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Formation of a student managed investment fund: risk management and oversight

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Abstract

Purpose – The creation and formation of a student managed investment fund (SMIF) is a risky proposition for all stakeholders involved in the process. These risks include reputational risks for the individuals involved, fiduciary risks for the school's Board of Trustees and monetary risks for the university itself. The purpose of this paper is to explain and detail how these risks can be mitigated through specific oversight committee (OC) construction, distributional/benchmarking requirements for the fund and detailed trading rules (exit points, short sale constraints, loss provisions, etc.) for fund managers, which can all be codified in the bylaws of the SMIF.
Design/methodology/approach – This investigation is done through a specific case study – the 2017/2018 formation of the George Mason University SMIF. As head of the OC for the fund and lead architect in the creation of the fund for the GMU faculty, the statements below come from firsthand accounts of dealing with all parties of interest and firsthand knowledge of the year-long process of managing all risks, which culminated in being granted endowment capital from the Board of Trustees to officially begin the SMIF on May 1, 2018.
Findings – First, this paper details how a complete investment policy statement can be used to mitigate the fears and concerns of all parties that have a fiduciary duty to the university's endowment (which the students will now be partially managing). These bylaws include statements on the risk characteristics of the fund, distributions back to the endowment, oversight features and benchmarking. Next, written into the bylaws of the fund can be several benchmarking and distributional requirements to mitigate the risk exposure of the SMIF's holdings. Finally, aside from benchmarking constraints, another successful risk management technique can be rules written directly into the investment policy statement that define exit points, tracking error, short sale constraints and other rules for trading.
Originality/value – This paper offers a roadmap by which these risks can be mitigated through the content of an investment policy statement/bylaws. The author details several techniques that eventually led to all stakeholders at GMU in signing off on the formation of an SMIF, and endowment capital being given to the fund as a seed investment. This is a firsthand account of this process and the author has not seen it documented in the literature anywhere else.

Keywords Case studies, Finance
Paper type Research paper

1. Introduction

The formation of a student managed investment fund (SMIF) involves numerous agents and individuals that have different duties to the stakeholders in the university. Navigating these interests may be difficult and a major impediment in the creation of an SMIF.

This paper serves to document the multitude of ways in which the concerns of all parties involved in the creation process of an SMIF can be mitigated through risk management practices and oversight directly written into the bylaws of the fund. Included in these practices are the development of an investment policy statement which the fund must follow, the creation of numerous committees at various levels throughout the university to oversee operations, and distributional/portfolio constraints placed on the fund itself.

This investigation is done through a specific case study – the 2017/2018 formation of the George Mason University SMIF. As head of the oversight committee (OC) for the fund and lead architect in the creation of the fund for the GMU faculty, the statements below come from firsthand accounts of dealing with all parties of interest and firsthand

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knowledge of the year-long process of managing all risks, which culminated in being granted endowment capital from the Board of Trustees to officially begin the SMIF on May 1, 2018.

First, this paper details how a complete investment policy statement can be used to mitigate the fears and concerns of all parties that have a fiduciary duty to the university's endowment (which the students will now be partially managing). Included in this complete policy statement are a set of bylaws which the fund must follow. These bylaws include statements on the risk characteristics of the fund, distributions back to the endowment, oversight features and benchmarking.

A foremost concern for the Board of Trustees is abiding by their fiduciary duty to the school to maximize the returns of the endowment they are managing. To ensure the SMIF is in line with this objective, having multiple layers of oversight and semi-annual reporting back to the Board of Trustees by the fund managers is viewed as a strong risk management technique by all stakeholders. Included in this oversight structure can be committees headed by students monitoring the risk and returns of the fund, with OCs above this headed by dedicated professors monitoring the students' actions.

Next, written into the bylaws of the fund can be several benchmarking and distributional requirements to mitigate the risk exposure of the SMIF's holdings. Included in this can be the requirement of defining the bounds by which the fund may deviate from its benchmark portfolio. Examples of this include statements such as "the SMIF may deviate no more than +/− 3% from the S&P 500 sector allocations at all times." In addition, another restraint technique may be requiring dividend payouts from the SMIF back to the Board of Trustees to ensure that the fund is not over-weighting the fund to non-dividend paying companies.

