**Experiential Learning in**

**Global Asset Management:**

**A Principles and Applications Based Approach**

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**Abstract**

# *This paper outlines the content and the process used to maximize student learning in global portfolio management and investment analysis (asset management) through the use of student managed investment funds (SMIFs). Fundamentally, the authors’ perspective is that business and investment acumen, and concomitant leadership skills, are not fully developed through study but rather are honed through experience. At its core, the content and process used in portfolio management and investment analysis, through the use of SMIFs, teaches the “art of managing uncertainty” and develops more effective investment and business leadership skills. The authors’ observed outcomes over more than a decade of managing assets, teaching and placing students in the workplace have been that students with experience in global SMIFs are generally more prepared, better able to solve problems, understand the industry better, and more likely to be offered job opportunities after graduation than those without this experience. This research analyzes an undergraduate asset management track taught at a large, private university as part of the university’s Finance major. This program is based on four key principles and is designed around nine characteristics which, when combined, result in a high value-added pedagogy built through real world experience rather than solely through study. A track structure uses a three semester course and a recommended international experience to reinforce theory from the Finance core, apply theory to real “messy” data, analyze real companies and industries, and build, monitor, and report to investors monthly regarding portfolio performance. The course structure consists of a post-Finance core Modeling and Valuation class followed by a two semester Asset Management class managing real assets and an optional Global Finance Investment Internship (GFI2) experience. The purpose of this paper is to share principles, program pedagogical structure, track structure, and key tasks of the Modeling and Valuation, Asset Management, and the GFI2 internship experience as students go through this program. While the development of this program continues to be an evolutionary process, the authors have observed strong success in the placing of over four hundred students in the ten years the SMIF has been operational. In addition, the fund has outperformed the weighted benchmark in seven of the past ten years, adding 142 basis points a year since inception (which began March 31, 2006 and for the period ending March 31, 2016).*

# INTRODUCTION

A major goal of higher business education is to deliver high quality teaching, research and learning, within the values of a forward thinking business school, with the professional qualifications required of the global economy. With the proliferation of business schools and programs, it is important that those schools offer the right strategies and resources that allow them to achieve their goal of preparing students who understand both the theory of the lessons taught and who can apply them in the real world [Cornuel 2007].

Many business schools have developed student managed investment funds (SMIFs) as a way of preparing students to step into employment in the investment industry without receiving extensive on-the-job training. From the time that the first SMIF was established at Gannon University in 1952 [Lawrence 1994], SMIFs have increased in 2008 to 314 universities worldwide managing $407 million [Lawrence 2008]. Anecdotal evidence has not shown a decline in that number. Lawrence gives a good review of the SMIF area in 2008 including size, growth, performance, funding sources, participation, faculty involvement and investment activity [Lawrence 2008].

In the finance field, SMIFs were developed to take investment education to the next level [Lawrence, 2008]. Schools have realized that the choice of teaching methods, in this case the application of theory to real world data, requires a different method. For the more complex skills, more active methods such as working cases and conducting research [Bonner 1999] and we add, applying theory to real world situations, through using student managed investment funds is a preferred method that builds competency through experience.

Business schools have slowly adopted SMIFs as one way to address the disconnect in the business school classroom between knowledge (knowing) and the application of that knowledge (doing). While they have come a good distance, there is still more to do [Pfeffer 2007].

This paper discusses a three semester and a recommended but optional international program developed at a major university to provide students with practical experience, technical skills in finance and asset management, and leadership skills that allow them to graduate with three semesters of practical experience in domestic and international valuation and portfolio management. The program also gives them a solid foundation of knowledge in portfolio management, including portfolio and diversification theory, risk management tools, and the leadership skills of how to apply these tools. While this paper does not suggest that this is the best nor the only way to run a SMIF, the principles, structure, and tasks may be helpful to others who are considering establishment of a student managed investment fund, particularly for those who want an international emphasis.

PRINCIPLES

# Fundamentally, the authors advocate a view that business and investment acumen, and concomitant leadership skills, are not fully developed through study but rather are honed through experience. Through management of real funds using industry investment practices and live news, industry, and company data, accompanied by interaction with practitioner investment managers, students better learn how to arrive at and defend investment decisions in the face of complex and ambiguous situations. By applying tools based on the theory taught in pre-requisite finance and other business classes, students conduct rigorous industry and company analysis, interact with talented peers, propose investment actions to fellow students as well as practitioners in the industry, and take leadership roles in managing an asset management company. Through this three semester process and optional international experience, students develop an increased capacity for strategic, investment, and organizational thinking; better gain the capability for making business decisions in an international context; and also see the results of their actions.

# At its core, the content and process used in portfolio management and investment analysis through the use of student managed investment funds teaches the ‘art of managing uncertainty.’ The process requires real capital to be invested, using real-world brokerage and analysis tools and research sources, led by a full-time instructor and part-time practitioners serving as planners, hosts, moderators, devil’s advocates, and judges, all in search of honing the students’ business and investment skills.

An analogy may better explain the rationale for the pedagogical philosophy. The authors are fans of master works of art. Paintings are ultimately vast collections of individual brushstrokes--none of which in isolation is very interesting or impressive. If you stand close to most canvasses, an observer will see a mass of seemingly unrelated streaks of colors, including many imperfections. However, as one gradually moves away from a painting, all the brushstrokes combine to produce a master work that evokes emotion, often a compelling story, and even, a change in the perspective of the observer. Just as those individual brushstrokes combine to complete a master work of art, so too is consistency of applying financial tools, like CAPM, NPV, etc. learned in isolation in our Finance core--individual brushstrokes if you will--to real world investment decisions can lead to significant and accelerated investment and leadership competency development. Students are better prepared to excel in the world, post-graduation, having created several works of “financial art” using real world “paintbrushes” with real money as a “canvas,” than if they were merely steeped in financial theory or built portfolios using “play money” where decisions had no financial or other impact.

