RESPONSE TO THE CFA SOCIETY ORANGE COUNTY REQUEST FOR PROPOSAL FOR INVESTMENT MANAGEMENT SERVICES

NOTICE : This document is not fully accessible as to its graphic charts - Please contact the Faculty Advisor below stated if you seek to understand these charts.

Date of response: November 22, 2019
Name of school: California State University, Long Beach

Faculty Advisor: Peter A. Ammermann, Ph.D
Title of Advisor: Associate Professor, Finance
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CFA SOCIETY ORANGE COUNTY

REQUEST FOR PROPOSAL

FOR

INVESTMENT MANAGEMENT SERVICES

Any questions or requests for clarification should be directed to either of the following:

Paisley Nardini, CFA	**Chad A. Noorani**
Investment Policy Committee Chairperson	*Director, Education Committee Co-chairperson*
PaisleyNardini@gmail.com	ca.noorani@gmail.com

Key Dates

Written Reports Due: Friday, November 22nd, 2019 at 8:00 PM

Oral Presentations: Friday, December 6th, 2019 at 12:00 PM

Oral Presentations to be held at:

To Be Confirmed

TABLE OF CONTENTS

I. Introduction

The CFA Society of Orange County ("CFAOC") is requesting proposals from qualified student management teams for the management of a portion of the CFAOC's investment portfolio. CFAOC is the premier association for financial analysts and investment professionals in Orange County. With over 600 members, most of whom hold the Chartered Financial Analyst (CFA) designation, CFAOC plays a vital role in advocating continuing education and ethical practices for professional excellence in the growing Orange County investment community.

CFAOC is one of over 150 connected local societies across the world that are affiliated with CFA Institute, the global not-for-profit organization of nearly 160,000 investment professionals that awards the CFA and CIPM designations. Society membership creates a valuable link between CFA charter holders and investment professionals.

The purpose of this proposal is to identify and select a student team to provide investment management services to assist the CFAOC Board of Directors (the "Board") to meet its objective of managing the funds in accordance with sound investment management policies, practices and procedures and in compliance with State and Federal regulations.

In selecting the student investment management team, the Board will take into consideration the team's experience, depth of resources, and level of personal commitment toward the investment management process. The selected team must demonstrate capability in the areas of asset allocation, security selection, and compliance.

The portfolios to be managed pursuant to this RFP have the following characteristics:

- There are currently four portfolios managed under the supervision of CFAOC.
- All CFAOC portfolios are benchmarked to a blended benchmark of 70% equity and 30% fixed income. The benchmark is comprised of 50% Russell 3000, 20% MSCI All Country World ex US Index and 30% Barclays Capital U.S. Aggregate Bond Index. Please also see optional use of one "customized benchmark."
- The management of all portfolios must follow the CFAOC SMIF Program Investment Policy Statement guidelines (see Appendices A and B).

II. Specifications of the Request for Proposal

Response Deadlines

8:00 PM on Friday, November 22nd, 2019 – SMIF Teams will e-mail in PDF format a completed RFP to the Chair of the Investment Policy Committee (PaisleyNardini@gmail.com) for subsequent distribution to the IPC. Any RFP not meeting this deadline will NOT be accepted.

12:00 PM on Friday, December 6th, 2019 – Five (5) printed presentations are due and Oral presentations made to the Investment Policy Committee of the CFAOC. Please do not print out the full RFP response. Any submission not meeting this deadline will not be accepted.

NO AMENDMENTS WILL BE ACCEPTED AFTER THE DEADLINES STATED ABOVE.

Required Attachments and Enclosures

In addition to the responses to the RFP questions, the forms referred to in Section V, below, must be attached to the proposing team's response.

Withdrawal/Irrevocability of Responses

A proposing team may withdraw and resubmit a Proposal prior to the Response Deadline. No withdrawals or resubmissions will be allowed after the Response Deadline.

Waiver/Cure of Minor Informalities, Errors, and Omissions

The Board reserves the right to waive or permit cure for minor informalities, errors, or omissions prior to the selection of finalists, and to conduct discussion with any qualified proposing teams and to take any other measures with respect to this RFP in any manner necessary to serve the best interests of CFAOC and its beneficiaries.

Incurring Costs

Neither the CFAOC or its Board of Directors will be liable for any costs incurred in the preparation of a proposal in response to this request.

Rejection of Proposals

The Board reserves the right to reject any non-qualifying Proposal. The Board also reserves the right to reject in part or in its entirety any Proposal received in response to this RFP if it is in its best interest.

Award Subject to Approval

All proposing SMIF teams are hereby advised that any Proposal that is selected will be subject to the approval of the Board. The CFAOC Board of Directors has the sole discretion of final approval.

CANCELLATION OF RFP

The Board reserves the right to cancel this process or terminate the search at any time.

III. Manager Minimum Qualifications

A proposing team must meet the following minimum criteria to be given further consideration in the Board's search for a student investment management team pursuant to this RFP. Failure of a team to meet the minimum criteria will result in the Proposal's immediate rejection.

The sponsoring college or university must be accredited and have a substantial presence in Orange County;

- The proposing team must include a minimum of five (5) team members;
- Each of the team members must be a currently enrolled student;
- Each of the team members must be interested in investment management and must have completed or be currently enrolled in investments-related coursework;
- The team must have a committed faculty advisor; and
- Each team member and the faculty advisor must sign statements of commitment to the term and the project.

IV. Investment Manager Search Timeline

November 22nd, 2019 8:00 PM	**Written Responses Due** *Notes:* PDF format submitted to the IPC Chairperson, Paisley Nardini (PaisleyNardini@gmail.com) **AND** the Education Committee Chairperson, Chad Noorani (ca.noorani@gmail.com) for distribution to the IPC Committee. Should a response be received after the deadline, the timestamp on the Education Committee Chairperson's email inbox will serve as confirmation for time of receipt.
December 6th, 2019 12:00 PM to 5:00 PM Location to be confirmed	Oral Presentations Notes: • Five (5) printed copies of the presentation are due at the time Oral Presentations are made to the IPC. Bring an electronic copy of your presentation to facilitate your Oral Presentation. • Each team will have a maximum of 30 minutes to make their Oral Presentations to the IPC. Time indications will be provided at the 5 and 1-minute marks. *The IPC Chairperson will keep official time, and will cut the presentation off when time expires (even if mid-sentence)*. • Questions from the IPC Committee will be conducted throughout after each team's presentation. Feedback will be given directly after. • IPC will award RFP assignments at the conclusion of the event after a closed-door deliberation session.
December 9th, 2019 – December 31st, 2019	**Performance holiday** allowing for rebalancing and aligning portfolio to stated allocation.
December 31st, 2019	**Transfer of assets** or accounts to SMIF teams (if necessary). Completed by the CFAOC after market close.
January 1, 2020	SMIF teams will **commence management** of their respective portfolios for the 2020 calendar year.
Mid-April, 2020 Location to be confirmed	Quarterly Update Presentations

V. Required Forms

- The team must complete the following questionnaire (Section VI). In addition, Appendices I, II, III, and IV must also be completed.
- Each student team member is required to complete the biographical form found in Appendix I: Student Biography.
- The faculty advisor must complete the form found in Appendix II: Faculty Advisor Biography.
- The team, as a whole, must complete Appendix III – Organizational Chart and Appendix IV – Investment Process Flow Chart.

