



**Spring 2018 Investor Relations Report**

<b>Introduction</b>	<b>4</b>
<b>Investment Thesis</b>	<b>4</b>
<b>Market Developments</b>	
Tax Cuts & Inflation	5
Trade War & Tariffs	6
Chinese Term Limits	6
Facebook Trial	6
North Korea Peace Talks & the Iran Deal	7
<b>Director of Research</b>	<b>7</b>
<b>Conclusion</b>	<b>12</b>
<b>Fund Manager Biographies</b>	<b>12</b>
Gunter Hubert	12
Jing Wing	13
Kevin LeFande	13
Yijie Li	14
Yuchen Liu	14
Yufan Ding	15
Owen Nuss	15
<b>Appendix: ETFs in Portfolio</b>	
SPDR Blmbg Barclays 1-3 Mth T-Bill ETF (BIL)	15
Vanguard Total Bond Market ETF (BND)	16
Global X Robotics & Artificial Intelligence ETF (BOTZ)	16
Vanguard Total Bond Market ETF (BND)	16
Global X Robotics & Artificial Intelligence ETF (BOTZ)	16
IQ Real Return ETF (CPI)	16
Guggenheim China Technology ETF (CQQQ)	17
VanEck Vectors Egypt ETF (EGPT)	17
First Trust Dow Jones Internet ETF (FDN)	17
Fidelity MSCI Utilities ETF (FUTY)	17
iShares China Large-Cap ETF (FXI)	17
iShares Russell 2000 ETF (IWM)	18
iShares Russell 2000 Growth ETF (IWO)	18
iShares US Financial Services ETF (IYG)	18
VanEck Vectors Morningstar Wide Moat ETF (MOAT)	18

ALPS Medical Breakthroughs ETF (SBIO)	18
ProShares VIX Short-Term Futures (VIXY)	19
VanEck Vectors Vietnam ETF (VNM)	19
Vanguard Mid-Cap Value ETF (VOE)	19
Vanguard Total Stock Market ETF (VTI)	19
Vanguard Total International Stock ETF (VXUS)	19
SPDR S&P Aerospace & Defense ETF (XAR)	20
Financial Select Sector SPDR ETF (XLF)	20
Technology Select Sector SPDR ETF (XLK)	20

## **Introduction**

The student managers of The RPI Lally James Fund want to personally thank you for your generosity and support over the course of the semester. The James Fund has been an extremely rewarding learning opportunity for all members providing us with hands on experience in the investment management industry. This course has allowed us to analyze exchange traded funds with a focus on current events in an attempt to outperform the market.

At the start of the semester the managers reviewed and revised the Investment Policy Statement (IPS) before they could take responsibility of the fund. The IPS laid out the rules and requirements that the fund managers had to abide by in their investing of the portfolio. The IPS also laid out the course structure where students lead discussions in class and offer their personal insights on decisions to make for the portfolio based on their research. The managers make pitches of ETFs to buy or sell and they are voted on and passed by a 5/7ths majority vote. The managers utilize a group chat in order to stay in constant communication to be able to create and vote on new pitches anytime of the week.

This semester was unique compared to past years as there was a substantial amount of market volatility. The uncertainty of the markets made it very difficult for the managers to anticipate the market and take optimal positions. However, this instability created an excellent learning experience for the managers attempting to maximize returns amidst high volatility and the importance of market timing. The managers also realized they needed to better anticipate future global events as they have massive effects on the market and to not rely on past performance.

## **Investment Thesis**

There are 7 student fund managers in RPI James Fund during the Spring 2018 semester. The ultimate goal is to generate excess return relative to the benchmark (80% VTI and 20% BND). In order to get trading ideas, we present pitches every week and discuss investment philosophy behind the ideas. To make trading decisions, we need one student to motion the trade and a 5/7<sup>th</sup> vote to pass a particular motion. Throughout the investment horizon, the fund managers aimed to be dynamic and adaptive. Basically, we discuss and change some positions every week based on fundamental analysis, technical analysis, and quantitative analysis.

Unfortunately, we didn't beat the market during our investment horizon. The main reason is that U.S stock market volatility has fluctuated since the beginning of February, then it stays in a shock market. When market volatility increases, it's difficult to generate excess return because timing the market trend is extremely difficult.

Since TMT industry companies like GOOG, AAPL, FB, AMZN and NVDA have had good financial reports and performance, they account for a large proportion of our portfolio compared to other industries. In order to diversify our portfolio, we also hold international positions like VXUS, EGPT, FXI and VNM. Mideast and Vietnamese markets have relatively low correlation with the U.S market and were not influenced a lot during the U.S market adjustment in February. To provide a hedge of our portfolio, we also selected volatility ETFs including VIXY. When market volatility increases, VIXY usually increases accordingly. We also attempt to avoid market volatility by holding the cash. We increased our allocation BIL, reducing our allocation to BND, when we believe markets will decline.

