Virginia Tech SEED

2023 Annual Report

A Letter from our Co-CEO's

To the supporters of SEED,

2023 has been one of significant achievements and growth for Virginia Tech SEED. We are immensely proud to share our ongoing commitment to providing outstanding learning experiences for our students, equipping them not only for academic success, but also for successful careers beyond Virginia Tech.

Throughout the past year, Virginia Tech SEED has once again demonstrated its dedication to enhancing member proficiency and maintaining analyst engagement in their training journey. With the departure of twenty-one seniors, a solid foundation was laid for the incoming group of twenty-three analysts. Our training processes have continued to evolve, attracting bright, eager, and motivated students. The caliber of students SEED recruits is a testament to our success. We have consistently attracted diligent students who have gone on to secure placements in investment banking, capital markets, sales and trading, consulting, and much more. Noteworthy firms such as Goldman Sachs, Bank of America, JP Morgan, and Citi have welcomed our alumni into their ranks.

Performance remains our top priority, and we are pleased to report a 0.998% risk-adjusted outperformance. However, amidst our successes, we have also encountered challenges. Our lead analysts have shown resilience as we sort through our plans, remaining focused on greater opportunities while emphasizing risk mitigation.

Looking ahead to 2024, we are eager to continue making strides. For the first time since our establishment in 1992, SEED has two women CEOs. We believe this is a testament to our DEI progress, marking an important moment in our organization's history. While already making great changes this year, we strive to continue breaking barriers. Additionally, we are enhancing our training processes by incorporating resources such as the Corporate Finance Institute (CFI), BamSEC, Bloomberg, and Morningstar Direct.

In conclusion, we approach the future with optimism and enthusiasm, confident in SEED's bright prospects. With over three decades of success and the guidance of Professor Billingsley, we stand on the shoulders of those who came before us, grateful for their contributions in shaping our organization. It is both an honor and a privilege to lead SEED into its next phase of growth and development.

Warm regards,

Kennedy Kabance

Kennedy Kabance
Co-Chief Executive Officer, SEED

Salma Khorramshahgol

Salma Khorramshahgol
Co-Chief Executive Officer, SEED

A Letter from our Faculty Advisor

Dear SEED Alumni, Friends, and Supporters,

SEED's best investment in 2023 was its student members – as is the case every year. The organization's goals continue to include educating our students in equity selection and portfolio management, providing hands-on learning opportunities, and generating attractive returns relative to our benchmark for our supportive client, the Virginia Tech Foundation. Our 100 percent placement record remains in place with internships and full-time placements at companies that include Goldman Sachs, Morgan Stanley, JP Morgan, Citi, Wells Fargo, Bank of America, Davenport, Ernst & Young, and Google.

SEED outperformed by about 100 basis points after risk-adjusting for our portfolio beta of 0.90. One of our goals in 2024 is to judiciously increase our risk to that of our benchmark, the S&P 500, so that we can also outperform on a raw, unadjusted basis. For most of 2023, the stock market's outstanding performance was dominated by large cap growth stocks, especially the so-called "Magnificent Seven" of the tech sector. This was a challenge for SEED given our emphasis on valuation fundamentals. And we learned more from further refining our quantitative strategies. All-in-all, SEED had a great year building human capital and placing more students in excellent professional positions. As faculty advisor, I'm proud of our students' outstanding performance.

SEED's executive team in 2023 consisted of co-CEOs Carson Kabance and Piyush Pokala and CIO Riley King. They did a superb job leading SEED. Examples include improvements to the analyst-in-training program, increased participation in off-campus stock pitch competitions, a more disciplined investment approach, and achieving greater diversity in our recruiting. Our new executive team for 2024 includes Kennedy Kabance and Salma Khorramshahgol as co-CEOs and Grant Goodall as CIO. It's clear they will continue the great work of 2023 with their own creative initiatives.

As faculty advisor, I am grateful to SEED's alumni, friends, and supporters. I thank our students for their commitment to excellence and for their hard work. I thank CEO Justice Elizabeth McClanahan and CIO David Greenberg of the Virginia Tech Foundation for their continuing support of the students of SEED and Virginia Tech. I am grateful to finance department head Professor Vijay Singal and Dean Saonee Sarker of the Pamplin College of Business for supporting SEED and my role as its faculty advisor. I thank the members of the SEED Advisory Board for their guidance and vision for the continued improvement of SEED. Once again, I especially thank Chair Trey Snow, CFA, for his consistent support of SEED and my role in it. Each year Trey does more to support SEED, its students, and the Pamplin College of Business.

I thank our alumni, friends, and supporters who help us continue pursuing excellence and learning how to manage our investment portfolio better for the benefit of our students, the Virginia Tech Foundation, the Pamplin College of Business, and Virginia Tech.

Sincerely,

Randall Billingsley

Professor Randall Billingsley
Faculty Advisor, SEED

2023 Annual Report

Advisory Board

Trey Snow
Chairman

Chad Meade
Member

Christina Todd
Member

Duffy Fischer
Member

James Rosenstock
Member

Kevin Bennett
Member

Nick Cullen
Member

Nick D'Angelo
Member

Patrick Moody
Member

Tracy Castle-Newman
Member

Vanessa Bradford
Member

Our board members play a pivotal role in guiding our organization with their wealth of experience, diverse expertise, and commitment to SEED. Their contributions extend beyond decision-making, as they actively support and mentor our team, fostering a collaborative environment that drives innovation and success. With their dedicated leadership, our board members inspire a culture of excellence, ensuring the sustained growth and positive impact of our endeavors beyond Virginia Tech SEED.

Leadership Team

Kennedy Kabance | Co-CEO

Kennedy is a junior studying Finance with minors in International Business and Political Science. This past summer, Kennedy interned at Arrowmark Partners as an Investment Analyst Intern in Denver. Next summer, she will be working as a Sales and Trading Intern at Citi in New York.

Salma Khorramshahgol | Co-CEO

Salma is a junior studying Finance with a minor in International Business. Over the summer, Salma worked at RBC as a Global Markets summer analyst, specifically on the REPO team. She will be returning to New York this summer as an Equity Capital Markets Intern at Goldman Sachs.

Grant Goodall | CIO

Grant is a junior studying Finance. Last summer, he interned for Chase Investment Counsel, a wealth management firm, and The Felton Group, a venture capital firm. Next summer, Grant will participate in a two-week Investment Banking Bootcamp with Harris Williams, followed by an internship with Regions Bank in their investment banking division.

Randy Billingsley

Faculty Advisor

Dom Bivins

Consumer Sector
Lead Analyst

Viktor Fedotov

Energy Sector
Lead Analyst

Adam Wieczorek

Financial Sector
Lead Analyst

Maya Snyder

Healthcare Sector
Lead Analyst

Lucas LeClair

Industrial Sector
Lead Analyst

Sebastian Franks

Technology Sector
Lead Analyst

Eera Rasne

Value Momentum
Lead Analyst

Analysts

Alex Nazari
Consumers

Justin Harrison
Consumers

Maddy McNiff
Consumers

Riley King
Consumers

Walker Hayes
Consumers

Andrew Hockersmith
Energy

Justin Hoover
Energy

Kevin Wang
Energy

Will Stinson
Energy

James Schooling
Financials

Kobey Simon
Financials

Lily Shiveley
Financials

Michael Binyam
Financials

Piyush Pokala
Financials

Brandon Smith
Healthcare

Analysts

Elan Parandeh
Healthcare

Supraja Ashok
Healthcare

Ansuman Rath
Industrials

Carson Schubert
Industrials

Gabby Latino
Industrials

Max Skirkanich
Industrials

Carson Kabance
Technology

Luke Jackman
Technology

Nick Carbone
Technology

Ruba Gari
Technology

Zach Schwartzman
Technology

Kritika Parthasarathy
Value Momentum

Louis Tucker
Value Momentum

Luke Schermerhorn
Value Momentum

Tim Carey
Value Momentum

Analysts-in-Training

Adam Bridges
FinTech

Aiden Grine
Finance

Alex Pierce
Finance

Charles Liu
FinTech

Deeba Hussini
FinTech

Drew Nayak
Finance

Eric Albi
Finance

Greg Patterson
Finance

Hallie Rodes
Finance

Jack Croke
Finance

Jason Witt
Finance & Accounting

Lorenzo Silva
Industrial & Systems Engineering

Marcio Parente
Computer Science

Nandini Bhola
Computer Engineering

Tanner Lovern
Finance

Will Grossarth
Finance

SEED Overview

The Student-managed Endowment for Educational Development (SEED) was established in 1992 with students looking to learn more about investing in equities. As a group, SEED's mission is to outperform the S&P500 with the $5 million managed on behalf of the Virginia Tech Endowment. Since its inception, the organization has had over 450 members with 41 current members and a 100% job placement rate. Outside of learning how to invest in equities, SEED teaches members professionalism, networking, and prepares students for internships and positions in the financial industry.

Sectors

| Consumers | Energy | Financials | Healthcare | Industrials | Technology |

Committees

Alumni Relations	Lucas LeClair and his team of five are focused on building and maintaining relationships with alumni through organizing alumni engagement events, Giving Day initiatives, and updating our alumni database.
Covered Calls	Alex Nazari and his team of three have been working on implementing a covered calls strategy focused on risk assessment, valuation, and income potential across all sectors.
Newsletter	Zachary Schwartzman and his team of two work on composing monthly newsletters for alumni, featuring performance highlights, and insight on key updates from the group.
Research	Sebastian Franks and his team of three work closely with the CIO to analyze market trends and their impact on the portfolio. The team writes papers on past market trends and provides weekly updates on current market news.

Sector Overview

Consumer Sector

The consumer sector is composed of the consumer staples and discretionary sectors. Consumer discretionary encompasses businesses that tend to be the most sensitive to economic cycles like automotive, household durable goods, restaurant, leisure, and textiles & apparel industries. The consumer staples side focuses on businesses that are less sensitive to economic cycles. It includes manufacturers and distributors of food, beverages, and tobacco, producers of non-durable household goods, and personal products.

Energy Sector

The energy sector is comprised of both the energy and utilities sectors. The energy sector largely focuses on companies engaged in exploration & production, refining & marketing, and storage & transportation. In addition, it also focuses on electrical, gas, and water utility companies as well as companies in the renewable energy sector.

Financial Sector

The financials sector contains banking, thrifts & mortgage finance, specialized finance, consumer finance, asset management and custody banks, investment banking and brokerage and insurance industries. Aside from financial services, the sector also includes real estate investment funds in a variety of industries.

Healthcare Sector

The healthcare sector includes health care providers & services, companies that manufacture and distribute health care equipment & supplies, and health care technology companies. It also includes companies involved in the research, development, production and marketing of pharmaceuticals and biotechnology products.
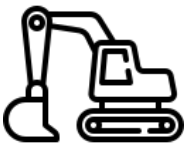
Industrial Sector

The industrials sector is comprised of both the typical industrial industries including manufacturers and distributors of capital goods such as aerospace & defense, building products, electrical equipment and machinery and companies that offer construction and engineering services. It also includes materials companies like providers of commercial & professional services including printing, environmental and facilities services, office services & supplies, and transportation services.
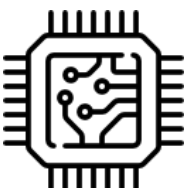
Technology Sector

The technology sector covers both the information technology and communication services sectors. More specifically, it covers companies in technology software & services, technology hardware & equipment, and semiconductors & semiconductor equipment manufacturers industries in information technology. The communication services side of the sector focuses on companies that facilitate communication and offer related content and information through various mediums, primarily telecom and media & entertainment companies.

