

**Student Investment Management (SIM)**

**Fund**

**Annual Report**

**June 2019**



**Fisher College of Business (FCOB)**

**The Student Investment Management (SIM) Program**

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**Acknowledgements**

***The SIM Fund family would like to thank:***

**SIM Class Director & Instructor**

Dr. Kewei Hou – *SIM Director and FCOB Professor*

Royce West – *SIM class Lecturer*

**SIM Class Guest Speakers**

Scott Adams – *The Ohio State University Investment Office*

###### Dave Brinkman – *Schneider Downs Wealth Management*

Ken Chee *– STRS Ohio*

John Lane *– CIO, The Ohio State University*

John Schwarck, *Director of Tech Investments, American Electric Power*

Dan Roberts – *Chief Economicst, STRS Ohio*

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**Donors**

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**SIM & Endowment Fund Management**

Gary Leimbach, Natalie Darner, Jeff Smith, and Katherine Seay – *Controller’s Office, for managing the SIM Fund and all University endowment funds*

**Table of Contents**

History of the Student Investment Management (SIM) Program 4

SIM Program Objectives and Philosophy 5

SIM Program Investment Process 7

SIM Program Performance: SIM vs. S&P 500 9

**Appendices**

SIM Fund Holdings – June 30, 2019 13

SIM Fund BUY Transactions – July 1, 2018 to June 30, 2019 14

SIM Fund SELL Transactions – July 1, 2018 to June 30, 2019 15

SIM Fund Dividends Received – July 1, 2018 to June 30, 2019 17

SIM Fund Net Interest Received – July 1, 2018 to June 30, 2019 18

SIM Fund Management Fees – July 1, 2018 to June 30, 2019 18

Rosenfield Family Prizes for Excellence in Security Analysis 18

SIM Portfolio Investment Methodology – June 2019 19

**History of the Student Investment Management (SIM) Program**

Following an initial what-if “paper dollar” experiment that lasted approximately one year, a team of students in 1990 developed a proposal for managing an actual endowment fund. The team made a presentation before the Investment Committee of the University Trustees. On the basis of the proposal and favorable results during the trial period, the student team was awarded a $5 million equity account. A burst of media attention followed the initial press release, including a spot on the NBC morning show, *Today*. Coverage of the first anniversary of the Program was even more intense upon the announcement that the student account had earned 20% or $1 million while the S&P 500 index had only returned 13.5%. Incredibly, students eclipsed their high returns the second year with a return of 25% or $1.5 million.

From its inception and through its continuing evolution, The Ohio State University’s (OSU) SIM Program has been an integrated effort by many individuals and groups. The SIM class is the heart of the Program, but there is much support offered from the following:

**University Trustees**: University Trustees proposed the project, monitored its early development, and approved the final plan. In addition, the Board continues to supervise both the investment and academic merits of the Program.

**University Administration**: The SIM class was hired as an equity manager subject to the same conditions and limitations that apply to any other equity manager for the University Endowment with one notable exception: The Office of Investments serves as the formal manager of the account. To date, the office has been able to follow the advice provided by the SIM class. Should the need arise, The Office of Investments has the authority to override decisions or to take independent actions. This arrangement allows the SIM Program to avoid potential legal problems regarding fiduciary responsibility. It also eliminates logistical problems due to the academic calendar (vacations, turnover of student managers, etc.). Other University offices are involved with the SIM Program as well, including University Communications, which helps coordinate media relations.

**Fisher College of Business**: Fiscal responsibility for the management of the program rests with the Dean’s office. The Office of External Affairs also assists with program publicity, media and alumni relations, investment management, special events and visits to financial centers.

**Securities Industry**: Support from the greater investment community has been extensive. Over time, the SIM Program has found increasingly more effective channels for this support, which now include summer internships, guest speakers for the SIM class, state-of-the-art investment information services, and reasonably priced trade and service commissions. The SIM Program would like to express its gratitude to the Frank Bettendorf Group of Morgan Stanley, who invites Fisher College of Business MBA candidates as finalists for the Morgan Stanley Scholarship.

