Assessment of Student Managed Investment Programs: Are they Mutual Funds or Pedagogical Devices?

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One area that has lagged behind analysis of student managed investment funds is assessment of learning. Most treatments of SMIF performance concentrate on the mutual fund aspect and look at return performance over time. Evaluating the fund in terms of common assessment metrics like learning objectives are few. Other ways are student alumni satisfaction surveys and the information transfer in the fund from experts (advisors) to novices (students). In this paper we survey existing analyses of SMIF program assessment and suggest alternative assessment tools. The objective is to discuss SMIF assessment from a pedagogical, rather than just a performance perspective.

Keywords: assessment, knowledge transfer, student managed investment program

INTRODUCTION

Student managed investment funds (SMIF's) are real money portfolios managed by groups of students: undergraduates, graduates or combinations of both. Although they may be organized in a number of different configurations (Belcher, Mallett (2007), Yerkes (2018)) the funds as pedagogical devices share common elements. Students are often organized in groups, write substantial research reports, do class presentations, and frequently do presentations to fund providers like Boards of Trustees or Investment Committees. In addition, class content may be tested in more traditional means like exams. From a pedagogical standpoint, then, they have common elements that other courses in a business curriculum would have and so assessment metrics that are used in those courses could be applied to student fund courses as well.

The unique aspect of a student managed investment fund is the fiduciary responsibility of students. As managers of someone else's money, they have an ethical responsibility to manage the funds in a "prudent" manner. In addition, as SMIF programs are often structured as "outside managers" of someone else's money, they are benchmarked against some return goal as a measure of adequate performance. In this sense, assessment can be pretty straight forward: did we beat the benchmark or not? Did we meet the goals established by our investment policy statement for sound management? If the students met those goals, then the class structure must be doing something right that is facilitating learning and knowledge transfer. If so, how then do we measure that?

In this paper we will examine existing literature dealing with assessment methods employed to measure learning and knowledge transfer in student managed funds and discuss some methods that might be employed that would be consistent with business accrediting body objectives for assurance of learning.

BACKGROUND

Student managed investment funds have grown dramatically in the last twenty five years. From their beginning in 1952 at Gannon University in Pennsylvania, there are now over 700 SMIF programs in the United States, according to Brian Bruce at Investment Research. In addition, the Student Managed Investment Fund Consortium at Indiana State University has identified 140 or so student funds outside of the US. Recently, there was a third student managed fund conference in the UK for schools in the UK with SMIF programs.

In addition to growth in SMIF programs, there is now a greater variety of funds beyond just equity funds. These include venture capital and private equity (University of North Dakota), funds that use options (Saunders (2015)), a new, options only fund (Nicolosi (2024), a commodities fund (Massa and Ramsey (2020)), fixed income only (Hyland, Pawlukiewicz and Smith (2018)) and other funds that use ETF's in their strategies. This has been great from a pedagogical perspective as learning opportunities for students in terms of a variety of asset classes have increased substantially.

From an academic perspective, what was once viewed as a risky venture (allowing college students to manage money) has turned into a well-established curriculum device that has almost become a necessity for a finance program. However, we argue that one area that has lagged behind the development curve has been assessment, particularly as a pedagogical device embedded in what is usually an accredited business program.

As we stated earlier, a student managed fund is a combination of an academic, credit bearing (usually) course with an imbedded investment fund in it. So, assessment of performance can have two parts: assessing the effectiveness of the curriculum in fostering knowledge transfer (assurance of learning) and experiential learning, and assessing the performance of the imbedded investment fund, or students as fund managers. We will consider examples of both types of assessment.

PERFORMANCE EVALUATION: FUND PERFORMANCE USING RETURNS

Using Performance Data to Evaluate Student learning in a Student-Managed Investment Fund. Mary Schmidt Daugherty and David O. Vang

In this paper the authors construct assessment methods for a SMIF program based on their University's College of Business learning goals. These are 1) business acumen, 2) leadership, 3) critical thinking and 4) ethical decision making. They chose to measure business acumen and critical thinking in the SMIF. In their general analysis of portfolio returns, they noticed that spring semester returns in the fund, on both raw and risk-adjusted bases, were higher. The question they dealt with was whether this was a result of knowledge gained through the class during the year. They felt that using full portfolio returns was somewhat misleading because decisions from previous classes carried over into future years, so the portfolio returns were not reflective of the learning and performance of the current classes in the SMIF. To control for this, they pulled the decisions made in the first two months and last two months of each year of the fund for a 14-year period. Each of those returns was compared to a one-year return on the stock as computed by Bloomberg. The holding periods of the stocks in the portfolio were not restricted to a year, but the one year return was chosen as a comparative metric.