In developing the program, the authors worked closely with industry shareholders. Industry shareholders are private investment professionals who put up the money for students to manage (“industry shareholders”). Their money was placed in an account with only the Faculty Advisor having authorization to trade. These industry shareholders worked with the Faculty Advisor on how an integrated international investment management work environment should be structured, within the limitations of the university environment and schedule. They recommended principles on which the money should be managed, but left the tasks to the Faculty Advisor and students. They felt that the guiding principles should be student focused, task driven, vision centric, and accountability based, and worked closely with the Faculty Advisor in the creation of the Investment Policy Statement for the students.

Student Focused

This program is based on the needs of the students. They are the primary beneficiaries, not the recruiters, industry shareholders, professionals or even the Faculty Advisor. Professionals in this article refers to practitioners in the industry who are either graduates of the program and/or University, or who give back to the University through donations of their time and talents. While working with professionals and recruiters to develop content is important, the ultimate purpose is to help the students develop skills needed to succeed in their careers. In addition to the analysis, modeling, valuation and other skills, the authors are also concerned with work-life balance, ethics, development of business acumen, and other areas to prepare students to succeed, not only in their careers, but in life as well [Christensen 2011].

Task Driven

The tasks for each class in the program were developed with industry shareholders and professional input to give students experience in the types of activities performed at most asset management and investment banking institutions. A critical part of career and life success depends on one’s ability to complete tasks in a timely fashion, while also imposing life and business judgment on the completion of the task. These tasks have been modeled on what occurs in the workplace at top-performing asset management and investment firms, who worked closely with the Faculty Advisor and industry shareholders in the implementation of the courses. They are really the business processes used in managing an asset management firm, and as such, enable gradual orientation to what will be expected in the workplace, as a part of the students’ higher education experience. Specific tasks and processes for each class are delineated below.

Vision Centric

The purpose of these classes is to help students understand the requirements of domestic and international careers across the breadth of the financial industry, but with a focus on asset management careers, while also helping them gain the vision of what they could and should do. The course content provides an outline of the taxonomy of careers in the financial industry. The program content encourages students to consider the skills needed to not only succeed in their initial job or role, but to also aspire to be leaders and influencers for good in the industry, which will require further leadership skill development as they progress in their careers. The authors believe that once students see the vision of what they are trying to accomplish, building on a solid foundation of basic skills and ethics, they will use the problem solving and relationship skills developed in the course to learn whatever they consider necessary to accomplish that vision.

Accountability Based

In the field of investments, it is often difficult to hold students accountable for their decisions and analysis, especially when students change their focus and courses of study each semester. This program attempts to develop that accountability for analysis and recommendations each student makes. Students develop an expertise in industries and specific companies, and become responsible for keeping the investment teams informed about recent earnings and other events in their industries and companies for a two to three semester period, consistent with their future work at asset management firms. Team leaders are charged with ensuring each team member or student conducts updates to company and industry analysis each time earnings results are announced, and prepares recommendations for the management company.

PROGRAM PEDAGOGICAL STRUCTURE

# In this section we cover the nine specific characteristics of the program. These characteristics are: experienced industry mentors whose money the students manage, a company structure similar to a small asset management organization, experienced investment professionals with ties to the university who return regularly, an on-campus internship framework which gives students internship experience without having to leave school, scheduled trips to the major asset management areas as part of on campus Clubs to assist student networking, a mentoring program allowing experienced students to mentor/teach other students, leadership opportunities to allow students to develop leadership characteristics while still at school, a recommended but optional international experience where students visit and report on international companies, and an experienced Faculty Advisor who has worked in the industry.

Experienced Industry Shareholders

This program was developed with the support and help of experienced industry shareholders, who set up a Texas-based LLC with $625,000 in 2006. The amount of money required is actually not as important (as long as it is adequate for diversification) as the accountability it brings to students who feel a need to perform well for an industry shareholder review committee beyond the Faculty Advisor. It is managed in a separate account at the industry shareholders’ brokerage house, with only the Faculty Advisor having authority to make trades.

These industry shareholders have continued to offer support and guidance each semester and through the past ten years. They participate in a monthly conference call with students and give ideas, views and feedback on market expectations and outlook. They read the students’ monthly reports on investment performance, research and outlook, and occasionally make comments to make suggestions on stock selection, tighten analysis, and help with research. They return to the university at the end of each semester to listen to the students’ company presentations for the Modeling and Valuation class and accountability reports from the Asset Management class. As the size of the program has increased, this has led to very long days at the end of each semester for industry shareholders.

Asset Management Company Structure

The Asset Management class was developed to mimic a structure similar to a small asset management company. In this class, students do everything that an asset management company would normally do except get paid and market their services. The authors and industry shareholders developed an investment policy statement. Then the Faculty Advisor, together with the students, developed a sell strategy, began building the Watch List, and set buy and sell points for all proposed investments on that Watch List. The “Watch List” is a list of the 120-160 best run companies in the world that the students would like to own should the price be right. Getting a company added to the Watch List takes significant effort and requires a two-thirds vote of all students. The students track performance daily through Quicken which downloads data from the industry shareholders’ brokerage account and links to real time data from Bloomberg via Excel. Students prepare monthly performance reports developed in-house and report monthly to the industry shareholders. Participants use financial analysis, industry, and Watch List monitoring tools to analyze, value, and track companies each day. The authors have also prepared an “Asset Management Manual” that is updated yearly to help the new students understand the “value orientation” and why the Asset Management class makes the decisions it does. The authors have limited the scope of trading to accommodate the learning capability of undergraduate students, with a focus on US and international equities. Over time the ability to trade bonds and select derivatives on equities will be “salted-in” to the investment agenda. Finally, all students complete the online Bloomberg Market Concepts course and they use Bloomberg and Excel VBA regularly in their work.

