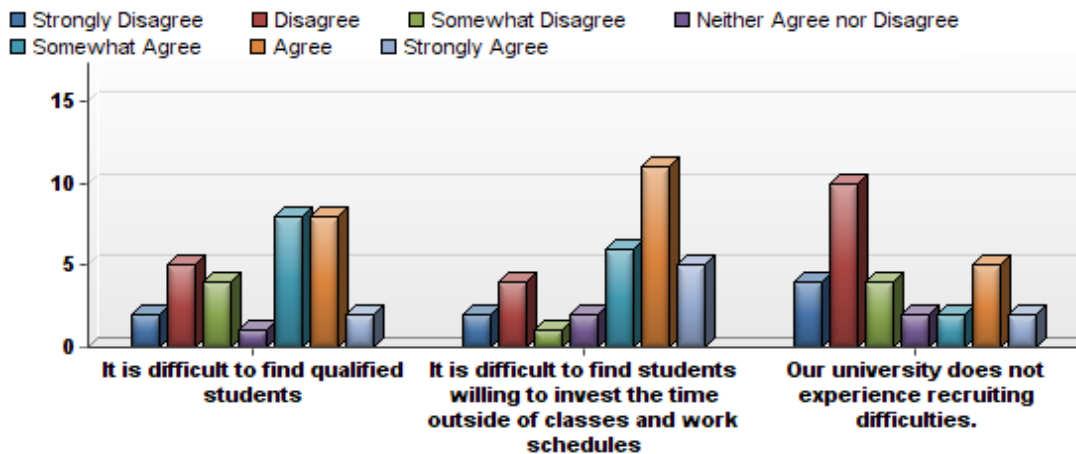


and strongly agree (28%). For the question addressing an introduction of real-world component, the mean response is 5.66 with 26 of 32 responses being somewhat agree (19%), agree (22%) and strongly agree (41%).

IVD. Challenges in Fielding/Maintaining a Team

While the Research Challenge offers tremendous benefits to those students who participate, it is also quite demanding. It is not uncommon for each student to invest 100-150 hours into the competition over the course of four or more months. This can lead to challenges for teams in getting students to commit to joining the team initially as well as to stay actively involved throughout the process. Based on our survey results, the challenges vary notably across schools

Figure 7 – Challenges in Fielding/Maintaining Teams



as responses crossed the entire spectrum of choices in three questions pertaining to getting students to sign up and stay active during the competition. While the evidence indicates that some schools have little to no difficulty in attracting qualified students to participate, there is a slight bias towards schools having some challenges in fielding a full team of students who are willing and able to commit to the Research Challenge over the length of the competition. Given the difficulty in keeping students involved throughout the process, it is interesting to explore why students drop out. We find that the three biggest reasons are (1) the competition requires too much time, (2) loss of interest, and (3) personal conflicts with other group members and/or advisor.

Competitive Balance

The Research Challenge has participants from across the globe and represent a mix of public/private schools which may be small or large. Some teams are made up primarily of graduate students, but the majority of teams appear to be primarily undergrads. Additionally, some teams require students to have completed upper-level finance coursework while other teams may have only minimal (or no) coursework requirements. This mix of students, schools, and prerequisite requirements may lead some to believe that there is a clear distinction between the teams with a real shot at advancing vs. those who are merely participating. In our survey, we tried to address this concern with a variety of statements for respondents to rate their level of agreement with (1 = strongly disagree to 7 = strongly agree):