The University is a Catholic institution and so there were some restrictions on the universe of investment opportunities and there were other requirements on the size of the purchases and size of eligible companies. Generally, funds have similar structural features in their investment policies or voting procedures, so these were not unusual. The students making presentations had to meet a "hurdle rate" for prospective buys based on a rate set by the class policies.

The main hypothesis tested was that "student learning can be measured by buy decision performance data " (pg. 92). The results supported that hypothesis based on their chosen evaluation criteria. These were average returns, Sharpe Ratio, Treynor Ratio and Jensen Alpha. All showed statistical improvement over the data period from fall to spring buy decisions. The paper did not fully relate these results to their chosen learning outcomes, however.

Students as Fiduciaries: An Examination of the Performance of Student-Managed Portfolios. Mahmoud M. Haddad and Arnold L. Redman

This paper was one of the first papers to look at the performance returns of student managed funds. The funds in question are part of a program called the TVA Investment Challenge. The Tennessee Valley Authority was created as a government corporation in 1933 to provide electrical power to residents of the Tennessee Valley. The TVA had planned to decommission nuclear power plants and created a decommissioning fund to facilitate that process. As part of that fund the TVA set aside $1,900,000 in the form of nineteen $100,000 funds allocated to universities. As part of the deal, the universities were to create student-managed funds where the students would serve as outside fund managers for the TVA. The "challenge" part of the grants was that the funds were competing against a benchmark and there were prizes and incentives for schools that did well relative to the benchmark. The universities had management contracts with the TVA that defined the fiduciary responsibilities of the fund managers as managers of public funds by the students in the programs. The client responsibilities for the students were similar to other outside managers of TVA funds. Initially, the benchmark was the S&P 500 Composite Index, but this was later expanded to give the student groups other choices to use (S&P Barra Growth Index and S&P Barra Value Index). After the initial allotment of funds, the program added 7 new private universities and added an additional $300,000 to each school's allotment of funds. The TVA allowed the universities to structure the pedagogy of their funds to fit their students and their programs. Returns were supplied by faculty mentors to an outside firm and the TVA monitored the progress of the portfolios.

The returns measured in the study were from the period 1999-2002. The returns were monthly for January 2002 through June 2002 and three-year returns from July 1999 through June 2002. Returns were not adjusted for risk and simply represented changes in portfolio value for each of the funds. For the short-term period, only four of nineteen programs performed better than the S&P 500 index. For the longer period, thirteen of the nineteen had returns that were better than the S&P 500. When risk-adjusted, the returns were markedly better. The authors note things that are often identified as challenges in a student-managed fund: turnover of asset managers every year and high portfolio turnover in some years as incoming students sold off existing assets to replace them with new ones they had researched and chosen.

Student Managed Investment Funds: An Exploratory Study of a Model That Works. Clarence H. Barnes and Paul F. Buller

Similar to the TVA Investment Challenge discussed in the Haddad and Redman paper, this paper evaluates the performance of Gonzaga University's student fund as part of a student fund consortium sponsored by D.A Davidson and Company, a regional west coast brokerage and wealth management firm. DADCO sponsors student funds at 20 western and mid-western universities. The program began in 1985 with the creation of a fund at Montana State University.

Beginning on September 1, a faculty advisor and a representative of DADCO along with the students in the school set up a small equity portfolio with a $50,000 grant from DADCO. On August 31, the portfolio balance is calculated and if it exceeds $52,000, the residual net gain is split between the school and DADCO and the portfolio is re-set to $50,000. The program then continues he next year with the $50,000 new balance.

A unique feature of the Gonzaga program is that it is a three semester course sequence consisting of a one credit hour courses including a summer semester course. The research and portfolio adjustments are allocated to different semesters with the portfolio adjustments taking place in the third semester. The IPS for the course is not dictated by DADCO but is developed by the professor with some broad guidelines.