**SIM Program Objectives and Philosophy**

The Ohio State University SIM Program combines traditional academic objectives with the practical demands of hands on investment management. The trustees, administration, and faculty view the Program as a unique opportunity for delivering high quality, pragmatic education in an area of considerable interest to students and employers alike.

The SIM Program has three primary objectives:

* To achieve a total return in excess of the benchmark, the S&P 500 index,
* To preserve and maintain the real purchasing power of the fund, and
* To enhance the educational experience of the students by providing them an opportunity to apply the investment management skills and knowledge learned in the classroom

Outside the classroom, the SIM Program concentrates on establishing and maintaining ties with the investment community which, in turn, enhances public relations for both the Fisher College of Business and The Ohio State University. Each year, the Program aims to sponsor student trips to major U.S. and international financial markets, such as New York, Chicago, and Hong Kong. While on these trips, the SIM students meet with professionals, often Fisher or OSU alumni, in the investment industry.

From an academic perspective, the SIM Program focuses on developing the students’ understanding of the securities market, specifically, and the financial markets, in general. To do so, different analytical valuation tools are presented, developed, and hopefully mastered throughout the class term. The valuation techniques are supplemented by theoretical material, as well as the real-world application and interaction with the SIM fund. In this way, a more complete understanding of investment theory and portfolio development is accessible to the SIM students. Ultimately, the SIM students become active portfolio managers of the fund. Each SIM student is responsible for a part of the portfolio in the following way:

* Each student is assigned one security from the existing SIM fund. The student analyst gives current event updates on his or her security in every class session.
* The class as a whole is further divided into market sector groups, which are then responsible for researching and analyzing that specific market sector. Periodic reports are delivered to the class outlining overall trends and recent developments.
* Furthermore, students are charged with researching potential security additions or replacements of the current fund securities.
* The culmination of the security and market sector analysis results in class presentations on portfolio rebalancing among sectors and also buy/hold/sell stock recommendations. The entire class then votes on the recommended actions based on the presented information and persuasiveness of the students.

**The Rosenfield Prize**: Thanks to a generous donation from OSU alumni Jack and Dan Rosenfield, the SIM Program maintains a rewarding process in which the SIM students are required to prepare an investment report on their assigned stocks in the SIM fund. Each semester, two prizes are awarded: $2,500 for the winner and $1,000 for the runner-up. The students also gain a competitive advantage in security analysis for any future internship or full-time employment opportunities.



Figure 1 – SIM Program Director Professor Kewei Hou and Fall 2015 Rosenfield Prize Winner Ryan Kong

**SIM Program Investment Process**

The investing philosophy of the SIM Program is based on a value investing approach, specifically that fundamental analysis can be used to identify attractively priced securities in the market. Because markets are inefficient in the short term, the market price of the security can experience volatility around the “intrinsic value” of the security. Fundamental analysis plays a role in determining the intrinsic value and then comparing that to how the security is currently priced in the market. Stocks that are priced lower than the intrinsic value are examined as potential additions to the SIM fund, while stocks that are priced higher than the intrinsic value are not. The alignment of the SIM Program with this intrinsic value philosophy causes the fund to be focused on large-cap value stocks with an eye towards portfolio risk diversification as well.

In the classroom, students become active portfolio managers of the SIM Fund. They are divided into market sector groups. Sector groups review the prior class sector presentations and complete a detailed update. The groups present their sector outlooks to the class with emphasis on business, economic, financial, and valuation analyses. The presentation ends with a recommendation to overweight, market-weight, or underweight the SIM Fund’s position relative to the S&P 500.