Event-driven strategies are also frequently used. For example, when we expect that big banks will report good results, we trade XLF, a financial industry ETF. The impact of other events like a potential Trade War between U.S and China, Facebook Trial, and North Korea-U.S. relations are also considered during our investment period.

For the dormant period strategy, we decided to hold 50% VTI, 30% IWM, and 20% BIL. The reason for 20% BIL is that it is the belief of the managers that rising interest rates will cause an underperformance in long term fixed income compared to short term. 50% was held in VTI in order to not deviate too significantly from the benchmark during a high volatility market. A 30% position in IWM (small-cap russell 2000 index fund) was taken to generate alpha above the benchmark due to expected small-cap outperformance compared to large caps. The reason for expected small cap outperformance is their benefits from the new tax code and lesser exposure to trade war risk.

## **Market Developments**

### *Tax Cuts & Inflation*

Two of the most significant driving forces behind the decision making process for the fund this semester were the Trump tax cuts and inflation rates. Tax cuts influenced decisions due to their positive effect on the financial sector and benefits to small cap companies. One of the main reasons securities such as XLF and IYG were pitched were to capitalize on the impact tax cuts were expected to have on banks. Small caps

were anticipated to outperform due to tax cuts because they benefit disproportionately from the cuts compared to large cap corporations. The reasoning behind this was that large caps often do not pay the full tax rate whereas small caps do, leading to the pitch of the IWO small cap growth fund.

Inflation had a significant influence on the pitches and holdings for the fund over the course of the semester. Due in part to rising inflation, the market has experienced increased volatility. This led the decision process to underweight long term fixed income (BND) and overweight cash (BIL short term 1-3 month T-Bills). Global inflation in Europe also led to underweighting in VXUS, as it has high European holdings, and pursuing opportunities in international investments in countries experiencing lower inflation such as Egypt (EGPT) and Vietnam (VNM). A CPI tracking ETF was also pitched as a method of hedging against inflation. Utilities (FUTY) were also a major focus as they tend to outperform during rising inflation.

### *Trade War & Tariffs*

The Trump administration has made it clear that they are focused on implementing protectionist policies in order to further the interests of US based companies. This has resulted in new tariffs on steel, the blocking of major multinational mergers (Broadcom & Qualcomm), and other Chinese goods. The fear of full blown trade war has depressed the performance of the US market over the past few months, and resulted in underperformance for large cap multinationals. The volatility caused by the fear of trade war led to investment in MOAT, which is a fund that invests in corporations with sustainable competitive advantages. The reasoning was that the trade wars would cause investors to have a flight to quality stocks and value, which is the focus of MOAT.

### *Chinese Term Limits*

In early March President Xi removed term limits for the Presidential position, effectively making himself president for life. This had severe ramifications for the Chinese stock market, as it created uncertainty in the marketplace. As such, it was decided to move away from positions in the total Chinese market (FXI) and the Chinese technology sector (CQQQ). Censorship by the Chinese government has continued to have an impact on the Chinese markets.

### *Facebook Trial*

One of the most significant developments in the technology sector over the semester was the trial of Mark Zuckerberg over Facebook's data leak with Cambridge Analytica. This had an impact on holdings such as FDN and XLK, which overweighted the fund

toward Facebook compared to the benchmark. It was a lesson in market timing, as the fund managers attempted to use FDN with its 8.32% holding of FB stock to capture a potential rebound in FB stock following the trial. FDN was one of the better performing holdings in the student managed fund.

### *North Korea Peace Talks & the Iran Deal*

Throughout the semester the managers have chosen to hold a significant portion of the fund in the defense sector through an investment in XAR (Sector Aerospace/Defense ETF). The reason for this is that military spending is increasing under the Republican Trump administration, causing large defense contractors such as Boeing and Lockheed Martin to experience high returns. As these companies tend to do better during times of conflict as opposed to times of peace, the situation in North Korea as well as the Middle East has been a focal point of the team’s research.

Earlier in the semester when XAR was initially purchased, Trump was feuding with the leader of North Korea on Twitter, which was having a positive impact on XAR. More recently, North Korea shifted its attitude towards foreign powers and has begun peace talks with South Korea and scheduled a peace summit with the United States. This was detrimental to XAR, and the fund sold off its position because of this, which was a mistake as it was a reactionary move. More recently, performance of XAR has improved as Trump backed out of the Iran Deal that had been established by the Obama Administration, resulting in a decline in international relations.