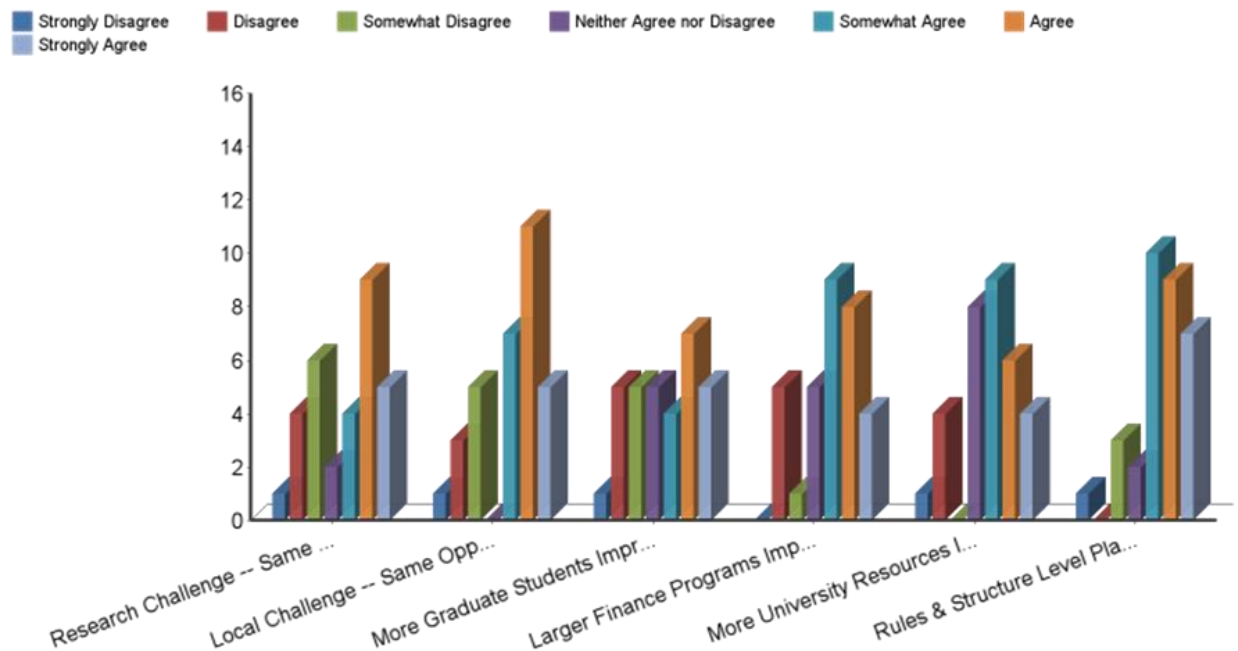
- I feel that all teams competing in the Research Challenge have the same opportunity to win;

- I feel that all teams competing in the LOCAL challenge have the same opportunity to win;
- I feel that teams with more graduate student participation on their team have a distinct advantage;
- I feel that teams from universities with larger finance programs have a distinct advantage;
- I feel that teams from universities with more resources have a distinct advantage;
- I feel that regardless of any inherent differences in the potential opportunities/abilities of teams, the rules and structure of the Research Challenge do a good job of leveling the playing field across competing student teams as much as possible.

The level of agreement across advisors varies significantly for this set of statements, as seen on the graph below. However, there is a sense that while there are some inherent differences in the competitive advantages held by certain teams, the rules of the competition are effective in limiting these advantages to the extent possible.

While the results indicate that the perceived advantages are not large, the two biggest advantages appear to be towards schools with larger finance programs (mean score of 4.81) and schools with greater resources (mean score of 4.71). The use of graduate students also creates a perceived advantage, although to a slightly lesser extent (mean score of 4.42). While these competitive advantages seem reasonable as schools with larger finance programs will have a bigger pool of students to select from and schools with more resources will have greater access to

Figure 8 – Competitive Balance



tools such as Bloomberg terminals and student managed investment funds, it is important to recognize that participants feel that the rules are designed to level the playing field (mean score of 5.35).

Another way to look at this issue is to look at the respondent views on scoring for the two deliverables (written report and presentation). In response to the question of whether or not the scoring was fair on these, the results indicate a strong bias towards yes. Specifically, 26 of the 31 respondents (84%) responded with somewhat agree (13%), agree (48%), or strongly agree (23%) on fair scoring for the written reports. For the presentations, the results were similar with 23 of the 31 respondents (74%) selecting somewhat agree (13%), agree (45%), or strongly agree (16%) on fair scoring. If we look at actual performance instead of perception, we find that 5 of the 31 teams (16%) have won their local challenges 3 or more times and 5 of the 31 teams (16%) have also been to the semi-finals or final four of the regional challenge 2 or more times. Most of the responding faculty advisors who view the scoring as fair have not had their team advance to the Regional Americas Challenge.