Following the sector round of presentations, each sector group assesses their current SIM Fund holdings and evaluates alternative companies within the sector as possible additions. Finally, the group makes another class presentation, in which they recommend to buy, sell, or hold the SIM Fund holdings. Students may also use this forum to make the case for any additional securities to be added to the SIM portfolio. The only requirement for security additions is that the new stock(s) must be within the group’s assigned market sector. After this round of presentations, a final class discussion and vote takes place. The class engages in a group decision-making process and a majority rule applies to the vote. The aggregate buys and sells are finalized, and trade orders get sent out to the brokers.

To facilitate continuity, all market sector and security specific presentations are uploaded to the SIM website under the “Class Info” section ([www.fisher.osu.edu/fin/courses/sim](file:///E:\SIM%20Program\Annual%20Report\2013\www.fisher.osu.edu\fin\courses\sim) or [www.buckeyefunds.com](file:///E:\SIM%20Program\Annual%20Report\2013\www.buckeyefunds.com)). Current students, as well as former and prospective students, professors, SIM friends, and the general public, can review past class presentations on the website. The individual investment reports of the Rosenfield Prize winners and runner-ups are also available on the website.

**SIM Program Performance: SIM versus S&P 500**

The benchmark for the SIM fund is the S&P 500 Index. For the fiscal year ending June 30, 2019, the SIM portfolio’s net return was 10.98% compared to 10.42% for the S&P 500 benchmark. Figure 1 shows the relative performance of both for the fiscal year ending June 30, 2019. Figure 2 shows an overall 10-year relative performance.

Figure 1: SIM versus S&P 500 - Relative Performance - July 1, 2018 to June 30, 2019

Figure 2: SIM versus S&P 500 - Relative Performance - July 1, 2009 to June 30, 2019

Figure 3 shows the relative returns of the SIM Fund and the S&P 500 benchmark for different time periods, including the last fiscal year, 3-year, 5-year, 10-year, and since inception time intervals.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| FY 19 Returns | | 3-Year Return | 5-Year Return | 10-Year Return | 15-Year Return | Since Inception (2/13/90) |
| S&P 500 | 10.42% | 14.19% | 10.71% | 14.70% | 8.75% | 10.01% |
| SIM (Net of Fees) | 10.98% | 13.63% | 6.94% | 11.04% | 6.27% | 7.84% |

Figure 3: SIM versus S&P 500 - Annualized Portfolio Return

Figure 4 gives an overview of the SIM portfolio as of June 30, 2019 and June 30, 2018. The market value of the fund increased to $10.524m from $10.515m in 2018. The number of portfolio holdings increased from 32 to 38 holdings. It is worth noting that at the end of April, 2019, the SIM fund had a value of $11,074,264.85. Due to the size of the fund, the Office of Investments made a $500,000.00 cash withdrawal to bring the fund closer to $10m and in line with its objectives. Similarly, in July 2018, the SIM fund had a value of $10,714,331.84 and $700,000.00 cash was withdrawn.

|  |  |  |
| --- | --- | --- |
|  | 30-Jun-19 | 30-Jun-18 |
| Inception Date | 2/13/90 | 2/13/90 |
| Total Net Assets | $10,523,598.95 | $10,514,544,.46 |
| Number of Equity Positions | 38 | 32 |
| Average Market Capitalization (in $ mln) | $166,341.79 | $128,792.31 |
| Average Weighted Market Capitalization (in $ mln) | $158,789.76 | 140,651.53 |
| Average P/E Ratio | 19.09 | 28.1 |
| Average P/B Ratio | 4.21 | 4.77 |
| Average Dividend Yield | 1.70% | 1.55% |

Figure 4: SIM Fund Overview - June 30, 2019 versus June 30, 2018

3

As of fiscal year ending June 30, 2019, the SIM Fund was overweight relative to the S&P 500 in Financials, Industrials, Materials, and Real Estate, while underweight in Information Technology, Health Care, Consumer Discretionary, Consumer Staples, Energy, Utilities, and Communication Services. The cash position in the SIM Fund represents 2.14% of the total portfolio value. Figure 5 shows the sector weights in comparison to the benchmark. Figure 6 gives an overview of selected risk measures for the SIM Fund.