Value and Momentum Strategy

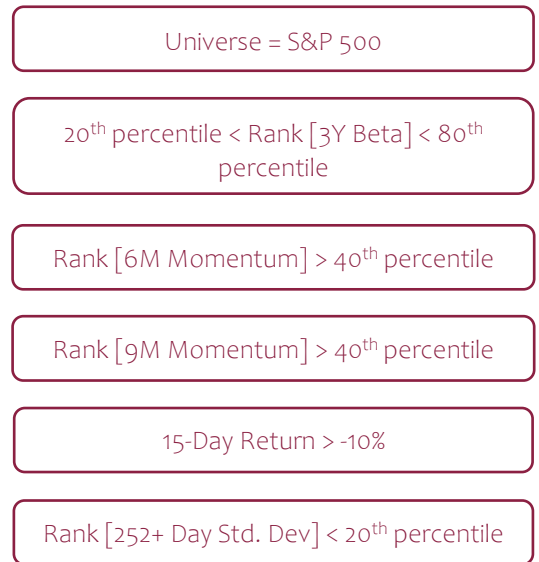Since its inception in 2018, the Value Momentum (VM) sector has offered students in SEED the opportunity to test and apply quantitative strategies to fundamental investing. The sector currently runs two equally weighted strategies in parallel, one specific to value and another focused-on momentum. Value and momentum strategies have a somewhat negative correlation, this protects the sector from any major downturns in a turbulent market.

These strategies use key metrics to help filter through companies with specific investment characteristics. These metrics include gross margin, Piotroski F score, debt-to-equity ratio, and more. Each quarter, the VM Sector's portfolio is rebalanced to accurately reflect what is currently being output by each strategy. Currently, these strategies are being back-tested through third-party software, but the sector is looking into crafting these strategies in-house using Python in the future. This would offer greater flexibility and control over how the strategies would be formulated.

Value Screener

Universe = S&P 500

No Financial Services

Piotroski F Score TTM >= 7

Debt to Equity Ratio < 0.75

Gross Margin > 7%

Rank of Asset Turnover Ratio Across Industry > 55th percentile

Momentum Screener

Universe = S&P 500

20th percentile < Rank [3Y Beta] < 80th percentile

Rank [6M Momentum] > 40th percentile

Rank [9M Momentum] > 40th percentile

15-Day Return > -10%

Rank [252+ Day Std. Dev] < 20th percentile
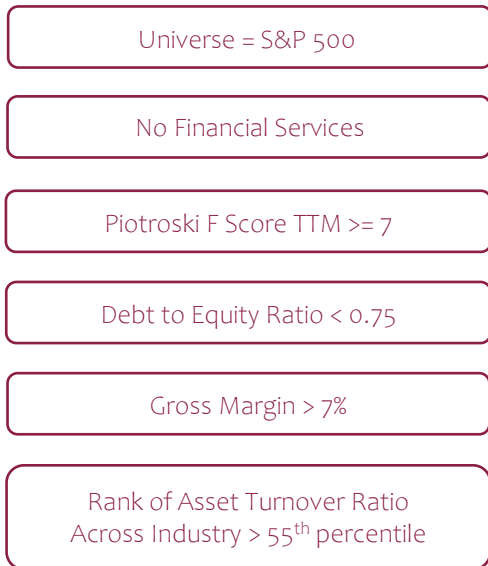
Quantitative Investing Strategy

Identify Universe

Remove Outliers

Screen for Value

Screen for Quality

Invest with Conviction
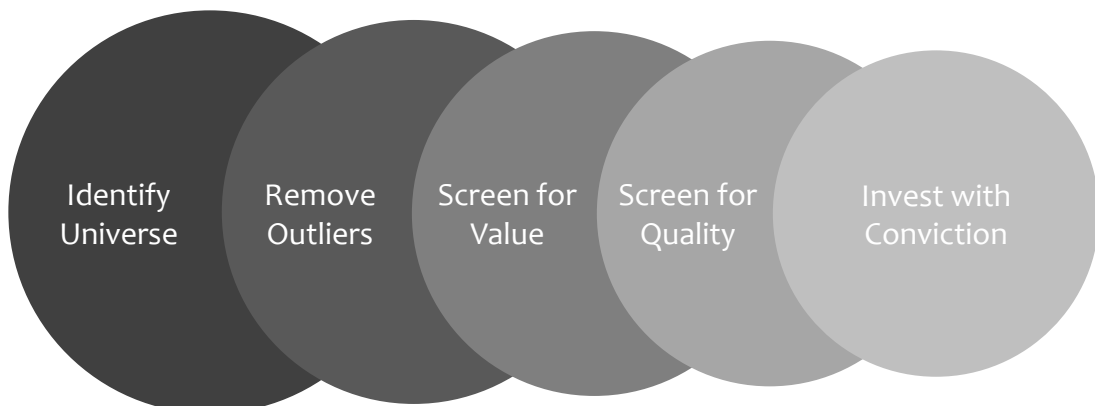
Recruitment

Director

Elan Parandeh

Team

Adam Wieczorek

Eera Rasne

Justin Hoover

Lucas LeClair

Maya Snyder

Ruba Gari

Resume Drop
- 160 candidates considered
- Resume and interest statement

Video Interview
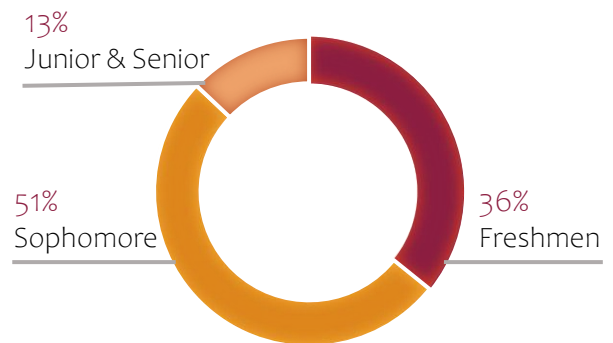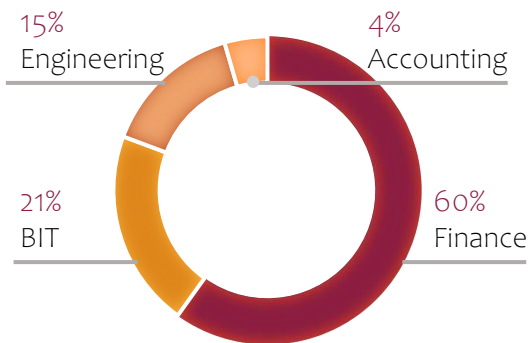- 80 candidates considered
- HireVue with 4 questions, market and behavioral

Superday
- 30 candidates considered
- Stock pitch on assigned company

Statistics

15% Engineering

4% Accounting

21% BIT

60% Finance

13% Junior & Senior

51% Sophomore

36% Freshmen

162 Applications [1]

3.64 Average GPA

42% Women AIT class

(1) Represents the highest number of SEED applications in a given semester

Training

Upon entry to the group, the Analysts-in-Training (AITs) complete a rigorous training course designed to prepare them for not only being an analyst but for their future careers as well through teaching a mix of hard and soft skills. The training process starts with assignments over the seasonal break after they get accepted into the group and complete the full program the semester following.

Key Concepts Taught

- Accounting
- Valuation
- DCF

- Research
- Networking
- Presentation Skills

- Software Usage
- Public Speaking
- Interview Preparation

Training Process

In 2023, Carson Kabance and Piyush Pokala revolutionized the Analyst-in-Training (AIT) process at Virginia Tech SEED. As Co-CEOs, they implemented a comprehensive training program more closely resembling real-world scenarios, using a Canvas page to monitor students' performance. The 16-week training commenced with winter/summer assignments to facilitate a better transition into the rigorous curriculum. AITs delved into detailed lessons covering finance fundamentals, including accounting principles, advanced valuation methodologies, and financial modeling techniques. Additionally, monthly boot camps were introduced to provide deeper insights into Bloomberg navigation, Excel proficiency, and the creation of primers and pitch decks within specified time frames.

Building on this strong foundation, SEED's current Co-CEOs, Kennedy Kabance and Salma Khorramshahgol, are now integrating Corporate Finance Institute (CFI) into the training curriculum, offering certifications in financial modeling, valuation, and various corporate finance topics. Alongside CFI, trainees also use BamSEC to extract financial data and analyze company accounts. With access to these resources, the Co-CEOs aim to enhance trainees' valuation expertise, emphasizing forecast analysis, alternative valuation methods, and refining projection estimates for comprehensive financial analysis.

Software and Data Sources Used

BamSEC

Bloomberg

CFI

MORNINGSTAR

Weekly Assignments

Every week AITs are expected to complete their sector specific assignment, modeling and accounting practice, and market update.

Group Pitch

Teams of 2-3 members prepare analyses on a chosen company over a two-week period. Each group develops a primer, pitch deck, and valuation model to pitch after conducting research and analysis.

Capstone Project

Marks the culmination of AITs process, requiring members to pitch a company within their sector. Capstone encapsulates their strategic insights and applies on their skills acquired throughout the training process.

SEED Office

SEED had a small office in Pamplin Hall for many years. However, this year marks a significant shift as we relocated to the Data and Decision Sciences (D&DS) building, now home to all the Pamplin College of Business investment groups (BASIS, SEED, and CREDIT). Our new space comes with upgrades, including a projector, four dual monitors, desks, and Bloomberg terminals. Within D&DS, we have a trading floor and trading lab with four additional Bloomberg terminals. While we will forever value our time in Pamplin Hall, our new office inspires excitement as we embark on creating lasting memories in our new workspace.

Trips

During the fall semester, Virginia Tech SEED once again visited New York City, where they connected with alumni working in the financial industry. Through insightful discussions, alumni provided invaluable advice on navigating the path to success in Wall Street careers. This experience allows members to explore various career avenues and solidify their aspirations. In the upcoming year, SEED hopes to further broaden its horizons by expanding trips to cities like Charlotte and Richmond, offering members insights into diverse sectors such as equity research, consulting, and asset management. These enriching experiences are made possible by the unwavering support and guidance of alumni, who generously share their wisdom and host the organization. SEED is grateful to all alumni hosts, as these New York trips mark the beginning of many members' journey toward success in the financial industry.

Stock Pitches

This past year, we had four members, Piyush Pokala, Kobey Simon, Max Skirkanich, and Patrick Caiafa compete in the University of Georgia Terry College of Business Stock Pitch Competition. Every year, the competition grows creating a more competitive and cohesive environment. The team competed against 14 others and each group pitched to three different audiences. They gained invaluable feedback from judges and professionals across various finance backgrounds, which they brought back to the organization for implementation. These competitions serve as platforms for SEED to gather diverse feedback, while also showcasing Virginia Tech's talent to other universities and Wall Street judges.

At the end of the year, we had Kennedy Kabance, Salma Khorramshahgol, and Maya Snyder get accepted to compete in the William and Mary Women's Stock Pitch competition. Enhanced participation in these events not only connects members with like-minded peers but also exposes them to diverse investment ideas, financial market perspectives, and company analyses.

Members Overview

Diversity

With each recruiting cycle, SEED continues to look for not only bright and hard-working applicants, but also those who will bring a new perspective into the organization. In the past couple of years, the number of women in the organization and leadership positions has significantly increased. For the first time since our inception in 1992, our two Co-CEOs are both women; Kennedy Kabance and Salma Khorramshahgol.