RESPONSES MUST BE MADE ON THE ENCLOSED FORMS WITH NO MODIFICATIONS. INCOMPLETE FORMS OR MISSING FORMS WILL RESULT IN THE PROPOSAL BEING REJECTED.

VI. Questionnaire Directions

To achieve a uniform review process and obtain the maximum degree of comparability, it is required that the proposal be organized in the following manner:

Title Page: Please present the information requested in the above table on the title page.

State the question in bold font with your answers stated in regular font. Responses should be thorough and answer the specific question asked (including the issues addressed in the bullet points).

Adhere to the same numbering scheme used in the questionnaire. Answer the questions in the same order in which they were asked.

Answers should be thorough but concise.

Adhere to page and style formats. The responses must be submitted in PDF format, single-spaced with 1" page margins. Font should be 12 point, preferably Times New Roman.

Save the document and submit it electronically to CFAOC in PDF format. Responses must be sent as attachments by e-mail as described above in the Search Timeline.

Note that the questionnaire includes three (3) subsections: (A) Contact Information, (B) Organization & People; and (C) Investment Philosophy & Process.

Also note that many of these questions may be difficult to answer, especially in view of the fact that you are students who have had a limited amount of experience and prior academic preparation. If you are not sure how to answer a given question (or if you are not sure what the question is asking in the first place), you are welcome to ask your assigned CFAOC representative for advice. Our goal is to enhance the educational opportunities available to Orange County investment students, and we view this Request for Proposal not only as a means for eliciting information from potential student investment-management teams, but also as an educational instrument in its own right. As such, the questions will challenge what you know (and what you think you know) about the investment analysis and portfolio management process. So, do your best to answer your questions to the best of your ability, and you may learn something before it is done!

Good luck! We look forward to reading your response!

VII. Questionnaire

- **A. Contact Information**

Date of response:	November 21, 2019
Name of school:	California State University, Long Beach
Faculty Advisor:	Peter A. Ammermann
Title of Advisor:	Associate Professor, Finance
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City, State Zip	Long Beach, CA 90840
Telephone:	
E-Mail:	Peter.Ammermann@csulb.edu
Student Contact:	
Address:	
City, State Zip	
Telephone:	
E-Mail:	

B. Organization & People

a. Describe the background of your University and the investment-related education it provides. Include in your description the following information:

Established in September 1949, California State University, Long Beach (CSULB) serves a student population of nearly 37,000 undergraduate and graduate level students, the 6th largest university in California. CSULB earned the distinctions of being the "*No. 10 Best Public School in the Nation"* by Money.com and "*No. 7 in the West for Promoting Social Mobility"* by U.S News and World Report. The university's mission is "Providing highly valued undergraduate and graduate educational opportunities through superior teaching, research, creative activity and service for the people of California and the world. The University places value on educational opportunity, excellence, diversity, integrity and service."

The College of Business (COB), one of the original colleges in 1949, has grown to include over 4,500 students, 153 faculty members, and 15 undergraduate and advanced degree programs. The COB's mission is to graduate highly valued, ethical business professionals prepared to excel in a dynamic global business environment by providing high-quality teaching and support programs that develop and assess students' business functional knowledge, critical thinking ability, and communication, ethical, interpersonal, and quantitative skills. The COB facilitates faculty's continuous commitment to research, professional development and service to strengthen the resource base and ensure continued excellence.

The finance department offers an undergraduate degree program focusing on three interrelated areas, financial management, investments, and money and capital markets to prepare students for successful careers in the disciplines of corporate finance and investments. For graduate students, the department offers the Master of Science in Finance program, which is aligned with the Chartered Financial Analysts (CFA) curriculum to equip students with the knowledge needed for CFA certification. The department also offers a minor in Finance for undergraduate students in other majors and a concentration in Finance for MBA candidates.

Undergraduate Investment Related Coursework:

Investment Principals (FIN 350)	Seminar in Financial Mgmt (FIN 470)
Capital Markets (FIN 360)	Derivatives (FIN 480)
Intermediate Financial Mgmt (FIN 400)	Fixed Income Securities (FIN 485)
Portfolio Analysis (FIN 450)	International Finance (FIN 490)
Mgmt in Financial Institutions (FIN 460)	Applied Portfolio Mgmt (FIN 499 A/B)

Graduate Investment Related Coursework:

Financial Mgmt Concepts (FIN 501)	Financial Analysis and Ethics (FIN 610)
Seminar in Business Finance (FIN 600)	Capital Budgeting (FIN 620)

Seminar in Financial Forecasting (FIN 630)
Economic & Quantitative Analysis (FIN 640)
Seminar in Investments (FIN 650)
Seminar in Financial Institutions (FIN 660)
Equity Securities & Valuation (FIN 670)
Seminar in Derivatives (FIN 680)
Fixed Income Securities (FIN 685)
Seminar in International Finance (FIN 690)
Applied Portfolio Mgmt (FIN 699 A/B)

Student Managed Investment Fund
CSULB's student-managed investment fund, known as Beach Investment Group (BIG), was established in 1995 and is offered as an elective to CSULB junior, senior, and post-baccalaureate level students with majors, minors or concentrations in finance, economics and other business disciplines. Beach Investment Group has approximately $670,000 AUM from two CSULB endowment funds. Entrance into the program is highly selective, requiring completion of prerequisite investment courses and participation in a summer boot camp and strategy competition.