## **Director of Research**

### Key Statistics

Beginning NAV:	125,501.96
Ending NAV:	123,781.38
Cumulative Return:	-3.47%
5 Day Return:	1.64% (05/07/18 - 05/11/18)
10 Day Return:	0.83% (04/30/18 - 05/11/18)
Best Return:	2.38% (03/26/18)
Worst Return:	-3.57% (02/05/18)

### *Performance Overview*

The student managed fund experienced a difficult time this semester with the heavy volatility in the market. The fund ended with a performance of -3.47% during the active trading period. We underperformed the benchmark (80% VTI and 20% BND) which had a return of -1.14% resulting in a 2.33% excess loss by the fund managers. Meaning that if the fund was left at the allocation it was

set at and not actively managed, it would have performed better. With a down market this semester, it was tough for the managers to try to generate a return. Management would have been much better off holding fixed income or cash instead of equities. The

graph below shows the performance of the fund versus the benchmark throughout the year:

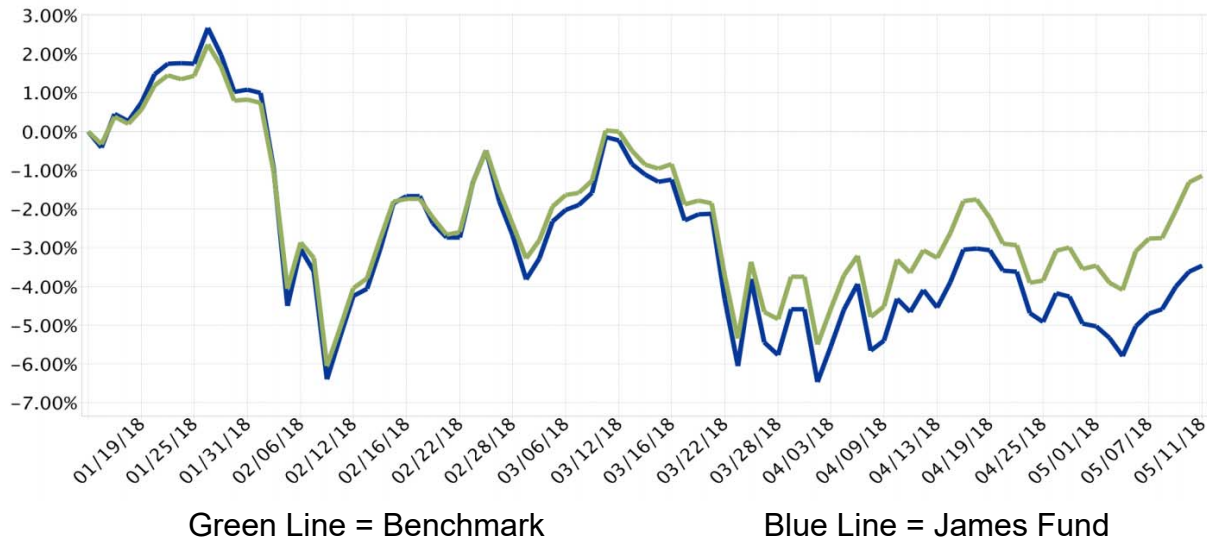


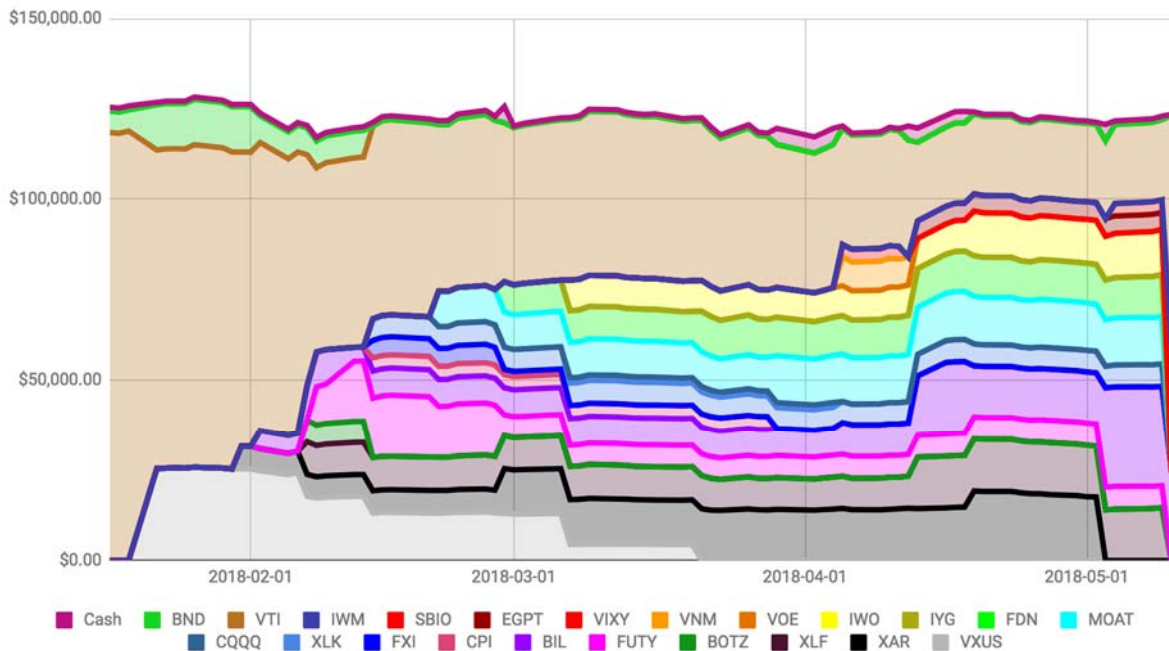
Figure from Interactive Broker's Portfolio Analysis of Rensselaer Polytechnic Institute January 16,2018 - May 11,2018 PDF