As with any other asset management company, the tools developed each semester are not “rebuilt” each year; rather, they are used and improved from semester to semester. Tools refer to very complex and detailed student and Faculty Advisor developed Excel spreadsheets with links to Bloomberg’s historical and real-time data using VBA. A major effort each semester is to teach new students the proper use and maintenance of the tools developed for this class. While some tools are proprietary to the industry shareholders and their affiliated companies, some are available to the students to take with them to their respective new jobs.

Experienced Investment Professionals

The program has developed a cadre of experienced investment professionals who attend class various times each semester to talk about critical areas of valuation and asset management. Currently, professionals from different companies visit the class regularly to discuss, among other things, industry practices, investment strategies, sell strategies, trading, fund accounting, and performance attribution. Most, but not all, are alumni and all freely provide their time to “give back” to the university through presenting in the classroom and mentoring the students.

The authors have developed close ties with local asset management companies and institutions who regularly come and visit and consult with us on the content and pedagogy of this track. As teaching has migrated closer to the needs of these institutions, greater success in student placement has occurred.

The authors have also developed internship programs with smaller investment management firms to provide interns every four months. These students return after the internship period with the asset management companies with more and better ideas on how the program can help students be better prepared for work in this field and how we can improve the tools for better results.

On-campus Internship Framework

The SMIF started as an on-campus internship in 2003. The authors worked together with numerous asset management firms giving the students companies to analyze as part of our Finance curriculum. One of the companies was so impressed with the quality of the analysis that they volunteered to provide assets for the students to manage. This was the beginning of the SMIF program in 2006.

This program gives students an internship experience without having to leave school. Students meet three days a week for a total of four and a half hours in class a week, and spend between 9 and 14 hours outside of class each week. Industry shareholders give the Modeling and Valuation class the names of the net-net, small-cap, and large cap publically listed companies they would like analyzed each semester, and the students analyze these companies and present back to industry shareholders at the end of the semester. Industry shareholders also help grade the presentations which gives more and better interaction with the students.

Scheduled Networking Trips

Students are required to be part of the finance clubs on campus which relate to this track in the Finance program. These clubs regularly take a number of students and faculty to New York, Boston, San Francisco, and Los Angeles to visit key asset management and other financial institutions to help them build relationships with alumni and network with other investment professionals. These trips have been helpful in offering exposure to the students of the various opportunities available.

Structured Mentoring Program

This course was developed around a structured mentoring program allowing experienced students, who are part of the Asset Management class, to mentor other students in the Modeling and Valuation class. This process provides four benefits:

1. It helps Modeling and Valuation students see the vision of why they are learning specific concepts. Seeing how concepts are applied in the real world gives support to the importance of learning those concepts and learning them well.
2. It encourages Asset Management students to truly understand and apply the concepts correctly. As Asset Management students teach and share with the Modeling and Valuation students, they become better teachers, mentors and students who are better prepared to contribute.
3. It builds a growing network of students who work and learn together. As the students move outside the university to careers and job opportunities, this network of friends and colleagues will be helpful in the years ahead.
4. It enables a low risk way to learn to put forward investment decisions and have them evaluated, scrutinized, critiqued, and assessed by others. Through this initial low risk process of active engagement and debating the uncertainties of the investment decision with peers, both the Valuation and Asset Management students develop the skill to verbally defend recommendations in the face of complex and ambiguous circumstances.

Leadership Opportunities

This program was developed to provide leadership opportunities for many of the students. The program is organized using a leadership delegation model common to many management organizations and in particular, the team structure often used in asset management companies. The Asset Management class is run by two student Heads of Research who are responsible to ensure the program follows the framework and process intended. These Heads of Research are research assistants and work closely with the Faculty Advisor. Six student team leaders are responsible to ensure that the teams function well and they accomplish their intended objectives. Finally, team members know what they should do and they act accordingly, and are held accountable to meet quality standards and deadlines. Along with each responsibility, job descriptions are updated yearly to take into account the development of the students and the program (see Exhibits 1 – 3).

Business leadership skills are taught through this process. Over the three semester course, students can put in as much as 600-1,000 hours of time, performing analysis, reviewing others’ work, assessing investment opportunities, reporting to other students and external shareholders, writing up monthly reports, reporting on earnings announcements, and building investment tools. By taking leadership roles to lead analysis and presentation of a company, industry sector, reporting of results, etc., students are involved in active engagement with real events, real-time data, real money, and learn how to arrive at and defend decisions in the face of complex and ambiguous circumstances. Making decisions under uncertainty, marshaling information and people resources to meet decision deadlines, articulating rationale for actions in front of a circumspect group of peers and industry shareholders are all real world activities that accelerate development of leadership skills at an early stage of these students’ careers.

Optional International Experience

This program offers an optional international investing experience for those students interested in doing international analysis. During this six-week internship, students consult with local asset management firms regarding which companies they would like visited in the respective countries. From that list of companies, the Faculty Advisor, with the help of the industry shareholders, sets up the agenda and schedules visits with the respective companies in their home markets. Then, the Faculty Advisors with the help of industry shareholders teach the students the challenges and opportunities in international analysis. Students then analyze the companies, forecast earnings, evaluate industry attractiveness, and value the companies before they leave for their internship. Students then travel to the respective companies in their countries, visit the companies, update their earnings, valuations, and industry analysis. Finally, upon return to the United States, they return to the local asset management companies and report on their findings of their respective company visits. Preferred locations of visits have been Asia, greater China, and Europe.

Experienced Faculty Advisor

This program was established with a Faculty Advisor who has had, in addition to holding a Ph.D., experience in the industry prior to devoting full-time to leading this curriculum and teaching. The program was structured based on beliefs that practical application of the tools learned in prerequisite classes would be the best way to build competency and business judgment in students. For this reason, involving investment professionals (practitioners) frequently in class discussions or having a former practitioner lead the curriculum has been viewed as beneficial. While not required for a successful program, it has been helpful in the development of the class and structure at this university. The Faculty Advisor outlines and emphasizes expectations for the class (Exhibit 4) which is different than the typical theory only based approach to classroom instruction. The Faculty Advisor then works closely with the student Heads of Research and Team Leaders, who then run the class.