The COB, finance department, faculty, and alumni fully support Beach Investment Group's educational and research efforts. Faculty regularly offer extracurricular advising and mentorship to Beach Investment Group team members, attend class meetings, and assist team members with strategy related research. Alumni regularly attend team meetings, provide professional development workshops and mentoring to support the program. The COB Finance department proudly opened the Bloomberg Lab in Spring 2019, providing students access to 10 Bloomberg Terminals for research and experiential purposes. Two additional mobile Bloomberg Terminals are accessible to Beach Investment Group students for additional research during off-hours. In addition to the Bloomberg Lab, CSULB provides students access to ABI/Inform, Hoovers, Moody's/Mergent, and ValueLine to further supplement financial research needs.

Financial Management Association (FMA)
The Financial Management Association (FMA) at CSULB is recognized as a "Superior Chapter" by the FMA International headquarters. It offers students exposure to financial markets and employment opportunities in the finance industry, enhancing students' college experience and understanding of finance. FMA members benefit from internship/job opportunities, workshops with speakers, networking, and professional/social events. The FMA's extensive alumni network includes professionals from various industries and firms including Comerica Bank, UBS, TCW, Northrop Grumman, Raytheon and beyond. Alumni support FMA efforts by returning as speakers, giving members career advice, offering internship opportunities, and donating. The CSULB FMA chapter is constantly expanding thanks to the efforts of current members and alumni and continues to foster successful careers in finance.

b. Describe the structure of your student investment-management team. In your description, address the following issues:

The 2019-2020 Beach Investment Group team is comprised of 32 students, 30 undergraduate and 2 graduate, with diverse backgrounds and varying levels of investment management and financial market experience. Students are assigned to one of five teams focused on research and analysis of specific investment-related areas: economic analysis and asset allocation, fixed-income, equity momentum, equity value, and portfolio analysis. Teams meet weekly sharing research and findings to further enhance the group's collective knowledge and understanding of investment management practices. Students' collective efforts and shared information help to establish a holistic market view and guide informed trade decisions for the portfolios under management.

Beach Investment Group leadership includes a class president, executive vice president, and five vice presidents. The class elects leaders using a democratic style voting process. The president is responsible for developing the strategic vision and ensures the group's adherence to the investment philosophy throughout the analysis and decision-making process. The executive vice president works closely with team vice presidents to coordinate efforts, ensure communication lines are open and support the implementation of the strategic vision and investment philosophy. The president and executive vice president, collectively, facilitate class communication and meet weekly with the program director to develop weekly goals and agendas. Team vice presidents coordinate the efforts of the analyst teams, assigning and monitoring duties of individual team members and act as the liaison between the team and the class. Equity and fixed income team vice presidents act as portfolio managers for the respective segment of the portfolio.

Economic Analysis and Asset Allocation Team

The economic analysis and asset allocation team analyze the macro- and microeconomic environment to determine capital market projections, develop sector profiles, set asset allocation targets, and provide regular economic updates and implications to the investment strategy. The team is comprised of market analysts who focus on the equity and bond markets, respectively, and asset allocation analysts who apply economic forecasts to develop sector profiles and the optimal asset allocation strategy. The vice president of the team is responsible for coordinating the team's efforts, holding team members accountable, and sharing findings with the class.

Fixed-Income Team

The fixed-income team is responsible for the development and implementation of the fixed-income portfolio strategy and security research. The team consists of fixed-income security analysts specializing in 2-3 fixed-income asset classes. Fixed-income analysts research asset class characteristics, apply economic outlooks to identify areas of opportunity through exposure or avoidance of their respective asset classes, and research and recommend fixed-income security holdings. The vice president acts as both the team leader and fixed-income portfolio manager, overseeing portfolio construction and identifying and managing portfolio risk.

Equity Value Team

The equity value team is responsible for the development and implementation of the value strategy. Value security analysts conduct in-depth fundamental security analysis to identify value opportunities. The vice president acts as the team leader and as the value portfolio manager, overseeing portfolio construction and ensuring proper diversification amongst value and momentum holdings.

Equity Momentum Team

The equity momentum team is responsible for the development and implementation of the momentum strategy. Momentum security analysts utilize quantitative strategies to identify sector ETF momentum and manage the monthly sector rotation. The vice president is responsible for overseeing team efforts, ensuring portfolio construction adheres to the momentum strategy, and monitoring the risk and diversification across momentum and value holdings.

Portfolio Analysis Team

The portfolio analysis team is responsible for portfolio reporting, compliance, and trading activities. Compliance officers present portfolio performance and compliance reports at weekly meetings, review security buy/sell recommendations, and report portfolio attributes given the proposed trades. Traders are responsible for the timely submission and confirmation of trade requests and recommendations. The vice president is responsible for oversight of the reporting, compliance and trading operations.

Team Meetings

Beach Investment Group holds weekly class meetings on Monday evenings from 7:00 p.m. to 9:45 p.m. Attendance of weekly class meetings is a requirement of all Beach Investment Group participants. Weekly meetings are structured to allow discussion of various topics including economic and market updates, portfolio performance updates, and trading recommendations. Each team provides regular updates pertaining to their areas of expertise to provide the group with up to date information, implications and strategy revisions. Meetings are presided over by the president and vice president. Meeting minutes are recorded and distributed by a rotating student chair. Minutes are also housed on a cloud drive for ready access to historical meeting topics and decisions.

Strategy, portfolio, and administrative decisions are voted on during class meetings. The decision process follows Robert's Rules of Order, requiring a minimum 75% percent class attendance to bring motions to a vote. Administrative decisions require a simple majority for approval, while strategy adjustments, portfolio construction, and trade decisions require a supermajority of 60% for approval. The program director provides mediation should the need arise.

In addition to regular class meetings, team vice presidents, the executive vice president, and president meet weekly to review group performance objectives, approve meeting agendas and discuss team and portfolio management. The president and executive vice president also meet weekly with the program director to evaluate progress, review investment strategies, and develop weekly meeting agendas.

c. Describe the benefits and incentives for students to participate in this program:

Participation in the Beach Investment Group program is highly selective, requiring commitment before and during the academic year, while providing exceptional benefits for students. Successful completion of investment-related coursework is a prerequisite besides participation in the Beach Investment Group summer boot camp and strategy competition. Students selected to participate must demonstrate an interest in and dedication to advanced investment management theory, as well as the ability to understand and develop portfolio construction strategies.

Beach Investment Group applicants include juniors, seniors and post-baccalaureate COB students with academic concentrations in finance or economics and the desire to apply investment theory in active portfolios. In addition to investment-related coursework prerequisites, applicants must attend the Beach Investment Group summer boot camp and strategy competition designed to test the applicant's investment knowledge and prepare them for the responsibilities of the Beach Investment Group team. During the 3-part boot camp, applicants attend strategy workshops and participate in a team strategy competition. Students are selected based on performance during the summer boot camp and interviews with the program director.