Makeup of Teams

A final area of observation that we will discuss from the survey is the general makeup of the teams. As previously mentioned, the Research Challenge is open to undergraduate and graduate students and there are no restrictions on the students' majors. While there is a slight perception that teams with graduate students might have an advantage in the competition, we see that the majority of teams (65%) have been comprised primarily of undergraduates and only a small group (6%) have been comprised primarily of graduate students. The remaining 29% are a mix of undergraduate and graduate students. This indicates that even if there is an advantage to having primarily graduate students on the team, the vast majority of teams do not get or use the opportunity to exploit this perceived advantage which helps keep the competition balanced. With respect to specific majors, we see that the majority of teams are comprised of finance majors (67%). The other selections were a mix of accounting and finance majors (30%) and any business major (3%). Thus, not surprisingly, the competition is weighted heavily towards finance majors with a moderate participation from accounting majors.

CONCLUSION

The CFA Institute Research Challenge provides students with an opportunity to apply and extend their knowledge gained in the classroom to a competition with a real-world setting. While this competition places significant demands on students' time and analytical ability, we find that faculty advisors view it as a major opportunity for those students who participate. Specifically, these faculty advisors find that it offers tremendous advantages in developing skills beyond what is developed in the classroom and that it notably enhances student career opportunities. In addition, the practical knowledge gained from working closely with a mentor in the investments field along with the feedback from the judges/graders provides students with both an enhancement and extension of the investment analysis skills that they learn in the classroom.

One challenge faced by many universities who choose to participate in the Research Challenge is recruiting a qualified team and maintaining the engagement and focus of that team throughout the competition. As these students are often taking a full course load of challenging classes and pursuing other activities such as work, campus organizations, and personal lives, finding the time to invest in the Research Challenge requires a high degree of motivation. Students may also find over the months of the competition that their passion for investment analysis is not as high as they anticipated, which in itself is an excellent learning opportunity, or that they struggle to work with their teammates/advisor. These challenges in building and

maintaining a team vary across universities and developing strategies to solve them could be an area for further research.

A concern of the Research Challenge is that there could be issues with leveling the playing field across all the teams competing in the challenge. Due to the vast differences in resources, size of finance programs, and other characteristics of universities that enter the Research Challenge, there are some teams that feel they are at a competitive disadvantage. While there may be some validity to these concerns, the consensus of faculty advisors indicates that the majority feel the CFA Institute designs the rules of the Research Challenge in a manner which keeps the competitive balance as equal as possible.

Finally, we explore the makeup of the teams and find that the majority of teams are comprised of undergraduate, finance students. While there are teams of primarily graduate students and teams with a mix of undergraduate and graduate students, the most common grouping is undergraduate. Also, there are teams with a mix of majors and teams with a combination of finance/accounting majors, but the most common major for building teams is finance.

Table 1 – Development of Skills

Statistic (1 = no impact and 7 = highly effective)	Interpersonal and team skills	Leadership skills	Communication skills	Analytical problem-solving skills	Technological proficiency	Strategic and critical thinking skills	Strong work ethic
Min Value	4	4	4	4	2	3	4
Max Value	7	7	7	7	7	7	7
Mean	6.03	5.87	6.23	6.06	5.32	6.00	6.06
Standard Deviation	1.05	1.11	0.84	1.00	1.33	1.18	1.03
Total Responses	31	30	31	31	31	31	31

Table 2 – Benefits Beyond Coursework

Statistic	The students' experience in the Research Challenge exceeds what can be accomplished in college courses? (1 = strongly disagree and 7 = strongly agree)
Min Value	2
Max Value	7
Mean	5.58
Standard Deviation	1.77
Total Responses	31

Table 3 – Career Development

Statistic (1 = strongly disagree and 7 = strongly agree)	The Research Challenge provides a tangible product students can show and discuss with potential employers.	The Research Challenge provides students with an in-depth experiential learning process that they can discuss in detail with potential employers.	The Research Challenge requires students to put forth effort under their own initiative, demonstrating work ethic to potential employers.	The Research Challenge provides an opportunity for students to determine their success given the limited time involvement of both the faculty advisor and industry mentor.	The Research Challenge provides a “real-world practice field” that is difficult to create in a typical course.
Min Value	5	5	4	4	2
Max Value	7	7	7	7	7
Mean	6.42	6.45	6.39	6.06	6.00
Standard Deviation	0.72	0.77	0.84	0.89	1.26
Total Responses	31	31	31	31	31