The authors then examined the returns in the funds as a proxy for student learning, with the Gonzaga fund as a sort of baseline for comparison for the other funds in the DADCO program. Again, this is similar to Haddad and Redman's analysis of the TVA Challenge funds. They broke the programs down into a number of sub-groups: 1) structure: formal class versus club, graduate versus undergraduate; 2) duration of the course: semester versus quarters and 3) number of credit hours (usual standard 3).

The results were generally what you would hope for in a student fund program. There were a number of return performance measures employed: 1, 3 year and 5 year annual average growth, 1,3 and 5 year Sharpe ratios. Clubs outperformed on the 1 year metrics while the courses outperformed on the 3 and 5 year metrics. For courses, courses that spanned more than one semester outperformed courses that were one semester or less on all annual growth averages and Sharpe ratios. For credit hours, student funds with three credit hours or less outperformed ones with more than three on all annual growth averages and Sharpe ratios.

The authors concluded that although their data provided some insight, the sample size was small and there was some similarity to the nature of the funds due to the program. They also noted a number of specific factors that could have contributed to the outperformance of the Gonzaga fund. These would be familiar elements to people who are deeply involved in the administration of a student fund: prerequisite requirements for students, a cohort structure, passion of the instructor and stock selection philosophy.

PERFORMANCE EVALUATION: ALTERNATIVE APPROACHES TO JUST USING RETURNS

Assessment Within a Student-Managed Investment Fund. Adam Stivers

This study examines the assessment of a student-managed fund through a variety of assessment metrics besides just looking at portfolio returns. It takes a more pedagogical approach to assessment by utilizing a variety of assessment tools to evaluate student performance.

The structure of the fund is similar to many others. Students must complete a prerequisite investments course and then the SMIF course is an elective course in finance. The course also covers investment analysis, portfolio theory and stock selection. Students who are enrolled in the course are asked to form teams of three or four people to analyze a stock. The universe of possible stocks is limited by an investment policy statement, as is usual for funds. The instructor can help this process, they run a Morningstar screening tool to provide a list of possibilities to the teams, although the teams are free to choose any stock. The teams spend the entire semester analyzing the stocks and create a written report and presentation, which is then presented at the end of the semester. Students also evaluate existing holdings and evaluate the investment policy statement for possible changes.

All of these features are common in most student-managed funds. One difference that not all funds have is an advisory board specifically for the student fund program. The board consists of a rotating group of between five to eight alumni of the school with some having participated in the student fund in the past. These are investment professionals from fields like portfolio management or financial planning. The board members come to campus at the end of the semester to hear the presentations, ask questions and vote on the stock selections. At the board's suggestion, a board member was assigned as a mentor to each team to help them draft their report and refine their presentation. The author notes this has accomplished two things: improved the student reports and reduced the faculty member's workload. Anyone who has serves as a faculty advisor to a student fund knows how much work it is.

The instructor initially had informal discussions after the semester with the board members to gain insight on student performance as well as to obtain feedback on improving the course. In later periods he formalized this as a five question survey to gain survey results that could be catalogued and reported. This feedback helped to assess student readiness for professional employment in the field as well as to identify ways in which the course could be modified to improve student outcomes. One very unique feature is that the advisory board actually votes on the trades based on the assessment results of the presentations. The fund typically would buy based on the top two group presentations made as scored by the advisory board

and instructor. The main two factors in the assessment are presentation/research quality and investment viability. Each presentation is scored as not meeting, meeting or exceeding expectations.

The results showed some interesting variation. The author's main point is that a student-managed fund should not be evaluated solely by returns. If we take a typical student fund as an example, the fund has "carryover" of past portfolio choices in the current portfolio. Thus, current portfolio returns are not totally reflective of the choices made by current students, but a composite of decisions made by current as well as past student recommendations. Overall, the fund examined in the paper posted returns that outperformed the market over a three to four year period corresponding to data obtained while the instructor was managing the program. However, for one year where there was sufficient data to analyze, the recommendations with higher rated assessments actually had lower returns the following year. The conclusion (with limited data) was that focusing totally on returns as a learning metric would be misleading, as the reports and presentations showed the greatest positive response from the advisory board.

Student Managed investment Funds: The Perspectives of Alumni. John Clinebell and Jody Murphy

One method of assessing satisfaction across businesses is a customer survey. With advances in technology and lower cost hardware, it seems as if it is easy nowadays to create a survey of satisfaction quickly and administer it electronically to large samples of customers. The authors of this study applied that mentality to a student fund that had been in existence at the time of the survey for over twenty years, meaning it had a very large alumni base to survey.