Additionally, SEED has made great strides in enhancing racial diversity within its ranks. Through targeted recruitment efforts and inclusive hiring practices, the organization has welcomed individuals from a wide array of racial and ethnic backgrounds into its fold. This commitment to diversity has not only enriched the company culture but has also fostered innovation and creativity within teams.
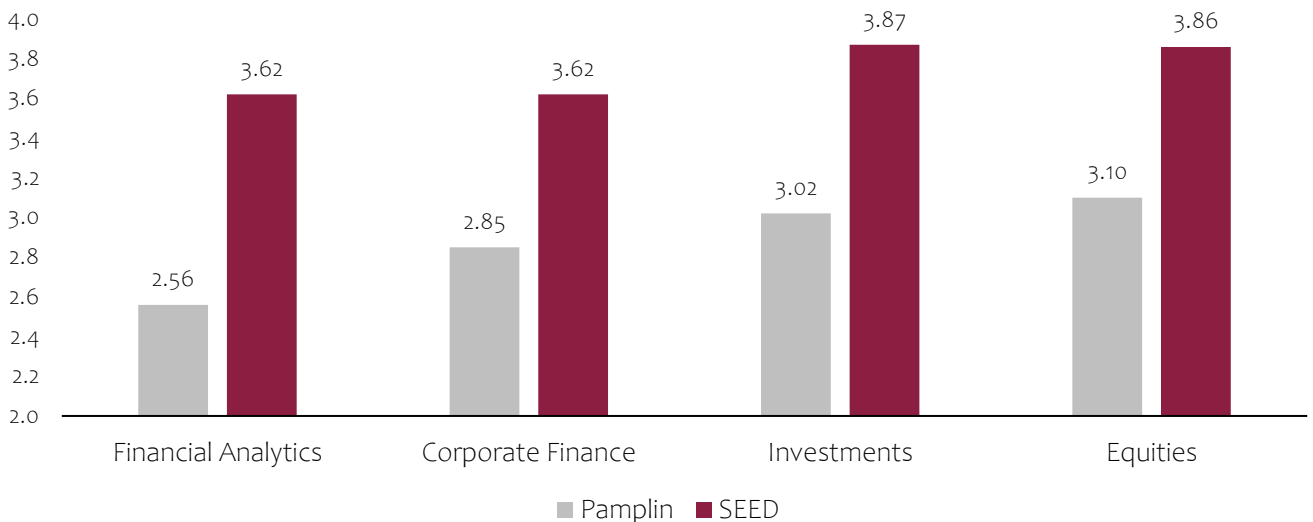
~25% women in the organization

~40% of leadership positions filled by women

Academic Excellence

In addition to diversity, SEED recognizes that academic excellence is a crucial indicator of future success, and as such, we place a strong emphasis on accepting students with exceptional academic records into our analyst-in-training program. While intelligence is certainly a key criterion, we also value dedication, resilience, and a passion for learning. By creating a supportive and motivating environment, SEED encourages its members to strive for excellence not only in their roles within the organization but also in their academic pursuits. We believe that maintaining good grades not only demonstrates a commitment to personal growth and development but also serves as a testament to the drive and ambition of our members.

On the chart below, the average grades in required classes for SEED members are compared to the Pamplin averages. The results show our dedication to our studies as a group.
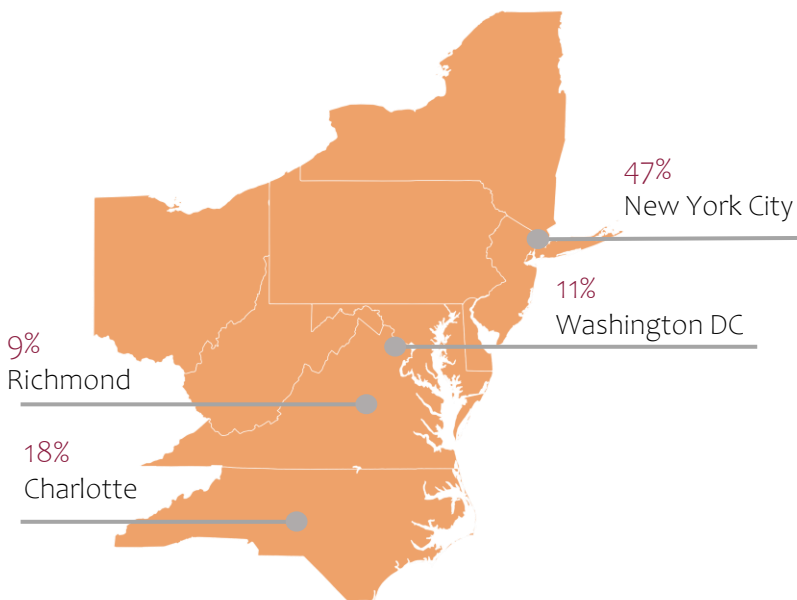
Grade Averages

Class	Pamplin	SEED
Financial Analytics	2.56	3.62
Corporate Finance	2.85	3.62
Investments	3.02	3.87
Equities	3.10	3.86

■ Pamplin ■ SEED

Group Placements

Placement Rate	100%
Alumni Since Inception	450+
Alumni on Wall Street	~150

Full-Time Placements

Carson Kabance	Former Co-CEO	Morgan Stanley	Investment Banking	New York City
Piyush Pokala	Former Co-CEO	Wells Fargo	Investment Banking	Charlotte
Riley King	Former CIO	Citigroup	Sales & Trading	New York City
Jake Vodovoz	Former CQO	Midcap Financial	Private Credit	Bethesda
Justin Harrison	Former Lead Analyst, Consumers	Capital One	FRP	Washington D.C.
Kobey Simon	Former Lead Analyst, Financials	Bank of America	Investment Banking	New York City
Maddi Koch	Former Lead Analyst, Healthcare	MassMutual	Financial Services	New York City
Max Skirkanich	Former Lead Analyst, Industrials	Davenport and Company	Asset Management	Richmond
Will Stinson	Analyst, Energy	Davenport and Company	Public Finance	Charlotte
Kevin Wang	Analyst, Energy	FTI Consulting	Consulting	Richmond
Ansuman Rath	Analyst, Industrials	Ernst & Young	M&A Consulting	New York City
Nick Carbone	Analyst, Technology	Bank of America	Investment Solutions	New York City
Louis Tucker	Analyst, Value Momentum	Fannie Mae	Capital Markets	Washington D.C.
Kritika Partha	Analyst, Value Momentum	Google	Software Engineering	Mountain View

47% New York City

11% Washington DC

9% Richmond

18% Charlotte

Median Base Salary

$110,000

$61,500

Pamplin[1]   SEED
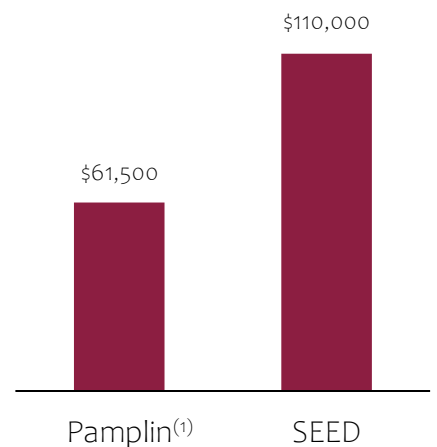
Group Placements

Junior Internship Placements

Kennedy Kabance	Co-CEO	Citigroup	Sales & Trading	New York City
Salma Khorramshahgol	Co-CEO	Goldman Sachs	Investment Banking	New York City
Grant Goodall	CIO	Regions Financial	Investment Banking	Charlotte
Dom Bivins	Lead Analyst, Consumers	JPMorgan Chase & Co.	Investment Banking	New York City
Viktor Fedotov	Lead Analyst, Energy	Bank of America	Enterprise Credit	New York City
Adam Wieczorek	Lead Analyst, Financials	Wells Fargo	Investment Banking	Charlotte
Maya Snyder	Lead Analyst, Healthcare	TD Cowen	Investment Banking	New York City
Lucas LeClair	Lead Analyst, Industrials	Goldman Sachs	Investment Banking	New York City
Sebastian Franks	Lead Analyst, Technology	Citigroup	Global Private Wealth	New York City
Eera Rasne	Lead Analyst, Value Momentum	Lockheed Martin	Cybersecurity Engineering	Moorestown
Alex Nazari	Analyst, Consumers	Goldman Sachs	Corporate Development	New York City
Maddy McNiff	Analyst, Consumers	Wells Fargo	Corporate Banking	Charlotte
Walker Hayes	Analyst, Consumers	Barclays	Credit Research	New York City
Andrew Hockersmith	Analyst, Energy	Fannie Mae	Capital Markets	Washington D.C.
Lily Shiveley	Analyst, Financials	HSBC	Investment Banking	New York City
Brandon Smith	Analyst, Healthcare	Davenport & Co.	Equity Research	Richmond
Elan Parandeh	Analyst, Healthcare	Wells Fargo	Sales & Trading	Charlotte
Gabby Latino	Analyst, Industrials	Midcap Financial	Private Credit	Bethesda
Luke Jackman	Analyst, Technology	Andersen	Investment Consulting	Washington D.C.
Ruba Gari	Analyst, Technology	Deloitte	GPS Consulting	Arlington

30% Investment Banking

12% Equity Research

9% Sales & Trading

Placement Rate

Pamplin[1]: 89%

SEED: 100%
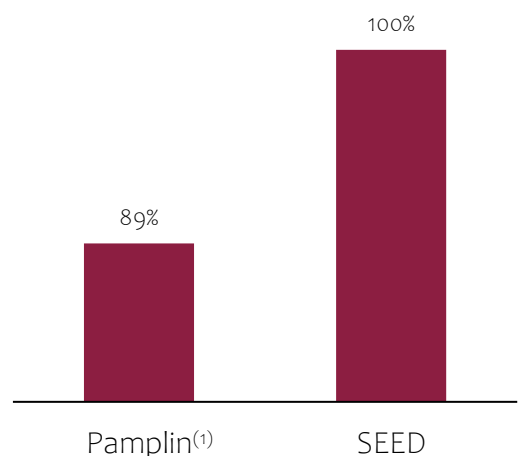
Portfolio Performance - CIO

SEED Portfolio

01/01/2023 Portfolio Value	$4,892,045
12/31/2023 Portfolio Value	$6,090,591

2023 Performance

SEED	25.15%
S&P 500	26.29%
SEED vs. S&P 500	-1.14%

Key Statistics

Portfolio Beta	0.8998
CAPM Return	24.15%
SEED Alpha	0.998%

Monthly Performance	SEED Return	S&P 500 Return	SEED Excess Return
January	6.69%	6.28%	0.41%
February	-2.89%	-2.44%	-0.45%
March	1.83%	3.67%	-1.84%
April	1.48%	1.56%	-0.08%
May	0.29%	0.43%	-0.14%
June	5.38%	6.61%	-1.23%
July	4.85%	3.21%	1.64%
August	-2.45%	-1.59%	-0.86%
September	-3.60%	-4.77%	1.16%
October	-1.49%	-2.10%	0.61%
November	8.89%	9.13%	-0.25%
December	4.57%	4.54%	0.03%

In 2023 the Student-Managed Endowment for Educational Development (SEED) delivered a total return of 25.15%. The S&P 500 Index, our benchmark, returned 26.29% over the same period, giving SEED an active return of -1.14% for 2023. We concluded 2023 with $6,090,591 in assets under management (AUM). SEED's CAPM return was 24.15% with a portfolio beta of 0.8998, resulting in an outperformance of 0.998% on a risk-adjusted basis. Looking back on a month-to-month basis, SEED outperformed the S&P 500 in 5 out of 12 months. During the second half of the year, SEED benefited from our overweight positions in large-cap technology names, which performed exceptionally well to close out 2023. Going forward, we look to continue to increase our risk-adjusted performance and seek to outperform the S&P 500 on a on unqualified basis.
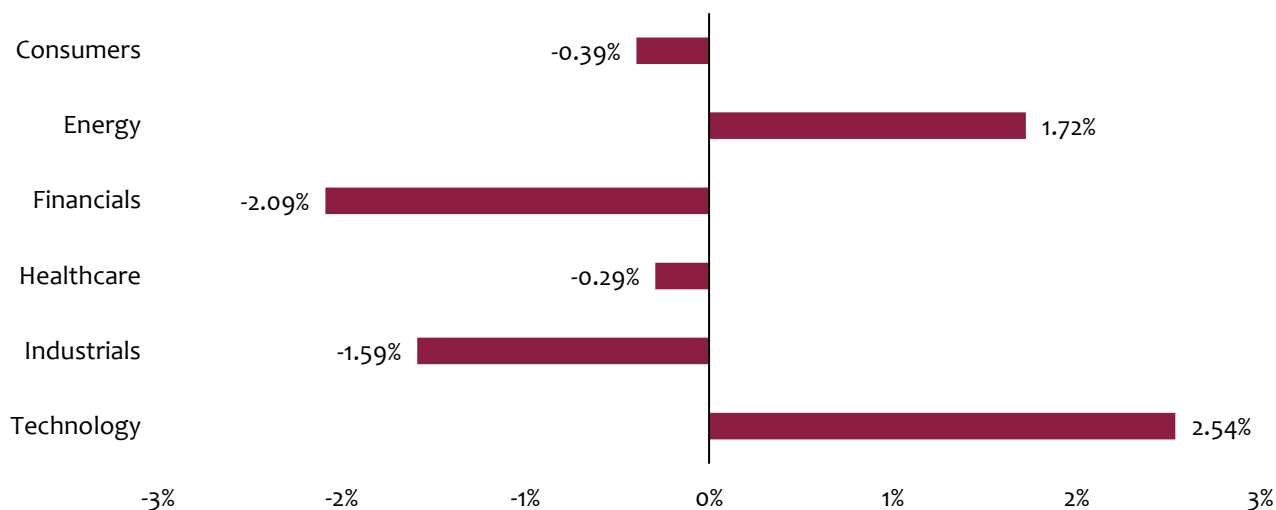

