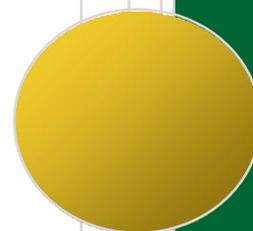




# 2021 MONTANO SMIF ANNUAL REPORT

GEORGE MASON UNIVERSITY

STUDENT MANAGED INVESTMENT FUND



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## **Investment Strategy and Process**

The George Mason University Student Managed Investment Fund operates under a value-based investment approach. The Fund currently manages roughly \$300K and is diversified across six sectors that provide a benchmark for comparative analysis against the S&P 500 Total Return, our Fund's benchmark index. The Fund's investment strategy seeks to preserve and enhance assets over time by outperforming the benchmark index while minimizing risk and transaction costs. The Fund's goal will be met by assessing future economic conditions, including inflation and interest rate levels, when determining investment positions within the portfolio.

The Fund is actively managed by both the investment and risk committees alongside student analysts, and we aim to change our positions only at the end of each semester, as stated by our Investment Policy Statement. Our process begins at the beginning of the semester when student analysts are assigned a specific sector within the S&P 500. Once each industry has been assigned to a team of analysts, the semester starts with each group analyzing the performance of the holdings picked within their sectors from the previous semester. This allows our analysts to become familiar with the methodology of prior analysts and identify critical drivers within their sectors. This preliminary research allows our analysts to identify holdings that they may wish to remove.

Once past performance has been sufficiently reviewed, our analysts will conduct a macro-level analysis of their sectors, the S&P 500, and various global markets. This process gets each team more familiar with their respective sectors and allows them to identify domestic and global macro-economic risks to be used in future analysis. This will enable analysts to identify critical catalysts within their sectors that will help them avoid firms that may remain undervalued for long periods. At this point, our analysts begin to identify potential firms that they may wish to add to the portfolio at the end of the semester.

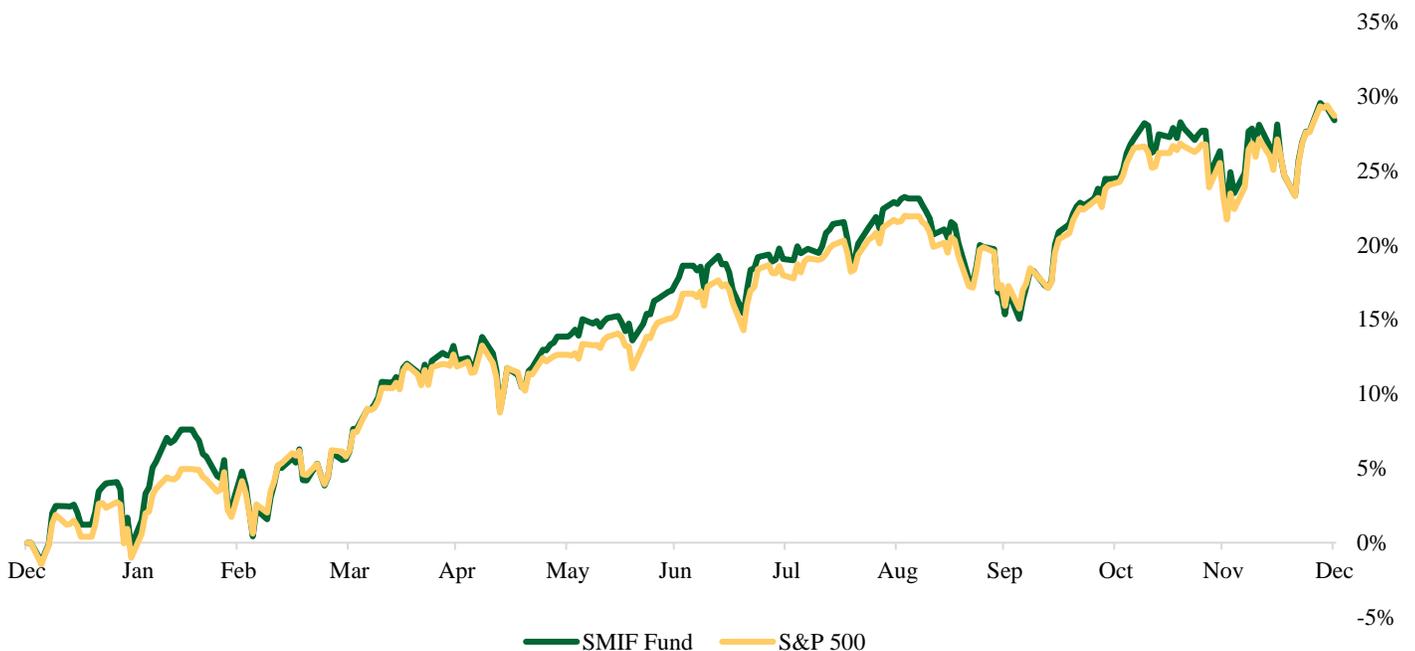
After each team of analysts concludes which holdings they would like to remove from their sectors and their respective replacements, they will present their findings to the class. At this point, the course will then vote on whether to accept the changes proposed by each sector or to hold the current position. Additionally, the class can vote to move the position into a sector ETF if they do not find the current position or the proposed changes made by the presenting team to align with our investment objectives. Holdings being added to the portfolio cannot represent more than a 5% weight of our total holdings as stated by our Investment Policy Statement.