|  |  |  |  |
| --- | --- | --- | --- |
| Sector Allocation | SIM | S&P 500 | +/- |
| Information Technology | 21.66% | 21.73% | -0.07% |
| Financials | 13.79% | 13.13% | 0.66% |
| Health Care | 12.91% | 13.29% | -0.38% |
| Consumer Discretionary | 9.59% | 10.37% | -0.78% |
| Consumer Staples | 6.42% | 7.21% | -0.79% |
| Industrials | 9.68% | 9.64% | 0.04% |
| Energy | 5.30% | 5.37% | -0.07% |
| Utilities | 2.51% | 3.21% | -0.70% |
| Materials | 3.29% | 2.72% | 0.57% |
| Communication Services | 9.59% | 10.38% | -0.79% |
| Real Estate | 3.12% | 2.95% | 0.17% |

Figure 5: SIM versus S&P 500 - Sector Allocations - June 30, 2019

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Risk Measures | Fiscal Year | 3-Year | 5-Year | 10-Year | Since Inception |
| **Standard Deviation** |  |  |  |  |  |
| SIM Fund | 6.66% | 4.08% | 3.90% | 4.21% | 4.79% |
| S&P 500 | 5.48% | 3.52% | 3.49% | 3.68% | 4.12% |
| **Sharpe Ratio** |  |  |  |  |  |
| SIM Fund | 0.13 | 0.26 | 0.15 | 0.22 | 0.11 |
| S&P 500 | 0.14 | 0.30 | 0.24 | 0.32 | 0.16 |

Figure 6: SIM versus S&P 500 - Risk Measures

Figure 7 shows the performance of the fund compared to the S&P 500 for each particular month of the 2019 fiscal year. The SIM Fund was able to outperform its benchmark six months out of the trailing twelve-month period.

Figure 7: SIM versus S&P 500 - Monthly Return Comparisons - July 1, 2018 to June 30, 2019

At the end of the 2019 fiscal year, the ten largest holdings of the SIM Fund amounted to $4,254,766 which accounts for 40.80% of the Fund’s total value. The largest holding was Total System Services Inc. with a market value of $487,426, equaling 4.67% of the SIM Fund.

|  |  |  |  |
| --- | --- | --- | --- |
| Security | Ticker | Market Value | SIM Fund % |
| Total Systems Services Inc. | TSS | $487,426 | 4.67% |
| Apple Inc. | AAPL | $480,946 | 4.61% |
| Amazon.com Inc. | AMZN | $435,535 | 4.18% |
| Wells Fargo & Co. | WFC | $420,675 | 4.03% |
| Micron Technology Inc. | MU | $414,457 | 3.97% |
| United Continental Holdings Inc. | UAL | $413,236 | 3.96% |
| Metlife Inc. | MET | $411,764 | 3.95% |
| General Motors Co. | GM | $406,492 | 3.90% |
| Alphabet Inc. – Class A | GOOGL | $400,636 | 3.84% |
| Molson Coors Brewing Co. | TAP | $383,600 | 3.68% |
| **Total** | | $4,254,766 | 40.80% |