If we look at typical student fund learning goals, they are things like analytical ability, critical thinking, writing and speaking and leadership. In addition, we expect the experiential learning to develop career-ready skills for students to take into professional career settings. The authors concluded that one way to evaluate questions like that was to survey past participants directly.

Survey questions used a five point Likert scale (Strongly Agree, Agree, Neither Agree or Disagree, Disagree, Strongly Disagree) to solicit responses to questions relating to participation in the student fund increasing investment knowledge and investing real money enhancing their understanding of investing as well as another set related to key skill areas that would be more typical assurance of learning areas. These included written communication skills and presentation skills, leadership and interpersonal skills. Additional questions related to the desire to pursue finance or investments in their career choice.

The results were overwhelmingly positive, with Likert scores ranging from 1.21 to 2.05 with 1 being Strongly Agree. The response rate for the survey was 51% with a sample group of 254 alumni going back the creation of the fund. Gender breakdown was 74% male and 26% female, which is not unusual for most student managed funds.

Accrediting bodies want assessment metrics that reflect external validation of learning and continuous improvement. Alumni surveys, particularly for long-established programs, can build a set of assessment data points that come from external sources that can have samples that are broad-based.

Experiment No More: The Long-Term Effectiveness of a Student-Managed Investments Program. James E. Mallett, Lawrence J. Belcher and G. Michael Boyd.

The Roland George Investments Program at Stetson University in Florida is one of the longest-running and most successful student-managed funds in the country. Established in 1981, it was one of the pioneers of the student-fund philosophy of having students manage real money. Along the way, the fund grew and changed in composition as additional monies became available. Because of the longevity of the fund and its rather peculiar structure, the fund had a large database of return and voting data that was used to track its performance over time.

The fund is unique in that it was established by a gift specifically to start a student-managed fund. This was at a time when most business schools thought the idea of giving college students money to manage was preposterous. The fund has little restrictions on what students can buy and voting is done by a Board of Trustees that also includes faculty members as a minority presence. The students do not report to anyone and make multiple recommendations each semester. The program is based around two semesters of portfolio management classes: one for equities and another for fixed income. The students have no

benchmark and pay the university an endowment fee which comes back in the form of an operating budget to fund travel and scholarships. That budget allowed students to participate in what became both a fun exercise but also a point of external assessment for the program.

The program's fund had grown from its initial level of $568,000 to about $2.5 million at the time the paper was written in 2009. The program had positive returns in 23 out of 29 years of existence at that point. The average return after expenses was over 7% over its long history, which encompassed a variety of market conditions, both up and down so from a return perspective it would indicate that the students were learning something and that their ability to select stocks was pretty good.

In April of 2001 the University of Dayton's Center for Portfolio Management and Security Analysis created something new in the student fund landscape: a national portfolio management competition specifically for student-managed investments programs. Programs submitted brokerage statements to verify risk-adjusted returns over a twelve month period and were assigned a slot to present their portfolio and its results to a panel of judges who were investment professionals from a variety of investment industries. Judging was based on two things: risk-adjusted returns and presentation quality. In the initial symposium, there were three categories: growth, value and blend.

The George students took first place honors in the blend category, with a portfolio return of 37% versus the S&P return that year of 4.7%. According to *Mutual Funds* magazine, that performance beat all but nine of 660 professional fund managers tracked by Morningstar who ran blend-style portfolios. The following year the students were assigned to the value category and again won the overall competition. Later on, classes were added in fixed income and alternative investments. Overall, the George Program won every equity category as well as fixed income, with eight national championship portfolios. This became a huge motivating factor for students as well as a great public relations vehicle for the university.

The conference was moved to Quinnipiac University and the competition along with it, being renamed the GAME (Global Asset Management Education) Forum. In the first year of the conference, George students won the fixed income category again.

There are other opportunities for such outside evaluation through competitions. The CFA Society sponsors the CFA Global Investment Research Challenge, where students are assigned a local company and then prepare a research report and present it to a panel of local CFA Society finance professionals. From an assessment perspective, this is another data point for evaluation by an outside group of the skills that are associated with student funds. I mention it here because for many schools the student fund class represents the recruiting pool for CFA Challenge teams. Since the judges give feedback to the teams after the competition, these can be used as assessment points.