TRACK STRUCTURE

The asset management track is a three semester class which begins after the students have successfully passed the Finance core classes. The first semester is the Modeling and Valuation class. Once this class is successfully passed, the student applies to the Asset Management class. Students are in the Asset Management class for a minimum of two semesters.

In the Modeling and Valuation class, students build tools, learn VBA, become Bloomberg certified, learn to do industry analysis, company analysis, build financial models, forecast earnings, value companies, present, and defend their recommendations to other students and industry shareholders. The overarching investment discipline that underpins all the tools and analysis is “fundamental value.” A value-based investment discipline most easily allows application of the tools learned in the Finance core, and is also the discipline espoused by the industry shareholders and the majority of the investment professional firms that participate with the program.

In the Asset Management class, students further develop their skills by analyzing additional companies, determining if they are companies that should be added to the Watch List, making decisions as to the price a security is bought and sold, being responsible for following specific holdings and Watch List companies, following and reporting on earnings announcements, reviewing and critiquing analyses from other students to determine if they agree with their recommendations, and contributing to monthly management reports.

Students do not blindly take forecasts from Bloomberg, but develop very granular Excel financial models of individual products, forecasts by product lines, and competitive analysis. Students are required to get into the actual products and competitive positions of their respective companies.

In the optional GI2 program, students interested in international analysis have the opportunity to apply their skills to analyzing companies from markets outside the US in a six-week internship that includes four weeks of international visits and travel.

MODELING AND VALUATION CLASS TASKS

The Modeling and Valuation class was designed around the five key tasks of analysis, modeling, forecasting, valuation, and presentations.

Analysis

Based on the knowledge from the Finance core classes, students apply core finance theory to financial analysis and industry analysis, using fundamental value as the core investment management discipline. The curriculum teaches where to find information, how to analyze companies and industries, and where to find relevant and critical information for these companies and industries.

Modeling

Modeling is the process of understanding how companies and industries are organized. Through modeling, students learn the art of understanding the most important drivers of performance in various company types. Students build detailed Excel spreadsheets with 10 years of historical data, as well as forecast full financial statements for five years, with key industry competitive levers and ratios built into the models to help determine forecasts. What are the key drivers that impact sales, cost of goods sold, depreciation, etc. by product line? Students learn first with small models of simple single product companies, and then expand to more detailed models of larger companies. To help with the further development of the students’ modeling work, students also complete the Bloomberg Essentials Certification in Basics, Equity and Fixed Income, and are exposed to basic programming in VBA in Excel.

Forecasting

Once students have extracted the data and have modeled the company (which includes income statement, balance sheet, and a simplified cash flow statements), they are taught forecasting. Instead of only forecasting single product lines and assuming margins remain constant, students are taught to build a full pro-forma financial statements where they forecast cash flows, financial statements and financial ratios for five years. Students spend the majority of their time developing and understanding revenue and cost drivers, the key factors that drive company earnings and profitability.

Valuation

Once the model has been built and the financial statements have been forecast for five years, students are taught valuation. Valuation is the process of determining the value of a specific asset, whether it is equity, enterprise value, or the value of specific financial assets. Based on the methods and forecast, students use a number of different valuation models based on the work of one of the key industry shareholders. These models include intrinsic value, relative value, acquisition/breakup, and technical models. Students are also instructed how to understand in which cases specific models may be more appropriate than others. In addition, the financial models allow for sensitivity analysis so students learn the key drivers of potential cash flow generation, based on historical trends and historical business models of the underlying companies.

Presentation

Finally, students present their findings and research on these industries and companies to faculty, team leaders and industry shareholders. In this process, they learn to develop an investment thesis, present their analysis, sort through the mountains of information to develop a decision-based perspective and recommendation on whether to invest or not in a particular company, and support their analysis and recommendations in front of others who are trying to understand the logic behind the students’ analysis.

ASSET MANAGEMENT CLASS TASKS

While the Asset Management class is based on the same concepts, the approach is different, as these students are truly running an asset management company. Tasks for Asset Management students are set on day one as each student is given a contract that spells out job descriptions and duties (see Exhibit 1). This contract reviews required readings, work hours, and codes of conduct that each student signs and agrees to. Once this document is agreed to and signed, the students may begin work. Tasks for the Asset Management class include: expectation, selection, valuation and modeling, execution, and reporting.

Analysts are divided into Teams by industry responsibility. Currently, six teams cover all 24 of the Level 2 GICs industry groups. Teams are led by an experienced team leader (Exhibit 2) chosen by the Faculty Advisor. Team leaders assign one team member to follow each of the companies in the portfolio, as well as each of the companies on the current Watch List, and they analyze and report on earnings whenever the company reports. With currently 88 companies (as of March 31, 2016) on the watch list and 31 student analysts, analysts cover 2-3 Watch List companies each.

Expectations

Analysts are split into Teams divided by industries. Analysts are expected to become proficient in understanding these industries. Team leaders assign individual industries to the students for research and reporting. The Teams do high level analysis of each of the 24 Level 2 Industry Groups of the S&P 500 Index each semester. Students perform an extended SWOT analysis (developed in house), look at trends, learn applicable valuation metrics (generally via NetAdvantage, Valueline, Morningstar and other programs available in the university library), and come up with their own opinion as to the attractiveness of the assigned industry. The students’ goal is to become the class experts in their respective industries; they write up reports and prepare and present their findings to the rest of the class. These reports and presentations are used to give the rest of the students a general idea of industry trends and key metrics/ratios in order to ask critical questions and make informed decisions later in the investment process. Students also develop expectations for each industry with views of whether they consider the industry prospects positive, neutral, or negative over the next twelve to twenty-four months.