SEED vs. S&P 500 Monthly Return 2023
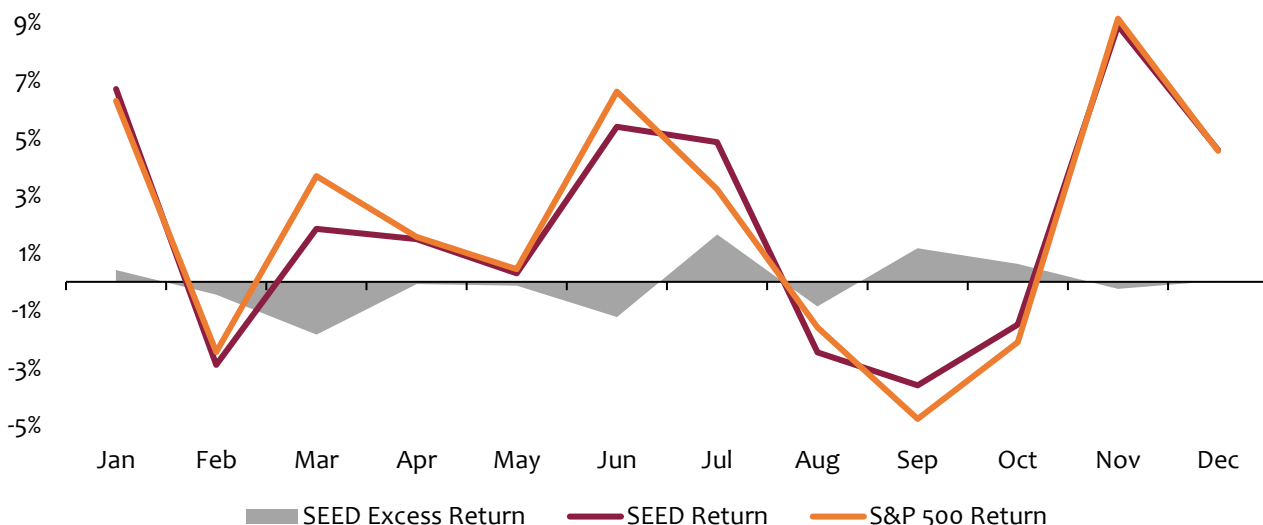
Holdings [1]

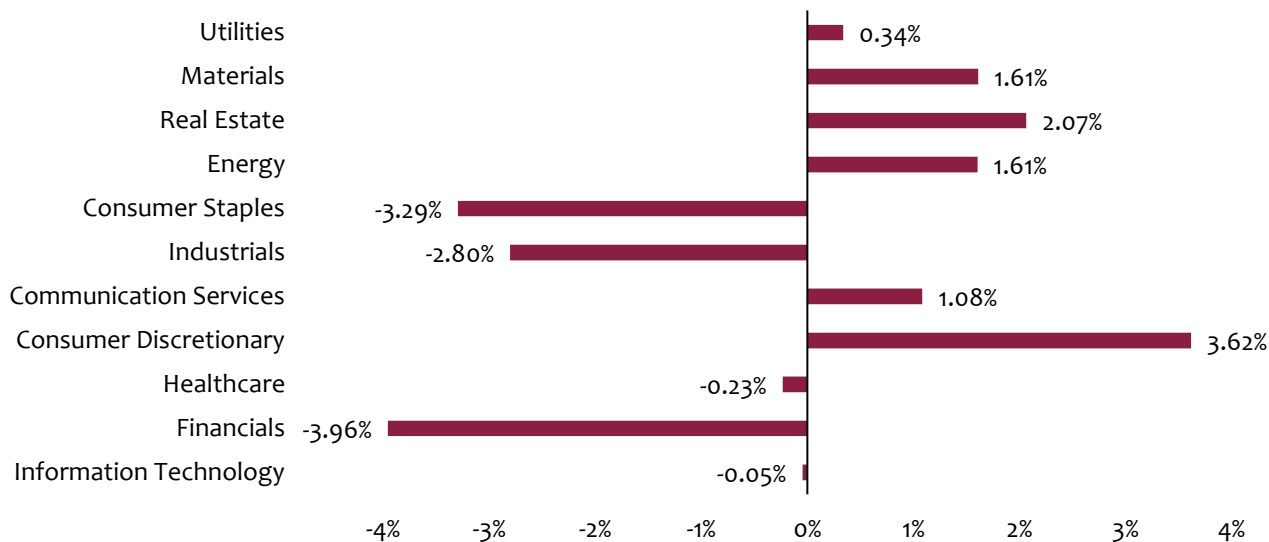| Name	Ticker	Market Cap ($MM)	Current Value ($)	HPR ($)	HPR (%)	Weight
Consumers						
Alibaba	BABA	187,985	57,822	-62,436	-52%	1.0%
Autozone	AZO	47,169	111,181	43,530	64%	1.9%
Deckers	DECK	22,151	157,081	73,591	88%	2.7%
Dollar General	DG	31,059	75,724	-35,607	-32%	1.3%
Marriott	MAR	69,948	144,101	33,500	30%	2.3%
TJX	TJX	111,734	124,111	24,370	24%	2.1%
Yum! Brands	YUM	37,809	124,780	10,315	9%	2.1%
Consumer Staples Benchmark	XLP	15,316	74,911	-2,419	-3%	1.2%
Energy						
Chevron	CVX	286,220	44,151	-4,575	-9%	0.7%
Constellation Energy	CEG	41,890	63,004	26,849	74%	1.1%
Diamondback Energy	FANG	32,113	26,984	-812	-3%	0.5%
Dominion Energy	D	38,376	61,100	-38,357	-39%	1.0%
Duke Energy	DUK	70,839	87,336	2,550	3%	1.5%
Exxon Mobil	XOM	411,912	59,988	-18,373	-23%	1.0%
Kinder Morgan	KMI	38,032	15,329	1,811	13%	0.3%
Shell	SHEL	203,914	75,999	8,456	13%	1.3%
Energy Benchmark	XLE	36,285	21,798	-531	-2%	0.4%
Financials						
Blackstone	BX	157,390	203,973	104,654	105%	3.5%
Markel	MKL	19,192	237,123	6,712	3%	4.0%
Morgan Stanley	MS	141,974	69,005	15,745	30%	1.2%
Prologis	PLD	123,370	83,446	18,989	29%	1.4%
Realty Income	O	43,529	96,179	16,936	21%	1.6%
Vici Properties	VICI	30,550	80,242	1,177	1%	1.4%
Healthcare						
Abbvie	ABBV	313,365	121,651	33,600	38%	2.1%
Agilent Technologies	A	39,513	58,810	2,041	4%	1.0%
AMN	AMN	2,331	30,701	-10,410	-25%	0.5%
Fortrea	FTRE	3,162	9,074	1,482	20%	0.2%
InMode	INMD	1,915	25,798	-14,261	-36%	0.4%
Laboratory Corp of America	LH	18,393	59,095	12,793	28%	1.0%
Merck	MRK	323,823	141,290	38,091	37%	2.4%
UnitedHealth	UNH	482,395	129,512	44,757	53%	2.2%
Veeva	VEEV	35,319	72,195	-5,982	-8%	1.2%
Industrials						
Ameresco	AMRC	1,201	37,846	-32,827	-46%	0.6%
CRH	CRH	53,578	110,518	32,353	41%	1.9%
John Bean Technologies	JBT	3,292	53,206	-5,751	-10%	0.9%
Nucor	NUE	45,623	89,283	13,342	18%	1.5%
SS&C Technologies	SSNC	15,707	77,671	-13,393	-15%	1.3%
U-Haul	UHAL	12,841	91,832	15,602	20%	1.6%
Technology						
Adobe	ADBE	247,090	327,533	106,255	48%	5.6%
Advanced Micro Devices	AMD	280,937	130,016	48,734	60%	2.2%
Alphabet	GOOG	1,754,117	272,559	78,630	41%	4.6%
Apple	AAPL	2,815,209	335,965	116,055	53%	5.7%
Crowdstrike	CRWD	79,065	198,639	73,410	59%	3.4%
Meta	META	1,206,684	439,264	192,549	78%	7.5%
Microsoft	MSFT	3,002,342	374,160	157,905	73%	6.3%
Roper	ROP	58,279	102,492	18,264	22%	1.7%
ServiceNow	NOW	156,825	260,695	78,756	43%	4.4%
SPY	SPY	483,744	106,469	7,127	7%	1.8%
Cash			140,881			2.4%

(1) Holdings as of 12/31/2023

Sector Weighting

For analyst coverage purposes, SEED condenses the eleven sectors of the S&P 500 into six sectors. Real estate is included in SEED's financial sector, materials is included in industrials, utilities is included in energy, consumer staples and consumer discretionary make up consumers, and information technology and communication services make up technology. The value momentum sector is not considered in our sector weighting comparison as it can hold equities across sectors. We ended 2023 with 1.01% and 3.38% in cash and ETFs, respectively (4.39%). This is down significantly from last year's total cash and ETFs of 14.49%. We were successful in our goal of lowering our exposure to sector SPDRs and increasing human capital by identifying undervalued securities and allocating our capital to those names.

SEED Sector vs. S&P 500 Weighting

Sector	Weighting
Consumers	-0.39%
Energy	1.72%
Financials	-2.09%
Healthcare	-0.29%
Industrials	-1.59%
Technology	2.54%

SEED Sectors vs. S&P 500 GICS Weightings

Sector	Weighting
Utilities	0.34%
Materials	1.61%
Real Estate	2.07%
Energy	1.61%
Consumer Staples	-3.29%
Industrials	-2.80%
Communication Services	1.08%
Consumer Discretionary	3.62%
Healthcare	-0.23%
Financials	-3.96%
Information Technology	-0.05%

Sector Performance

Sector	% of SEED Portfolio	Sector Value
Consumers	14.83%	$903,222
Energy	7.04%	$428,474
Financials	11.91%	$725,133
Healthcare	10.93%	$665,485
Industrials	8.53%	$519,626
Technology	35.54%	$2,164,880

Excludes SPY and Cash, data as of 2/9/23

Sector	SEED Return	Benchmark Return	SEED Excess Return
Consumers	4%	33%	-30%
Energy	1%	-5%	5%
Financials	-14%	13%	-27%
Healthcare	-1%	2%	-3%
Industrials	18%	17%	1%
Technology	79%	56%	23%

SEED measures each sector's specific performance against its respective benchmark, usually, a blend of the two GICS sectors included in the sector. During 2023, SEED achieved alpha in 3 of our 6 sectors. Technology achieved 23.14% outperformance, energy beat its benchmark by 5.36%, industrials narrowly outperformed by 1.46%, healthcare lagged by 2.72%, financials underperformed by 26.84%, and consumers was down 29.61% when compared to their benchmark. Our technology sector benefited from our exposure to the mega-cap names, specifically Meta Platforms (META), which performed exceptionally well. The increased focus in AI helped our holding AMD as AI and ML require increased chip usage. The financial sector suffered through the banking crisis in March and the commercial real estate issues due to higher vacancy rates and a work-from-home culture. Finally, our consumer sector's lackluster performance was mainly due to our position in Dollar General (DG).

