

# **Student-Managed Investment Funds: A Survey of Student Demographics, Fund Policies, and Transparency**

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## **ABSTRACT**

*This paper summarizes the survey results of U.S.-based colleges and universities with active Student-Managed Investment Funds (SMIFs). A web-based survey of 441 colleges and universities provides up-to-date and comprehensive analysis of SMIF information. Survey results include three areas of SMIF elements not previously included in SMIF research. Information about student demographics, fund policies, and fund performance and transparency are all included in this study. Results indicate that the majority of students participating in SMIFs are white males, with few schools specifically targeting recruitment of females and minorities to the finance and investment field. In addition, results indicate that most funds are managed by undergraduate students, use the S&P 500 as a benchmark, and average 30% portfolio turnover each year. Results indicate a mix in the dollar value of SMIFs, of dividend policies, and of out of class activities associated with the SMIF. Finally, while professional money managers must provide timely and transparent information about fund performance, fees, and large holdings, the vast majority of SMIFs do not provide this information publicly, in part or in whole.*

## **INTRODUCTION**

The use of Student-Managed Investment Funds (SMIFs) on college campuses in the United States is certainly no longer a unique experiential learning tool. What began several decades ago as a unique feature in a few Investment Management courses, has gained universal acceptance as a nearly necessary tool for students interested in finance and investment management careers. The majority of SMIFs were created as educational tools for finance students, though there are a number of SMIFs that are utilized as clubs open to students from all majors.

As with any educational endeavor, part of the learning process – for any student, professor or college or university – should be to critically evaluate the tools used to enhance student learning. In fact, business programs accredited by AACSB and ACBSP are required to strive for continuous improvement by assessing results. There are a variety of methods that could be used to assess the success of SMIFs across campuses. These include comparing SMIF rates of return (versus each other and versus a common benchmark), reviewing dividend policies, measuring the turnover of fund holdings, and demographic characteristics of SMIF students, to name a few. Comparative analyses can only be completed routinely with access to information

made readily available to the public at large, which could most simply be accomplished by posting SMIF information on the college or university website. This research reveals new information about SMIFs, including student demographics, fund policies and transparency.

## **LITERATURE REVIEW**

A review of the literature regarding SMIFs identifies research that has been conducted in three primary areas: pedagogy, operations and management, and funding and performance.

Pedagogical research is critical as the primary goal of SMIFs is educational. Therefore, pedagogical approaches, classroom structure and course design are of significant importance. These areas, when combined successfully should engage students with a positive educational experience that ultimately impacts student learning and career success. Tatar (1987) provides specific classroom examples of a new SMIF at one institution. Cooley & Hubbard (2012) similarly review one institution based on experience from ten plus years of an active SMIF. Kahl (1997) discusses course structure and the educational opportunities that exist when placing students of different genders, races and countries on investment analysis teams. Clinebell, Kahl & Stevens (2012) identify both learning goals and non-learning goals of SMIFs. They conclude both sets of goals should be considered when determining the structure and pedagogical design of a course and associated SMIF. North & Stevens (2012) develop a systematic approach to SMIFs, by designing a proposed two-year academic sequence and associated organizational structure for a SMIF. The approach extends beyond one course and is a coordination of multiple disciplines and courses, all designed to develop best-practices in applied investment management. The activities and structures they suggest are robust and likely limit utilization to larger institutions.

The operation and management of a SMIF is a balance of institutional policy, faculty leadership and student action. Lawrence (1990) identifies various investment alternatives allowed by different SMIFs and how SMIF operations and activities are funded. Saunders (2008) reviews differences in religiously affiliated and independent college SMIFs and identifies attitudinal differences in screening for socially responsible investing. Clinebell (2013) extends the review of socially responsible investing by providing a history of the concept and its application to a SMIF at one school. Peng, Dukes & Bremer (2009) review asset allocation differences and the use of CAPM within SMIFs. Cooley & Hubbard (2012) identify academic content, administrative requirements and SMIF policies at Trinity University. Adams and Belcher (2015) suggest significant resources are not needed to properly operate a SMIF. They discuss the use of the Blackboard learning management system to aid in SMIF communication and information access, with little to no additional costs to SMIFs or college operating budgets.

Sources of funding for SMIFs is provided by Neely & Cooley (2004) and identifies donors and college endowments as major fund sources. Lawrence (2008) provides information on U.S.-based and international SMIFs and includes the year each fund started and the fund size.

## **SURVEY METHODOLOGY**

An email, including a link to the survey, was sent to faculty advisors of U.S.-based SMIFs. Faculty advisors were identified by reviewing websites of colleges and universities listed in prior research from Neeley & Cooley (2004) and Lawrence (2008), and from schools identified on the University Finance Labs (ND) website. Contacts from professional associations

and conferences were added, and a search of “student managed investment fund” was conducted on over 2,000 additional college websites to complete the list. The email requested confidential faculty participation in the web-based survey hosted on Qualtrics. A second and third email were sent to faculty who did not open the original email, using a tool provided by Qualtrics. This methodology is similar to that used by Saunders (2008) and Peng, Dukes, & Bremer (2009).

A total of 441 surveys were sent to individual SMIF faculty advisors, with 104 survey responses, for a response rate of approximately 24%. Of the 104 responses, several were only partially completed and therefore the response totals throughout the paper vary according to the total responses to each question. A copy of the survey is provided in Appendix A. The list of colleges and universities identified as having a SMIF is provided in Appendix B.