Selection

The course uses screening tools to help in the selection of companies for the students to follow. A key challenge of the Asset Management class is to go from the ~14,000 publically listed North American companies (we focus on GAAP reporting in an undergraduate course rather than global reporting methods in more advanced classes) to a short list that is most likely to offer attractive opportunities for investment. The program’s chosen selection screen has been developed in coordination with industry shareholders, and is based on fundamental value research that is proprietary to the industry shareholders. This gives us our list of possible companies. Students then calculate specific valuation metrics, namely Return on Assets, Profit Margin, and Return on Invested Capital for each of these companies. Return on assets lets us know which companies are well run, profit margin helps us to see which companies have a competitive advantage, and return on invested capital helps us see which companies use all their available resources well. Participants weight these variables based on research done by industry shareholders and supported by both in-class and external research. Students then rank the companies from most attractive to least attractive based on these three weightings.

This beginning list is the starting point for prioritizing work. Analysts look to the highest ranking companies in their industries as a place to begin research. When a student finds a company that seems well positioned, the student determines if this is a good company. The goal is to see if it should be added to the Watch List, a list of 80-120 of the best run companies in the world (a larger asset management company would have a larger list of the best companies on its watch list, but the goal of this program is to allow deeper, focused analysis on fewer opportunities to hone analysis skills). Watch List companies are companies the management fund would purchase if the price were sufficiently attractive. Questions include:

1. Is management adding value?
2. Do they have a defendable moat (competitive advantage)?
3. Is the moat sustainable?
4. Are threats to the business manageable?
5. Will the shareholders benefit if the business prospers?
6. Is the information received reasonably reliable?

These questions act as a starting point for the students’ research efforts. Using different sources such as Bloomberg, Capital IQ, Company 10-K’s & 10-Q’s, the student comes up with an investment thesis, presents the company and his thesis to the class with a proposal to either add or not add the company to the Watch List, and defends his recommendation to the class. Adding a company to the Watch List requires a two-thirds vote of all members.

Valuation & Modeling

With a company added to the Watch List, the student is now responsible for modeling the company and coming up with a valuation and investment recommendation. Key here is the development of the Revenue and Cost Drivers for the company, coming to understand the key drivers of earnings. Combining the use of Excel models, pricing tools, and an investment thesis, the student comes up with a buy and sell price for the company, including a dollar allocation size for buy recommendations, and presents and defends his analysis to other students. Other students pick through the thesis, review the financial model and Revenue and Cost drivers, ask questions, make recommendations for further research, and finally vote on whether or not to follow the investment recommendation. Often the student proposing the investment is required to do further research to answer other important questions or to further refine his thesis and assumptions.

Execution

When a proposal is voted on and passed by a two-thirds margin, a Buy/Sell order form is generated by the student making the recommendation and is passed to the Faculty Advisor. The Advisor then places the order consistent with the purchase method discussed and the asset is then bought or sold. The student continues to monitor the added company and is responsible for further research and informing the class of any key changes or reporting when earnings are announced.

Most students and professionals agree that it is more difficult to know when to sell a stock than when to buy. As such, we have worked with the industry shareholders and select investment professionals to develop a sell strategy to aid the students in this important and critical aspect of investing.

Reporting

Every month throughout the semester, performance is reported to the industry shareholders. This gives an opportunity for students to review their activities, share with industry shareholders why they invested as they did, or just ask questions related to the companies they are currently researching. At the end of the semester, the industry shareholders visit the university in person to hear and respond to the teams’ presentations on the investments made throughout the course. Here, the industry shareholders evaluate and give constructive feedback to the students and discuss the things that were learned, including ways ongoing improvements in tools, process, systems, and institutionalization of learning and modifying the course content and process can be implemented. The overall final day of findings and sharing of research is led by the Heads of Research (Exhibit 3), enabling them to further develop leadership skills.

GLOBAL FINANCE INVESTING INTERNSHIP (GFI2) TASKS

The optional GFI2 program is a once a year internship in the spring term where students visit various international destinations. Two years ago, the internship was in Southeast Asia, the previous year was North Asia and greater China, and this year it is developed and emerging Europe. While the internship is based on the same concepts as the Asset Management class, the approach is different. In addition to the work done in analyzing, visiting and reporting on specific companies, students also complete undergraduate courses in international business and international finance to broaden their international expertise prior to the trip.

Analysts are divided into Teams by country responsibility. Currently, seven teams cover each of the countries to be visited. Teams are composed of Asset Management students, Modeling and Valuation students who have yet matriculated into the Asset Management class, and a few students who have expressed interest in the area. Teams are led by an experienced Asset Management team leader chosen by the Faculty Advisor.

Selection

Students met with local asset management firms to get suggestions on which companies to visit, which individuals to talk to, and permission to use the asset management firms’ name in the discussion. There is little incentive for these companies to allow us to visit without that connection to the asset management firms, and this is a time-intensive process. Students then determine the attractiveness of each of the companies and determine which companies to visit. The Faculty Advisor then works with the team leaders to set up the appointments in each country. Extreme flexibility is required as it is often very difficult to schedule the times for the visit consistent with the availability of the respective companies.

Valuation & Modeling

With the company scheduled, the country teams are now responsible for modeling the company and coming up with a valuation and investment recommendation. Key here is the development of the Revenue and Cost Drivers for the company, coming to understand the key drivers of earnings. Combining the use of Excel models, pricing tools, and an investment thesis tools developed in the Modeling and Asset Management classes, the student comes up with a buy and sell price for the company.

Company Visits

Students then travel to their respective countries, then visit the companies in their local markets. The country team then reviews their analysis, prepares questions for management, and shares with the other analysts their line of questioning before the visits. During the visit to the company, the country team will ask questions of management. After the visit, The Faculty Advisor discusses with the group what they learned, what went well, what could be improved upon, and what they would do differently next time.