### Figure: Portfolio Performance

As you can see from the graph above the benchmark and The James Fund were p close in performance for a large part of the semester. The main reason behind this is that until late March we still had about 40% of our fund made up of VTI, which lead the fund to have a high correlation with the benchmark. At the end of March and early April we started to make more trades to hold less VTI and concentrated in other ETFs in order to try to create more alpha and a better return. However, as you can see from the figure, the more we moved away from VTI the more and more we underperformed the benchmark ending up with a final 2.33% difference. The chart below does a much better job at illustrating the fund's portfolio allocation over time, and the decreasing amount of VTI as the semester went on.



## Portfolio Allocation



**Figure: Portfolio Allocation**

The chart above describes the breakdown of our portfolio over the course of the semester, reflecting the changes in our allocation after each trade. As you can see in the chart, as managers we decided to hold a lot of BIL as we did not feel comfortable with longer term fixed income markets. We also held a large allocation to utilities for a long portion of the semester, which was one of our best decisions. The chart below breaks down more the individual ETFs that helped and hurt the fund the most.

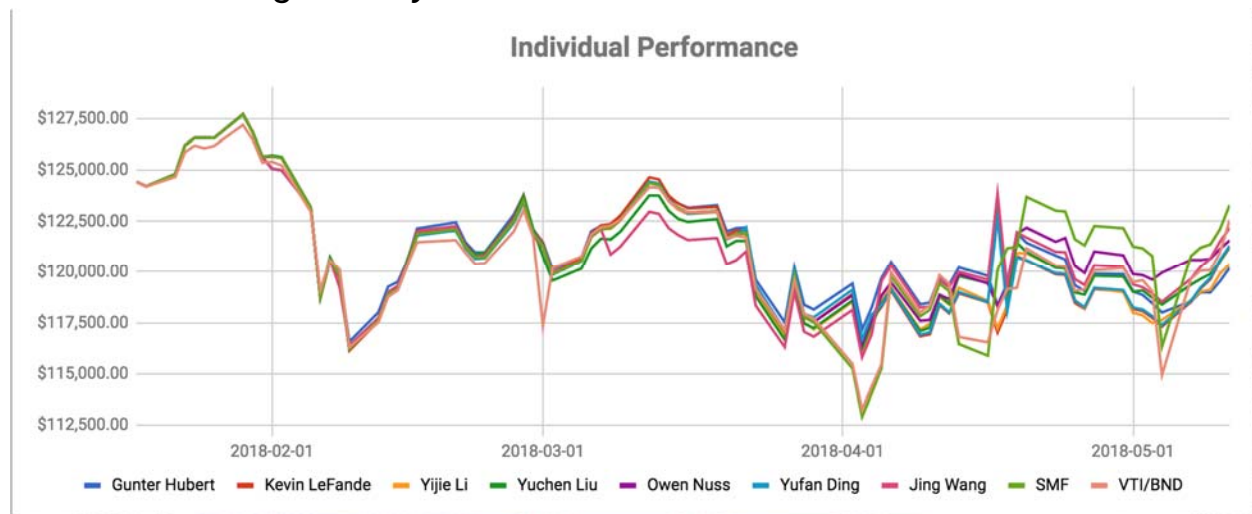
<b>Best Performers</b>	FDN	XLK	FUTY	IWO
Return While Held	6.42%	6.35%	4.05%	1.86%
Benchmark Return	-0.66%	2.59%	1.11%	0.56%
Return Versus Benchmark	7.08%	3.76%	2.94%	1.30%