## Portfolio Highlights

The SMIF portfolio ended 2021 with a market value of \$365,721, with the portfolio's highest risk wagers on Nvidia Corporation and Advanced Micro Devices. Although the fund experienced a 4.5% drop September through October due to weak unemployment reports, and the projected delay in the Federal Reserve's asset purchases, the fund was still able to outperform the S&P 500 throughout the year. Risk analysis shows a Standard Deviation or portfolio volatility of 14.49% over 2021, while the S&P 500's was 13.07%. The daily expected shortfall is \$7,307.03 or 2.00%, while the portfolio's value at risk is \$6,859.43 or 1.88%. Our portfolio returned a Sharpe Ratio of 2.04 compared to the benchmark's 2.27 and a Jensen Alpha of -2.32%.

## Performance Analysis

We consistently outperformed our benchmark most of the year; however, the market experienced some headwind in Q4 which impacted our higher risk contributing holdings. The fund returned 28.36% compared to 28.66% for the S&P 500, a -0.3% spread. The most significant contributor to our annual returns was the Technology sector which saw a 41.22% return over the period, compared to its benchmark's (XLK) return of 34.55%. Nvidia Corporation (+124.28%) and Advanced Micro Devices (+55.90%) played a large part in this sector's success. Another contributor to our fund's outperformance was the Industrials (+25.45% vs. benchmark's +20.96%) sector. The Energy Sector struggled the most, with a 6.33% return compared to the benchmark's 53.26%. On an asset level, holdings such as PayPal Holding Inc. took a hit during the month of November, and in turn concluded the year with a negative total return (-15.95%).



## **Investment Outlook 2022:**

Following a year of perplexity in 2020, 2021 proved to be a year of clarity. The economy of the United States recovered quicker than projected, and the S&P 500 returned 28.66%. The Fund reached new all-time highs 68 times during the year, accounting for approximately 30% of all trading days in 2021. This level of consistency is practically unique, considering that 1995 is the only year in which there were more record highs. Investors anticipate a slowdown in economic growth in the new year, but they remain confident about the economy's long-term prospects. Current risks facing the economy are high inflation, new COVID variations, geopolitical instability, and supply chain bottlenecks.

We believe the economy's top risk remains COVID-19 and the virus's new, more transmissible variants. These novel variants can potentially trigger supply chain disruptions or government-mandated lockdowns in nations with "Zero-COVID" laws. Companies in the United States have made significant investments in supply chain resiliency strategies to offset the impact of lockdowns in important trading partner countries on business earnings. If there are further delays in the development of numerous products, supply would be limited, putting more upward pressure on prices. This would make it more difficult for the Fed to determine the right monetary response.

