An Organization Design for a Student Managed Investment Fund

David Nawrocki, Villanova University

INTRODUCTION

The money has arrived and now: “How do we organize students into a workable investment management organization?” In his book, *The Democratic Corporation*, Russell Ackoff (1994) argues that the American corporation is one of the last bastions of autocracy in the supposedly democratic United States. (Recent events have pointed out the problems with the autocratic corporation, e.g. AIG) One can say the same for the college classroom where a grade has to be determined. How do we provide students with the freedom to make investment decisions but still maintain the hierarchy inherent in an academic grade environment? Ackoff (1994) gets to the point:

“Work is organized only when it has to be divided. Divided labor has to be coordinated. When there are a large number of coordinators, they too, must be coordinated, and so on. This gives rise to hierarchy, and hierarchy is essential in organizations; it is the framework, the skeleton, around which organizations are built. And hierarchies are assumed to be necessarily autocratic.”

This leads to the following question: Are democratic hierarchies possible and what would they look like? Ackoff proposes his circular organization as an answer to this problem. In a democracy, anyone who has authority over others is subject to the collective authority of these others; hence its circularity. The main structural characteristic of a circular organization is that every person in a position of authority is provided with a board to which he/she reports. The board is composed people under the manager. Therefore, our student managed fund has the following characteristics:

1. A workflow that has to be divided.
2. The divided work has to be coordinated.
3. The coordinators have to be coordinated.

SMF as a Circular Organization

The workflow is shown in Figure 1. This is the traditional top-down investment process that is supported by the CFA Institute in books like Stowe, Robinson, Pinto, and McLeavey (2002). Next, we have a class of 15-20 aspiring investment managers. How are they to be organized to accomplish the workflow?

One of the answers was provided by Dolan and Stevens (2003). They provided a traditional organizational chart for their class that was engaged in top-down investment management. The workflow is broken into different jobs and teams of students are assigned to each job. Next, we need a group of coordinators who also have to be coordinated.
Ackoff (1994) also notes that people under a manager know their job better than the manager. (The old manager is promoted to his/her level of incompetence.) This leads to the use of MBA students in the class. First, senior undergraduates at Villanova are coming into the class with four finance classes under belt, one of which is the investments class. MBA students may have a foundation and core corporate finance class and may be thinking of taking 1-3 finance electives during their last year. However, the MBA students have had numerous classes in management. So this leads to the following circular organization:

Board of Advisors -> Investment Committee -> MBA Management Group -> Teams

Starting at the bottom, the teams are composed of undergraduates and an MBA leader. The teams (See Figure 2) are coordinated by the MBA Management Group which meets separately each week. The teams report to the Investment Committee which makes all investment decisions by majority vote. The Investment Committee is composed of the undergraduate students, the MBA students, and the faculty advisors. One faculty advisor executes all trades through a brokerage account. The faculty advisor retains a veto in case the Investment Committee makes a decision that is in violation of the SMF’s investment policy. Otherwise, the faculty member has only one vote, the same as a student. The Investment Committee represents the democratic circular organization. The Investment Committee in turn reports to a Board of Advisors which is comprised of the University CFO and Controller, the dean of the Business College, various faculty members and university alums. A number of portfolio managers and the president of the brokerage firm where the SMF funds reside are on the board. While this may not be exactly circular, it keeps the SMF grounded in “real-world” management.

The Grading Hierarchy

The previous part of the process is fairly democratic. However, the hierarchic grade producing process still needs to be in place. It is represented by:

Dean -> Department Chair -> Faculty Advisor -> MBA Management Group -> Teams

The MBA Management Group reports to the faculty advisor. They do not have ultimate grade power but at the end of the year, each MBA student evaluates each undergraduate on reliability, timeliness, work ethic, quality of work, and quality of presentations. The faculty advisor also receives all written work and is present for all student presentations. Based on the undergraduate student’s work and MBA evaluations, a final grade is determined. The MBA students are graded on the success of their organization achieving the goals of the investment policy statement. They are also required to complete a paper on organizational design. Grades are the currency by which the members of this organization are paid.

There are some major problems. The MBAs can be frustrated by lack of direct grade power over the undergraduates. Undergraduates resent the MBAs because they feel that it is their fund and that they should be running the fund. Another major problem is that an organizational chart such as Figure 2 is distributed to the students, but most undergraduate and MBA students don’t understand its significance. The MBAs catch on first because they have to get the organization to operate effectively and then they try to explain it to the undergraduates.