Reporting

Once the GFI2 group returns, they spend three days finalizing their presentations and preparing to report back to the local asset management firms. They then spend two days visiting the local asset management firms and giving reports on the most attractive companies visited.

At the beginning of September, GFI2 team members then report to the entire Asset Management class on potential additions to the Watch List. These are then voted on, and with a two-thirds majority, are added to the Watch List.

RESULTS

While the authors have been successful in placing over four hundred students from these two classes, it is difficult to definitively determine the overall effectiveness of this program. Admission to the business school, of which the Finance program is a part, automatically provides some level of inherent success in placement outcomes. In many cases, the students would have received strong job offers regardless of what was taught, based on the reputation of the university and the business school, and as they are inherently good students. However, in the 12 years since the genesis of the Modeling and Valuation course; ten years since this SMIF program became operational; and three years of the GFI2 program, the authors have placed over 400 students in investment banking, international investment research at both buy- and sell-side firms, private wealth management, operations, mutual fund research and supporting functions. Over that time period, the raw number of students placed in higher brand name financial firms has increased, and the rankings of the university’s finance program in public surveys has improved (based on the entire efforts of the university, the business school, the finance core and the efforts of faculty, leadership and staff beyond this course).

# Feedback from major Wall St. firms who conduct the bulk of the recruiting reinforces our beliefs that applying financial theory through establishing an asset management company run by the students enables:

# Active, accelerated learning through compelling students to practice financial theory and leadership skills within the program and among their peers

* Improved domestic and international analysis and investment tool development to assess complex business data, anticipate future impact of the economy and competitive action on individual businesses, and
* An ability to articulate rationale for making investment decisions.

In practice, this pedagogical approach enables students to accelerate development of the skills to be effective investment managers and leaders of asset management companies.

FUND RESULTS

While not critical to getting jobs and fostering learning, the actual results from the Fund may also be instructive. Calculating fund returns over the past ten years is relatively straightforward for the Fund as there was a single contribution in 2006 and no outflows from the Fund except the roughly $50 tax filing fee each year.



The Fund began on March 31, 2006 with the reporting month ending in March. As of March 31, 2016, the Fund had outperformed the weighted benchmark by 142 basis points annually (which was 80% S&P 500 and 20% Russell 2000 until September 30, 2013, 60% S&P and 40% Russell until March 31, 2014 and 60% S&P, 30% Russell and 10% EAFE thereafter). It has outperformed its benchmark in seven of the past ten years (see Table 1). This was also done at a lower level of risk and on a risk-adjust basis, as confirmed by the Jensen, Sharpe, Treynor and Sortino ratios (see Table 2). While performance for any equity fund is volatile, the financial results support the positive value from this program.



CONCLUSIONS

# Student managed investment funds have been successful in bridging the gap between the theory of finance and the application of that theory to real world data and investment situations. Business and investment acumen, and concomitant leadership skills, are not fully developed through study but rather are honed through experience. At its core, the content and process used in portfolio management and investment analysis (asset management) through the use of student managed investment funds teaches the “art of managing uncertainty,” and develops more effective investment and business leadership skills.

# Observed outcomes over more than a decade of professional work, teaching and placing students in the workplace have been that students with experience in SMIFs are generally more prepared, better able to solve problems, understand the industry better, and more likely to be offered job opportunities after graduation than those without this experience. This research analyzed an undergraduate asset management track taught at a large, private university as part of the university’s Finance major. The program is designed around four principles and nine characteristics which, when combined, result in a high value-added pedagogy. The program is a three semester course, and consists of an entry level Modeling and Valuation class followed by a two semester Asset Management class managing real money and an optional global finance investing internship in the spring term. While there is no “right” way to structure this type of program, the authors have observed some success in applying the principles, pedagogical structure, track structure, and key tasks for the Modeling and Valuation, Asset Management and I3 students as they go through this program. While the development of this program continues to be an evolutionary process, the authors have observed strong success in the placing of students in the ten years since the SMIF has been operational, and also found success in Fund performance over that same period of time.

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**Exhibit 1: Job Description: Team Member**

**Fin415 Investment Analysis and Portfolio Management**

Fall 2015

Following are the responsibilities of the Team Members for the Fin415 Investment Analysis and Portfolio Management internship. Your preparations outside of Team meetings and your contribution during Team discussions will make this internship a valuable experience for all and an important transition from your BYU education into a career in Asset Management.

**1. Integrate the learning from the Finance Core and Fin409 into your Fin415 work**

* Understand the concepts, principles, and theory taught in the Finance core and in the Fin409 Investment Modeling and Valuation classes
* Be able to apply the valuation theory and models, and understand where and in which circumstances certain models are better than others
* Begin moving your analysis from domestic firms to include international firms as you broaden your investment skills and experience
* Continue to build on your Excel modeling skills to incorporating Bloomberg, Capital IQ, and other data sources into your analysis
* Be comfortable asking questions of anyone – if you don’t know something, do your homework, ask good questions and figure it out

**2. Learn to think critically and differently**

* prACTtice LIKE A PROFESSIONAL—this more than a class--it’s your job
* Treat this experience like the job it is—the job to get you the job you want
* Be willing to make mistakes now rather than when you are on your first job
* Learn to anticipate possible questions and be prepared to answer them beforehand
* Embrace ambiguity

**3. Be informed and ahead of schedule on all assignments**

* Attend all class and Team meetings and follow through on all individual and Team assignments
  + This work is very time consuming, so plan on sufficient additional time outside of class. Plan 5-10 hours a week minimum outside of class on your way to 10,000 hours to become an expert
* Be responsible for making sure your Team presentations are ready on the assigned date (24 hours before) and that you can answer all likely questions
* Inform your Team Leader early of any concerns regarding assignments
* Read Seth Klarman’s *Margin of Safety* and one additional book from the Fin415 Reading List each semester (two new from the list, if you’ve already read Klarman)
* Stay abreast of global geopolitical, social and economic news. Think how this will impact your industry, companies and markets
* Ensure your Bloomberg Certification is complete for Equity, Fixed Income and Foreign Exchange