Furthermore, current geopolitical tensions between the United States and other nations are precarious, and the prudent foreign policy by the Biden administration is essential. Nuclear talks with Iran have stagnated as the new administration is willing to risk economic prosperity to drive a harder-line bargain. Similarly, Russia is posturing for an invasion of Ukraine to drive a harder line bargain with NATO countries to get what it wants. Instability in the region and uncertainty over President Vladimir Putin's subsequent actions will impact global markets as Putin has excellent power. He could shut off critical natural gas to European nations, start a war, cause general instability in the area, and much more.

Ultimately, we believe 2022 is poised to be a year of corporate earnings growth and innovation here in the U.S. By staying in line with our IPS, investing in undervalued securities, overvaluing sectors poised for more growth, and keeping our risk to a minimum, we believe 2022 is a year to be optimistic about.

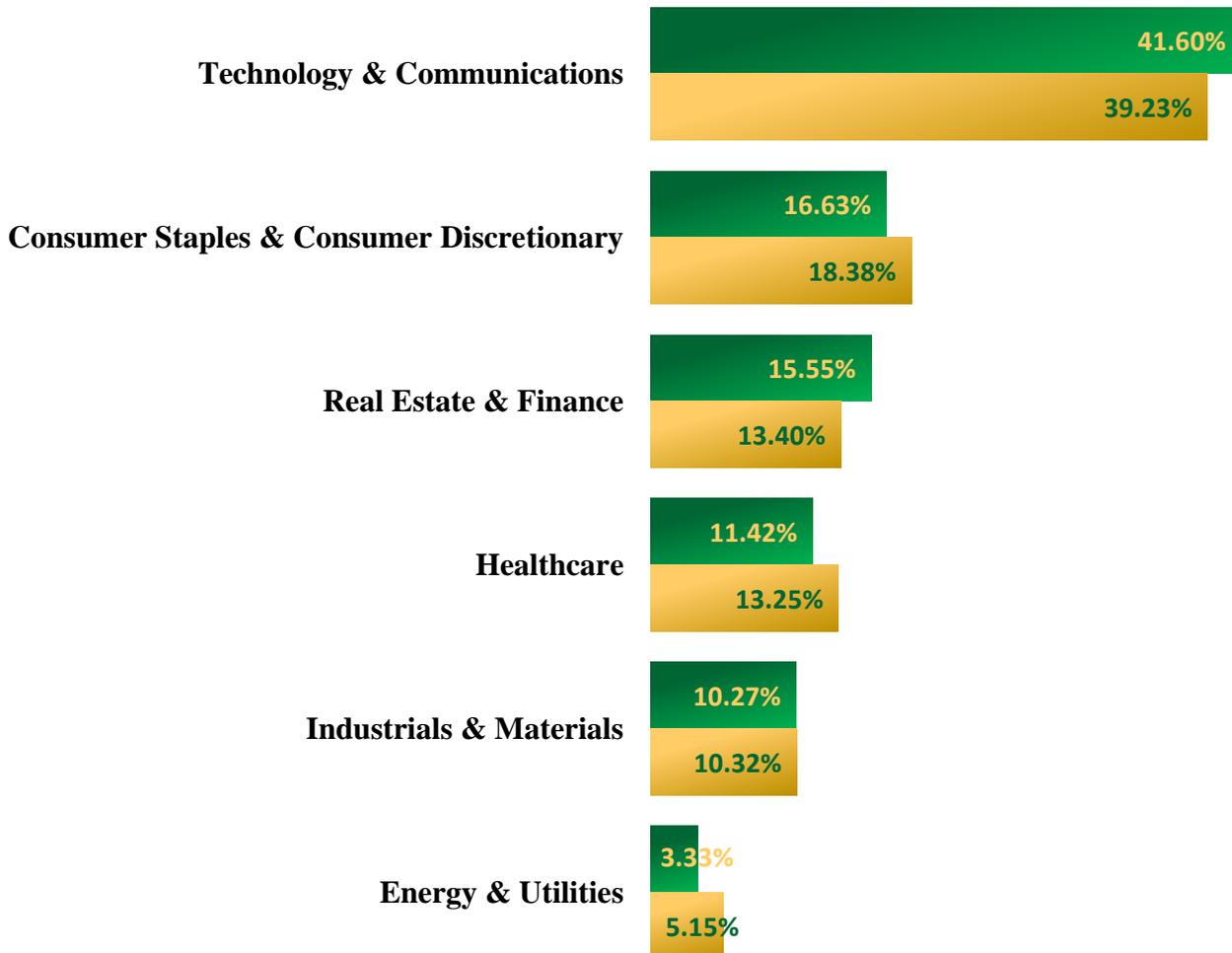
## GMU SMIF Sector Reports:

The GMU SMIF is divided into six sectors that serve as a baseline for comparative study. Energy & Utilities, Consumer Staples & Consumer Discretionary, Healthcare, Industrials & Materials, Financial & Real Estate, and Technology & Communications comprise the benchmark. The following sections study each sector in detail, including current holdings, sector performance over the investigated time, statistical highlights, and future investment expectations.

### Portfolio Allocation

As of 12/31/2021

■ PORT ■ SPY



## Sector Performance

The Utilities and Energy sectors returned 17.58% and 6.33%, underperforming their benchmark ETFs XLU and XLE by 10.98% and 53.26%, respectively. NextEra Energy was the top-performing individual holding between the two sectors, contributing to returns of 0.56%. Together, the Utilities and Energy sectors contributed +3% to overall portfolio return and comprised 0.67% of total portfolio risk.

## Sector Summary

Worldwide lockdowns and supply conflicts between OPEC and OPEC+ nations triggered a historic slump in oil prices in early 2020. As projected, global electricity demand climbed 5% in 2021, but supply lagged; many firms elected to only moderately expand due to increasing financing costs, which drove up energy costs. Specifically, coal averted a severe decrease because of the solid economic recovery in China. The switch from coal to gas in Europe, alongside low inventory levels and limited Russian imports, increased gas prices. Despite runaway oil prices, OPEC expects short-term demand to continue to climb as renewables and other sources fail to meet global energy demand.

The SMIF divested several holdings between the Energy and Utilities sector this year. This included selling Dominion (D) after it fell below the -20% IPS returns threshold, as well as selling First Trust Energy (FEN) and Royal Dutch Shell (RDS). In contrast, the traditionally defensive Utility sector underperformed in 2021 as concerns about slowing economic growth faded.

## Upcoming Investment Expectations

Renewable energy remains on track to surpass coal as the most significant energy source by 2025, and coal divestment continues, with the European Investment Bank planning to stop investing in coal projects beginning in 2022. OPEC similarly predicts that the short-term rise in oil demand will plateau by 2035 as the number of electric vehicles continues to grow. Renewable energy production will increase 6% in 2022, but the IEA expects this will fulfill less than half the projected growth in demand. This rapid “but uneven” recovery is expected to strain energy markets and increase prices overall. Utility companies will also likely take on debt to build renewable energy infrastructure. Going into 2022, we continue to be slightly overweight towards renewable energy, which is environmentally friendly and financially attractive.

	Weight	HPR
ROYAL DUTCH SHELL PLC-A SHS	0.08%	
SCHLUMBERGER LTD	0.03%	0.71%
ENERGY SELECT SECTOR SPDR	1.72%	6.7%
FIRST TRUST NASDAQ CLEAN EDG	0.66%	
VALERO ENERGY CORP	0.48%	
DOMINION ENERGY INC	0.05%	
UTILITIES SELECT SECTOR SPDR	0.29%	
NEXTERA ENERGY INC	2.16%	66.77%
<b>TOTAL</b>	<b>5.48%</b>	

## Sector Performance

The Consumer Staples Sector was one of the worst performers of the S&P for 2021, but all sectors posted double-digit returns in 2021. In 2021, the fund's Consumer Discretionary Sector underperformed its benchmark by 4.45% (23.40% versus the XLY's return of 27.85%). The fund's Consumer Staples Sector underperformed its respective benchmark by 11.78% (5.34% versus the XLP's return of 17.12%). The Consumer Discretionary Sector was an average performer, although companies such as Ford (+137.50%) experienced great returns as they unveiled their electric lineup. Amazon (+2.38%), which last year had strong returns, was one of the main reasons for our underperformance in the Consumer Discretionary Sector over the previous year.