Once admitted to the Beach Investment Group program, students receive a total of 6 semester units for the year-long program commitment. These units apply directly to the applicant’s degree program as elective finance courses. Participants also receive the added benefits of practical knowledge and experience in portfolio management not available through traditional theory-based coursework.

In addition to the academic benefits, Beach Investment Group participants have the unique opportunity to interact with clients and develop professional communication skills. While managing multiple clients’ portfolios, Beach Investment Group conducts quarterly and annual reviews for multiple investors and occasionally, approaches potential investors with the goal of increasing AUM. Each interaction with potential investors requires Beach Investment Group participants to not only create and deliver customized presentations, but also to communicate research and performance attributes clearly and concisely.

Networking is another benefit to participation in Beach Investment Group. Participants are encouraged to attend industry networking events, with the requirement of attending a minimum of two per semester as a part of the curriculum. CFA and other professional organization events are a key part of the Beach Investment Group experience and help students make connections that ultimately help develop a successful career in finance.

IN ADDITION TO PROVIDING THE ABOVE ANSWERS, THE TEAM MUST COMPLETE APPENDIX III – ORGANIZATIONAL CHART

d. Describe the background of the students and faculty advisor of the team:

Beach Investment Group team members include junior, senior and post-baccalaureate level COB students with academic concentrations in finance or economics. Students have varying levels of professional and investment-related experience, based on their personal backgrounds.

Dr. Peter Ammermann serves as the faculty advisor and program director of the CSULB Beach Investment Group program. Dr. Ammermann holds a Ph.D. in Finance from the Virginia Polytechnic Institute, continues coursework toward a Ph.D. in statistics, and is a founding member of the CFAOC Investment Policy Committee.

Please refer to appendices I & II for detailed information regarding the CSULB Beach Investment Group student team and faculty advisor.

IN ADDITION TO PROVIDING THE ABOVE DESCRIPTIONS, EACH STUDENT TEAM MEMBER MUST COMPLETE APPENDIX I – STUDENT BIOGRAPHY, AND THE FACULTY ADVISOR MUST COMPLETE APPENDIX II – FACULTY ADVISOR BIOGRAPHY.

e. Why is your team uniquely qualified to manage the investment portfolio of CFAOC?

CSULB Beach Investment Group’s commitment to the program, pursuit of academic excellence, and passion for research and education make it uniquely qualified to manage the investment portfolio of the CFAOC Foundation. Through its highly selective recruiting process, the support of faculty, alumni, the investment community, and the resources provided by the university, Beach Investment Group creates a highly research-driven learning environment with a culture of professionalism and success.

Beach Investment Group recruits individuals who exhibit exceptional dedication to an education in portfolio management and the drive to perform. Through the recruiting process, Beach Investment Group members gain valuable strategy development experience in a competitive setting and receive feedback from alumni, faculty, and industry professionals. These experiences all take place prior to entry into the program, providing a valuable springboard into the responsibilities of the academic year. Candidate interviews, which are conducted by the program director, further refine the participants to those who possess a high level of motivation and the ability to collaborate in diverse team settings in order to enhance the overall program.

Once admitted to Beach Investment Group, students regularly meet outside the confines of class, conducting market research, developing presentations, and monitoring economic environments to understand the implications of changes in strategy and portfolio performance. Non-class meetings and research equate to 20+ hours per week dedicated to the management of the portfolios Beach Investment Group is accountable for. Beach Investment Group transcends the academic calendar, meeting regularly during school holidays, between academic semesters and during summer sessions.

The combination of a rigorous selection process that focus on research, education, and steadfast dedication to the management of the portfolios under its purview qualify CSULB Beach Investment Group program to manage the CFAOC Foundation portfolio.

- **C. Investment Philosophy & Process**

PHILOSOPHICAL AND ECONOMIC OVERVIEW

a. Describe your team's investment philosophy:

Beach Investment Group believes the capital markets are mostly, but not perfectly efficient (Eugene Fama et. al), creating growth opportunities through the opportunistic identification of risk and reward regularities.

The tenets of our philosophy are:

Client-Centered

Beach Investment Group's principal objective is to satisfy the return and risk objectives of our investors. More than just a fiduciary duty, we believe our responsibility is to understand our client's investment goals and provide transparent, ethical and responsible portfolio management strategies that meet and exceed those goals.

Fundamentally Sound

Beach Investment Group employs a fundamental approach to combining top-down, bottom-up, and quantitative processes to guide our investment decisions and manage risk. Throughout our process, a heavy emphasis is placed on the combination of top-down and bottom-up analysis and identification of long-term risk premia. We believe a basis in fundamentals helps us identify opportunities and manage underlying risks for our clients.

Diversification
We believe diversification provides an effective tool to help manage the risk profile of a portfolio. Idiosyncratic risk can be difficult to identify, leaving opportunities for investors to take on more risk than they are aware of. Through proper diversification, investors have a more clear and transparent understanding of their risk exposure and, more importantly, the return for that risk exposure.

Research Oriented
There is no shortcut for identifying opportunities and risks. The Beach Investment Group team engages in relentless research to understand the economic, sector, industry, and idiosyncratic conditions during each step of the decision-making process. We believe our dedication to conducting in-depth research gives Beach Investment Group the best opportunity to meet client objectives and expand our knowledge of sound investment principles.

Through these core investment beliefs, Beach Investment Group looks to capitalize on the research and identification of long-term risk premia that provide return opportunities. The market risk factors we see as most quantifiable and exploitable include value and momentum, which form the basis of our equity strategies.

Environmental, Social, and Governance (ESG) factors are considerations we believe sets us apart from other firms. Research suggests ESG considerations have a neutral impact on long-term portfolio returns. Consequently, Beach Investment Group incorporates ESG considerations into the investment process as we can construct sustainability and responsible minded portfolios without risking return opportunities.

Beach Investment Group believes the combination of value and momentum strategies will continue to provide excellent return opportunities well into the future. The value-based approach, widely popularized by investment professionals like Warren Buffet, Peter Lynch, Joel Greenblatt, and Benjamin Graham, has remained successful through various economic cycles and market conditions. Furthermore, empirical evidence supports that over time, value outperforms growth, cheap outperforms expensive, and small-cap firms outperform large-cap firms (Fama, French et. al). As a result, Beach Investment Group focuses on small to mid-cap value securities as the core of value strategy holdings while attempting to capture illiquid premiums (Ibbotson et. al) with betas below market averages. Applying top-down economic analysis and bottom-up security analysis allows Beach Investment Group to identify macro performance barriers and drivers and work to understand how these forces may affect individual security performance.