Figure 8: SIM Fund Top Ten Holdings - June 30, 201

**Appendix 1: SIM Fund Holdings – June 30, 2019**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Ticker** | **Security** | **Quantity** | **Unit Cost** | **Market Price** | **Market Value** | **SIM Fund %** |
| ALXN | ALEXION PHARMACEUTICALS INC | 1,700 | $136.88 | $130.98 | $222,666.00 | 2.14% |
| GOOGL | ALPHABET INC-CL A | 370 | $572.10 | $1082.80 | $400,636.00 | 3.84% |
| MO | ALTRIA GROUP INC | 900 | $54.65 | $47.35 | $42,615.00 | 0.41% |
| AMZN | AMAZON.COM INC | 230 | $796.41 | $1,893.63 | $435,534.90 | 4.18% |
| AAPL | APPLE INC | 2,430 | $92.78 | $197.92 | $480,945.60 | 4.61% |
| BXP | BOSTON PROPERTIES INC | 1,050 | $118.88 | $129.00 | $135,450.00 | 1.30% |
| CELG | CELGENE CORP | 3,750 | $83.66 | $92.44 | $346,650.00 | 3.32% |
| COP | CONOCOPHILLIPS | 1,400 | $68.25 | $61.00 | $65,400.00 | .082% |
| CTVA | CORTEVA INC | 866 | $31.72 | $29.57 | $25,607.62 | 0.25% |
| CCK | CROWN HOLDINGS INC | 2,730 | $46.56 | $61.10 | $166,803.00 | 1.60% |
| DOW | DOW INC | 1,740 | $58.25 | $49.31 | $85,799.40 | 0.82% |
| DRE | DUKE REALTY CORP | 6,000 | $28.98 | $31.61 | $189,660.00 | 1.82% |
| DD | DUPONT DE NEMOURS INC | 866 | $83.83 | $75.07 | $65,010.62 | 0.62% |
| FB | FACEBOOK INC | 1,140 | $181.18 | $193.00 | $220,020.00 | 2.11% |
| FDX | FEDEX CORP | 650 | $196.54 | $164.19 | $106,723.50 | 1.02% |
| GM | GENERAL MOTORS CO | 10,550 | $36.57 | $38.53 | $406,491.50 | 3.90% |
| GILD | GILEAD SCIENCES INC | 5,220 | $59.74 | $67.56 | $352,663.20 | 3.38% |
| GPN | GLOBAL PAYMENTS INC | 2,200 | $140.19 | $160.13 | $352,286.00 | 3.38% |
| HCA | HCA HEALTHCARE INC | 2,230 | $97.02 | $135.17 | $301,429.10 | 2.89% |
| MPC | MARATHON PETROLEUM CORP | 5,950 | $62.73 | $55.88 | $332,486.00 | 3.19% |
| MET | METLIFE INC | 8,290 | $38.99 | $49.67 | $411,764.30 | 3.95% |
| MU | MICRON TECHNOLOGY INC | 10,740 | $38.38 | $38.59 | $414,456.60 | 3.97% |
| TAP | MOLSON COORS BREWING CO | 6,850 | $64.22 | $56.00 | $383,600.00 | 3.68% |
| NWL | NEWELL BRANDS INC | 10,240 | $25.18 | $15.42 | $157,900.80 | 1.51% |
| NEE | NEXTERA ENERGY INC | 1,280 | $122.97 | $204.86 | $262,220.80 | 2.51% |
| NVDA | NVIDIA CORP | 1,260 | $158.51 | $164.23 | $206,929.80 | 1.98% |
| OSK | OSHKOSH CORP | 2,810 | $78.75 | $83.49 | $234,606.90 | 2.25% |
| PTEN | PATTERSON-UTI ENERGY INC | 11,740 | $16.27 | $11.51 | $135,127.40 | 1.30% |
| SNA | SNAP-ON INC | 1,540 | $167.06 | $165.64 | $255,085.60 | 2.45% |
| SYF | SYNCHRONY FINANCIAL | 10,700 | $29.56 | $34.67 | $370,969.00 | 3.56% |
| TSS | TOTAL SYSTEM SERVICES INC | 3,800 | $100.43 | $128.27 | $487,426.00 | 4.67% |
| UAL | UNITED CONTINENTAL HOLDINGS | 4,720 | $65.95 | $87.55 | $413,236.00 | 3.96% |
| VZ | VERIZON COMMUNICATIONS INC | 6,632 | $55.21 | $57.13 | $378,886.16 | 3.63% |
| WMT | WALMART INC | 2,200 | $72.03 | $110.49 | $243,078.00 | 2.33% |
| WFC | WELLS FARGO & CO | 8,890 | $53.95 | $47.32 | $420,674.80 | 4.03% |
| ZION | ZIONS BANCORP NA | 5,100 | $47.03 | $45.98 | $234,498.00 | 2.25% |
| MDT | MEDTRONIC PLC | 3,550 | $84.09 | $97.39 | $345,734.50 | 3.32% |
| NXPI | NXP SEMICONDUCTORS NV | 3,240 | $99.09 | $97.61 | $316,256.40 | 3.03% |