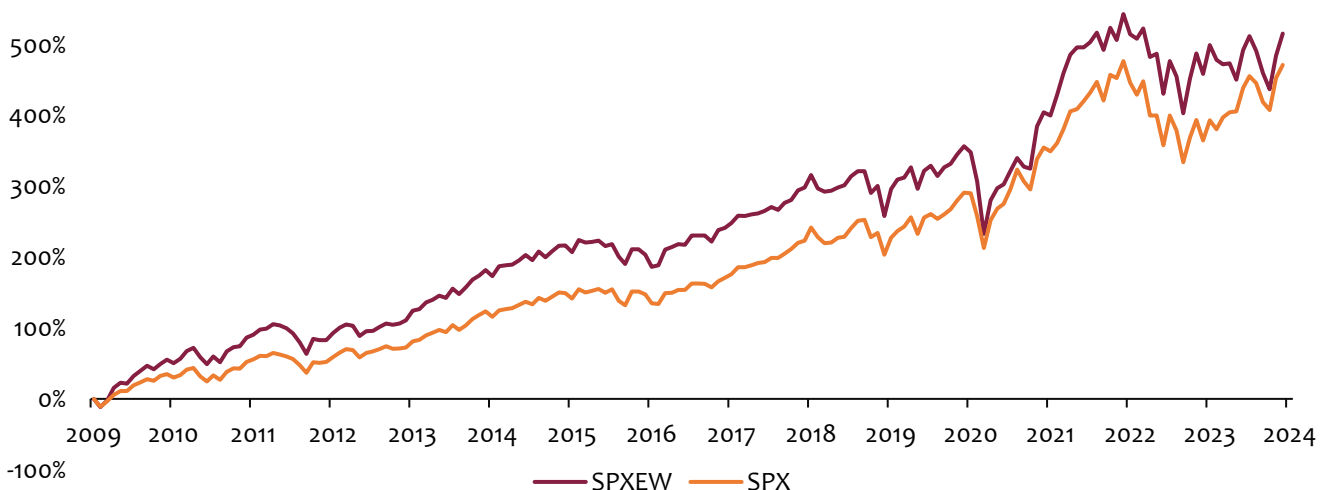## Sector Performance vs. Benchmark
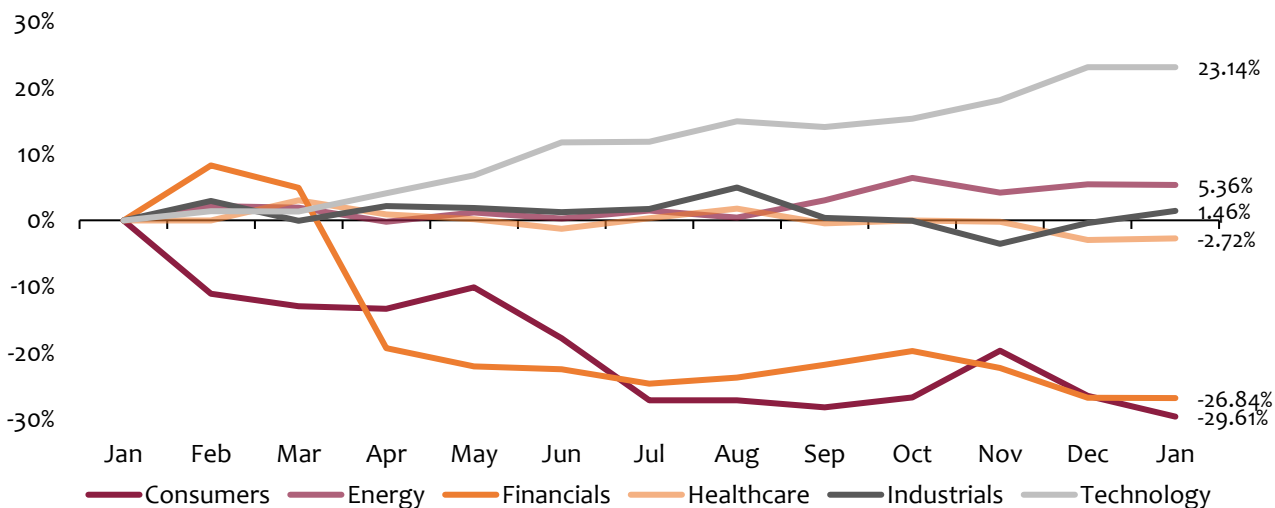
2024 Investment Outlook

Anticipating impending rate cuts, traders are enthusiastic going into 2024. With the more challenging phase of reducing inflation now in the rearview, the Fed can begin to think about bringing the Fed funds rate back down to lower long-term levels. However, it remains uncertain when and how quickly these rate cuts will occur. Members of the FOMC have released their individual predictions for rate cuts, and when comparing the median of these estimates to the Fed funds futures, there is a gap that shows traders are too optimistic about the timing of rate cuts in 2024. More specifically, the markets are pricing in a fed funds rate of 4.2% by the end of 2024, 0.425% lower than what the Fed is forecasting. This shows that the recent runup in equities may have overstretched the market, which we believe will cause a correction in 2024. Given this possible correction, SEED plans to be cautious in our capital allocation, focusing on companies with solid fundamentals and lower correlation to interest rates in case the Fed remains hawkish longer than anticipated.

The Fed's Dot Plot
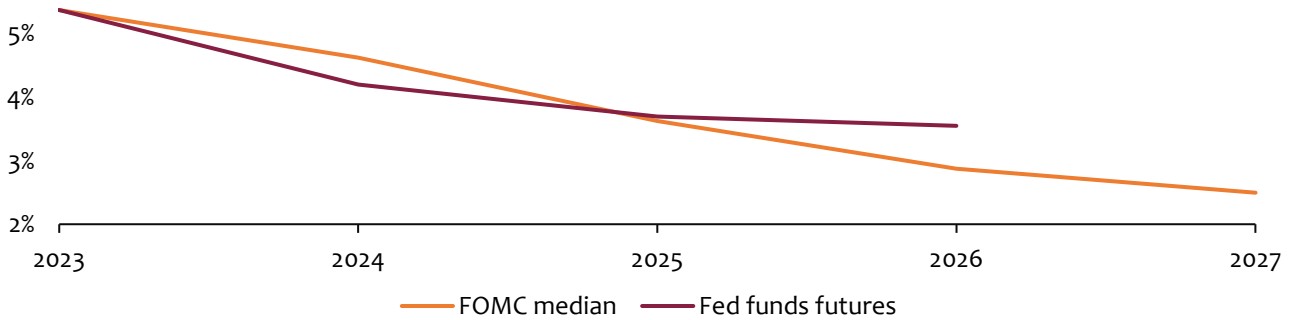
Going into 2024, SEED will be looking to trim some of our largest holdings, mainly in the technology sector, and potentially adding exposure to high-quality small and mid-cap names. 2023 was a rough period for the equal-weighted S&P 500 index and an incredible one for the market-cap-weighted index, with gains led by the mega-cap technology stocks. Historically, this trend reverts to the long-term norm of outperformance of the equal-weighted index, especially as rates fall, implying widening market breadth and greater dispersion on an individual stock level within the indices. Additionally, there is a wide valuation gap between the large and small-cap names. Valuations on the market-cap weighted index were 48.6% higher than the equal-weighted index, at 26.9x vs. 18.1x price-to-earnings as of Feb. 2.

S&P 500 Market-Cap vs. Equal-Weighted Performance

Consumer Sector Performance

Portfolio Update

In 2023, the consumers portfolio slightly underperformed when compared to the sector's blended benchmark (XLY/XLP). The poor performance was largely due to Dollar General and Alibaba which saw heavy declines over the course of the year. However, analyst Alex Nazari pitched Marriot on April 25, 2023, and has seen gains of more than 40% since then. We also sold Conagra on October 31st, 2023. Deck (+58.72%), TJX (+19.99%), and AZO (+8.40%) all saw notable gains as the discretionary sector overall performed well over the course of the year.

The success of the discretionary sector was largely due to the overall strength of the economy in 2023. Real wage growth, which excludes the adjustment for inflation, saw its first positive increase for the first time in two years. Within the discretionary industry, automobiles and components saw growth of 76%, retailing grew by 40.5%, and consumer services increased by 28%.

Staples did not find the same success as discretionary. Staple's XLP saw a decline of -3.38% as the XLY saw increases of 38.44%. This decline is heavily due to volume reduction, as companies felt pressured to increase prices due to inflation. However, volume is expected to bounce back as inflation cools allowing for companies to feel less pressure to increase prices along with the stabilizing of the macroeconomy.

Overall, 2023 was a year filled with volatility in both the discretionary and staples sectors. Going forward, major factors within the sectors that will influence performance are input costs, consumer spending, supply chain disruptions, interest rates, pricing power, inflation, and personal consumption expenditures.

Dom Bivins

Lead Analyst
dombivins@vt.edu

Justin Harrison

Former Lead Analyst
harrisonjr@vt.edu

Riley King

Former CIO
rileyking02@vt.edu

Alex Nazari
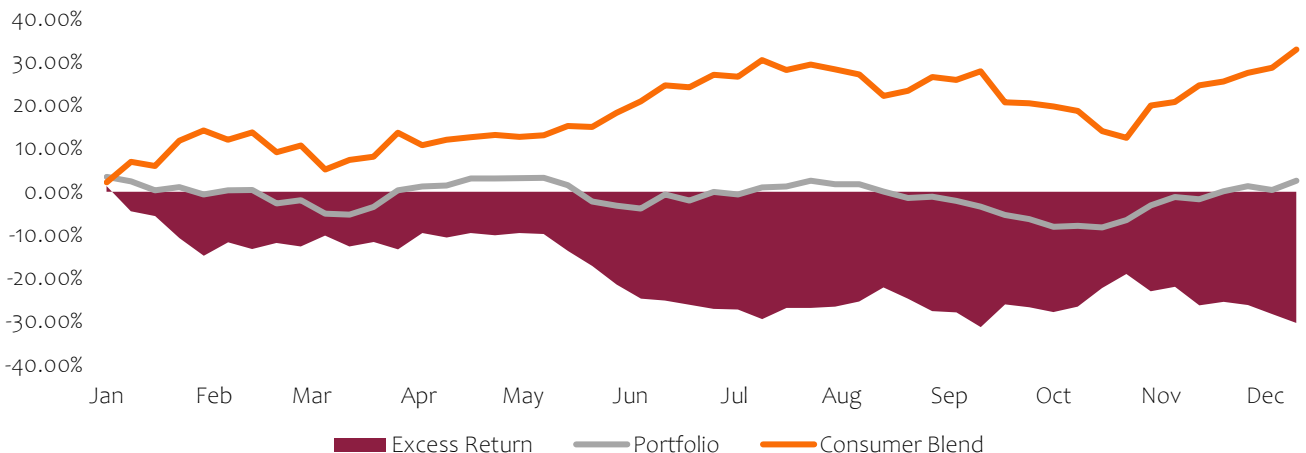
Analyst
alexnazari@vt.edu

Walker Hayes

Analyst
walker03@vt.edu

Maddy McNiff

Analyst
madisonmcniff@vt.edu

1 Year Performance

Legend: Excess Return — Portfolio — Consumer Blend

Consumer Sector Performance

Analyst	Company	Ticker	1-Yr Change	HPR
Justin Harrison	Yum! Brands	YUM	6%	9%
Riley King	TJX	TJX	19%	24%
Alex Nazari	Deckers Outdoors	DECK	58%	88%
	Marriott	MAR	51%	30%
Walker Hayes	Dollar General	DG	-52%	-32%
	AutoZone	AZO	8%	64%
Maddy McNiff	Alibaba	BABA	-7%	-52%

Forward-Looking Statement

As we turn our attention to 2024, our sector is poised for a year of strategic realignment. In response to the evolving market, we have decided to sell our holdings in Dollar General and Alibaba stocks, as they no longer align with our sector's objectives. As the consumer landscape evolves, it is crucial that we adapt and adjust our portfolio to ensure it reflects our current convictions.