While widely misunderstood, the momentum effect continues to be one of the most widely documented and persistent anomalies used to develop investment strategies. Empirical evidence supports the existence of momentum, specifically when found in trailing 3-12 month returns (Jegadeesh, Titman et. al). We acknowledge the risk of momentum crashes persists within the strategy; however, the diversification properties and positive performance, when combined with value is well documented (Asness, Clifford S., 2009) and can potentially provide tremendous returns while providing excellent diversification for the overall portfolio.

b. Will your approach include passive strategies such as indexation? If so, please describe the role such strategies will play.

Beach Investment Group utilizes active portfolio management strategies. The value strategy portfolio seeks to hold between 8-15 individual securities. While individual securities are researched, broad style, sector, or market ETFs may also be held. The momentum strategy portfolio holds up to five sector ETFs; holdings are actively managed with a monthly rotation strategy as outlined further in section K.

Fixed-income strategy portfolio utilizes an active approach. Fixed-income holdings are limited to broad ETF securities due to portfolio size and adherence to investor guidelines. The fixed-income team uses a top-down approach to selectively gain exposure to segments of the bond market through broad ETFs. While capturing broad exposure and providing diversification properties, ETFs also reduce the ability to target sectors, industries, and firms.

MARKET OVERVIEW AND ASSET ALLOCATION

c. What is your capital market outlook for the coming year:

Global and domestic capital markets faced many forces throughout the course of 2019. From trade wars and geopolitical concerns to declining capital investment and inverted yield curves, there are many factors to consider when generating near-term forecasts. Even though headwinds exist, high consumer sentiment, a strong labor market, accommodative monetary and fiscal policy, and continued, albeit slowing, GDP growth continue driving the US domestic economy into the 125th month of its historic expansion. While global economies remain a concern, recession does not appear imminent and the US appears well-positioned to continue its economic expansion into 2020.

Analyzing global and domestic economies begins with identifying key factors in the economic environment. These factors include the *Economic Cycle Stage*, *Inflation*, *Risk Sentiment* and *Financial Conditions*. Identifying and understanding these factors involves studying leading and lagging economic indicators such as GDP, CPI, unemployment and the FED rate target, among others. Understanding the interrelationships between and implications of these indicators form the basis for economic analysis and projections.
Bloomberg Terminals are the primary source for economic data. Bloomberg Terminals act as an aggregator of information, providing consensus estimates, news, and other market updates

from around the globe. Primary sources are also referenced to validate consensus estimates. Information sources include:

- Bloomberg Professional Services
- St. Louis Federal Reserve (FRED)
- U.S. Federal Open Markets Committee
- U.S. Bureau of Labor Statistics
- U.S. Department of the Treasury
- National Bureau of Economic Research
- Organization for Economic Co-operation and Development (OECD)
- Chicago Board Options Exchange
- World Bank
- International Monetary Fund
- Pacific Investment Management Company

Market projections are constructed using a combination of leading and lagging indicators, monetary and fiscal policy forecasts, and assessment of geopolitical environments. Beach Investment Group also uses Edward Yardeni's *Yardeni Model* as a secondary tool to construct forward estimates of the S&P 500, which is widely considered a proxy for the domestic equity market.

Global Economic Outlook

Global economic growth rates are projected to slow over the next 12 to 18 months in both developed and emerging markets. Slowing GDP growth rates, low unemployment levels, and falling central bank rates hint that global economies may be entering a late cycle trend. Global uncertainty, as a result of increased political unrest and waning consumer and business confidence, appears to be stifling global economic growth potential. During this turbulent time, a firm grasp of current global affairs is imperative to understanding the nature of the global economy and growth opportunities.

Economic uncertainties are clouding the global economic environment, making projections difficult to derive as geopolitical concerns remain a constant headwind to global economic growth. US-China trade tensions are driving much of the uncertainty as two of the world's largest economies impose tariffs and sent shockwaves through global markets. Recently, a Phase I deal involving tariff rollbacks was announced, signaling optimism over easing tensions. The UK's exit from the European Union (EU), Brexit, is also a major concern as a no-deal Brexit may be a drag on the Euro-area and on many global economies. These along with other geopolitical considerations are constantly monitored as updates quickly reverberate causing shifts in sentiment and outlooks.

Developed market GDP is projected to grow by only 1.5% in 2020, down from 2.3% in 2018, while emerging market GDP is projected to grow by 4.6%, down from 4.9% in 2018. Declining GDP growth rates support the assertion that global economies have entered the late stages of the economic cycle. Germany, the largest EU economy, has seen its manufacturing and production sharply decline, evidenced by manufacturing PMI. Germany narrowly avoided falling into a technical recession with its recent Q3 GDP growth reported at 0.1%. China is also experiencing economic headwinds and struggling to reach GDP growth targets, slightly missing Q3 estimates. China reported 6% Q3 GDP growth, slightly below 6.1% targets. Germany and China, as two of the largest developed and emerging market economies, respectively, illustrate the impacts trade tensions and other economic uncertainties are having on the global economic environment. Germany and China epitomize global growth concerns given the headwinds faced by both developed and emerging markets.

Developed market inflation is projected at 1.9% in 2020, down from 2.3% in 2018, but slightly above 2019. Below target inflation rates have persisted as an ongoing concern in recent months, however, low inflation has also allowed central banks to continue their accommodative monetary and fiscal policy stances in efforts to boost economic activity. The European Central Bank (ECB) recently cut rates to -.5% and reinstituted quantitative-easing, providing a boost to EU sentiment. Overall, global central banks are expected to continue cutting rates in 2020, attempting to stimulate further growth, with rates expected to decline to 1.13%. Unemployment rates in developed economies are projected at 4.9% in 2020, slightly improving from the 5.1% mark in 2019.

Emerging markets saw strong growth patterns overall in 2018 and 2019; however, expectations have cooled recently. Inflation is projected to decline to 3.7% and unemployment is expected to continue declining to 5.3% in 2020. Economic headwinds have turned most central banks dovish with more accommodative monetary policy stances and rate cuts expected in 2020. Rates are expected to slide from 5.91% in 2019 to 5.49% in 2020 in efforts to support further growth. While accommodative policies provide a boon to growth potential, exposure to uncertainties such as the US-China trade war and Brexit leaves an uncertain future for many emerging markets. Selective opportunities are available; however, as global supply chains are reconfigured and a further decoupling from China progresses.