## **SURVEY RESULTS – DEMOGRAPHICS**

Those responding to the survey represent a broad range of institutions, including both large and small, and both public and private schools. Respondents include schools with SMIFs that began as early as 1955 and include a SMIF that was established in 2016. Nearly 70 percent of the SMIFs began operating since 2000. In addition, institutions identified AACSB, ACBSP, IACBE and other business accrediting agencies as those who assess their results. A summary of this information is provided in Table 1.

Table 1: School Enrollment, Institution Profile and Specialized Business Accreditation

<b>Panel A</b>		
<b>What is the Enrollment of Your Institution?</b>	<b>Frequency</b>	<b>Percent</b>
< 2,000	22	22.9%
2,001-5,000	27	28.1%
5,001-10,000	13	13.5%
>10,000	34	35.4%
Total	96	100.0%
<b>Panel B</b>		
<b>What Type of Institution is it?</b>	<b>Frequency</b>	<b>Percent</b>
Public	40	41.7%
Private	56	58.3%
Total	96	100.0%
<b>Panel C</b>		
<b>Which organization accredits your business programs?</b>	<b>Frequency</b>	<b>Percent</b>
AACSB	59	61.5%
ACBSP	16	16.7%
IACBE	2	2.1%
Other	8	8.3%
None	11	11.5%
Total	96	100.0%

Demographic information about student participation in SMIFs is provided in Table 2. The data shows that, for the 2015-16 academic year, respondents reported overall mean SMIF class composition of 73% male and 27% female students. When disaggregated by public versus private institutions, the percentage of female students is 20% and 31.4%, respectively. This difference is statistically significant, as shown in Table 3. Respondents also reported overall SMIF classes comprised of 74% Caucasian, 9% Asian, 9% Hispanic, 7% Black, and 1% Other. Differences in the means between public and private institutions are shown in Table 2. Statistically significant differences exist between public and private schools when measuring the percentages of international and Asian students (Table 3). In all cases of significance, private schools have higher proportions of female, international, and Asian students. No significant differences in demographics exist when measured against institution size, accrediting agency or size of the SMIF. These demographic characteristics are likely to remain consistent in the near future, as only 28% of SMIFs and/or SMIF schools actively recruit females specifically to the finance/investment field, and only 19% recruit minorities.

Table 2: SMIF Student Enrollment Demographics and Recruitment by Institution Type

<b>Panel A</b>	<b>Public Institution</b>			<b>Private Institution</b>		
<b>Based on Gender</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min-Max</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min-Max</b>
Female	20.0%	12.8%	5-60%	31.4%	17.4%	8-100%
Male	80.0%	12.8%	40-95%	68.6%	17.4%	0-92%
Total	100.0%			100.0%		
<b>Panel B</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min-Max</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min-Max</b>
<b>Based on Geography</b>						
Domestic Student	88.6%	7.2%	71-100%	80.2%	15.7%	30-100%
International Student	11.4%	7.2%	0-29%	19.8%	15.7%	0-70%
Total	100.0%			100.0%		
<b>Panel C</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min-Max</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min-Max</b>
<b>Based on Race</b>						
Caucasian	78.7%	15.4%	29-100%	71.5%	19.4%	25-100%
Black	7.2%	8.5%	0-36%	6.0%	6.9%	0-30%
Asian	6.1%	5.5%	0-20%	11.0%	13.7%	0-60%
Hispanic	6.4%	12.5%	0-65%	9.8%	14.9%	0-73%
Other	1.8%	3.9%	0-16%	1.7%	4.2%	0-20%
Total	100.0%			100.0%		
<b>Panel D</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>		
<b>Student Recruitment</b>						
Females - Yes	9	25.0%	15	30.0%		
Females - No	27	75.0%	35	70.0%		
Total Females	36	100.0%	50	100.0%		
Minorities - Yes	7	19.4%	10	20.0%		
Minorities - No	29	80.6%	40	80.0%		
Total Minorities	36	100.0%	50	100.0%		

Table 3: ANOVA Test Results on Demographic Differences Based on Institution Type

ANOVA Table						
		Sum of Squares	df	Mean Square	F	Sig.
% Women * What type of institution is it?	Between Groups	2706.85	1	2706.853	11.094	<b>0.001**</b>
	Within Groups	20494.97	84	243.988		
	Total	23201.83	85			
% Men * What type of institution is it?	Between Groups	2706.85	1	2706.853	11.094	<b>0.001**</b>
	Within Groups	20494.97	84	243.988		
	Total	23201.83	85			
% Domestic * What type of institution is it?	Between Groups	1478.01	1	1478.010	8.890	<b>0.004**</b>
	Within Groups	13966.13	84	166.263		
	Total	15444.14	85			
% International * What type of institution is it?	Between Groups	1478.01	1	1478.010	8.890	<b>0.004**</b>
	Within Groups	13966.13	84	166.263		
	Total	15444.14	85			
% Caucasian * What type of institution is it?	Between Groups	1063.03	1	1063.033	3.341	0.071
	Within Groups	26726.42	84	318.172		
	Total	27789.45	85			
% Black * What type of institution is it?	Between Groups	28.49	1	28.488	0.495	0.483
	Within Groups	4831.00	84	57.512		
	Total	4859.49	85			
% Asian * What type of institution is it?	Between Groups	511.69	1	511.693	4.203	<b>0.043*</b>
	Within Groups	10225.89	84	121.737		
	Total	10737.58	85			
% Hispanic * What type of institution is it?	Between Groups	247.52	1	247.520	1.270	0.263
	Within Groups	16366.31	84	194.837		
	Total	16613.83	85			
% Other * What type of institution is it?	Between Groups	0.17	1	0.170	0.010	0.920
	Within Groups	1385.97	84	16.500		
	Total	1386.14	85			