In the coming year, our sector will be actively seeking to replace those holdings with other consumer staples companies. We believe valuations in the consumer staples sector have become more attractive, and with possibly improved profit margins and sales volumes, consumer staples could see a more favorable year. A few industries and companies have happened to gain our interest with some that include Costco, beverage companies such as Pepsi, and household product companies. As for the companies in our portfolio that we plan on continuing to hold, we are going to monitor each of their earnings and performance to ensure our sector's success.

We are also making sure to monitor consumer data as it is released alongside any changes in monetary policy. While there are areas of concern for consumers, particularly for lower-income households, the overall sentiment and spending patterns point towards continued economic activity and resilience. Through strong research and due diligence, we are looking forward to having a positive performance in 2024. We are enthusiastic about the ongoing advancements within our sector and are eager to capitalize on them in the upcoming year.

Energy Sector Performance

Portfolio Update

In 2023, the energy portfolio outperformed our benchmark blend (40% XLE and 60% XLU) by 536 basis points. Our two largest utility holdings, Constellation Energy (NYSE: CEG) and Duke Energy (NYSE: DUK) led our outperformance, surpassing the XLU by 44.40% and 5.53% respectively. Constellation's GAAP net income for the 3rd quarter of 2023 increased to $731 million (+488.84% YoY), while adjusted EBITDA (non-GAAP) rose to $1,199 million. On the other hand, short-term economic woes caused Duke's net income to drop to $1.25B (-11.95% YoY) in the third quarter. However, management expectations of modest customer growth through 2027 relieved worries of a significant downtrend in earnings. Conversely, Dominion Energy has been a consistent laggard in our portfolio, with total revenue (-3.86% YoY) and net income (-79.05% YoY) both dropping significantly following their Q3 2023 earnings report. As a sector, we are currently looking for other opportunities to replace Dominion (NYSE: D).

Regarding our holdings in the oil and gas sector, Shell outperformed the XLE by over 15%. Chevron and Exxon lagged, returning -13.62% and -6.24%, respectively. The subpar performance of Exxon and Chevron is mainly attributable to broader macroeconomic trends and the slump in crude oil and natural gas prices, which were down about 10% and 40%, respectively. However, weakness in the oil and gas sector led to two notable acquisitions during 2023: Exxon's agreement to purchase Pioneer Natural Resources for $59.50 billion and Chevron's deal to acquire Hess for $53 billion.

During the fall semester, the energy sector made one addition to its portfolio: Diamondback Energy (NYSE: FANG). Since purchase, the stock price has been largely stagnant, but we expect future earnings to increase as the volatility in crude oil and natural gas prices normalizes.
Throughout the year, global decarbonization initiatives and geopolitical tensions took center stage, resulting in large swings in many of our positions. The Russia-Ukraine conflict continues to have detrimental effects on the global supply of oil and gas, and the drone attacks in the Red Sea have halted the passage of many oil tankers that operate in the area.
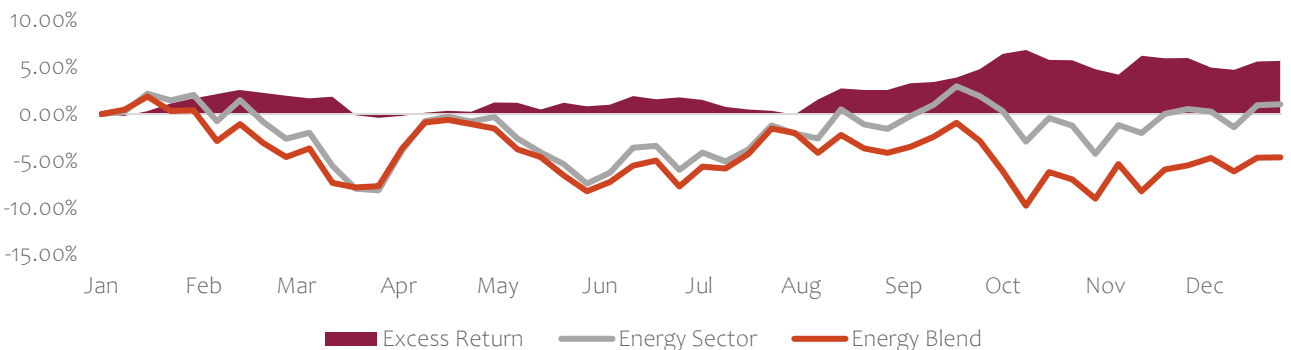
Viktor Fedotov

Lead Analyst
vfedotov03@vt.edu

Kevin Wang

Former Lead Analyst
kevinwang@vt.edu

Will Stinson

Analyst
willstinson80@vt.edu

Andrew Hockersmith

Analyst
ahockersmith@vt.edu

Justin Hoover

Analyst
hjustin@vt.edu

1-Year Performance

Legend: Excess Return — Energy Sector — Energy Blend

Energy Sector Performance

Analyst	Company	Ticker	1-Yr Change	HPR
Kevin Wang	Chevron	CVX	-13%	12%
	Constellation Energy	CEG	37%	94%
Will Stinson	Duke Energy	DUK	-1%	-1%
	Shell	SHEL	4%	8%
Justin Hoover	Exxon Mobil	XOM	-6%	-8%
	Diamondback Energy	FANG	19%	-3%
Andrew Hockersmith	Dominion Energy	D	-19%	-42%

Forward-Looking Statement

Moving forward, the intricate dynamics of global geopolitics will significantly influence the performance of our portfolio. We will remain vigilant regarding developments in the Israel-Hamas conflict, recognizing the potential for its escalation into other Middle Eastern nations. Additionally, the decisions and macroeconomic events orchestrated by the Federal Reserve will profoundly impact the anticipated economic trajectory of the United States.

Furthermore, we have decided to divest from Kinder Morgan, reducing our exposure within the midstream oil and gas sector, and instead, we intend to invest in SLB, a prominent player in the oilfield services industry. Moreover, we are poised to liquidate our holdings in Dominion Energy (NYSE: D) and transition to a utility company with a stronger commitment to clean energy initiatives. These decisions were both driven by the upcoming presidential elections occurring in November. Specifically, Biden's recent announcement to pause new LNG export terminals will require us to focus more on international exposure and diversification. As Kinder Morgan and Dominion, both have significant US exposure, divesting from these positions removes our vulnerability to a potential Democratic victory.

Our investment in SLB aims to leverage its significant global customer base, integration of machine learning, and advancements in clean energy technology. This positions our portfolio to navigate the evolving energy landscape effectively, encompassing global, political, and economic challenges. We also see potential in the clean oil tanker sector, driven by increased transportation distances due to disruptions in the Panama and Suez Canal, and a long-term shift towards the refined oil space as refiners relocate closer to upstream drilling sites. Finally, despite the growth in the renewable energy sector, we do not feel compelled to significantly divest from our Oil & Gas and Utility holdings. Many of these entities are actively involved in clean energy initiatives and are working towards decarbonization. Moreover, the clean energy objectives of numerous countries remain vague. We will continue to monitor developments in this area closely and maintain our commitment to diligence.

Financials Sector Performance

Portfolio Update

The financials portfolio has faced a challenging period, underperforming the sector's blended benchmark (XLF and XLRE) by approximately 26.77%. The underperformance can be attributed to a complex interplay of market dynamics that impacted the financial sector more broadly, along with specific headwinds faced by our chosen investments. Despite Blackstone's robust full-year results, which included strong investment performance and significant capital deployment, the overall sector faced pressures that may have overshadowed individual company achievements. A pivotal factor in the sector's underperformance was our holding in First Republic Bank (FRCB), which encountered severe challenges during the early financial crisis of 2023. First Republic Bank's growth strategy, which involved attracting high-net-worth clients with preferential rates, backfired when these clients began withdrawing their deposits as the U.S. Federal Reserve raised interest rates. This resulted in a dramatic drop in deposits exceeding $100 billion in the first quarter, leading to a severe sell-off in the bank's shares and ultimately to its collapse. JPMorgan Chase & Co. stepped in to purchase most of the bank's assets after it was seized by regulators, marking one of the most significant bank failures since 2008. In response to the unfolding crisis and to mitigate further risks, the sector decided to exit its position in Fifth Third Bancorp (FITB). This strategic move was intended to reduce our exposure to potential vulnerabilities within the regional banking space, which was under considerable stress during the period.

In a contrasting development, the Lead Analyst, Adam Wieczorek, completed a successful pitch for Realty Income Corp (O) in September, and the sector added the company to our portfolio in October, aiming to capitalize on its potential for stable dividends and long-term growth in the real estate investment trust space.

Adam Wieczorek

Lead Analyst
adamwiz@vt.edu

Kobey Simon

Former Lead Analyst
kobeyrs@vt.edu

Piyush Pokala

Former Co-CEO
piyush20@vt.edu

James Schooling
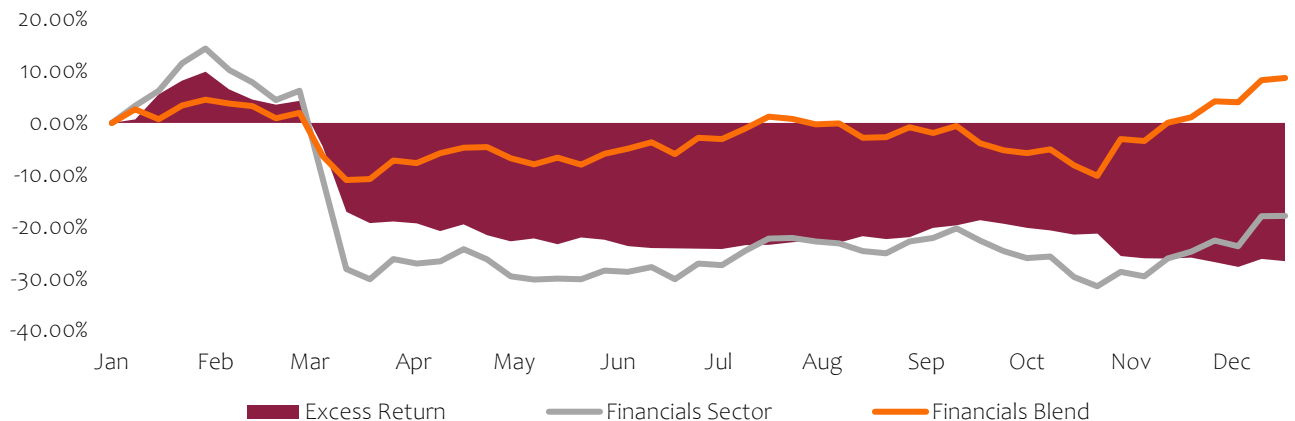
Analyst
jrschooling@vt.edu

Lily Shiveley

Analyst
lilys@vt.edu

Michael Binyam

Analyst
michaelb22@vt.edu

1 Year Performance

Legend: Excess Return — Financials Sector — Financials Blend

Financials Sector Performance

Analyst	Company	Ticker	1-Yr Change	HPR
Piyush Pokala & Kobey Simon	Realty Income	O	-9%	22%
James Schooling	VICI Properties	VICI	-1%	14%
Lily Shiveley	Blackstone	BX	76%	123%
	Morgan Stanley	MS	9%	41%
Michael Binyam	Markel	MKL	7%	0.8%
	Prologis	PLD	18%	38%

Forward-Looking Statement

Heading into the new semester, the financial sector faces a cautiously optimistic economic environment. The U.S. economy has showcased resilience, dispelling recession fears with better-than-expected GDP growth in 2023. There's substantial progress toward a soft landing, with expectations for continued growth in 2024. This growth is supported by strong consumption, a healthy labor market, and inflation that is expected to continue its descent, possibly prompting a rate cut from the FOMC by mid-to-end 2024 once core PCE inflation falls below 2.5%. The financial sector is well positioned to navigate these conditions, particularly as consumer sentiment improves with easing inflation, which has weighed on perceptions in previous years. However, the sector must remain vigilant, as the strong correlation between consumer sentiment and economic performance can be influenced by the political climate of an election year and the pervasive impact of social media on public perception. In line with these broader economic trends, our financials portfolio is set to capitalize on these developments. Our strategy includes a reassessment of our holdings to ensure alignment with current market conditions and to exploit areas of growth. The sector is considering diversifying further by potentially adding a life insurance company to the mix.