**4. Be a team player**

* Be proficient in both financial and industry analysis
  + Be aware that others may not come with an extensive background in finance. Be able and willing to help them. You are a teacher as well
* Help Team members become more involved in the analysis and to help them develop the skills that will make them successful in their future careers
  + Make sure all Team members get exposure to both the quantitative and qualitative aspects of the analysis and presentation (financial forecasting and industry and company analysis). Do not pigeonhole anyone
* Encourage Team members to learn new skills and try out different parts of the analysis process
  + During group and Team presentations, make sure you take the opportunity to voice your opinion—it is very valuable.
* Help team members develop to a level where they are able to become better financial analysts each semester
  + You are not competitors

**5. Take your share of the work load and more**

* Know the companies and industries you present
  + Know more than just your part—know it all
* We live or die as a group. Work in council with your Team
  + Help others to be their best, and you will grow as well
* Be a positive influence in your Team and class
  + Help other Team members to be successful in the class as well
* Have an upbeat and positive attitude and work hard
  + Be constantly willing to help other members with their assignments should they express or have a need.
* Carry your share of the work load and a bit more
  + Always do more than is asked
  + Prepare beforehand and vote responsibly
  + Support in-class decisions and beware of 20-20 hindsight
* Be there each class period
  + If you are ever to miss class, you will let your Team Leader know beforehand and copy the Heads of Research and Faculty Advisor
  + If you are going to be late, let your Team Leader know. After the third tardy, you will need to bring three dozen cookies each time you are late
  + Please note that one unexcused absence puts you on probation, two unexcused absences requires a discussion with the Faculty Advisor, and with the third unexcused absence you are dropped from the class.

I agree to work on the above objectives to the best of my ability while working in this capacity in the Fin415 Asset Management class.

Signed:

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Analyst Date Name Printed

**Exhibit 2: Job Description: Team Leader**

**Fin415 Investment Analysis and Portfolio Management**

Fall 2015

Following are the responsibilities of the Team Leaders for the Fin415 Investment Analysis and Portfolio Management internship. This experience is run like a business, with responsibilities delegated to individual team members.

**1. Understand and follow all the tasks and responsibilities of a Team Member**

**2. Communicate clearly with the Head of Research and Team Members**

* Attend all Team Leadership meetings with Heads of Research.
  + If you are ever unavailable, assign another member to go in your stead and inform the Heads of Research and the Faculty Advisor beforehand
* Ask questions of Heads of Research to ensure assignments are understood and completed on or ahead of schedule
* Ensure all required reports and forms are completed and put in DropBox on a timely basis and saved accurately with appropriate name and formatting
* Schedule, organize and attend all Team meetings as needed
* Keep Team members updated on their individual assignments through email and phone calls
  + The in-depth analysis done in class can be time consuming, so reminders sent to the team can help them be prepared on time
* Be responsible for making sure presentations are ready on the assigned dates
* Encourage Team members to be actively engaged in the investment process
* Ensure that all members are included in the decision-making process
* Be an example of how to disagree agreeably
* Teach Team members to think critically and act professionally

**3. Select, analyze, present, and document attractive companies within your industries**

* Work together with your Team to develop a process for selecting companies within your industries consistent within the GFA Investment process
* Develop a research pipeline, based on the screens, industry tools, pricing tools, financial analysis tools, and other tools, and research these companies
* Divide the work on research between your Team, ensuring consistency and fairness in assignments
  + Ensure all owned and Watch List companies are covered each semester
  + Work to build effective teamwork and team leadership
* Complete all necessary forms to document purchases/sells, earnings reports, industry reports, the day they are voted on or assigned in class

**4. Know owned companies within your industries**

* Understand in great detail any owned companies within your industries
* Delegate assignment to prepare monthly paragraphs on company performance for assigned companies and industry for monthly performance reports
* Report to the Team **within 24 hours** of a company earnings announcement. Prepare an earnings announcement and update presentation (this should be assigned to the analyst covering the stock) and email the entire class with an update (including a link to the announcement)

**5. For Winter Team Leaders, be a conscientious and caring Fin409 Modeling and Valuation class Leader and mentor**

* Attend all 409 Friday Labs
* Determine companies for analysis for your 409 student teams
* Make appropriate assignments as needed for 409 students
* Be on-time and clock-in for hours worked mentoring 409 students

**6. Aid the development of each Team member**

* Be proficient in both the financial and industry analysis
  + Be aware that others may not come with an extensive background in finance—help them to be as good as you are
* Help team members become more involved in the company analysis and to help them develop the skills that will make them successful in their future careers
  + Make sure team members get exposure to both the quantitative and qualitative aspects of the analysis and presentation
* Encourage team members to learn new skills and try out different parts of the analysis
* Help team members develop to a level where they are able to become Team Leaders their next semester

**7. Be a good example**

* Be an example of how Team members should think, act, and work
* Learn to counsel with your Team
  + You are not the ruler of the group, but the leader for one semester (remember D&C 121-34-46). As such, assignments and group decisions should be made by council with the entire group
* Make your influence a positive factor in the overall performance of the group and help other team members to be successful
* Be upbeat and positive and constantly willing to help the other members with their assignments should they express or you see a need

I agree to work on the above objectives to the best of my ability while working in this capacity in the Fin 415 Asset Management class.

Signed: Printed:

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Team Leaders/Analyst Date

**Exhibit 3: Job Description: Head of Research**

**Fin415 Investment Analysis and Portfolio Management**

Fall 2015

Following are responsibilities of the Heads of Research for the Fin415 Investment Analysis and Portfolio Management internship. This experience is to be run like a business, with responsibilities delegated to individual team leaders and members.