## Sector Summary

Supply chain issues, new Coronavirus variants, and record inflation characterized much of 2021. Despite these issues, the Consumer Sector still posted positive returns for the year. With U.S. consumers spending more time at home this year and spending less, they focused on home improvement projects. These home improvement projects benefitted companies like Lowes (+61.04%) and Home Depot (+56.24%) and pulled XLY to its high positive return for the year. As for XLP's more average returns for the year, this was because of the COVID-19 pandemic. The increased operating costs required to maintain a healthy and safe working environment negatively impacted the sector, particularly on Consumer Staples. Companies whose operations revolved around supplying restaurants, for example, were hurt by these increased costs as restaurants were still not at full capacity. Also, a tight labor market and concerns over the virus have caused slowdowns in the hiring process.

## Upcoming Investment Expectations

Since the distribution of vaccines did not increase consumer staples revenue as previous officers of this fund expected, the fund has opened a position with XLP to hedge against any single stock underperformers in the meantime. Given our expectation that interest rates will rise in 2022, investors will likely pull money away from the tech sector, where future earnings will be discounted more and moved into other sectors. Depending on what version of Biden's "Build Back Better" plan gets passed through Congress will determine what sectors benefit from subsidy support. Given current inflation rates, consumers will likely forgo luxury items in favor of necessities, which makes us optimistic about the consumer staples sector in 2022.

	Weight	HPR
COCA-COLA CO/THE	1.70%	18.86%
CONSTELLATION BRANDS INC-A	1.51%	6.12%
COSTCO WHOLESALE CORP	0.07%	2.24%
HERSHEY CO/THE	0.82%	8.33%
CONSUMER STAPLES SPDR	0.27%	8.53%
WALMART INC	0.77%	46.94%
AMAZON.COM INC	4.06%	99.57%
LENNAR CORP-A	5.03%	121.74%
NIKE INC -CL B	0.74%	
TARGET CORP	2.60%	56.26%
<b>TOTAL</b>	<b>17.56%</b>	

## Sector Performance

The SMIF saw a yearly return of 20.64% in the Healthcare Sector compared to the S&P's Healthcare Sector return of 25.93%. It is our belief that the COVID-19 pandemic, vaccine distribution, as well as the emergence of the Delta and Omicron variants contributed to the performance of the healthcare sector. The persistence of near zero interest rates have caused the asset values of the sector to rise over the year. Omicron heavily affected our holding in the last month of the year, and we expect the Omicron variant to continue to have an impact on our holdings in 2022 as well.

## Sector Summary

The SMIF invested in new companies in the Healthcare Sector, including Bio-Rad Laboratories, Cigna, UnitedHealth Group, and Regeneron Pharmaceuticals. The SMIF also continued to hold Stryker and expanded its position in CVS Health. The fund expects that CVS will do well in the upcoming months with increased testing and vaccinations. CVS is the fund's largest healthcare holding at 4.29% of the portfolio and returned 51.31%. The fund sold off holdings of Bristol-Myers Squibb to realize a significant gain of 36.96%. Also, the fund sold off all shares of SPDR Health Care Select Sector ETF to allocate to new holdings. During the year, the fund sold off about half of its holdings in Cigna at a loss because of underperformance despite its role in the healthcare space. The price has since returned to break even on the assets kept effectively. The fund purchased Bio-Rad Laboratories to expect that they will do well primarily because of the number of COVID-19 tests they process. The fund has held Stryker since 2019, and it has performed well, returning 31.37% since the purchase. We expect Stryker to perform well because of the increased demand for healthcare because of the pandemic.

## Upcoming Investment Expectations

Given the growth of the Omicron version, we expect COVID-19 to remain a key focus for this sector's investment outcomes. Given the high demand for COVID-19 testing and booster shots, we believe our shares provide adequate upside exposure. Because we own UnitedHealth Group and Cigna, we anticipate our holding will do well even if the current COVID-19 surge subsides. They'll become used to the monthly COVID-19 test requirement. The broader economy and the healthcare business should do well despite economic threats.