This semester, we will continue to monitor the economic indicators closely, including the potential adjustments in monetary policy and their effects on the financial sector. The prospect of adding a life insurance company to our portfolio underscores our commitment to strategic growth and portfolio optimization amidst a dynamic economic landscape.

Healthcare Sector Performance

Portfolio Update

The healthcare sector has seen major moves in the past year, both in our holdings and the sector overall. 2023 was a big year for the development of expensive biotech treatments, longevity-focused products, and post-covid recovery efforts for major companies. Within our holdings, several have faced issues affecting performance. The major issue within our holdings was for Inmode (NASDAQ: INMD), which is based in and manufactures out of Israel. The conflict in Gaza has had major negative implications for the company and we are continuing to monitor the development of the situation and weighing the best next steps for the holding.

The past year the Healthcare Sector pitched twice in the Spring semester and twice in the Fall semester. In the spring a buy pitch was presented by past Analyst Liam Desmond for Trulieve Cannabis Corp (OTCMKTS: TCNNF). The pitch did not go through but has opened the doors for approval to purchase OTCMKTS stocks and look further into purchasing a cannabis holding in the future. The second pitch of the semester was a buy pitch for Agilent Technologies (NYSE:A) by past Lead Analyst Maddi Koch. The buy was confirmed, and the holding remains in the portfolio. In the Fall semester, a buy pitch for Vertex Pharmaceuticals (NASDAQ:VRTX) was presented by current Lead Analyst Maya Snyder and was confirmed to be purchased. Following the pitch before the holding could be purchased, the stock ran up as the pitch indicated. The recent approval of their CRISPR-utilizing drug, CASGEVY has created increased investor interest as predicted. The purchase is being reevaluated to decide if it will still go through after the primary investment thesis was largely realized. A sell pitch was also performed in the Fall by Elan Parandeh for the holding AbbVie Inc (NYSE: ABBV) which was declined by the investment committee.

Maya Snyder

Lead Analyst
mayasnyder@vt.edu

Elan Parandeh
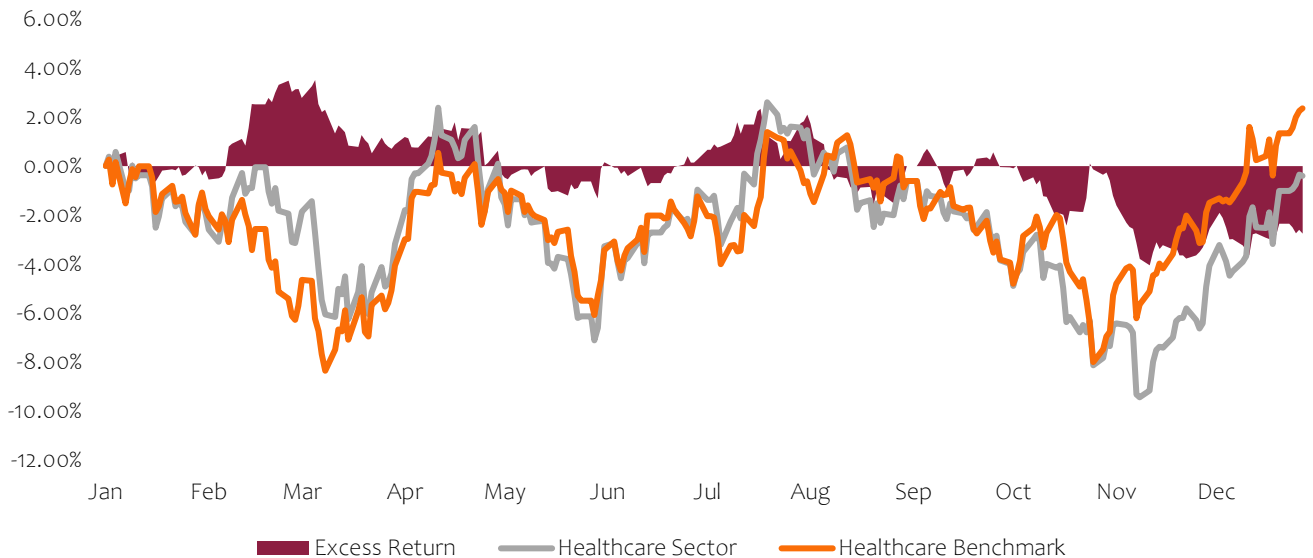
Analyst
elanp21@vt.edu

Supraja Ashok

Analyst
asupraja21@vt.edu

Brandon Smith

Analyst
brandonsmith@vt.edu

1 Year Performance

Legend: Excess Return — Healthcare Sector — Healthcare Benchmark

Healthcare Sector Performance

Analyst	Company	Ticker	1-Yr Change	HPR
Elan Parandeh	AbbVie	ABBV	-6%	-10%
	Merck	MRK	-5%	17%
Supraja Ashok	Inmode	INMD	-38%	-89%
	Laboratory Corporation	LH	7%	-0.1%
	UnitedHealth Group	UNH	-0.5%	-1%
Brandon Smith	Agilent	A	-7%	5%
	AMN Healthcare Services	AMN	-33%	-5%
	Veeva Systems	VEEV	14%	53%

Forward-Looking Statement

The Healthcare sector plans to have a major reorganization of our portfolio over the coming year. We are planning on reevaluating all our holdings and completing at least two sell pitches in the semester to come. Currently, we are primarily looking at AbbVie (NYSE: ABBV), Inmode (NASDAQ: INMD), and AMN Healthcare Services (NYSE: AMN). We are hoping to move the sector from being diversified across all the healthcare subsectors to focusing more heavily on the larger growth segments such as biotech, pharmaceuticals, and life sciences. This year is anticipated to be a big year for healthcare companies, and we hope to capture some of that upside in the months to come. We will continue to monitor major news, acquisitions, and market trends but anticipate focusing more heavily on patent life and R&D pipelines when making investments in biotech and life sciences.

The CRISPR technology approval for Vertex Pharmaceuticals was major news in the healthcare space in December 2023, but we are moderately pessimistic about a new movement in the space over our time horizon. Other drugs using the technology are in phase 2 trials and so they are anticipated to have several more years of development and relatively low odds of advancing through the next two stages to approval. Another major interest is for Antibody-Drug Conjugate (ADC) which was the main topic for the JP Morgan Healthcare Conference in early January. We are looking into the major players targeting this space to evaluate if there are profitable opportunities.

Beyond the conflict in Gaza affecting our Israel-based holding, there are a few other risk factors we are monitoring. The main concerns we have are on the regulatory front, with the Inflation Reduction Act affecting the pricing of some key drugs, which may affect the pricing power of our pharmaceutical holdings. Additionally, the Supreme Court is expected to hear a case this year about the legality of allowing Mifepristone, commonly referred to as the abortion pill, in all states. If the Supreme Court rules against this, many analysts question whether the authority of the FDA will be diminished moving forward in approving more controversial pharmaceuticals.

Industrials Sector Performance

Portfolio Update

In 2023, the industrials sector portfolio experienced moderate gains, with CRH plc (CRH), the sector's building materials company, and Caterpillar (CAT), the sector's equipment manufacturing holding, driving the sector's returns. Trends such as increases in infrastructure spending and manufacturing of semiconductor and electric vehicles have helped to prop up the sector's growth this last year, with specific catalysts such as the Chips and Science Act subsidizing related manufacturing spend. To put this into perspective, as of 2022, most of the 94 million square feet of industrial space under construction relates to semiconductors, batteries, and electric vehicle plants.

Continued supply chain constraints have also encouraged companies to consolidate supply chain activities and to move manufacturing and distribution plants to the United States, as opposed to Asia, alongside a trend of manufacturing onshoring. The desire for domestic manufacturing and to reduce dependency on foreign nations has helped drive demand for Caterpillar (CAT) and Nucor (NUE) specifically. With analysts forecasting a multi-year investment cycle in manufacturing onshoring and related spending, we believe this will provide the industrials sector with solid returns moving forward.

While we continue to follow positive market trends in the sector, specifically regarding manufacturing spend, we also try to limit our positions in areas we see underperforming the broader sector. For 2023, this meant trimming our holding of ZIM Integrated Shipping Services (ZIM) and Ameresco (AMRC). Moving forward, we will continue to closely track headwinds, such as the ongoing shortage of skilled labor, supply chain disruptions, and challenges with getting new products to the market. We also plan to continue shifting our sector's strategy from small-cap companies to larger, more established companies.

Lucas LeClair
Lead Analyst
ljleclair@vt.edu

Max Skirkanich
Former Lead Analyst
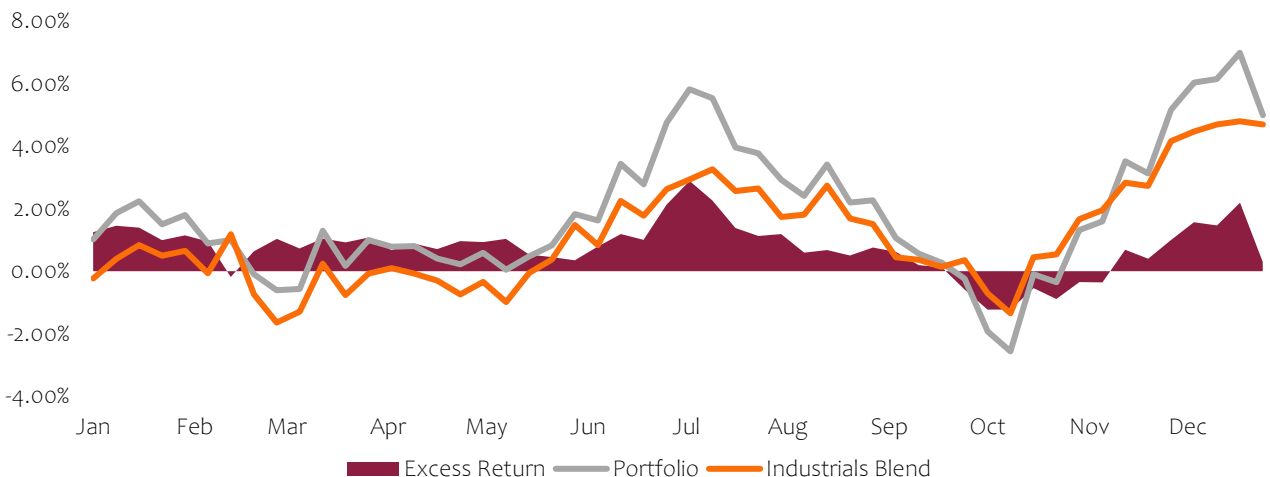maxskirkanich@vt.edu

Ansuman Rath
Analyst
ansuman27@vt.edu

Gabby Latino
Analyst
gabriellalatino@vt.edu

Carson Schubert
Analyst
cschubert03@vt.edu

1 Year Performance

Industrials Sector Performance

Analyst	Company	Ticker	1-Yr Change	HPR
Max Skirkanich	John Bean Technologies	JBT	-9%	-6%
Ansuman Rath	Caterpillar	CAT	25%	9%
Gabby Latino	CRH PLC	CRH	57%	45%
	U-Haul Holding Company	UHAL	-4%	14%
Carson Schubert	Nucor	NUE	8%	19%
	SS&C	SSNC	1%	-14%

Forward-Looking Statement

Moving into 2024, the industrial sector faces a variety of unknowns. With interest rates still up and geopolitical unrest, SEED Industrials is closely monitoring our current holdings for how they respond to different market-moving events. Over the next two weeks, 5 of our current holdings will report earnings. Given the broad nature of the industrial sector, we will be keeping an eye out for all of these to help form our decision-making for 2024. Our current portfolio is diversified into multiple different subsectors. Looking at the HPR of our portfolio, we are currently considering an exit from SS&C. With earnings taking place next week, we will watch to see how the company adjusted in the back half of 2023. Considering the misses in their previous three earnings reports, we do not feel extremely confident in their ability to handle the current dicey macro environment. In terms of prospective companies to add to the portfolio, we are currently monitoring Clean Harbors (CLH) and United Rentals (URI). Both have very appealing operations and growth opportunities we are excited about.