While most undergraduates have some internship experience with financial firms, the MBA students have a minimum of two years work experience. It takes the MBAs a while to convince the undergraduates that they are not in a class but rather in a work environment. Once everyone is on board, the organization
can be effective. It is just that first month or two when the two groups are working out their relationships that the organization does not look like much of an organization. In the end, most undergraduates will admit that they learned a lot by working with the MBA students.

I try to keep the grading hierarchy parallel to the democratic hierarchy. The grading hierarchy provides the motivation to get the organization up and running. When the democratic hierarchy is functioning, the grading hierarchy takes a back seat.

Our SMF Process

Undergraduate students are required to commit to the SMF class for an entire academic year from August to May. In return, they receive 3 credits. This fall, we are moving to two 1.5 credit courses, one in the fall and one in the spring. Because the MBA students are required to attend all class presentations and also meet for several hours per week coordinating the team activities, they receive 3 credits per semester. Undergraduates are selected based on their desire to participate and work within the class environment. We try to weed out the “resume padders”. Our investment style is a top-down process which consists of the following steps.

1. Business Cycle

The economics team studies the business cycle in the United States and they sit in on a weekly teleconference with the economist at The QInsight Group. QInsight breaks the business cycle into five phases based on Hunt’s (1987) methodology. These phases are summarized in Figure 3. In Table 1, the variables for determining an “Easeoff” phase are displayed as well as which industries performed best during the easeoff phase.

2. Industry Analysis

The industry team then studies each industry for companies that meet our original criteria. Companies must be more than $1 billion in market cap and do not trade in the single digits.

3. Social Responsibility Screening

The social responsibility team then uses the IWFinancial database (Figure 4) to screen companies on social responsibility and the IRRC database for corporate governance. The investment committee determines our social responsibility profile. We use the U.S. Catholic Bishops statement on social responsibility investing and then adapt it to the current class. Our first SMF class was on the liberal side of social responsibility. The second class was more conservative so the social responsibility screening will change depending on the social responsibility profile of each class. Companies with poor corporate governance will also be weeded out at this stage.

4. Security Analysis

The security analysis team (all undergraduates) will then analyze the stocks that survive the social responsibility screen. Typically, around 150 stocks need to be evaluated. We adapted a single stage and two stage discounted cash flow spreadsheet that we downloaded from Damodaran Online. To these two models we added the Altman Z score (which does not work for financial companies) and the Dupont
ratios. The security analysts have to provide us with accept/reject decisions. Analysts have access to the resources of our applied finance lab (Table 2 and Figure 5).

5. Portfolio Analysis

At this point, we have 60-75 companies and our goal is to build a portfolio of 25-30 securities. We use my PMSP program which contains a number of portfolio optimizers and portfolio heuristics and the CRSP dataset. I prefer heuristics using the Lower Partial Moment as a risk measure and we use historic industry returns for each of the individual security returns. The heuristics are more effective because we have the following maximum limitations: 5% in any one stock, 12.5% in an 8-digit GIC industry and 25% in a 2-digit GIC Sector. Generally, only 4-6 undergraduate students have taken portfolio management with me and are familiar with the PMSP program and the heuristics. They are simple enough that the MBAs catch onto the heuristic quickly but they don’t have the slightest idea of what the LPM means.

6. Performance Evaluation

We report performance in accordance with the reporting standards of the CFA Institute. The PMSP program has a performance evaluation section that is used to generate the performance statistics. Basic returns are reported using Quicken and EXCEL spreadsheets.

7. Exit Strategy

During the Christmas break and during the summer the portfolio is not managed. Therefore, the analysts have to provide a stop loss price for each of their stocks in the portfolio. This is provided immediately after the portfolio is purchased and is adjusted during the semester. When the students leave for break, the stop loss orders are in place and constitute the only potential trading in the portfolio during the un-managed periods. The faculty advisor is limited to carrying out the decisions of the investment committee and can only execute stop loss orders during the un-managed period. If the economy shifts into a new phase of the business cycle during the un-managed period as called by QInsight, the faculty advisor may liquidate the portfolio.

SUMMARY

An organizational view of a student managed investment fund has been presented. Given Russell Ackoff’s work on democratic corporations, it is important that everyone in an SMF class reports to the investment committee made up of all participants. It is important that the faculty advisor carries out the decisions of the investment committee and does not second guess the investment committee. The faculty veto may only be exercised if any decision is in violation of the SMF investment policy statement.

Second, the need for coordination of the various teams is met by having a small number of MBA students come into the class as team leaders and coordinators. The MBA students bring a much needed managerial perspective to the undergraduate students who before this class may have thought of investing as simply stock picking.