Finally, aside from benchmarking constraints, another successful risk management technique can be rules written directly into the investment policy statement that define exit points, tracking error, short sale constraints and other rules for trading. To limit the portfolio's exposure to single stock risk, rules regarding weights on single positions can be implemented. To ensure monitoring of positions, rules regarding "loss provisions" can be codified. And, to mitigate the risks associated with the trades of the fund, rules disallowing short sales and American Depository Receipt (ADRs) can also be a sufficient tool to get the Board of Trustees comfortable with moving capital to a SMIF.

These techniques used in tandem are a prime example of a successful year-long negotiation process between the creators of the GMU SMIF and the Board of Trustees to get all parties interested in this endeavor comfortable with the risks of such a fund. While there are certainly other methods to SMIF implementation, the preceding tools highlight one successful path and offer helpful guidance for future SMIF creation at other universities.

This paper proceeds as follows. Section 2 highlights the existing literature in the SMIF arena. Section 3 presents the results associated with the risk management techniques. Section 4 concludes the paper.

2. Background literature

This section details how the existing literature in this area relates to this study. While this paper is the first to detail a full and comprehensive oversight/risk management plan at the fund level, included in this review will be past studies on the performance of SMIFs, learning techniques and risk mitigation tools in SMIFs as well.

First, a prominent line of literature in the SMIF arena has been how these programs affect student experiential learning. Phillips and Volker (2014) shows how SMIFs and the constructivist approach in SMIFs (i.e. learning by doing, instead of passively absorbing) aid students in retaining knowledge concerning finance topics, and lead to overall greater student satisfaction in the classroom. Similarly, Johnson and Alexander (1996) notes how the group decision-making dynamic that exists within SMIFs augments students' learning experience by developing presentation skills and the ability to work within teams. Following this, Clinebell (2013) documents how knowledge about social issues and how it relates to investing is often omitted in most finance programs. The authors highlight how SMIFs can incorporate this material, and in turn, educate students on social investing, which is becoming a more prevalent topic in the modern financial industry. Together, these three works highlight how student participation in SMIFs leads to positive academic experiences through greater retention of knowledge and exposure to new information.

This line of research also extends to the job market conditions for students who work and participate in an SMIF. Macy (2010) notes that finance programs at regional schools face challenges in producing marketable students due to increased competition among schools and lack of proximity to financial hubs. The author shows that SMIFs can be a great way to differentiate a finance student at such schools and provide them with a highly marketable line-item on their resume. Similarly, Ammermann *et al.* (2011) detail how the development of quantitative investment strategies within the fund delivers educational benefits to the students and a necessary skill that enhances job prospects. In particular, in depth quantitative strategies that mimic real-life work that is being done at financial institutions can aid students in their job search since the material learned is so applicable to future positions they may hold.

Another line of literature documents just how prevalent these funds have become in the USA and around the world. Lawrence (2015) produces a comprehensive study on SMIFs and shows there are now 314 universities worldwide that offer students the chance to learn about portfolio management by investing real money. The author calculates that in total, students around the world are directly managing more than 407m in assets as of 2007.

Finally, authors studying SMIFs have also documented the reputational risks that schools face when implementing these funds. Mallett *et al.* (2010) investigate over 300 SMIFs and looks at their long-term success, noting that what once was considered highly risky for the university is now viewed more as a pivotal part of experiential learning. While this line of literature documents the risks to a university, what is lacking in this area of research is how these risks to universities can be mitigated. This paper fills this gap by extending this particular area of research on how reputational risks can be alleviated through proper controls and bylaws.

3. Risk management and oversight techniques

This section details how a complete policy statement can be used to mitigate the concerns of all parties that have a fiduciary duty to the university's endowment. Included in this complete policy statement are a set of bylaws which may include statements on the risk characteristics of the fund, distributions requirements, oversight features and proper benchmark construction. Each of these facets is detailed below.

3.1 Benchmarking, distributions and risk requirements

One of the most tangible and constructive features of a policy statement in terms of risk reduction is defining the benchmark that the SMIF is to be compared to. Included in this to further reduce the operational risk of the fund can be a statement that the risk (volatility) of the fund must also mimic the benchmark as well, or not be materially different from it. Below is a verbatim example taken from the GMU Investment Policy Statement.

Return.

> The expected return objective for the portfolio, measured over a rolling three-year period, is to provide an annualized total return, net of fees, that outperforms S&P 500 Total Return ("the Benchmark").

Risk.

> The Fund should experience risk as measured by volatility or variability of return not materially higher than that of the Benchmark as defined above. Risk should be assessed on both an absolute manner and relative to the Benchmark.