With respect to the sector, our team remains optimistic for 2024. Despite some major industry players such as Rockwell Automation citing decreased backlogs and uncertainty for the year, we see ourselves well-positioned for growth through our holdings. An anticipated increase in infrastructure spending in 2024 will grow demand and subsequently revenue for holdings such as Caterpillar. As for U-Haul and CRH, we continue to monitor reports on real estate demand and the overall housing market but feel confident in a continued post-pandemic stabilization.

Technology Sector Performance

Portfolio Update

In the year 2023, the technology sector saw incredibly strong returns, notably driven by rapid advancements and widespread adoption and excitement regarding artificial intelligence. Major tech companies heavily invested in AI research and development, supported by investors in both the public and private space. While navigating global economic headwinds and geopolitical tensions, especially in the first quarter, the sector was still driven to gains with the hype around AI. The so-called 'Magnificent 7' drove the major New York indices throughout the year, with little sign of slowing down in the first months of 2024. After an underwhelming 2022, the performance in 2023 was a welcome valuation correction to the industry. We believe the performance in 2023 brought tech stocks to a more reasonable valuation, given the extreme opportunity regarding AI, and the future implications, to many seen as the next revolution comparable to the internet itself.

This strong performance over the year left us in a unique position of holding a majority of our companies, given we hold 4 of the 'Magnificent 7' stocks. While we found a few positions we felt we could trim, our analysts struggled to sell holdings with conviction. In 2023, the organization as a whole focused on selling with conviction, based on a deterioration of the original thesis points. For this reason, we chose to make little changes to the portfolio throughout 2023. That being said, we continued to seek potential additions to the portfolio for the beginning of 2024, focusing on companies that could become the 'Brick and Mortar" firms of the AI industry. One notable change at the beginning of the year was due to GICS reclassifications, resulting in us shifting SSNC Technologies (SSNC) to Industrials, and receiving Roper Technologies (ROP) from them. Our analysts have been monitoring this new holding, but we do not believe it is in line with our portfolio view and are looking to sell this position soon. In the latter part of the year, former analyst, now CIO, Grant Goodall pitched Enphase Energy (ENPH), unfortunately, this pitch did not pass through the investment committee. This equity represents the direction we are trying to lead the sector, as the blockbuster performance of the 'Magnificent 7' inevitably fades in 2H24.

Sebastian Franks

Lead Analyst
smf@vt.edu
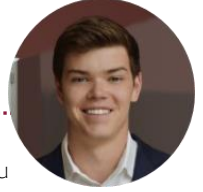
Carson Kabance

Former Co-CEO
carsonkabance@vt.edu

Nick Carbone

Analyst
nickcarbone02@vt.edu
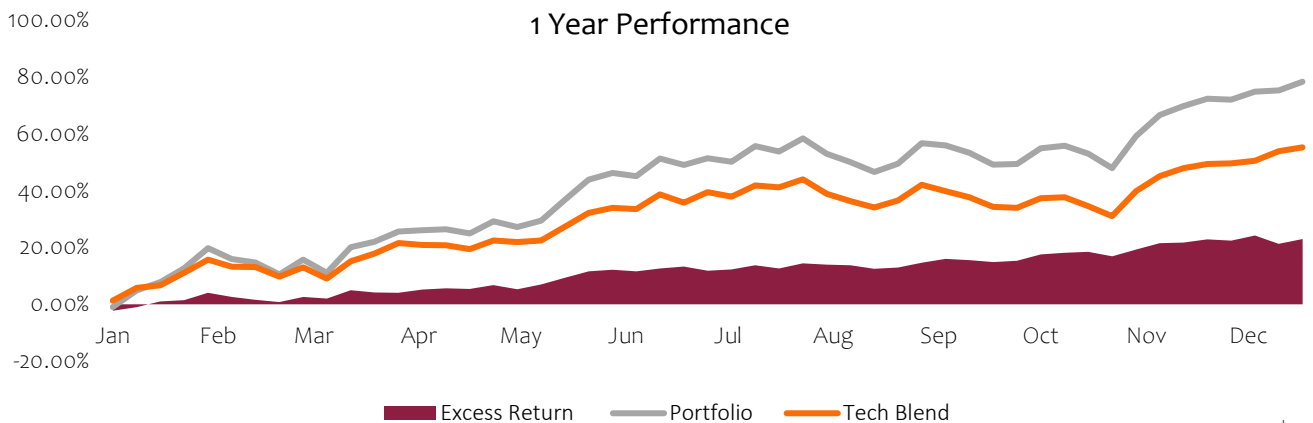
Luke Jackman

Analyst
lj2jackman@vt.edu

Ruba Gari

Analyst
rubagari@vt.edu

Zach Schwartzman

Analyst
zschwartzman26@vt.edu

1 Year Performance

Legend: Excess Return, Portfolio, Tech Blend

Technology Sector Performance

Analyst	Company	Ticker	1-Yr Change	HPR
Carson Kabance	CrowdStrike	CRWD	147%	59%
Nick Carbone	Apple	AAPL	53%	53%
Ruba Gari	Roper	ROP	25%	22%
	Adobe	ADBE	77%	48%
	Google	GOOG	57%	41%
Luke Jackman	Advanced Micro Devices	AMD	130%	60%
	Meta	META	183%	78%
Zach Schwartzman	Microsoft	MSFT	56%	73%
	ServiceNow	NOW	83%	43%

Forward-Looking Statement

Moving into 2024, the technology sector is facing a pivotal turning point as earnings are reported early in 1Q, revealing to investors if the hype around AI is partnered with revenue growth, and continued strong outlooks. We believe the first and second-quarter earnings for tech will show the true colors of the 2023 rally, and how sustainable it really is. Following this, we see some devaluation in the sector as investors begin to trim gains from the 2023 rally, likely in the second half of the year. Beyond this point, we believe AI will see some strict regulation in the second half of 2024, and into 2025. Within the first few weeks of 2024, there have been several lawsuits within the AI space, specifically regarding intellectual property. Moving into the first quarter of 2025, as the Fed continues to cut rates, we believe large amounts of capital will flow into the equity markets, with overweight allocation to tech as the near $9 trillion in money market funds begin to see weaker returns.

With the above noted, the sector is looking into new opportunities that offer a pure AI play. While we see the MSFT and GOOG performing strongly, we would like to isolate from some of their other risk factors, focusing specifically on AI. Additionally, we are looking into holdings within the solar space, continuing to monitor Grant's pitch of ENPH, as well as increasing our exposure to the semiconductor industry. Lastly, we are looking to trim our largest holdings as our CIO mentioned earlier in this report, as we believe it is crucial to realize some gains and reallocate this capital into Small and Mid-cap stocks, which have historically performed well in a tight rate and rate cut environment. We look forward to finding new and exciting equities in 2024, and seeing the next revolution in the technological world as AI is applied across industries.

Value Momentum Sector Performance

Portfolio Update

In 2023, our quantitative strategy, incorporating both value and momentum stocks, was up 6.13%, underperforming the S&P 500 benchmark. Despite this setback, notable performers on the value side included PulteGroup, Chevron, and Molina Healthcare. Concurrently, strong momentum stocks such as O'Reilly Automotive, Mondelez International, and Lowe's Corporation contributed positively to the portfolio. While the momentum stocks yielded positive returns, the value side faced challenges, resulting in an overall strategy loss.

To refine our models, we are actively engaged in thorough back-testing to identify specific areas for improvement. Preliminary findings underscore a pronounced emphasis on energy companies within the value segment of the strategy. In response, we are making necessary adjustments to address this bias and enhance the strategy's overall performance. Our aim is to implement these adjustments before the next rebalance scheduled for the middle of February.

Moreover, our ongoing efforts extend to exploring alternative methods for ranking companies post-screener. Our focus is on identifying and implementing ranking systems that demonstrate optimal performance across a spectrum of diverse market conditions. These strategic initiatives are crucial as we work toward mitigating challenges, optimizing performance, and achieving sustained success in our quantitative investment approach.

Eera Rasne
Lead Analyst
eerarasne@vt.edu

Luke Schermerhorn
Analyst
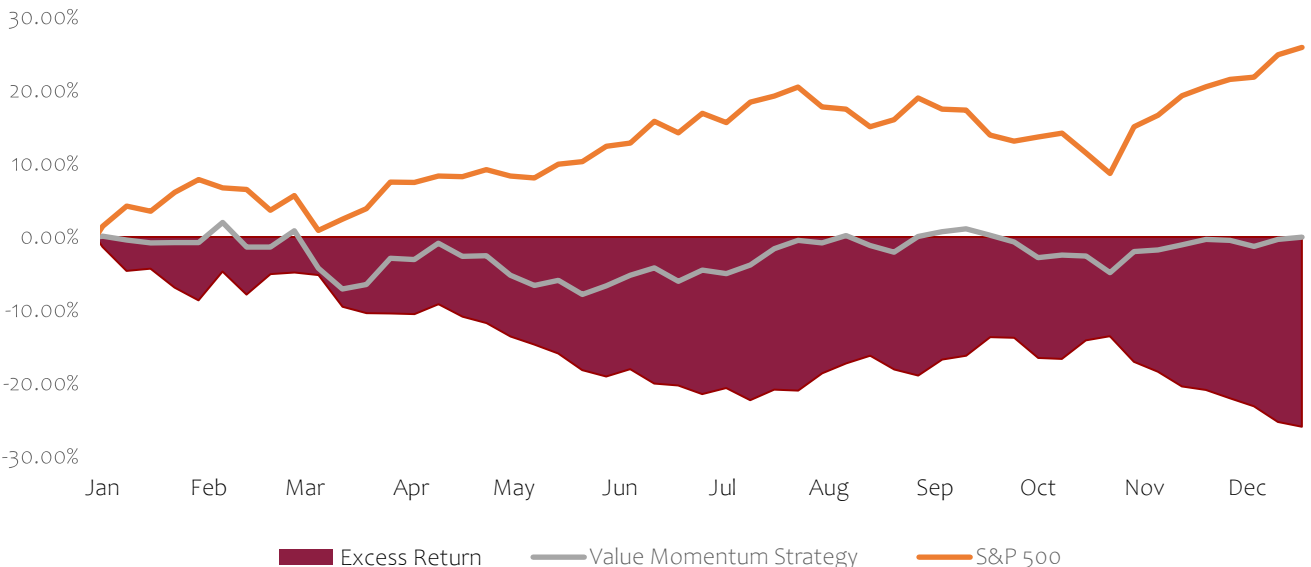luke44@vt.edu

Tim Carey
Analyst
tcarey23@vt.edu

Louis Tucker
Analyst
louistucker@vt.edu

Kritika Parthasarathy
Analyst
kritikap11@vt.edu

1 Year Performance

Legend: Excess Return — Value Momentum Strategy — S&P 500

Value Momentum Sector Performance

Analyst	Project
Kritika Parthasarathy	Python Implementation
Louis Tucker	Sector Specific Strategy
Tim Carey	Sector Specific Strategy
Luke Schermerhorn	Sector Specific Strategy

Forward-Looking Statement

Throughout the first quarter of 2024, our plan is to closely track all holdings and regularly assess the strategy to determine if any positions require adjustments. In response to several factors, including recent underperformance in the past couple of months and the evolving rate environment, we are proposing a tweaked value strategy. Simultaneously, we are in the process of testing the value strategy on a sector-by-sector basis and formulating a weighting system to objectively evaluate which sectors offer the highest value.

Furthermore, ongoing efforts include the conversion of the strategy into Python, a step that will significantly enhance the value momentum sector's capabilities. This adaptation is anticipated to broaden the scope of what the strategy can achieve in the long run, fostering greater flexibility and efficiency in its implementation across various market scenarios. Additionally, the Python project will ensure that we acquire market data from reputable sources, eliminating the reliance on a third-party source and further strengthening the strategy's foundation and reliability.

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