<b>Worst Performers</b>					
	CQQQ	XAR	VXUS	EGPT	VNM
Return While Held	-7.23%	-6.57%	-5.20%	-3.84%	-3.24%
Benchmark Return	-1.80%	-5.58%	-2.44%	1.88%	0.19%
Return Versus Benchmark	-5.43%	-0.99%	-2.76%	-5.72%	-3.43%

**Figure: Best/Worst Performers**

Shown in the figure above are the top five best and worst performing ETFs that we held. Not only does it show the overall return of the ETF while we held it, but the bottom row also shows how it compared to the benchmark (80 percent VTI, 20 percent BND). For example, XAR (Defense Sector), which had one of the worst returns of all the ETFs actually only underperformed the benchmark by 0.99%, indicating that it actually didn't hurt our performance as much as its absolute performance would suggest. Another area of investing that hurt the fund's performance tremendously was international ETFs. VXUS (Vanguard Total International Stock), EGPT (Egypt), and VNM (Vietnam) all are international ETFs and all are part of our top 5 worst performing holdings. We tried to allocate some of our portfolio in specific areas or countries outside the US market in order to generate alpha. However, in all three of these cases we generated large losses versus the benchmark and would have been better off just staying in VTI. Specific areas that did well and helped our portfolio were Utilities (FUTY), Technology (XLK), and Internet (FDN). All three of these ETFs outperformed the benchmark by a good margin, however they were not large enough holdings in order to make the portfolio as a whole higher than the benchmark.

### Individual Manager Analysis



We did an analysis to show each member's individual portfolio performance if their vote was the choice for each trade instead of the 5/7th majority. As the chart above shows manager Jing Wang had the best individual portfolio, while Gunter Hubert had the worst. Besides, the individual performance before 1/31th is one single line is because everyone and our SMF hold the same ETFs at the beginning of this semester, so these lines coincide for one. However, Jing's portfolio ended up at \$122,462.97 which still underperformed the \$123,781.38 that the James Fund ended up with. During the whole semester, some of our fund managers can beat the SMF as well as our benchmark at some point, for instance, in March most of our fund managers have done a good job, but at the end of the semester, no one can beat the market and our SMF. Showing that the consensus of the majority ended up with a better portfolio than if each manager decided on their own.

## *Missed Opportunities*

### CQQQ



The first big missed opportunity we had this semester was with respect to the timing for CQQQ. CQQQ was pitched on February 7th, however we decided to wait on purchasing it. Of course the stock started to do tremendously well and we missed a large opportunity to make a healthy gain for the portfolio. For example, if we bought the stock on the 7th and then sold it a month and a half later on around March 20th we would have made a profit of about 14.79%. Although, we missed an opportunity here the CQQQ stock did start falling drastically in April, so if we held it for an extended period of time it would have taken away the gain it made previously. We did buy a small portion of

CQQQ on March 7. We bought CQQQ at its high though, and ended up with a total loss of 7.23% from this ETF as it continued to drop the whole time we owned it.

## XAR



Probably the largest mistake, the managers made was selling XAR on May 2nd. We made the decision partly because of the news about peace negotiations between North Korea and South Korea causing the price of the ETF to go down greatly. However, immediately after we sold our shares of XAR the ETF started to rise and continued to do well for the week and half left of the semester. We sold at around \$83 and as of May 10th when we started our dormant allocation it was \$88.10, meaning we missed out on about 6.14% of return.

## Conclusion

At the conclusion of this semester we were tasked to relocate our portfolio in preparation for the dormant period. To do this we had all agreed on three ETFs that we thought best positioned our portfolio to continue to gain value. The three ETFs are IWM, BIL, and VTI. In an effort to divide the portfolio between these three ETFs, each fund manager selected a percentage that they would like to have in each of the three based on their own thoughts for the future of the market. When each fund manager had selected the percentage they believed was best, we averaged them together and derived a portfolio division of 50% VTI, 30% IWM, and 20% BIL.