This points out something that can be overlooked about assessment but is very appropriate for a program like a SMIF. If one of the objectives of the class is to prepare students to become portfolio managers or investment professionals, then having them judged on professional appearance, presentation skills and investment knowledge by practitioners with written and verbal feedback is a valuable data point. Students are competitive by nature, particularly high performers, so this combines a fun exercise with valuable input.

PERFORMANCE EVALUATION: ALTERNATIVE APPROACHES USING DIFFERENT LEARNING MODELS

Designing a Constructivist Learning Environment- A Student Managed Investment Fund. Michael D. Phillips and John X. Volker.

In this study the authors consider a different learning model for a student run fund course. The traditional model is faculty-centric in that the faculty takes on the role of "expert" and the course is structured around the expert transferring said knowledge to the learners in the course. The faculty member creates the course syllabus, the learning materials and the assessment metrics. The students learn by assimilating facts or participating in group exercises that are created by the instructor. This is what the author refers to as an "objectivist" method of instructional design.

The alternative design discussed by the authors is a "constructivist" model where the focus shifts from an expert delivering content to a joint model where the faculty member assists the student-learners in the construction of knowledge rather than just reproducing factual knowledge back to the professor. The students were tasked with articulating the goals of the course with faculty guidance. This resulted in the students being a significant part of designing course learning goals. The students desired to acquire the ability to make independent investment decisions and to work collaboratively to achieve course goals. This then translated into deciding if a firm was a good investment candidate to pursue.

In order for the process to work well, the professor must provide some structure, or "scaffolding" around what the students create in order to guide them to more complex learning tasks. This included using real-world databases and presenting models of valuation and asking the students to utilize these tools to develop their own analytical skills. This was supported with multiple group presentations where the students could hear from their peers and critique their own skill development relative to that of the class.

The final steps of the process are to assess and reflect. Formative assessments track skill development over the course of the semester. At this point the methods more closely approximate what happens in most student funds: students select firms to analyze, write written reports and do final presentations at the end of the semester. The class then discusses the recommendations, chooses buys and sells and then evaluates the course design. Student input on the course gives the students some agency in the process and leads to a process of continuous improvement.

In terms of assessment of learning, the authors noted a number of positives. The professor's evaluation of the quality of the work indicated it was at a higher level than before. Student satisfaction was high and the portfolio's one year return against twenty five peer universities ranked first in the group. Their conclusion was that the positives outweighed one negative in that the classroom environment was less structured than most.

Does Experience Matter? Expertise, Knowledge Transfer and Voting Patterns in a Student-Managed Investments Program. Lawrence J. Belcher and Landon J. Belcher.

In this paper the authors look at a student managed fund as a vehicle for transferring expert knowledge from the expert (faculty member) to a group of "novices" that would be the student fund class. In a knowledge-based industry, having a well-defined mechanism to transfer expert knowledge from one group to the next helps to assure that the organization does not lose continuity and productivity.

This is an important fact for a student managed fund. In most cases, the fund classes are senior-level courses that will graduate most if not all of the participants each year. This means that the fund typically begins a new year with an entirely different management team in place. If institutional knowledge is lost, then fund performance will suffer until the new team acquires sufficient knowledge to be productive.

In this study the authors examine the pedagogical structure of a particular student fund program, the Roland George Investments Program at Stetson University and compare it to two different models of expert knowledge transfer. The first of the models comes from the communications literature and the second from the management literature. There are two parts to the study: the first compares the fun's pedagogical structure to the communication and management models to look for similarities. The second examines voting consensus between student and faculty trustees in the program when they vote on specific buy, sell or hold decisions. Agreement between expert and novice is tested as a proxy for effective knowledge transfer, indicating that learning has taken place over the course of the program. If the pedagogical structure of the program is such that knowledge transfer can take place effectively, then the knowledge and practice of the expert(s) should result in the students being able to use the same techniques in their decision-making.

In the communications model cited, the authors of the study examined what they called knowledge "congestion." This was diminished ability to transfer knowledge from experts to novices, who could be current members of the community or newcomers. They discussed two transfer channels: direct and indirect. Direct pathways included things like email, telephone conversations or face-to-face meetings. Indirect channels were things like discussion boards or electronic forums. They found that congestion was minimized when both channels were employed. A student fund program typically uses elements of both channels.