**1. Understand and follow all the tasks and responsibilities of a Team Member**

**2. Understand and follow all the tasks and responsibilities of a Team Leader**

**3. Manage the investment process**

* Ensure that the Team follows the GFA investment discipline and process
* Ensure the Team is using the processes, Watch List forms, Earnings Announcement forms, Buy/Sell forms, and other established procedures for investing
* Oversee the teaching and use of the financial tools, particularly:
  + Investment screening
    - Ensure that the inputs of the process match the objectives of the screen
  + Use of the Pricing Tool
  + Use of the Industry Tool
  + Use of the Financial Analysis Tool
  + Use of the Watch List Monitoring Tool
* Teach Team members about key areas of investments and portfolio management
* Work with the Supervisor to ensure investment processes, sell strategies, and reporting is done in a timely and professional manner

**4. Participate in valuation and investment selection**

* Run the GFA screen before class starts each semester. Make results available to Team members
* Work with individual Teams on investment assignments
* Perform research to identify the most relevant risks and opportunities
* Analyze investments in the context of the entire portfolio given the group’s macro expectations
* Facilitate the voting process for investment decisions
* Teach Team members to think critically and to act professionally
* Provide input discouraging potential investments that lack fundamental support for a purchase
* Be an example of how to analyze clearly and disagree agreeably

**5. Take the lead in class meetings**

* Take the lead in all classes and final presentations
* Prepare weekly agendas for all class and Team Leader meetings
* Lead class discussions regarding investments, strategy, research, speakers, etc.
* Delegate teaching assignments to class members
* Choose outside speakers to present and teach
* Manage the voting process ensuring accuracy and efficiency
* Schedule monthly conference calls with GFA and other professionals
  + Prepare agendas for calls with professionals by informing them of desired topics/class questions beforehand
* Evaluate Team members at the end of each semester/mid-semester on things to improve and suggestions on how to become better analysts
* Personally present to class as desired and as time permits

**6. Take the lead in leadership meetings**

* Work with the Coordinating Supervisor to set goals and objectives for the Team
* Prepare agendas for weekly leadership meetings with Supervisor guidance
* Formulate discussion topics and potential strategies to present to leadership Team
* Counsel with Team Leaders as they determine their research pipeline and topics
* Ensure Teams are functioning properly—make adjustments as necessary
* Synthesize feedback to establish feedback mechanisms for goals and objectives

**7. Promote the Fund among students and professionals**

* Educate students and faculty about the activities of the Fund
* Seek out intelligent students interested in investing to participate in the Fund
* Seek out professionals with specific abilities and talents to present to the Team
* Work to help Team members find internships and jobs

**8. Communicate with the Supervisor and GFA**

* Communicate frequently with Professor Sudweeks and GFA
* Work with Team to ensure the confidentiality of all processes and tools
* Effectively teach and mentor the Fin 409 students
* Ensure the team follows the IPS, Investment Process and Sell Strategy

I agree to work on the above objectives to the best of my ability while working in this capacity in the Fin 415 Asset Management class.

Signed:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

Analyst Date

**Exhibit 4: Characteristics of Effective Experiential Learning**

**in Asset Management**

**FIN 415 Investment Analysis and Portfolio Management**

Fall 2015

Following are the aspirations, preconditions, and in-class and out-of-class behaviors expected to be enforced by the instructors for the Portfolio Management internship. This internship is run like a business, with responsibilities delegated to individual team members, team leaders, and heads of research, with other activities directed by a Faculty Advisor.

**1. ASPIRATIONS**

* In-class learning substantially exceeds pre-class learning and stimulates post-class learning among peers
* Learning is linked across classes, analyses of companies and industries, and development of tools
* Students must participate in class discussion, improving verbal acumen through practice, much like participation in a business meeting
* Students discover insights through live discussion and analysis, led by the instructor, and are forced to extend thinking in live discussion

**2. PRECONDITIONS**

* Mutual respect among students, Faculty Advisor, and visiting practitioners
* Instructor and students come to class with job duties completed, ready to direct action-oriented discussion
* Students and instructor apply rigorous standards to discussion. Participants are willing to take risks and consider different points of view to arrive at the best analysis possible
* Investment tools, materials, data, information sources, questions, and discussion format are part of an effective course structure.

**3. BEHAVIORS**

* **In-Class: Students**
* Participate and listen actively throughout the class discussion
* Contribute ideas, analysis, and personal experience that go beyond sharing facts
* Build on each other’s comments and critique, debate different points of view, and hold to time constraints in the discussion
* Learn to disagree agreeably
* **In-Class: Faculty Advisor**
* Prepare both content and process of the course and individual class modules, including a clear set of teaching/learning objectives, a call list, board/framework plan, follow-up questions, and conclusions to enable overall progress in course learning
* Listen thoughtfully to class discussion and re-direct when students divert, while being flexible to allow students to derive their own insights.
* Pose challenging questions and follow-ups to promote high quality discussion, and use of proper financial tools and analysis.
* Stimulate student on student discussion, and ensure broad range of participation
* Provide proper closure to discussion segments, class modules, and investment recommendations, sharing perspective based on experience.
* **Out-of-Class: Students**
* Prepare and pay attention to the outside news and other resources available to be as informed as possible on investing
* Complete the tasks outlined in the job descriptions
* Work all methods available to gain an “edge” of investment insight
* **Out-of-Class: Faculty Advisor**
* Work with outside investment management advisors to continue to improve content, tools, and processes available to students, ensuring the most up-to-date approaches are made available to students
* Conduct own research and review of industries and companies covered by students so students feel instructor perspective is comparable to or better than theirs

I agree to work to achieve the above aspirations, pre-conditions, and behaviors to the best of my ability while working in this capacity in the FIN 415 Asset Management class.

Signed:

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Faculty Advisor Date:

**Exhibit 5. Annual Fund Return and Risk Statistics**

**FIN 415 Investment Analysis and Portfolio Management**



**Exhibit 6. Fund Performance Statistics**

**FIN 415 Investment Analysis and Portfolio Management**