The first, IWM is an ETF that tracks the performance of the small-capitalization sector of the U.S. equity market. The team believed that this would be a good investment because we believe that the small-capitalization sector will outperform in the coming months. This is driven by two primary factors, one is the idea that small-cap corporations benefit disproportionately from the recent tax code changes and the

second being that small-caps are generally more domestic in nature and less impacted by the threat of trade war. The second ETF our team selected, BIL, is an ETF that seeks to provide investment results that correspond generally to the price and yield performance of the Bloomberg Barclays 1-3 Month U.S. Treasury Bill Index. BIL was held in the fund for a majority of the semester, before the beginning of the dormant period. The team does not like the outlook for long duration fixed income due to inflation so a decision was made to reduce our position in this holding. The third ETF that the team believes is a good hold is VTI. VTI seeks to track the performance of a benchmark index that measures the investment return of the overall stock market. This ETF was 80% of our benchmark throughout the semester, therefore, similarly to BIL, we also held this in the portfolio prior to the beginning of the dormant period. The team believes this ETF will protect the portfolio from significant deviation away from the benchmark of 80%-20% VTI and BND during times of high volatility.

## Fund Manager Biographies



### **Gunter Hubert**

Gunter Hubert is currently pursuing his Masters in Business Administration with a concentration in finance at RPI where he also earned his Bachelor's of Science in Management. His work experience includes two internships, the first being the Procurement/Materials Intern at Novo Nordisk Biopharmaceuticals in his native state of New Hampshire. His second internship was as a Client Operations Intern at State Street Corporation in Boston. He enjoys spending his free time as a four year member of the RPI rugby team and cheering on his New England Patriots. Gunter is graduating in May of 2019.

### **Jing Wang**



Jing is pursuing Master degree in Quantitative Finance and Risk Analytics. Before entering the QFRA program, he finished bachelor degree in Mathematics in year 2017 at RPI. He has great interests in quant trading and portfolio management.



### **Kevin Lefande**

Kevin LeFande is currently pursuing his Master's in Business Administration having completed his undergraduate degree in Mechanical Engineering. Recently, he finished his second internship with Telephonics Corporation, an aerospace defense company working on projects for Lockheed Martin and Boeing. Kevin has developed a passion for investing through courses he has taken at RPI including Investments I and Financial Trading & Investing. After class, he enjoys spending his time rock climbing and watching his favorite baseball team the New York Mets. Kevin has accepted a full time position with General Dynamics Electric Boat in a systems engineering role.



### **Yijie Li**

Yijie Li is currently pursuing a MS in Quantitative Finance and Risk Analytics in RPI. She has an undergraduate degree in Finance with experience working in the Risk Control Department of Bank of Communication and Business Department of Donghai Securities. Her future plans involve working as an analyst in Investment Banking. Yijie is very excited to learn new knowledge and strengthen her abilities.



### **Yuchen Liu**

Yuchen Liu is currently pursuing a Master in Quantitative Finance and Risk Analysis at RPI. He received his Bachelors Degree in Financial Engineering from Northeastern University. With a great passion for investing, he has invested in real time stock and futures market since he was 19 years old. He has plenty of internship experiences such as Quantitative Research in the biggest futures company in China, Quantitative Research in a hedge fund, and consulting assistant experience in the securities division of Citi.





### **Yufan Ding**

Yufan Ding is currently a graduate student at RPI and has a Mathematics-Economics dual undergraduate degree. She has worked in Medtronic for two months, coordinating sales data and modified reports. After graduation, she is going to work in pricing products at Amsino.



### **Owen Nuss**

Owen Nuss is currently pursuing a BS in Business and Management with a concentration in finance at RPI. Owen has held an internship position at The Ayco Company, L.P. a Goldman Sachs Company in addition to other summer employment positions where he gained valuable experience in the financial field. In addition to his working experience he is very involved on campus as the president of RPI Men's Club Soccer, a member of the Roebling Investment Fund and Co-founder of a student chapter of RAN. Owen will be residing in New York City as he has accepted a full-time position in the wealth management field following graduation.

## **Appendix: ETFs in Portfolio**

### *SPDR BImbg Barclays 1-3 Mth T-Bill ETF (BIL)*

The investment seeks to provide investment results that correspond generally to the price and yield performance of the Bloomberg Barclays 1-3 Month U.S. Treasury Bill Index. The fund invests substantially all, but at least 80%, of its total assets in the securities comprising the index or in securities that the Adviser determines have economic characteristics that are substantially identical to the economic characteristics of the securities that comprise the index. The index measures the performance of public



obligations of the U.S. Treasury that have a remaining maturity of greater than or equal to 1 month and less than 3 months.

*Vanguard Total Bond Market ETF (BND)*

The investment seeks the performance of Bloomberg Barclays U.S. Aggregate Float Adjusted Index. Bloomberg Barclays U.S. Aggregate Float Adjusted Index represents a wide spectrum of public, investment-grade, taxable, fixed income securities in the United States-including government, corporate, and international dollar-denominated bonds, as well as mortgage-backed and asset-backed securities-all with maturities of more than 1 year. All of its investments will be selected through the sampling process, and at least 80% of its assets will be invested in bonds held in the index.