Finally, the top-down process of the SMF class at Villanova was presented.
REFERENCES


“IWFinancial Social Responsibility Database”, http://www.iwfinancial.com


Stowe, J., Robinson, T., Pinto, J. and D. McLeavey (2002), Analysis of Equity Investments: Valuation, AIMR, Charlottesville, VA.

Villanova University Institute for Research in Advanced Financial Technology (IRAF), http://www.homepage.villanova.edu/david.nawrocki/iraf

http://www.osjspm.org/sri-uscc.htm
Figure 1 – The Workflow in a Student Managed Investment Fund

INVESTMENT POLICY → ECONOMIC BUSINESS CYCLE/INDUSTRY ANALYSIS → MARKETING

→ SOCIAL RESPONSIBILITY SCREENING → FINANCIAL SCREENING

CORPORATE GOVERNANCE → PORTFOLIO ANALYSIS → INITIAL INVESTMENT (3-26-04)

→ PERFORMANCE REPORTING → PORTFOLIO COMPLIANCE

→ EXIT STRATEGY FOR SEMESTER BREAK
Figure 2 – Student Managed Fund Organizational Chart

Advisory Council
Faculty Advisors, Dean C&F, University Finance VP, CRLG

Investment Advisor
Faculty Advisors

Investment Committee
15 Undergraduates, 5 MBA’s, Faculty Advisors

General Management
5 MBA Students

Operating TEAMS

Social Responsibility
MBA Students (1)
Seniors (3)
SR Screening
SR Compliance/Reporting

Security Analysis
MBA Students (5)
Seniors (15)
Stock Selection

Portfolio Analysis
MBA Students (1)
Seniors (2)
Asset Allocation
Trading Activity

Compliance
MBA Students (1)
Seniors (3)
Regulatory Reporting

Accounting/Performance Reporting
MBA Students (1)
Seniors (3)
Fund Performance
Benchmark Monitoring
Fund Accounting

Economics (Industry Analysis/Business Cycle)
MBA Students (2)
Seniors (8)
Global Economic Conditions
US Macroeconomic Conditions
Industry Sector Conditions

Marketing
MBA Students (1)
Seniors (3)
SMF Website
SMF Presentations
Newsletter

Investment Products
Arnone-Lerer SRI Fund
MBA Students (5)
Seniors (15)

** This document should be used along with Student Fund Gantt Chart to determine when students are to be assigned to specific groups.**
Figure 3 - The QInsight.Com Business Cycle Approach
Table 1 - Current Economic Cycle: Ease-off

● Characteristics of Ease-off phase:

- Year-to-year change in industrial production peaks, then begins to decline
- Initial unemployment claims increase overall
- Interest rates and inflation rise

Easeoff Industries

<table>
<thead>
<tr>
<th>Telephone</th>
<th>Household Products</th>
</tr>
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<tbody>
<tr>
<td>Healthcare</td>
<td>Beverages – Alcoholic and Nonalcoholic</td>
</tr>
<tr>
<td>Utilities</td>
<td>Insurance – Property, Multi-line, Life</td>
</tr>
<tr>
<td>Energy</td>
<td>Broadcasting</td>
</tr>
<tr>
<td>Retail – Food, Drug Stores</td>
<td>Defense</td>
</tr>
<tr>
<td>Restaurants</td>
<td>Computer Software and Services</td>
</tr>
<tr>
<td>Diversified Financial</td>
<td>Waste Management</td>
</tr>
<tr>
<td>Electrical Equipment</td>
<td>Office Equipment</td>
</tr>
<tr>
<td>Entertainment</td>
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Figure 4

SAMPLE OF SOCIAL RESPONSIBILITY SCREENS SELECTED FOR CURRENT INVESTMENT HORIZON FROM IWFINANCIAL.COM
Table 2 - SMF Resources

Economic Analysis – Qinsight.Com, DataInsight from Global Insight (DRI)

Corporate Governance – IRRC Database

Security Analysis – Damadaran.com, Compustat Market Insight

Portfolio Analysis – PMSP, Computer Handholders, Inc.

Applied Finance Lab at Villanova University

- Reuters Bridge Station – 16 stations
- Bloomberg – 1 Station
- Trader Ex – Baruch College Trading Simulation
- Wharton Research Data Services (WRDS)
  CRSP-Compustat Merged
  Compustat Global
  DRI Global & Domestic
  IRRC Takeover Defenses & Directors
  Compustat Complete Back Data
  NYSE TAQ
  SDC Platinum - Mergers
Figure 5 – Layout of Villanova Applied Finance Lab