	Weight	HPR
BIO-RAD LABORATORIES-A	0.32%	1.84%
BRISTOL-MYERS SQUIBB CO	1.16%	
CIGNA CORP	1.03%	0.89%
CVS HEALTH CORP	3.64%	54.54%
REGENERON PHARMACEUTICALS	0.05%	-2.63%
STRYKER CORP	2.29%	32.74%
UNITEDHEALTH GROUP INC	1.00%	26.92%
HEALTH CARE SELECT SECTOR	1.29%	5.66%
VERTEX PHARMACEUTICALS INC	0.22%	
<b>TOTAL</b>	<b>11.00%</b>	

## Sector Performance

The Industrials Sector outperformed its sector ETF (XLI) by 4.49% returning 25.45% compared to its ETF's 20.96%. The Materials Sector had underperformed its sector ETF (XLB) by 1.84% returning 25.63% compared to its ETF's 27.47%. Combined, both sectors account for a 9.85% average weighting in the portfolio, with Industrials being 8.26% and Materials 1.59%.

## Sector Summary

The outperformance of the Industrials sector can be attributed to two companies, with the most significant contributor being Kansas City Southern which had a return of 113.04% over the period and 2.04% to the total portfolio and trailing closely behind was Masco which returned 30.35% over the period and 0.48% to the total portfolio. We also saw Kansas City Southern merge with Canadian Pacific Railway, per the agreement we received \$90 per share and 92 shares of Canadian Pacific Railway (CP) at the end of the year at 2.88 shares per Kansas City Southern shares held. Within the Materials section, we saw Martin Marietta Materials drove most of the sector performance with a return of 19.92%, which led to a total portfolio gain of 0.53%. While weighing only 0.06% and returning 1.69%, Nucor Corp returned 0.0019% to the total portfolio.

## Upcoming Investment Expectations

With the possibility of rising interest rates and inflation, we expect to see investors flock towards safer and more stable investments. The capital inflow into "safe sectors" should fare well for the Materials and Industrials sector. As we have seen the past year, we have been in a bull market, which may be attributed to low-interest rates, FED view toward inflation, and capital inflow. This has been beneficial towards the stock market, as we see a total S&P return of 27.04% for the period compared to its average of 10-12%. It is important to note that with all these factors in mind, the market has moved capital towards more speculative investments, and we have seen a cyclical move from Electric Vehicle stocks towards SPACs, and Cryptocurrencies, which have now been on a decline. As many factors previously mentioned are changing within the macroeconomic trends of the country, we should be prepared to see investors allocate capital towards less speculative investments.

	Weight	HPR
CUMMINS INC	0.79%	-7.58%
HONEYWELL INTERNATIONAL INC	2.39%	37.66%
HUNTINGTON INGALLS INDUSTRIES	0.31%	-7.48%
KANSAS CITY SOUTHERN	3.09%	113.04%
INDUSTRIAL SELECT SECT SPDR	0.17%	2.13%
MASCO CORP	1.51%	30.35%
MARTIN MARIETTA MATERIALS	1.53%	19.92%
NUCOR CORP	0.06%	1.69%
<b>TOTAL</b>	<b>9.85%</b>	

## Sector Performance

The Real Estate Sector returned 31.33% during the holding period, while the Financial Sector returned 31.83%. We underperformed in the Real Estate Sector by 14.66% and in the Financial Sector by 3.00% when compared to their benchmark counterparts. Morgan Stanley was the top-performing holding in the overall sector.

## Sector Summary

While the pandemic still posed a risk to the sector, we were able to see returns as vaccine programs in the world continued to develop. Compared to 2020, where we saw the real estate sector take a hit, we began to reinvest in the real estate sector as we added a holding, American Tower Corporation, which proved to add positive returns to the portfolio. Although still underperforming in comparison to the ETF benchmarks, we still saw more positive returns than we did in 2020, as the housing market boom helped to reenergize the market with its low-interest rates combined with high demand for housing. With the high demand for real estate in the housing market combined with a low supply of houses, it is no shock that we saw an uptick in this sector compared to 2020. The Financial Sector posed less of a risk over the course of 2021, as it performed closer to its ETF benchmark than the Real Estate Sector. We saw the most favorable returns from our holdings in Morgan Stanley and JPMorgan within the Financial Sector.