\*\* Significant at the .01 level

\* Significant at the .05 level

The demographic results showing male dominance of students participating in SMIFs provides insight for industry professionals about likely upcoming recruits. Studies on the role of gender in finance and investing have been researched as related to behavioral finance. Barber & Odean (2001) conclude overconfidence in men causes male traders to trade more often than females, resulting in lower investment returns for males compared to females. Bhandari & Deaves (2006) corroborate this conclusion, finding the results are most significant in single men compared to single women. So why, then, do so few females pursue an investing career? North & Stevens (2012) note that “the imbalance of gender is a complicated phenomenon.” Jäkel & Moynihan (2016) report the financial services industry lags in unleashing female leadership potential. The report concludes that only 20 percent of boards and 16 percent of executive committee members are female globally. In addition, they find that “female executives are more likely to leave their employer at mid-career in financial services than in any other industry.”

Adams, Barber & Odean (2016) note that 18 percent of Chartered Financial Analysts are women and suggest one possible barrier is “that finance is a profession that disproportionately rewards those who work long and inflexible hours.” Foster (2016) suggests those in the industry should “encourage women to pursue an education and career in investment management.”

Turning from gender to race, why do fewer racial minorities participate in SMIFs and have a career interest in finance? Delvecchio, McEwen, & McEwen (2001) find that while African American students had higher preferences for careers in human resource management than Caucasians, there was no preference difference for fields of accounting, finance and marketing. What other reasons may contribute to low levels of minority participation? Lahey & Vihtelic (2000) found that 82 percent of finance faculty are white, with 2.4 percent black, 2 percent Hispanic, and 13.3 percent other. Thus, students of color are more likely to have a white professor than a racial minority. Results from Chung, Baskin & Case (1999) and Karunanayake & Nauta (2004) suggest it is possible that a lack of role models leading the classroom leads to lower career interest in the field by racial minorities.

This survey identifies that the current stream of college and university students likely mirrors the demographic imbalances which currently exist in the financial services field. Some institutions are making efforts to counter this imbalance, with 27.9 percent of colleges specifically recruiting females to the finance industry and 19.8 percent specifically recruiting racial minorities.

## **SURVEY RESULTS – POLICY**

Table 4 provides data related to the dollar value of SMIFs responding to the survey. The table also lists the benchmark used by the fund to gauge student investment success. Results show the S&P 500 is used as a benchmark for SMIF performance more than any other metric.

Table 4: SMIF Data by Fund Size and Fund Benchmark

<b>Panel A</b>		
<b>What is the Size of the SMIF</b>	<b>Frequency</b>	<b>Percent</b>
<\$100,000	11	13.6%
\$100,0001-\$250,000	11	13.6%
\$250,001-\$500,000	25	30.9%
\$500,001-\$1,000,000	10	12.3%
>\$1,000,000	24	29.6%
Total	81	100.0%
<b>Panel B</b>		
<b>What Benchmark does the SMIF use?</b>	<b>Frequency</b>	<b>Percent</b>
DJIA	4	4.9%
S&P 500	48	59.3%
Russell 2,000	6	7.4%
NASDAQ Composite	1	1.2%
Other	22	27.2%
Total	81	100.0%

Beyond the S&P 500, the “other” benchmarks mentioned by respondents reflected multiple benchmarks due to multiple funds managed by the SMIF. Why, though, should students who are learning compare their results to the same index generally used by professionals? Haddad and Redman (2006) provide evidence that doing so may be difficult by noting that both the investment portfolio and style of management are difficult to maintain within a SMIF. Mallett, Belcher and Boyd (2010) find the return performance of SMIFs “spotty at best” and suggest one possibility for the underperformance is portfolio turnover, caused by turnover of fund managers. Kreuger (2011) finds that while SMIFs provide numerous non-monetary advantages to students, even the Investment Advisory Board utilized in the study underperformed the market as well, suggesting the level of attention and direct consequence of results differs between SMIFs and professional fund managers. Gradisher, Kahl, Clinebell & Stevens (2016) discuss federal legislation and its potential impact on fiduciary responsibilities of SMIF students and professors. They provide several recommendations on SMIF structure to protect students, faculty and institutions from the SMIF being viewed as a registered Management Investment firm. With this, they suggest donors should not “have expectations of professional investment management.” These results all appear contrary to common SMIF practice as the majority of SMIFs use the S&P 500 as a benchmark.

Table 5 provides data on policy matters related to management and dividends. Results show more than 70% of SMIFs are managed by undergraduate students, with 22% managed by both undergraduate and graduate students. About half of all schools (48%) use a policy of cash dividends on all holdings, with 29% having a policy to reinvest dividends and the remaining 23% using a combination of cash and reinvestment. Two-thirds of SMIFs are not actively managed between semesters. This is not surprising given the educational nature of SMIFs.