Slowing global inflation may signal a troubling trend where a decline in consumer demand further stifles growth prospects as consumers wait for prices to fall. The concern over deflation has led many central banks to continue cutting interest rates, evidenced by record low, and a growing number of negative, rates. As explained above, accommodative policies are helping to dampen the decline, but headwinds from global uncertainties remain at the forefront of forecast considerations. Global capital markets offer select upsides; however, slowing growth patterns are expected to persist barring significant changes in the geopolitical environment.

Global Real GDP Growth Rates (%)					
	2017	2018	2019	2020	2021
Global	3.81	3.61	3.01	3.41	3.56
Developed	2.53	2.31	1.68	1.48	1.68
Emerging	4.90	4.93	4.45	4.58	4.72

Global Consumer Price Index (%)					
	2017	2018	2019	2020	2021
Global	3.20	3.62	3.41	3.56	3.48
Developed	2.01	2.29	1.74	1.86	1.89
Emerging	3.37	3.60	3.77	3.71	3.42

Global Unemployment Rates (%)					
	2017	2018	2019	2020	2021
Global	-	-	-	-	-
Developed	5.60	5.07	4.86	4.83	4.76
Emerging	6.10	5.90	5.27	5.25	5.14

Central Bank Rates (%)					
	2017	2018	2019	2020	2021
Global	-	-	-	-	-
Developed	1.19	1.95	1.27	1.17	1.25
Emerging	5.06	5.16	5.79	5.44	5.14

Source: International Monetary Fund & OECD

Domestic Economic Outlook

The US economy has entered its 125th month of economic expansion, setting a new record for the longest economic expansion in US history. High levels of consumer confidence, a strong labor market, continued GDP growth, and accommodating monetary and fiscal policy are projected to fuel growth. As do global economies, the domestic markets must overcome headwinds, primarily the US-China trade war and a sluggish domestic manufacturing and production environment. Overall, the domestic economy is projected to weather global uncertainties far better than economies abroad as domestic economic expansion continues into 2020.

Domestic GDP is projected to continue its pattern of slow and persistent growth in 2020. Bloomberg estimates Q4 2019 real GDP to grow at a rate of 2.3%. GDP is projected to grow between 1.7% - 2.3% in 2020. While the slowing growth rate suggests a late stage cycle, positive economic indicators point to a continuation of the current growth cycle. Consumer sentiment also remains quite positive, considering the rise of recession fears and uncertainty, with consumer spending increasing by 2.9% and continuing to bolster economic growth. Making up greater than 2/3 of overall GDP, strong consumer sentiment also supports the notion of continued economic expansion.

While projections call for continued GDP growth, growth rates have slowed in recent years. A flattening and briefly inverting treasury yield curve also projected uncertainty. As a result, the Federal Open Market Committee (FOMC) reversed its hawkish policy outlook and cut rates in July, September and October of 2019. The current FOMC's federal funds rate now sits at 1.5% - 1.75%. Jerome Powell's commentary indicated rate cuts were a mid-cycle adjustment and the FOMC would remain data dependent, adjusting policy as new economic data is published. Powell also alluded to solid economic data indicating the US economy is on stable footing. As a result of the rate cuts, markets have continued to rally, the treasury yield curve steepened, and consumer sentiment remains high. Bloomberg estimates the FED's upper bound will be further cut to 1.5% by Q4 2020, indicating policy will remain accommodating to support economic expansion.

Domestic Inflation has fluctuated between 1.7% - 2% for most of 2019, with Q3 ending at 1.7%. Accommodative policy, tariffs and low interest rates are expected to gently increase inflation to the target 2% in 2020, a level widely considered normal for a modern economy. Low inflation also allows the FED to continue supporting economic expansion with low federal funds rates without the immediate fear of an overheating economy.

Domestic manufacturing and production are areas of concern in the U.S. economy. The August 2019 PMI index posted a 49.1, the first reading below the neutral 50.0 threshold since Q3 2016. September was the second consecutive month of PMI contraction indicating a decrease in business confidence. Coupled with declining fixed investment levels by businesses, manufacturing and production remain an ongoing concern to the economic expansion. Trade war implications and anomalies, such as Boeing's halt of 737 MAX production, contribute to these less than ideal economic figures. Continued monitoring of business sentiment is necessary to understand if this decline will become an ongoing trend or is simply a short-term fluctuation, as was the case in 2016.

The U.S. labor market remains solid with unemployment reaching 50 year lows in 2019. Unemployment is projected to fall to 3.5% by year end and remain at 3.5% through 2020, indicating a healthy economy with at or near full employment. Coupled with rising wage rates, the U.S. worker has much to be happy about and is translating that sentiment into increased consumer spending. This, again, supports the projection of a continuation of the economic expansion in 2020.

The domestic economy's sustained expansion has continued for more than a decade and is poised to continue into 2020. Solid economic factors including growing GDP, strong labor markets, and supportive FED policy appear reassuring to continued expansion. While the deterioration of the fragile Phase I agreement with China, further declines in business sentiment, or surprises form the presidential election or impeachment proceedings may alter this outlook, projections for the 2020 domestic economic outlook are quite positive.

	2019	2020	2021
Real GDP (YoY%)	2.30	1.75	1.90
CPI (YoY%)	1.80	2.0	2.0
PMI	50.7	51.1	--
Unemployment (%)	3.70	3.70	3.80
Central Bank (%)	1.75	1.60	1.70

Source: Bloomberg

Equity Market Projection

Beach Investment Group uses forward projections of the S&P 500 as a proxy for equity market performance. The *Yardeni Model,* from Yardeni Research, Inc, uses forward estimates of earnings and price targets to project estimates of future S&P 500 performance. By combining Yardeni's projections with Bloomberg's consensus estimates and internal economic analysis, Beach Investment Group derives forward estimates of the equity markets.

Beach Investment Group estimates the S&P 500 Index to reach a target range of 3400 - 3500 in 2020. This estimate implies a 2020 equity market growth rate of approximately 9% - 11%, slightly above the S&P's long-term historical average growth rate of 8%.

Fixed-Income Market Projection

Fixed-income markets are heavily influenced by the target federal funds rate, inflation expectations, and the overall risk levels of market participants. Recent FED funds rate cuts, uncertainties over deteriorating global economic conditions, trade disputes, and other geopolitical concerns early in 2019 resulted in a risk off scenario. As a result, the treasury yield curve flattened and inverted for a short time and yields and spreads compressed toward historic lows.