Table 4 – Assistance to Career Search

Statistic (1 = strongly agree to 7 = strongly disagree)	Participation in the Research Challenge has positively impacted the ability of participating students to obtain a job in finance and/or accounting.
Min Value	4
Max Value	7
Mean	6.06
Standard Deviation	0.89
Total Responses	31

Table 5 – Benefit of Mentor

Statistic (1 = strongly disagree to 7 = strongly agree)	Provides support for the processes taught in finance courses	Extends the concepts taught in finance courses	Helps bridge the gap between what is taught in finance courses and the real-world
Min Value	2	3	2
Max Value	7	7	7
Mean	5.72	5.93	6.14
Standard Deviation	1.16	0.92	1.03
Total Responses	29	29	29

Table 6 – Relevance of Industry Judges

Statistic	Value
Min Value	2
Max Value	4
Mean	3.41
Standard Deviation	0.67
Total Responses	32

Table 7 – Benefit of Industry Judges

Statistic	Largely an overlap with finance course subject matter	An extension of finance course subject matter	Provides a real-world element not really covered in finance courses
Min Value	1	1	2
Max Value	7	7	7
Mean	4.28	5.53	5.66
Standard Deviation	1.63	1.39	1.54
Total Responses	32	32	32

Table 8 – Challenges to Fielding a Team

Statistic (1 = strongly disagree to 7 = strongly agree)	It is difficult to find qualified students	It is difficult to find students willing to invest the time outside of classes and work schedules	Our university does not experience recruiting difficulties.
Min Value	1	1	1
Max Value	7	7	7
Mean	4.33	4.90	3.38
Standard Deviation	1.83	1.87	1.97
Total Responses	30	31	29

Table 9 – Leveling the Playing Field

Statistic (1 = strongly disagree to 7 = strongly agree)	"I feel that all teams competing in the Research Challenge have the same opportunity to win."	"I feel that all teams competing in the LOCAL challenge have the same opportunity to win."	"I feel that teams with more graduate student participation on their team have a distinct advantage."	"I feel that teams from universities with larger finance programs have a distinct advantage."	"I feel that teams from universities with more resources have a distinct advantage."	"I feel that regardless of any inherent differences in the potential opportunities/abilities of teams, the rules and structure of the Research Challenge do a good job of leveling the playing field across competing student teams as much as possible."
Min Value	1	1	1	2	1	1
Max Value	7	7	7	7	7	7
Mean	4.73	5.03	4.42	4.81	4.71	5.35
Standard Deviation	1.82	1.68	1.84	1.60	1.62	1.45
Total Responses	30	31	31	31	31	31

References

Aggarwal, Raj (1993). "Theory and practice in finance education: Or Why we shouldn't just ask them," *Financial Practice and Education*, Spring/Summer, pg.15-18.

Bennis, Warren G. and O'Toole, James (2005). "How business schools lost their way", *Harvard Business Review*, 83(5), pg. 96-104.

Block, Stanley B. (1999). "A study of Financial analysts: practice and theory," *Financial Analysts Journal*, 55(4), pg. 86-95.

CFA Institute, (2015-2016). CFA Institute Research Challenge Factsheet, pg. 1-2.

Gordon, Robert A. and Howell, James E. (1959). *Higher Education for Business*. New York: Columbia University Press.

Lytle, Laurian and Payne, Janet D. (2015). "Real-world application: forecasting and valuation pedagogy as compared to industry practice," *Advances in Financial Education*, 13, pg. 1-21.

Pactwa, Therese; Wong, K. Matthew; and Moore, Keith M. (2007), *Journal of Financial Education*, (33) Summer, pg. 1-21.

Percival, Raj (1993). "Why don't we just ask them?" *Financial Practice and Education*, Spring/Summer, pg. 9.

Pierson, Frank C. (1959). *The Education of American Businessmen: A Study of University-College Programs in Business Administration*. New-York: McGraw-Hill.

Weaver, Samuel C. (1993). "Why don't we just ask them?" *Financial Practice and Education*, Spring/Summer, pg. 11-13.