**Table 5: SMIF Data by Student Level, Interim Management and Dividend Policy**

<b>Panel A</b>		
<b>Who manages the SMIF?</b>	<b>Frequency</b>	<b>Percent</b>
Undergraduate	58	71.6%
Graduate	4	4.9%
Both	18	22.2%
Other	1	1.2%
Total	81	100.0%
<b>Panel B</b>		
<b>Is the SMIF Actively Managed Between Semesters?</b>	<b>Frequency</b>	<b>Percent</b>
Yes	26	34.2%
No	50	65.8%
Total	76	100.0%
<b>Panel C</b>		
<b>What is the SMIF Dividend Policy?</b>	<b>Frequency</b>	<b>Percent</b>
All Cash Dividends	37	48.1%
Reinvest All Dividends	23	29.9%
Combination of Cash and Reinvestment	17	22.1%
Total	77	100.0%

Study participants were asked to provide portfolio returns for the past two years. Ranges, instead of specific results, were used in the survey to maximize reporting without requiring participants to research their exact return from two years ago. Table 6 provides frequency and percentage of respondent returns for each year. It should be noted that the S&P 500, the primary SMIF benchmark, provided returns of 13.52% and 1.36% in 2014 and 2015, respectively. Specific differences between SMIF returns and the S&P 500 for each year could not be calculated due to the survey design requesting a return range instead of a specific return option. It is noted that in 2015, the range of returns that contained the actual S&P 500 return contained the highest response frequency. In 2014, more SMIFs responded to the range that was lower than the S&P 500 return range.

Table 6: SMIF Returns by Year

<b>Panel A</b>		
<b>What was the fund's return for 2015?</b>	<b>Frequency</b>	<b>Percent</b>
< (5)%	2	2.9%
0-(4)%	19	27.1%
0%	6	8.6%
0-5%	32	45.7%
6-10%	7	10.0%
11-15%	3	4.3%
16-20%	0	0.0%
>20%	1	1.4%
Total	70	100.0%
<b>Panel B</b>		
<b>What was the fund's return for 2014?</b>	<b>Frequency</b>	<b>Percent</b>
< (5)%	0	0.0%
0-(4)%	3	4.5%
0%	2	3.0%
0-5%	8	11.9%
6-10%	24	35.8%
11-15%	20	29.9%
16-20%	9	13.4%
>20%	1	1.5%
Total	67	100.0%

Note: Three participating colleges commenced SMIF activities in 2015 or later.

While all participating SMIFs were allowed to invest in equities, the number of SMIFs allowed to invest in other asset classes drops dramatically. Slightly more than one-third of SMIF's have the ability to invest in fixed income, less than 20% in options, and less than 10% in commodities and other. Table 7 provides a breakdown of investible asset classes by institution size and type.



Table 7: Investments Allowed by Institution Size and Institution Type

Asset & Institution Type	Institution Enrollment				Total	Total %**	
	<2,000	2,001-5,000	5,001-10,000	>10,000			
Public	1	3	9	20	33		
Private	16	17	4	6	43		
<b>Equities</b>	<b>Total</b>	17	20	13	26	76	<b>100%</b>
Public			2	3	9	14	
Private		4	4	3	3	14	
<b>Debt</b>	<b>Total</b>	4	6	6	12	28	<b>36.8%</b>
Public			1	1	1	3	
Private		1	1	1	1	4	
<b>Commodities</b>	<b>Total</b>	1	2	2	2	7	<b>9.2%</b>
Public			2	1	2	5	
Private		4	2	2		8	
<b>Options</b>	<b>Total</b>	4	4	3	2	13	<b>17.1%</b>
Public			1	1	3	5	
Private		1			1	2	
<b>Other*</b>	<b>Total</b>	1	1	1	4	7	<b>9.2%</b>

\* Other included ETF's, currencies, futures and mutual funds

\*\* Total % equals the percentage of responding schools allowed to invest in each asset type

Most funds available for individual investors have a specific targeted asset allocation. This allows investors to determine if a fund is an appropriate investment vehicle for the investor's risk tolerance and investment objectives. SMIFs are likely different than many other funds in that it is assumed that the majority of SMIFs have a long-term investment horizon, with little need for the corpus in the near-term. Of SMIF's participating in the survey, only 59.5% have an asset allocation policy, whereas 40.5% do not. Of those SMIFs that have an asset allocation policy, equities, fixed income, and cash are the asset classes with the largest mean percentage target. A summary of the survey results on asset allocation is shown in Table 8.

Table 8: Asset Allocation Averages of SMIFs with Specified Target Asset Allocations

Asset Type	All Institutions		
	Mean	S.D.	Min-Max
Cash	6.6%	6.5%	0-25%
Equities	82.2%	20.8%	0-100%
Fixed Income	9.7%	1.9%	0-100%
Other	1.5%	4.2%	0-20%
<b>Total</b>	<b>100.0%</b>		

Table 9 provides information on fund asset turnover. The mean asset turnover of SMIFs during a typical year is almost 32% of the portfolio, with a reported range from one to one hundred percent, resulting in a significant standard deviation of 23%.

Table 9: Fund Turnover

	All Institutions		
	Mean	S.D.	Min-Max
Fund Turnover	31.64%	23.72%	1-100%

## SURVEY RESULTS – TRANSPARENCY

Survey results indicate that the vast majority – 83% – of SMIFs do not make their fund performance available on the school website (Table 10). In addition, only 6.5% of SMIFs provide public information about the fund’s specific holdings. In an era where transparency and performance measurement are paramount in the finance and investment industry, it appears that SMIFs may be lagging incorporating these facts into classroom practice. In so doing, SMIFs are perhaps also missing a teachable moment of what is expected of institutional fund managers.