**Appendix 2: SIM Fund BUY Transactions – July 1, 2018 to June 30, 2019**







**Appendix 3: SIM Fund SELL Transactions – July 1, 2018 to June 30, 2019**







**Appendix 4: SIM Fund Dividends Received – July 1, 2018 to June 30, 2019**



**Appendix 5: SIM Fund Net Interest Received – July 1, 2018 to June 30, 2019**



**Appendix 6: SIM Fund Management Fees – July 1, 2018 to June 30, 2019**

|  |  |  |
| --- | --- | --- |
| **Date** | **Porfolio Value** | **Fee** |
| **Dreyfus Cash Management Fund** | | |
| **9/28/18** | **$10,711,161.76** | **$26,770.37** |
| **12/31/18** | **$9,266,107.37** | **$23,150.75** |
| **03/29/19** | **$10,768,305.84** | **$26,908.79** |
| **06/28/19** | **$10,523,598.95** | **$26,300.39** |

**Appendix 7: Rosenfield Family Prizes for Excellence in Security Analysis – July 1, 2018 to June 30, 2019**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Winner** | **SIM Security** | **Runner-Up** | **SIM Security** |
| **Summer 2018** | **Korey Murnane** | **Cisco Systems** | **Eric Wu** | **Eli Lilly & Co.** |
| **Fall 2018** | **Michael Natalizio** | **Intel** | **Alyssa Bey** | **General Motors** |
| **Spring 2019** | **Trevor Thompson** | **Wells Fargo** | **Jayaprabha Dhavale** | **Marathon Petroleum** |

**Appendix 8: SIM Portfolio Methodology – June 2019**

**Portfolio Objective**

The Student Investment Management (SIM) portfolio seeks to achieve long-term returns greater than the S&P 500 benchmark.

**Portfolio Philosophy**

The SIM portfolio applies rigorous valuation methods to find attractive equity investment opportunities. The portfolio team has a long-term (infinite) time horizon.

**Asset Allocation**

The portfolio will attempt to be fully invested in equities, with cash holdings less than 5%

of the portfolio.

**Sector Selection**

The SIM portfolio will remain nearly sector neutral, with sector allocation of +/- 100bps

vs. the benchmark S&P 500. Rebalancing will occur at the end of each semester.

**Stock Selection**

The stock selection universe will be sourced from the S&P 500 Index and will primarily be comprised of large market capitalization stocks. The primary driver of stock selection is Discounted Cash Flow (DCF) analysis, which adjusts for differences in accounting methodologies across various sectors and industries, additionally incorporating varying levels of risk through the discount rate. The team seeks to determine the underlying value of the company, with the goal of buying stocks that trade at a discount to intrinsic value. The team will also use other valuation techniques, including P/E, P/B, P/S, EV/EBITDA, and sum-of-parts as secondary valuation measures to determine which stocks are attractively priced. Additionally, because the fund will remain nearly sector neutral, the class will use relative valuation to find stocks within a sector that are less expensive than their peers.

**Risk Controls/ Portfolio Characteristics**

The portfolio will be concentrated in nature, typically holding between 30 and 50 long stock positions and have a large cap risk profile. No single security position will be greater than 5% of the portfolio. In order to mitigate risk, the portfolio will remain nearly sector neutral vs. the S&P 500, with sector allocation of +/- 100bps relative to the benchmark. The portfolio will be rebalanced at the end of each semester to bring sector/stock bets back into the aforementioned ranges. In the event the portfolio appreciates above the threshold, it will be sold down to $10 million when trades are executed at the end of each semester.