In addition, another restraint technique may be requiring dividend payouts from the SMIF back to the Board of Trustees to ensure that the fund is not over-weighting itself to non-dividend payers. This tool not only keeps the fund in line with the mandate of the Board of Trustees to deliver dividends to the endowment but it also reduces the risk of the fund by forcing fund managers away from holding securities that are exclusively growth stocks. This dividend requirement in turn leads to diversification across payout policies of the companies held in portfolio and a reduction in systematic risk. Again, below is a quote taken from the GMU Investment Policy Statement which details such a requirement.

Endowment spending policy. Consistent with the Foundation Statement of Investment Policies of the Endowment, the Foundation expects distributions to equal approximately 5 percent of June 30, 2016 portfolio market value through June 30, 2019. The fund payout for fiscal year 2018 and 2019 will be 8,420. In total, 3.75 percent of the annual spending is used to attract new and rising scholars by providing multi-year research fellowships in the School of Business. The remaining 1.25 percent is used to support the operations of the Foundation. The long-term goal is to reduce the overall spending on administrative costs to 1.0 percent or less. Full implementation of the banded inflation spending methodology will begin in fiscal year 2020. At that time, the prior year distribution amount will increase by the rate of inflation (CPI). Distributions must be above 3 percent and do not exceed 6 percent of prior year market value.

3.2 Oversight through reports and committee creation

To ensure an SMIF is in line with the Board of Trustees' objective to maximize the returns of the endowment, another risk management technique is the reporting of results to the Board and multiple layers of oversight through the establishment of various committees.

First, oversight can be codified into the bylaws of the fund through the requirement of constant monitoring of the fund representatives and semi-annual reporting requirements. These reporting requirements ensure that any misstep by other agents running the SMIF can be caught and dealt with by the Board of Trustees themselves. Below is an example of such a statement in the bylaws taken from the GMU Investment Policy Statement:

> The ongoing monitoring of the Fund positions must be a regular and disciplined process. While frequent change in positions is neither expected nor desirable, monitoring the investment performance of the investments in the Fund relative to specified guidelines is an ongoing activity, intended to be conducted quarterly but no less frequently than every six months.

Next, the creation of several committees each tasked with oversight over particular areas of the fund and each with separate and distinct monitoring roles is another feature of proper risk management. Included in this structure can be the OC which is headed by dedicated professors in the school, the risk committee (RC) which is comprised of top students who monitor the risk profile of the fund, and finally the investment committee (IC) which is comprised of top students who monitor the performance of the individual securities. Below is a verbatim example of what this may look like, taken from the GMU Investment Policy Statement.

Oversight committee. Members of this committee could include (not necessarily include all and not limited to) the personnel in the table below. The "OC" is generally responsible for:

- establishing and maintaining the IPS, with any changes approved by the Foundation's Board of Trustees IC;
- retaining control rights to trade executions and final portfolio decisions; and
- generating communications to stakeholders as necessary, including semi-annual performance updates to the George Mason University Foundation Board of Trustees IC or subcommittee.

Investment committee. The "IC" is broadly responsible for the investment decisions of the fund and the adherence of those decisions to the IPS. Specifically, the IC is responsible for:

- selecting and terminating positions;
- monitoring the performance of the overall fund and of individual investments and making investment changes when necessary;
- following the investment guidelines from this IPS;
- reviewing investment options' performance according to the IPS and the investment thesis at inception of each position; and
- reporting on a monthly basis to the OC all relevant matters such as performance, position-related events, trading errors or any other material facts the OC deems relevant.

Risk committee. The "RC" is generally responsible to measure and assess potential risks of the overall portfolio. Namely, the RC should:

- Ensure the portfolio is adequately diversified and monitor whether any position or group of positions is contributing to the overall risk of the portfolio in a higher degree than is desirable.
- Measure risk using volatility and other measures such as VaR, as deemed appropriate.
- Ensure the overall fund is taking adequate risk in line with that of the benchmark. The RC is tasked with advising the OC when it is necessary to cut risk by bringing down the gross exposure (if it deems it necessary), yet the OC still retains the rights to execute any risk reducing transactions.
- Minimize and reduce risk that is not expected to be rewarded over the long term, or mitigated through diversification.
- Report the overall risk, sector risk and any risk-thresholds breaches to the OC on a monthly basis.

Together, this multi-layered committee construction ensures that there are individuals monitoring the trades and positions at all time and that there are professors monitoring the students at all times and their actions. This oversight feature is a strong risk management tool which can be a successful device to allay the concerns of the Board of Trustees.