Table 10: Public Transparency

Panel A		
Is Fund Performance Publicly Available on Website?	Frequency	Percent
Yes	13	16.9%
No	64	83.1%
Total	77	100.0%
Panel B		
Are Specific Holdings Made Available?	Frequency	Percent
Yes	5	38.5%
No	8	61.5%
Total	13	100.0%

Kuhle & Ogilby (2010) provide a detailed approach to using publicly available information to conduct fundamental security price analysis. This approach to analysis could be utilized in any SMIF. Haslem (2004) provides a template for transparency of information for mutual funds. The template suggests providing information transparency across multiple areas, including boards of directors, fund managers, and fund performance. Haslem argues such information is necessary for fund owners to make informed decisions. Macy (2010) highlights one benefit of SMIFs is the production reports. Communication and synthesis skills are utilized in report preparation, including Macy’s suggestion of an annual report. It is likely that many SMIFs indeed utilize report preparation as a learning tool (as well as an audit or performance measurement tool), yet very few make such reports publicly available.

Jennings & Jennings (2006) find SMIFs have a strong tendency to favor domestic equities over international equities. They note that this may be attributed to lack of knowledge

“about the political, legal and economic environments of other countries.” Is it possible that improved transparency of SMIF holdings might convince more students and associated SMIFs to explore international equities in their portfolios?

Finally, the Securities and Exchange Commission (SEC) Final Rule on Shareholder Reports and Quarterly Portfolio Disclosure of Registered Management Investment Companies (2004) mandated, among other things, that mutual funds and similar entities report portfolio information on a quarterly basis and “to include Management’s Discussion of Fund Performance in its annual report to shareholders.” Agarwal, Mullally, Tang, & Yang (2015) utilize the 2004 SEC rule to analyze stock liquidity and fund performance and find that after the regulation change, stocks with higher fund ownership increase greater liquidity. Each of these examples provide evidence that there are benefits to fund managers with transparency. While there are likely challenges as well, SMIF faculty and administrators should consider the benefits of increased transparency.

Results indicate SMIFs are also a springboard for a host of other educational opportunities. More than half of the survey respondents indicated that students in their respective SMIFs participate in competitions (research challenges, case competitions, security/credit analysis competitions, etc.), conferences and other events. Additionally, students in SMIFs provided community service in the form of financial literacy, provided on-campus educational programs, and attended investor meetings, amongst other things. Saunders (2015) provides examples of a SMIF that wrote and submitted a shareholder proposal, leading to phone calls and in-person visits from corporate executives, including the director of corporate governance from The Coca-Cola Company.

Table 11: SMIF Activities and Activity Funding

<b>Panel A</b>		
<b>What Activities do SMIF Students Participate In?</b>	<b>Frequency</b>	<b>Percent</b>
CFA Institute Research Challenge	37	55.2%
Federal Reserve Challenge	11	16.4%
Campus-wide Learning Initiatives	17	25.4%
Conferences*	49	73.1%
Events	35	52.2%
Personal Finance Topics	21	31.3%
Other	11	16.4%
Total Responding to Question	67	
<b>Panel B</b>		
<b>How are SMIF Activities Funded?</b>	<b>Frequency</b>	<b>Percent</b>
Earnings	12	17.9%
Fund Drawdowns	8	11.9%
College Operating Budget	47	70.1%
Total	67	100.0%

\*Includes QGAME, RISE, ENGAGE and Other

## **LIMITATIONS AND FURTHER RESEARCH**

Survey results indicate a wide range of demographic information. While this is the first research that highlights demographic information of SMIF participants, the confidentiality of survey responses did not allow for further understanding of the why certain schools have higher female and minority participation. It is likely that schools with 100% female participation are female-only institutions, while schools with high percentages of Hispanic student participation may be designated as Hispanic-serving institutions under the federal definition. For college administrators and industry executives interested in increasing female and minority representation in finance and investing, further research into the variability of participation by these student groups is encouraged.

With SMIFs designed to be educational in nature, it should be assumed that errors will be made while students are learning. In fact, Lawrence (1990) notes that while most faculty retain veto power over student investment decisions, “faculty advisors felt an important component of the educational experience necessitates allowing students to make their own decisions for better or for worse.” Thus, utilizing the industry benchmark for professionals – generally the S&P 500 – as a SMIF benchmark might be a high hurdle. A SMIF performance index may be a better barometer, whereby students, faculty and administrators could measure results against other students who are also learning as they make investment decisions.

The lack of public information transparency is an area that could be investigated further. Assumptions are made as to why colleges and universities do not share SMIF performance results, key holdings, and annual reports, but actual reasons may differ. If a substantial number of SMIFs begin to publicly report information on a routine basis, other schools may follow. The use of a template would aid SMIFs and result in uniform reporting. Public disclosure may also serve as an additional point of information for high school students during their college and university research and selection process. It is also possible that such publication may increase minority and female participation if, for example, large SMIF holdings identify companies of importance to females and racial minorities.

Last, while this research focuses specifically on SMIFs, additional thought and research should be conducted to identify how other business disciplines, namely accounting, marketing and management, could benefit from a similar hands-on, real-world application. Given the growth and success of SMIFs, and the associated activities completed by SMIF participants, the extension of discipline-specific opportunities to other functional areas of business seems natural.

## **CONCLUSION**

While the number of SMIFs has grown significantly in the past two decades, much information about specific fund performance, management and holdings remains private. This runs contrary to public disclosure required by fund managers outside of SMIFs, and is likely the result of protecting faculty and school image and reputation. With most SMIFs continuing to be managed by undergraduate students, using the S&P 500 as a benchmark for SMIFs appears to be at odds with student learning and suggests an alternate benchmark could be established for SMIFs.