In the management model cited, the authors of that study identified five factors that facilitate expert knowledge development and transfer between experts and novices. They were deliberate and guided self-practice, self-regulation, feedback seeking motivation and goal setting. Once again, a typical student fund has most or all of these elements in the structure of the fund. Between prerequisites, student selection, presentations and research reports, the faculty member guides the students in best practices as well as critiquing their performance based on industry professional standards.

In the George Program, students made multiple research reports and presentations over the course of a two-semester course sequence in portfolio management. The class had an internal email message board for posting research and trustee minutes, used social and print media to spread news of the program both internally and externally, and had a dedicated faculty member to teach the classes as well as run the student fund. The structure of the program effectively contained elements identified by both models the authors cited: direct and indirect communication channels and all of the factors identified in the management literature.

The fund is somewhat different in that by charter the Board of Trustees (the voting body) has both student and faculty trustees on it, although the faculty position is always in the minority. The program also kept detailed minutes of all trustee meetings, so it was easy to separate out each vote by whether it was cast by a student or faculty member. This allowed the authors to test several hypotheses related to agreement between faculty and students on each decision. The results showed that there was wide scale agreement between faculty and students across all categories of decisions (buy, hold, sell; equity or fixed income).

From an assessment perspective, the conclusions were that the structure of the fund was an effective pedagogical structure for expert knowledge transfer. There was consistent consensus of decisions between faculty and students. If we consider the knowledge and experience base of the faculty as a standard to aim for in terms of student performance, it was consistently shown. An ancillary analysis of fund returns over the sample period also showed that when portfolio sales' returns were calculated and compared to appropriate benchmark returns, the student portfolio beat them handily. If we reverted to return performance as an assessment measure of performance, it would indicate that learning took place.

METHODS OF ASSESSMENT: SOME PRELIMINARY CONCLUSIONS

We asked the question in the title of the paper: Are student funds mutual funds or pedagogical devices? The answer, somewhat obviously, is they are both. Students have the fiduciary responsibility of managing a pool of money for an external client but at the same time this is done in the structure of some form of academic enterprise. So, the evaluation of a student fund could be as a pedagogy or as a mutual fund. The use of returns is a common form of evaluating learning and knowledge transfer. If students consistently beat a benchmark or show better performance at the end of a semester relative to the beginning, or in a second semester relative to an earlier one, we generally say that learning has taken place.

This does not really answer the question posed by one of the authors we cited: If markets are really efficient could this not be just dumb luck? Or, as we like to think, the structure of the class and its experiential learning benefits are causing the students to be more proficient at managing money that professional money managers.

Traditional Assessment Methods

Many student fund classes employ traditional classroom assessment points: examinations, research reports and presentations. These can employ traditional types of assessment vehicles. All assessment methods start with learning objectives. For student funds, these are things like portfolio management, security selection, asset valuation, critical thinking and communication skills.

Pre-test/Post-test: This can be used for classes that use some form of examinations to test conceptual knowledge. At the beginning of a semester, administer a conceptual exam on things related to learning objectives such as security selection, asset valuation or portfolio construction or management. Then, administer the same exam at the end of the semester and compare scores. Set an improvement threshold and report the results.

***Embedded Questions**:* This could be used for exam questions related to specific learning objectives such as asset valuation or security selection. Set a threshold score as an indicator of mastery of the concept and then record the distribution of scores to test for mastery of the concepts.

Security Report Rubric: Here the instructor develops a rubric for a written report that assigns numerical values to certain features in the report such as discounted cash flows, ratio analysis, market analysis or other typical parts of a security report. The assessment threshold would be a certain score on individual parts of the report or the numerical score on the report as a whole.

Presentation Rubric: Presentations in student fund classes can be to other members of the class or to external groups such as Boards of Trustees. In many cases the meat of the evaluation is on the technical aspects of the presentation and less on the communication mechanics of the presentation. Things like eye contact, use of filler words, tone of voice or other things related to communication mechanics should be a part of a presentation rubric. Again, the instructor or outside reviewer would complete the rubric and a numerical score assigned to the presentation. We have provided a sample rubric in Appendix A from a student-run public relations consulting firm from a university communications program.