More recently, positive economic data, easing trade tensions, and further supportive monetary policy have resulted in a return to risk, a steepening yield curve, and an overall increase in yields across tenors. Though inflation is expected to remain low, yields are expected to climb through 2020 as the expectation of continued domestic economic expansion and low yields and spreads leads investors to risky assets. Bloomberg analysts project treasury yields to increase as shown below.

2020 Treasury Yield and FED Target Rate Projections				
Time Period	3-Month	2-Year	10-Year	FED Funds Target Rate
Current	1.57%	1.6%	1.81%	1.75%

Q4 - 2020 (P)	1.77%	1.66%	1.95%	1.5%

Source: Bloomberg

10-Year Treasury 2020 Consensus Yield Estimates			
Period	Low	Median	High
Q1 - 2020	1.15%	1.80%	2.27%
Q2 - 2020	1.05%	1.90%	2.75%
Q3 - 2020	1.00%	1.93%	3.03%
Q4 - 2020	1.00%	1.95%	3.00%

Source: Bloomberg

Given these forward projections and the Bloomberg Barclays Aggregate Bond Index's average modified duration of 6.176 years, fixed-income market returns are estimated to range between -7.23% to 5.13% in 2020 based on consensus yield to maturity forecasts.

d. What is your target asset allocation?

Based on projections for continued economic expansion and a positive outlook for equities markets, Beach Investment Group is setting the portfolio target asset allocation at 75/25, equities to fixed-income. Compared to the blended benchmark allocation of 70/30, the portfolio will be more heavily weighted in equities as estimates of continued expansion bode well for increased exposure to risk assets. Notwithstanding uncertainties identified during the analysis of the economic environment, Beach Investment Group remains bullish on the equity markets while maintaining a moderate risk level. Material changes in economic conditions, domestic political events, or geopolitical considerations may require revisions to asset allocation targets as new information becomes available.

e. What do you think are reasonable performance goals for the coming year?

Based on capital market projections and the proposed portfolio construction, the 2020 CFAOC portfolio's expected return ranges from 6.5% - 10.5%. The median expected return of 8.5% satisfies the CFAOC's stated annual return objective equal to the spending rate of 6% plus 2% for tuition inflation at major universities serving Orange County.

f. Apart from the assigned blended benchmark, does your team utilize a different internal benchmark?

Beach Investment Group utilizes a composite of the S&P 500 and Bloomberg Barclays Aggregate Bond Index weighted 70/30 respectively as an internal benchmark for portfolio performance. Considering the S&P 500's nearly universal use as a proxy for the domestic equity market, this composite provides an excellent benchmark to the heavily domestic proposed portfolio.

FIXED-INCOME VALUATION AND SELECTION

g. Which of the following instruments would you regard as appropriate for the fixed-income portion of your portfolio?

	Appropriate (X)	Inappropriate (X)
Cash Equivalents	x	
U.S. Treasury Notes and Bonds	x	
Investment Grade Corp. Bonds	x	
Mortgage-Backed Securities	x	
High Yield Corp. Bonds	x	
Developed International Debt		x
Emerging Market Debt		x
Preferred Stock	x	

Methodology

The fixed-income portfolio acts as an anchor, reducing volatility and focusing on income generation. While rising recently, yields and credit spreads remain low compared to historical averages. To mitigate risk, given the economic environment, the fixed-income portfolio focuses on higher-quality investments while emphasizing sectors and industries that remain stable in the event of an economic downturn, when possible. Duration and maturity targets seek to protect against upward movement in yields, match liquidity needs and reflect our current assessment of the fixed-income markets. It should be emphasized that this strategy reflects our position, given the current economic outlook and projections, and may require modifications should the economic outlook change.

Cash Equivalents

Short-term cash and cash equivalents provide liquidity and insulation from the expectation of a rising yield environment over the next 12-18 months. Similarly, cash and equivalents act as a risk reduction tool should uncertainties once again negatively impact markets. Due to yields below inflation, however, short-term bills will be used primarily for risk reduction purposes should market conditions require it. For these reasons, Cash and cash equivalents are deemed appropriate for the portfolio.

U.S. Treasury Notes & Bonds

Historically being one of the safest investment securities with essentially non-existent credit risk, U.S. Treasuries provide ultra-low risk yield to investors. While compressed, U.S. treasury yields remain higher than most developed economies, with some economies, notably Germany and Japan, with negative yields. In the event of further global economic deterioration, foreign capital may seek the safety of U.S. treasuries, specifically tenors near the 10-year, potentially putting downward pressure on intermediate yields and creating potential capital appreciation opportunities. Though global pressures may provide opportunities in the future, most treasury yields remain below current levels of inflation, therefore relegating the current value of treasuries to that of a diversification tool. The relative safety of U.S. Treasuries makes them appropriate for the portfolio as volatility reduction tool.

Investment Grade Corp. Bonds

Investment grade corporate bonds represent one of the best income opportunities, compared to risk, in the fixed-income market. Corporate bonds provide higher coupon rates and yields, when compared to treasuries, providing stable income with the added benefit of capital appreciation potential. While credit risk is a factor, expectations for continued expansion reduce the risk of default or rating downgrades. Low inflation expectations also allow the asset class to provide high-quality duration with higher coupon potential without excessive credit risk. Maturity and duration will be laddered to reduce exposure to single portions of the yield curve. For these reasons, investment grade corporate bonds are appropriate for the portfolio.

Mortgage-Backed Securities

Mortgage-Backed Securities (MBS) provide the potential for stable income from higher coupon rates with attractive yields, compared to treasury instruments, while maintaining a relatively low credit risk profile. Mortgage default rates continue declining as employment and wages continue strong growth. Prepayment risk is inherent with MBS securities; however, the analyst team concludes the recent decline in interest rates does not create enough incentive to push large numbers of homeowners into refinancing. Healthy growth in housing starts and mortgage loan originations remain steady giving stability to the MBS market. Duration of MBS securities fall into the intermediate term due to prepayment risk; however, maturities tend to be long. The varying tranches of MBS securities also allow the portfolio to gain exposure to higher credit quality instruments, thus increasing overall credit quality of the portfolio and reducing default risk. Mortgage-Backed Securities are appropriate for the portfolio.