Survey results indicate that gender and race in SMIF student enrollment across the United States is skewed towards males and Caucasians. Private colleges and universities enroll higher percentages of females, international students and Asian students than their public institution

counterparts. The trend of the finance and investment industry being male-dominated may continue for some time, as few schools and/or SMIFs actively recruit females and minority students to the discipline.

This research confirms prior survey results that most SMIFs are not actively managed between semesters and that SMIF fund size varies significantly. In addition, this research shows varying SMIF policies for dividends, target asset allocation and fund turnover. Last, results indicate substantial participation in out of class activities by SMIF participants, highlighting the benefits of the engaged learning component of an actively-managed fund.

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## Appendix A – Student Managed Investment Fund Survey

### **Institutional profile**

What is the enrollment of your institution?

- <2,000 (1)
- 2,001-5,000 (2)
- 5,001-10,000 (3)
- >10,001 (4)

What type of institution is it?

- Public (1)
- Private (2)

Check all degrees that are offered

- Business Administration (1)
- Economics (2)
- Finance (3)
- Management (4)
- Accounting (5)
- Marketing (6)
- Graduate Business Program (7)

Indicate which organization accredits the business school/program at your institution. (Select all that apply)

- AACSB (1)
- ACBSP (2)
- IASBE (3)
- Other (4) \_\_\_\_\_
- None (5)

### **Class Profile**

For the last couple of semesters, estimate the student composition of the investment class/fund based on gender. (In %)

\_\_\_\_\_ Men (1)  
\_\_\_\_\_ Women (2)

For the last couple of semesters, estimate the student composition of the investment class/fund based on geography. (In %)

\_\_\_\_\_ Domestic (1)  
\_\_\_\_\_ International (2)

For the last couple of semesters, estimate the student composition of the investment class based on race. (In %)

- \_\_\_\_\_ Caucasian (1)
- \_\_\_\_\_ Black (2)
- \_\_\_\_\_ Asian (3)
- \_\_\_\_\_ Hispanic (4)
- \_\_\_\_\_ Other (5)

Does your school/fund recruit females specifically to the finance and investment field?

- Yes (1)
- No (2)

Does your school/fund recruit minorities specifically to the finance and investment field?

- Yes (1)
- No (2)

### **Fund Profile**

What is the current value of the student investment fund?

- <\$100,000 (1)
- \$100,001-\$250,000 (2)
- \$250,001-\$500,000 (3)
- \$500,001-\$1,000,000 (4)
- >\$1,000,000 (5)

What benchmark does the fund use to compare performance results?

- Dow Jones Industrial Average (1)
- S&P500 (2)
- Russell 2,000 (3)
- NASDAQ Composite (4)
- Other (5) \_\_\_\_\_

What was the fund's return for 2015? (in %)

- <-5 (8)
- 0-|-4| (7)
- 0 (1)
- 0-5 (2)
- 6-10 (3)
- 11-15 (4)
- 16-20 (5)
- >20 (6)

What was the fund's return for 2014? (In %)

- <-5 (8)
- 0-|-4| (7)
- 0 (1)
- 0-5 (2)
- 6-10 (3)
- 11-15 (4)
- 16-20 (5)
- >20 (6)

Who manages the fund?

- Undergraduate Students (1)
- Graduate Students (2)
- Both (3)
- Other (4) \_\_\_\_\_

What policy does the fund use for dividends?

- Cash Dividends on all stock (1)
- Re-invest Dividends on all stocks (2)
- Combination of both (3)

### **Fund Information**

What was the approximate year that the fund was started?

What types of investments are allowed? (Select all that apply)

- Equity (1)
- Debt (2)
- Commodities (3)
- Options (4)
- Other (5) \_\_\_\_\_

Does the fund have a target asset allocation?

- Yes (1)
- No (2)

If No Is Selected, Then Skip To Does the fund make information public...

Answer If Does the fund have a target asset allocation? Yes Is Selected

What percentage of each asset aligns with your fund's target asset allocation?

- \_\_\_\_\_ Cash (1)
- \_\_\_\_\_ Equity (2)
- \_\_\_\_\_ Fixed Income (3)
- \_\_\_\_\_ Other (4)

Is your fund performance publicly available on your college website?

- Yes (1)
- No (2)

If No Is Selected, Then Skip To Is the fund actively managed between ...

Answer If Does the fund make information public via institution's website? Yes Is Selected

Does the fund make specific holdings available?

- Yes (1)
- No (2)

Answer If Does the fund make information public via institution's website? Yes Is Selected  
Please provide URL to the information about the fund.

### **Fund/Class Operation**

Is the fund actively managed between Semesters/trimesters?

- Yes (1)
- No (2)

Approximate what percent of the portfolio is turned over every year?

Indicate which activities, if any, current or former investment classes have participated in.

- CFA Research Challenge (1)
- College Fed Challenge (2)
- Campus wide learning initiatives (3)
- Conferences (4)
- Events (5)
- Personal Finance topics (6)
- Other (7) \_\_\_\_\_

If Conferences Is Not Selected, Then Skip To How are class activities funded?

Answer If Indicate which activities, if any, current or former classes have participated in.  
Conferences Is Selected

What conferences have the current/past classes participated in?

- GAME (1)
- RISE (2)
- ENGAGE (3)
- Other (4) \_\_\_\_\_

How are class/fund activities funded?