Alternative Assessment Methods

Student managed funds come in a variety of flavors when it comes to course structure (Mallett and Belcher (2013)).Credit versus non-credit, course versus club, single semester or multi semester so sometimes traditional assessment tools are not going to work. Even in funds with more traditional classes, the structure can involve a variety of different activities. Here are some alternative suggestions for assessment methods.

Peer Group Evaluations: Many funds split the students into groups such as sector teams. Group projects can sometimes be notorious for "free rider" issues. To deal with workload distribution and contribution evaluation, peer evaluations for groups are often used to measure adequate participation to the task assigned to the group. This requires honest peer assessment but can be useful. We have attached a sample peer evaluation rubric in Appendix B.

Constructivist Principles: In the constructivist model we discussed, the authors of that study had the students be drivers of setting investment policies or restrictions at the beginning of the semester and then provide feedback about progress and any changes that need to be made at various points along the semester. This was used to modify the course as it went along and to provide students with more agency in the course.

Journaling: This is something that is not frequently used in technical areas like accounting or finance. It can give feedback about how students believe they are learning, and it can be used to pinpoint areas where students may be struggling with concepts, leading to improvements in the class.

Student Portfolios: Another device that is used in more "creative" disciplines like art, writing, communications or marketing are student portfolios. These are collections of student work throughout a semester or year. In a student fund course, this could include group research, individual stock reports, presentation slides or other individual work that represents the student's work product. In a student communications team, the professor also requires a professional resume because the portfolios are available to clients or recruiters interested in hiring the students. One school with a SMIF had a website for the entire class that had profiles and resumes and work samples that recruiters could access in one place.

CONCLUSION

Student managed funds come in a variety of forms and have both traditional and non-traditional elements in them. Most assessment of learning relates to the mutual fund aspects of a student fund and less to the pedagogical aspects of the fund. We are suggesting that assessment tools in other disciplines can be added to student funds, which can both improve them and also satisfy accrediting bodies' desire to see continuous improvement in business programs.

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APPENDIX 1

Presentation Rubric

Student Presenter: Faculty Evaluator:

INTRODUCTION					
Creatively grabbed the audience's attention					
Clearly stated thesis statement Previewed main points					
BODY OF PRESENTATION					
Identified main points	1	2	3	4	5
Provided details to develop main points	1	2	3	4	5
Used transitions effectively	1	2	3	4	5

Thoroughly identified & explained criteria	1	2	3	4	5
SOURCES OF SUPPORT					
Minimum (5) number of sources orally cited					
Used credible sources (cited credentials)					
CONCLUSION					
Restated central idea statement	1	2	3	4	5
Summarized main points	1	2	3	4	5
Tied back to introduction (if applicable)	1	2	3	4	5
Provided a strong sense of closure	1	2	3	4	5
DELIVERY					
Business Professional	1	2	3	4	5
Maintained eye contact with audience	1	2	3	4	5
Avoided using excessive vocal fillers (um, uh, etc.)	1	2	3	4	5
Maintained good posture	1	2	3	4	5
Sufficient vocal variation (volume, rate, pitch)	1	2	3	4	5
Used appropriate gestures	1	2	3	4	5
Conversational speaking, enthusiastic	1	2	3	4	5
AUDIO/VISUAL AIDS					
Quality audio or visual aid(s)					
Used visual aids effectively					
QUESTION & ANSWER					
Clarified each question					
Provided clear and responsive answers					
TOTAL POINTS /200 (This is a holistic assessment, not a sum of the numbers scored.)					

APPENDIX 2

Peer Evaluation Form

Rate every member of your Senior Project team, not including yourself, on the two dimensions indicated. A score of "l " means the member contributed little, and a score of "10" means the member's contributions were vital. Score non-participating members with a "0." Think carefully about your peers' performances and award the most productive members with the highest scores.

- Task Functions: Actions vital to completing the group task. This includes showing up on time, actively participating (assuming and fulfilling responsibility), offering solutions, providing information or opinions, following through on commitments, organizing group meetings, and effective communication.
- Maintenance Functions: Actions necessary to create a positive, cohesive group environment. Groups need cheerleaders, encouragers, motivators, tension-relievers, and coordinators. Rate members who contributed to a positive group atmosphere highly; conversely, rate members low if they created a poor working environment.

Group Member	Task Functions (0-10)	Maintenance Functions (0-10)