*Global X Robotics & Artificial Intelligence ETF (BOTZ)*

The investment seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the Indxx Global Robotics & Artificial Intelligence Thematic Index. The fund invests at least 80% of its total assets in the securities of the underlying index. The underlying index is designed to provide exposure to exchange-listed companies in developed markets that are involved in the development of robotics and/or artificial intelligence as defined by Indxx, the provider of the underlying index.

*IQ Real Return ETF (CPI)*

The investment seeks performance that tracks an index that aims to provide returns greater than the rate of inflation. The fund's index uses a multifactor model to allocate across asset classes and geographies primarily via ETFs.

*Guggenheim China Technology ETF (CQQQ)*

The investment seeks investment results that correspond generally to the performance, before the fund's fees and expenses, of an equity index called the AlphaShares China Technology Index. The fund will invest at least 80% of its total assets in common stocks, ADRs, ADSs, GDRs and IDRs that comprise the index and depositary receipts or shares representing common stocks included in the index. The index is designed to measure and monitor the performance of the universe of publicly-traded companies which are based in mainland China, Hong Kong or Macau, are in the Information Technology Sector.

*VanEck Vectors Egypt ETF (EGPT)*

The investment seeks to replicate as closely as possible, before fees and expenses, the price and yield performance of the MVISTM Egypt Index. The fund will normally invest

at least 80% of its total assets in securities that comprise the fund's benchmark index. The index includes securities of Egyptian companies. A company is generally considered to be an Egyptian company if it is incorporated in Egypt or is incorporated outside Egypt but has at least 50% of its revenues/related assets in Egypt. Such companies may include micro-, small- and medium-capitalization companies.

*First Trust Dow Jones Internet ETF (FDN)*

The investment seeks investment results that correspond generally to the price and yield (before the fund's fees and expenses) of an equity index called the Dow Jones Internet Composite Index (SM) (the "index"). The fund will normally invest at least 90% of its net assets (including investment borrowings) in common stocks that comprise the index. The index is designed to include only companies whose primary focus is Internet-related. To be eligible for inclusion in the index, a company must generate at least 50% of its revenues from Internet commerce or services.

*Fidelity MSCI Utilities ETF (FUTY)*

The investment seeks to provide investment returns that correspond, before fees and expenses, generally to the performance of the MSCI USA IMI Utilities Index. The fund invests at least 80% of assets in securities included in the fund's underlying index. The fund's underlying index is the MSCI USA IMI Utilities Index, which represents the performance of the utilities sector in the U.S. equity market. It may or may not hold all of the securities in the MSCI USA IMI Utilities Index.

*iShares China Large-Cap ETF (FXI)*

The investment seeks to track the investment results of the FTSE China 50 Index composed of large-capitalization Chinese equities that trade on the Hong Kong Stock Exchange. The fund generally invests at least 90% of its assets in securities of the underlying index and in depositary receipts representing securities of the underlying index. The index is designed to track the performance of the largest companies in the Chinese equity market that trade on the Hong Kong Stock Exchange and are available to international investors, as determined by FTSE International Limited.

*iShares Russell 2000 ETF (IWM)*

The investment seeks to track the investment results of the Russell 2000® Index, which measures the performance of the small-capitalization sector of the U.S. equity market. The fund generally invests at least 90% of its assets in securities of the underlying index and in depositary receipts representing securities of the underlying index. It may invest the remainder of its assets in certain futures, options and swap contracts, cash and cash equivalents, as well as in securities not included in the

underlying index, but which the advisor believes will help the fund track the underlying index.

*iShares Russell 2000 Growth ETF (IWO)*

The investment seeks to track the investment results of the Russell 2000 Growth Index, which measures the performance of the small-capitalization growth sector of the U.S. equity market. The fund generally invests at least 90% of its assets in securities of the underlying index and in depositary receipts representing securities of the underlying index. It may invest the remainder of its assets in certain futures, options and swap contracts, cash and cash equivalents, as well as in securities not included in the underlying index, but which the advisor believes will help the fund track the underlying index.

*iShares US Financial Services ETF (IYG)*

The investment seeks to track the investment results of the Dow Jones U.S. Financial Services Index composed of U.S. equities in the financial services sector. The fund generally invests at least 90% of its assets in securities of the underlying index and in depositary receipts representing securities of the underlying index. The underlying index measures the performance of the financial services sector of the U.S. equity market.