- Earnings (1)
- Fund draw downs (2)
- College operating budget (3)

If you would like to be informed about the results of the survey, please provide your email.

## Appendix B – List of Colleges and Universities with Student-Managed Investment Funds\*

Abilene Christian University	Bryn Mawr College
Adelphi University	Bucknell University
Alabama A&M University	Butler University
Alaska Pacific University	California Institute of Technology
Albion College	California Lutheran university
Alfred University	California Polytechnic State Univ.
American University	California State University - Long Beach
Amherst College	California State University - Los Angeles
Anderson University	California State University - Northbridge
Appalachian State University	California State University - Fresno
Arizona State University	Calvin College
Ashland University	Cameron University
Auburn University	Canisius College
Augustana College	Carleton University
Austin College	Carnegie Mellon University
Austin Peay State University	Carroll College
Babson College	Cedar Crest College
Baldwin-Wallace College	Cedarville University
Ball State University	Centenary College of Louisiana
Barry University	Centre College
Baruch College	Central Michigan University
Bates College	Champlain College
Baylor University	Chapman University
Bellarmino University	Christian Brothers University
Belmont University	Christopher Newport University
Benedictine University	Claremont Graduate School
Bentley University	Clark University
Berry College	Clarkson University
Binghamton University - SUNY	Clemson University
Bloomsburg University	Cleveland State University
Bluffton University	Coastal Carolina University
Boise State University	Coe College
Boston College	Colby College
Boston University	Colby-Sawyer College
Bowling Green State University	College of New Jersey
Brandeis University	College of the Holy Cross
Brigham Young University	College of William & Mary
Brown University	College of Wooster
Bryant University	Colorado College

Colorado State University  
Colorado State University - Fort Collins  
Columbia University  
Connecticut College  
Cornell University  
Creighton University  
Culver Stockton College  
Dartmouth College  
Davidson College  
Denison University  
DePaul University  
DePauw University  
Dixie State University  
Drake University  
Drexel University  
Duke University  
Duquesne University  
East Tennessee State University  
Eastern Illinois University  
Eastern Mennonite University  
Eastern Washington University  
Elizabeth City State University  
Elizabethtown College  
Elon University  
Emory University  
Evangel University  
Fairfield University  
Fayetteville State University  
Florida Atlantic University  
Florida Gulf Coast University  
Florida International University  
Florida State University  
Fordham University  
Fordham University - Bronx Campus  
Franklin and Marshall College  
Freed-Hardman University  
Furman University  
Gannon University  
Gardener Webb University  
Georgia Institute of Technology  
Georgia State University  
George Washington University  
Georgetown College  
Georgetown University  
Georgia Southern University  
Gonzaga University  
Grand Valley State University  
Grinnell College  
Gustavus Adolphus College  
Hampden-Sydney College  
Harding University  
Harvard University  
Henderson State University  
High Point University  
Hodges University  
Hofstra University  
Houghton College  
Howard University  
Humboldt State University  
Idaho State University  
Illinois College  
Illinois Institute of Technology  
Illinois State University  
Illinois Wesleyan University  
Indiana State University  
Indiana University  
Indiana University Northwest  
Indiana University of Pennsylvania  
Indiana University Southeast  
Iona College  
Iowa State University  
Ithaca College  
Jackson State University  
Jacksonville University  
James Madison University  
John Carroll University  
Johnson and Wales University  
Juniata College  
Kansas State University  
Kennesaw State University  
Kutztown University  
Lafayette College

Lake Superior State University  
Lamar University  
LaSalle University  
Lehigh University  
LeMoyne College  
Lewis University  
Lipscomb University  
Longwood University  
Loras College  
Louisiana State University  
Loyola Marymount University  
Loyola College  
Loyola University Chicago  
Loyola University Maryland  
Loyola University New Orleans  
Manhattan College  
Marian University  
Marist College  
Marquette University  
Marywood University  
Massachusetts Institute of Technology  
Masters College  
McMurry University  
McNeese State University  
Mercy College  
Messiah College  
Miami University  
Michigan State University  
Michigan Technological University  
Middle Tennessee State University  
Middlebury College  
Midwestern State University  
Millikin University  
Millsaps College  
Minnesota State Mankato  
Minnesota State Moorhead  
Minot State university  
Mississippi College  
Mississippi State University  
Mississippi State University for Women  
Missouri Southern State university

Molloy College  
Monmouth College  
Montana State University - Billings  
Montana State University - Bozeman  
Montclair State University  
Moravian College  
Morehead State University  
Morehouse College  
Muhlenberg College  
Murray State University  
Nazareth College  
Nebraska Wesleyan University  
New Jersey City University  
New Mexico State University  
New York University  
Niagara University  
North Arizona University  
North Carolina A&T  
North Carolina Central University  
North Carolina State University  
North Dakota State University  
Northeastern University  
Northern Illinois University  
Northern Kentucky University  
Northern Michigan University  
Northwest Nazarene University  
Northwestern University  
Norwich University  
Oakland University  
Oberlin College  
Occidental College  
Ohio Northern University  
Ohio State University  
Ohio University  
Ohio Wesleyan University  
Old Dominion University  
Oregon State University  
Ouachita Baptist University  
Pace University  
Pacific Lutheran University  
Penn State - Fayette, The Eberly Campus