3.3 Risk reduction through portfolio constraints

Another risk management technique that can also be employed can be rules written directly into the investment policy statement that define portfolio constraints. These portfolio constraints make sure that the OCs are doing their job and offer the fund managers strict trading guidelines to execute should certain exit points be hit or other events manifest, reducing the risk of the overall fund.

First, to ensure the active monitoring of positions, rules regarding "loss provisions" can be written into the policy statement. To limit the portfolio's exposure to single stock risk, rules regarding weights on single positions can be implemented, as well as, defining the acceptable tracking error of the fund. And, to mitigate the risks associated with the trades of the fund, rules disallowing short sales and limiting ADRs can also be a sufficient tool to adequately reduce the overall risk of the fund. Below is a verbatim quote taken from the GMU Investment Policy Statement which details the portfolio constraints.

The fund seeks to maintain a diversified portfolio of US equity securities in order to obtain a total return for the fund at an acceptable level of risk within this asset class:

- The portfolio is expected to earn an annualized net (after fees and expenses) total rate of return that exceeds the S&P 500 Total Return Index over rolling three-to-five year periods, with an expected tracking error under 7.5 percent.
- The fund should be style-neutral with respect to the benchmark. Namely, the fund should default to maintaining similar sector allocations to those of the benchmark, unless otherwise documented as an active risk or performance decision.
- The fund may use sector or index ETFs ("passive positions") if deemed appropriate to balance the overall or sector exposures. No other ETF can be used in the fund, which includes but not limited to commodity or bond ETFs. The passive positions may be used to offset any investment style biases in the fund relative to the benchmark, as temporary investment for assets in transition, or if no adequate active position is approved by the IC.
- The portfolio should consist of 15–35 active positions. No position should have a weight of more than 5 percent at inception unless otherwise approved in writing by the OC. Any position above 10.0 percent will be reassessed by the IC. Positions above 12.5 percent will be reduced to under 10.0 percent.
- Positions that surpass the investment thesis target valuation will be reassessed by the IC. Any such position should be unwound unless the IC readjusts the target valuation.
- Positions that lose 10 percent of their value should be reassessed promptly by the IC. A position that suffers a 15 percent loss must be cut in half, and at 20 percent loss completely removed from the portfolio.
- No more than 20 percent exposure of the total portfolio may be invested in any one industry (at market value). For the purposes of these guidelines, the S&P's definition of industry classification shall be used for clarification when necessary.
- Foreign equity securities are a permissible investment strictly on an "ADR" basis only, while preferred stock and convertibles are not permitted.
- Any position that the RC deems as contributing too much risk on an individual basis should be reassessed by the IC.
- Any position reassessment triggered by the guidelines above will require a written memo to the OC communicating the reasons for such reassessment and the actions taken by the IC as a result of the analysis.

In total, by defining industry weight constraints, this process reduces the industry-specific systematic risk of the portfolio. By placing single stock position constraints, this process reduces the unsystematic risk of the fund. Both of these constraints should lead to a reduction in overall portfolio volatility over the long run. Next, by putting in loss provisions, this hopefully reduces any negative momentum features of the fund, mitigating this particular form of risk. And, by placing rules on foreign stock ownership this should serve to keep the fund in closer line to its actual benchmark (the S&P 500), and help reduce certain liquidity risks which may come about with trading foreign stocks in other less liquid markets.

4. Conclusion

An SMIF is a career enhancing activity for the students that get to participate in it, but may also bring about considerable risk exposure for those that are involved in its establishment. These risks included reputational risks for the Board members, career concerns for the professors that are involved, and monetary risks for the university itself.

This paper fills a void in the existing literature by being the first to offer a comprehensive roadmap by which these risks can be mitigated through the content of an investment policy statement/bylaws. Using the successful year-long negotiation process of the GMU SMIF as a case study in risk management and oversight issues, this paper details several techniques that eventually led to all stakeholders at GMU in signing off on the formation of an SMIF, and endowment capital being given to the fund as seed investment.

These risk management tools include the creation of several layers of OCs, reporting requirements, benchmarking and portfolio constraints. These techniques used in tandem are a prime example of how a negotiation process can eventually get the Board of Trustees and all other parties comfortable with the risks of a student lead fund. While there are certainly other methods to SMIF implementation, the preceding tools highlight one successful path and hopefully can offer helpful guidance for the establishment of future SMIFs at other schools and universities.

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