After evaluating the market status and expanding the investing in the Real Estate & Financial Sectors, these sectors represent 15.6% of the current SMIF portfolio, showing a conservative increase in weight compared to 2020. JPMorgan and Morgan Stanley, two leaders in multiple financial sectors, still carry most of the weight in the financial sector.

## Upcoming Investment Expectations

With interest rates expected to rise and return to normalcy in the near future, we could witness a reduction in the number of homes for sale. Mortgage rates will also likely rise in 2022, which could have an influence on the demand issue that has plagued the housing boom since its inception in 2007. Given that interest rates are expected to return to a semi-normal level and that inflation is expected to rise, the financial sector should see positive returns in the future years.

	Weight	HPR
AFLAC INC	1.54%	27.66%
BLACKROCK INC	0.15%	3.53%
HARTFORD FINANCIAL SVCS GRP	0.51%	-1.09%
JPMORGAN CHASE & CO	5.10%	33.38%
MORGAN STANLEY	4.26%	102.86%
S&P GLOBAL INC	0.89%	
FINANCIAL SELECT SECTOR SPDR	0.73%	26.37%
AMERICAN TOWER CORP	0.87%	5.38%
BOSTON PROPERTIES INC	1.40%	0.18%
REAL ESTATE SELECT SECT SPDR	0.01%	8.53%
<b>TOTAL</b>	<b>15.67%</b>	

## Sector Performance

Our Technology sector returned 41.22% in the fiscal year 2021, above the Information Technology Select ETF (XLK) benchmark's return of 34.55%, which entails a 6.67% additional return. The Communications sector returned 14.21%, only 1.69% less than its benchmark equivalent (XLC), which returned 15.90%. All 10 of our technology sector holdings earned positive Holding Period Returns. With the heaviest weighting, the technology sector has generated significant return contribution of 13%. The combination of Nvidia Corporation [NASDAQ: NVDA] and Microsoft provided remarkable active returns; the two stocks alone contributed 8.18% to the whole portfolio's 30.78% return, driven by their greater weighting.

## Sector Summary

Both sectors accounted for the largest average weighting allocation throughout the year and thus accounted for 44.70% of the overall risk attribution. The combined sectors' overall average weight decreased by 0.70% year over year, ending the year (January 1st, 2022) at 38.62%, down from 39.32% at the start (January 1st, 2021). In 2021, the US Information Technology industry grew by 34.5%, while the US Communication Services sector grew by 15.90%. Despite the 6.9% decline in average total return, our portfolio-maintained comparative results to the prior year. Delivering a 1.03% YoY improvement in the Communication Services sector's contribution to total portfolio return. The information technology sector outperformed the portfolio on an asset level; Nvidia Corporation reported a 114.29% YoY rise in total return, with a 3.16% YoY increase in total portfolio return contribution. Apple Inc. also increased total yearly return by 29.06% while increasing real portfolio contribution by 1.11%.

## Upcoming Investment Expectations

We are confident that while the Communication Services sector is stable due to constant sector demand and a collection of holdings with new fundamentals, the Information Technology sector poses an additional danger that may be avoided. The confluence of deterrent market factors like rising 10-year treasury yields and Fed rate hikes will push us to cut risky positions like Advanced Micro Devices' 2.13% and Nvidia Corporation's 1.81% total risk contributions the future. We believe both enterprises have achieved their ceiling price and that a drop in total average holding weight is required to reduce risk exposure.

	Weight	HPR
ADOBE INC	1.90%	4.77%
ADVANCED MICRO DEVICES	3.53%	260.03%
AKAMAI TECHNOLOGIES INC	0.60%	4.295
APPLE INC	3.89%	43.39%
BROADCOM INC	1.84%	46.89%
INTEL CORP	0.24%	1.32%
MICROSOFT CORP	5.66%	104.90%
NVIDIA CORP	3.90%	55.17%
PAYPAL HOLDINGS INC	4.63%	112.52%
TECHNOLOGY SELECT SECT SPDR	1.25%	1.33%
ALPHABET INC-CL C	5.68%	80.61%
COMM SERV SELECT SECTOR SPDR	1.65%	3.22%
<b>TOTAL</b>	<b>34.80%</b>	

## University Contact Information



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