Penn State - University Park  
Penn State Behrend  
Pennsylvania State University  
Pepperdine University  
Philadelphia University  
Pomona College  
Portland State University  
Princeton University  
Providence College  
Purdue University  
Purdue University - Fort Wayne  
Quinnipiac University  
Radford University  
Rhode Island College  
Rice University  
Roanoke College  
Robert Morris University  
Roger Williams University  
Rollins College  
Rowan University  
Rutgers University  
Sacred Heart University  
Saint Anselm College  
Saint Bonaventure University  
Saint Cloud State University  
Saint John's University  
Saint Joseph's University  
Saint Louis University  
Saint Mary's University  
Saint Xavier University  
Salisbury University  
Samford University  
San Diego State University  
Santa Clara University  
Scripps College  
Seattle Pacific  
Seattle University  
Seton Hall University  
Shenandoah University  
Shippensburg University  
Siena College

Simpson College  
Slippery Rock University  
Smith College  
South Dakota State University  
Southeast Missouri State University  
Southern Arkansas University  
Southern Connecticut State University  
Southern Illinois University  
Southern Illinois University Carbondale  
Southern Methodist University  
Southern New Hampshire University  
Southern University  
Southwestern University  
Spring Arbor University  
St. Bonaventure University  
St. John Fisher College  
St. Lawrence University  
St. Thomas University  
Stanford University  
State University of New York - Albany  
State University of New York - Geneseo  
Stephen F Austin State University  
Stetson University  
Stevens Institute of Tech  
Stonehill College  
Susquehanna University  
Syracuse University  
Taylor University  
Temple University  
Tennessee State University  
Tennessee Tech University  
Texas A & M University  
Texas Christian University  
Texas State University  
Texas Tech University  
Texas Wesleyan University  
The Citadel  
Thomas College  
Towson University  
Trevecca Nazarene University  
Trinity College



Trinity University  
Truman State University  
Tufts University  
Tulane University  
Union University  
University of Akron  
University of Albany  
University of Alabama - Birmingham  
University of Alabama - Huntsville  
University of Alabama - Tuscaloosa  
University of Alaska  
University of Arizona  
University of Arkansas - Fayetteville  
University of California - Berkeley  
University of California - Los Angeles  
University of Central Florida  
University of Central Missouri  
University of Chicago  
University of Cincinnati  
University of Colorado - Boulder  
University of Colorado - Colorado Springs  
University of Colorado - Denver  
University of Connecticut  
University of Dallas  
University of Dayton  
University of Delaware  
University of Denver  
University of Evansville  
University of Florida  
University of Georgia  
University of Hartford  
University of Houston  
University of Idaho  
University of Illinois  
University of Iowa  
University of Kansas  
University of Kentucky  
University of Louisville  
University of Maine  
University of Mary  
University of Maryland  
University of Massachusetts Boston  
University of Massachusetts Lowell  
University of Memphis  
University of Michigan  
University of Michigan - Dearborn  
University of Minnesota  
University of Minnesota - Duluth  
University of Mississippi  
University of Missouri - Columbia  
University of Missouri St. Louis  
University of Missouri-Kansas City  
University of Montana  
University of Nebraska - Lincoln  
University of Nebraska - Omaha  
University of Nebraska Kearney  
University of Nevada  
University of Nevada, Reno  
University of New Hampshire  
University of New Haven  
University of New Mexico  
University of North Alabama  
University of North Carolina - Chapel Hill  
University of North Carolina - Charlotte  
University of North Carolina - Wilmington  
University of North Carolina at Pembroke  
University of North Dakota  
University of North Florida  
University of North Texas  
University of Northern Colorado  
University of Northern Iowa  
University of Notre Dame  
University of Oklahoma  
University of Oregon  
University of Pennsylvania  
University of Pittsburgh  
University of Pittsburgh - Katz  
University of Portland  
University of The Redlands  
University of Rhode Island  
University of Richmond  
University of Rochester

University of Saint Francis	Valdosta State University
University of San Francisco	Vanderbilt University
University of Sioux Falls	Villanova University
University of South Alabama	Virginia Commonwealth University
University of South Carolina	Virginia Military Institute
University of South Carolina Upstate	Virginia Tech
University of South Dakota	Wabash College
University of South Florida	Walsh College
University of Southern California	Wartburg College
University of Southern Indiana	Washburn University
University of Southern Mississippi	Washington and Lee University
University of St. Thomas	Washington College
University of Tampa	Washington State University
University of Tennessee - Chattanooga	Washington University in St. Louis
University of Tennessee - Knoxville	Wayne State University
University of Tennessee - Martin	Wesleyan University
University of Texas	West Liberty University
University of Texas at Dallas	West Texas A&M University
University of Texas at El Paso	West Virginia University
University of The Incarnate Word	Western Carolina University
University of the Pacific	Western Kentucky University
University of Toledo	Western Michigan University
University of Tulsa	Western New England University
University of Utah	Western Washington University
University of Vermont	Westminster College
University of Virginia - Darden Graduate	Whitman College
University of Virginia - McIntire School	Whitworth University
University of Washington	Widener University
University of West Alabama	Willamette University
University of Wisconsin-Eau Claire	William Paterson University
University of Wisconsin-La Crosse	Winona State University
University of Wisconsin-Madison	Winston-Salem State University
University of Wisconsin-Milwaukee	Winthrop University
University of Wisconsin-Oshkosh	Wofford College
University of Wisconsin-Platteville	Wright State University
University of Wisconsin-Whitewater	Xavier University
University of Wyoming	York College of Pennsylvania
Utah State University	Youngstown State University
Utica College	

*\*Of the 483 identified schools, 441 were solicited to participate in the research survey. Contact information for remaining schools could not be properly identified.*