*VanEck Vectors Morningstar Wide Moat ETF (MOAT)*

The investment seeks to replicate as closely as possible, before fees and expenses, the price and yield performance of the Morningstar® Wide Moat Focus Index<sup>SM</sup>. The fund normally invests at least 80% of its total assets in securities that comprise the fund's benchmark index. The index is comprised of securities issued by companies that Morningstar, Inc. ("Morningstar") determines to have sustainable competitive advantages based on a proprietary methodology that considers quantitative and qualitative factors ("wide moat companies").

*ALPS Medical Breakthroughs ETF (SBIO)*

The investment seeks investment results that correspond (before fees and expenses) generally to the performance of its underlying index, the Poliwogg Medical Breakthroughs Index<sup>SM</sup>. The fund employs a "passive management" - or indexing - investment approach designed to track the performance of the underlying index. It will normally invest at least 80% of its net assets in securities that comprise the underlying index. The underlying index is comprised of small- and mid-cap stocks of biotechnology and pharmaceutical companies that have one or more drugs in either Phase II or Phase III U.S. Food and Drug Administration clinical trials.

*ProShares VIX Short-Term Futures (VIXY)*

The investment seeks results (before fees and expenses) that, both for a single day and overtime, match the performance of the S&P 500 VIX Short-Term Futures Index for a single day. The index seeks to offer exposure to market volatility through publicly traded futures markets and is designed to measure the return from a rolling long position in the first and second month VIX futures contracts.

*VanEck Vectors Vietnam ETF (VNM)*

The investment seeks to replicate as closely as possible, before fees and expenses, the price and yield performance of the MVISTM Vietnam Index. The fund normally invests at least 80% of its total assets in securities that comprise the fund's benchmark index. The index includes securities of Vietnamese companies. A company is generally considered to be a Vietnamese company if it is incorporated in Vietnam or is incorporated outside of Vietnam but has at least 50% of its revenues/related assets in Vietnam.

*Vanguard Mid-Cap Value ETF (VOE)*

The investment seeks to track the performance of the CRSP US Mid Cap Value Index that measures the investment return of mid-capitalization value stocks. The fund employs an indexing investment approach designed to track the performance of the CRSP US Mid Cap Value Index, a broadly diversified index of value stocks of mid-size U.S. companies. The advisor attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

*Vanguard Total Stock Market ETF (VTI)*

The investment seeks to track the performance of a benchmark index that measures the investment return of the overall stock market. The fund employs an indexing investment approach designed to track the performance of the CRSP US Total Market Index, which represents approximately 100% of the investable U.S. stock market and includes large-, mid-, small-, and micro-cap stocks regularly traded on the New York Stock Exchange and Nasdaq. It invests by sampling the index, meaning that it holds a broadly diversified collection of securities that, in the aggregate, approximates the full index in terms of key characteristics.

*Vanguard Total International Stock ETF (VXUS)*

The investment seeks to track the performance of a benchmark index that measures the investment return of stocks issued by companies located in developed and emerging markets, excluding the United States. The fund employs an indexing investment

approach designed to track the performance of the FTSE Global All Cap ex US Index, a float-adjusted market-capitalization-weighted index designed to measure equity market performance of companies located in developed and emerging markets, excluding the United States. The index includes approximately 5,800 stocks of companies located in over 45 countries.

*SPDR S&P Aerospace & Defense ETF (XAR)*

The investment seeks to provide investment results that, before fees and expenses, correspond generally to the total return performance of the S&P Aerospace & Defense Select Industry Index. In seeking to track the performance of the S&P Aerospace & Defense Select Industry Index (the "index"), the fund employs a sampling strategy. It generally invests substantially all, but at least 80%, of its total assets in the securities comprising the index. The index represents the aerospace and defense segment of the S&P Total Market Index ("S&P TMI").

*Financial Select Sector SPDR ETF (XLF)*

The investment seeks investment results that, before expenses, correspond generally to the price and yield performance of publicly traded equity securities of companies in the Financial Select Sector Index. The fund generally invests substantially all, but at least 95%, of its total assets in the securities comprising the index. The index includes securities of companies from the following industries: diversified financial services; insurance; banks; capital markets; mortgage real estate investment trusts ("REITs"); consumer finance; and thrifts and mortgage finance.

*Technology Select Sector SPDR ETF (XLK)*

The investment seeks investment results that, before expenses, correspond generally to the price and yield performance of publicly traded equity securities of companies in the Technology Select Sector Index. In seeking to track the performance of the index, the fund employs a replication strategy, which means that the fund typically invests in substantially all of the securities represented in the index in approximately the same proportions as the index. It generally invests substantially all, but at least 95%, of its total assets in the securities comprising the index.