Non-Investment Grade Corp Bonds

Credit risk is the primary consideration with non-investment grade credit instruments, both in terms of default risk and the risk of downgrades in credit ratings. The projection for continued economic expansion bode well for non-investment grade corporate credit's tighter correlation with equities, higher yields, and higher coupons. However, the low yields and credit spread compression across the fixed-income make the risk return profile less advantageous. Should economic conditions deteriorate, lower credit quality firms may see slashes to credit ratings in response to headwinds in their respective industries, creating substantial risk for the category. Notwithstanding the credit risk, non-investment grade credit offers the highest yields and coupons in the domestic bond market, therefore, while economic conditions remain positive, exposure to the category for the purpose of yield pickup is deemed appropriate. The analyst team will, however, continue to monitor economic conditions as changes may require a reduction or elimination of exposure to this asset category.

Developed International Debt

Developed markets are experiencing yields at or near record lows, including some economies with negative yielding debt. Central banks have also reaffirmed dovish stances to extend the growth cycle and in some cases, prevent recession. Foreign central banks such as the European Central Bank (ECB) and Bank of Japan (BOJI) recently reinstated stimulus programs, including quantitative easing and interest rate cuts, given sluggish economic forecasts and geopolitical events like the U.S. - China trade war. With the economic conditions in developed markets continuing to weaken, the overall return for the level of risk in most developed economies is difficult to accept. Therefore, developed market debt is deemed inappropriate for the portfolio.

Emerging Market Debt

Depressed yields and dovish policies in developed economies led to a rally in emerging market debt over the past year. Although yields are higher than domestic debt, the recent rally has driven spreads on emerging market debt instruments down. As a result, investors are not being adequately compensated for the elevated risk of emerging market debt. While the U.S. - China trade war creates unique opportunities in Latin America and Southeast Asia due to the realigning of supply chains, broad global deceleration is anticipated as international trade deteriorates and uncertainties loom on the horizon. Emerging market debt remains a consideration and will be among the instruments added to the portfolio should geopolitical tensions settle and global growth projections revert to the positive. However, given the current global economic outlook and compressed credit spreads, emerging market debt is not considered appropriate for the portfolio.

Preferred Stock
Given the low interest rate environment, preferred stock securities offer superior dividends compared to coupons of other fixed income asset classes of similar credit risk. Higher dividend payments give the asset class substantial upside in the current rate environment. Preferred stock, generally considered hybrid securities as they share characteristics of both equities and bonds, tend to also be more highly correlated to the equities market. This correlation makes returns on preferred stock slightly more volatile than traditional bonds, yet lower than common stocks, offering potential upside during economic growth cycles while adding diversification benefits. With steady, albeit slowing economic growth and rising bond yields forecasted, preferred stock brings in an attractive source of income, making them appropriate for the fixed-income portfolio.

h. What are the target maximum, minimum, and average maturities and durations for the fixed-income portion of the portfolio?

	Maximum (years)	Minimum (years)	Average (years)
Maturity	25 yrs	<1 yr	4-7 yrs
Duration	10 yrs	<1 yr	3-6 yrs

The fixed-income portfolio is constructed to provide both an anchor to the volatility of equity markets and exposure to areas of the fixed-income market that are well-positioned for the forecasted economic environment. To accomplish both of these goals, taking the economic outlook and amount of uncertainty of today's markets into account, the fixed-income portfolio targets average duration and maturities slightly below the benchmark Barclays Aggregate Bond Index. A barbell strategy will be used to maintain close proximity to the benchmark's average duration while positioning the portfolio in multiple segments of the yield curve.

Duration and maturity targets were selected in response to forecasted persistent, albeit slowing, growth of domestic equity markets and overall economy. Fixed-income yields have recovered from near record lows in recent months and while the fed target rate is projected to remain mostly unchanged, consensus estimates project bond yields to continue increasing over the course of 2020. With economic indicators being relatively positive, the fixed-income portfolio will focus on exposure to asset classes to generate income rather than increasing exposure to interest rate sensitivity on the expectation of future target rate cuts.

To attain the desired average duration and maturity targets, the portfolio will be structured with a barbell strategy. This strategy positions portfolio holdings on the short and intermediate-long segments of the yield curve while keeping the average near the benchmark. The strategy allows the portfolio to capture the upside potential of longer maturity and duration instruments that may benefit from international capital inflows should global conditions worsen, while reducing interest rate risk and volatility with shorter durations and maturities. Should economic conditions continue to improve, interest rate sensitivity on longer durations and maturities may become problematic. Thus, the barbell strategy provides somewhat of a hedge against this kind of market movement.

The analyst team understands the current fixed-income environment is fluid and could change rapidly as economic and market conditions evolve. The current market environment has led to yield compression across the fixed-income security universe, changing the risk-reward profile of asset classes. The analyst team continues to monitor the changing economic environment with an understanding that the strategy may require modifications should the economic outlook change in the near future.

i. What is the target sector / industry allocation for the fixed-income portion of the portfolio?

Portfolio sector and industry targets are evaluated similarly to equity holdings, emphasizing sectors and industries that are projected to outperform in the forecasted economic environment. The fixed-income analyst team finds global economic uncertainties, geopolitical concerns, and domestic election with impeachment proceedings to be risk factors for fixed-income securities, primarily due to potential changes to the economic outlook. As a result, the portfolio emphasizes higher quality debt from sectors and industries that have shown a propensity to weather changing economic conditions.

Keeping in line with the economic outlook, the fixed-income team is targeting debt securities from the real estate, healthcare, communications, and consumer staples sectors. Financial sector and mortgage securities are also targeted as they represent two of the largest portions of the debt market, outside of treasuries. While the low rate environment is not ideal for the financial sector, current liquidity and solvency requirements stemming from Dodd Frank and Basel III provide a positive and stable outlook for financial sector debt should the economic environment deteriorate. The overall sentiment for the fixed-income portfolio is to focus on higher quality debt from sectors and industries that will remain stable should the uncertainties in the economic environment changes to the outlook.

Due to the size of the portfolio, below $500k, fixed-income securities will be limited to ETFs and mutual funds, making it difficult to target specific sectors and industries as outlined above.

Although difficult given this limitation, fund holdings and weighting are monitored in efforts to identify sector and industry exposure. Sector weighting is not the exclusive factor in fund selection; however, exposure through fund holdings is an important aspect of the decision-making process.

EQUITY VALUATION AND SELECTION

j. Describe your equity strategy, including whether your strategy will be using any of the following approaches:

Beach Investment Group constructs its equity portfolio to capture well-documented long-term risk premia with a focus on capital preservation through active management and the combination of value and momentum strategies. Empirical research suggests the combination of these strategies produces superior portfolio returns, reduces portfolio risk, and ultimately generates higher Sharpe ratios when compared to the combination of other risk factors (Asness, Clifford S., 2009). Beach Investment Group equally weights the value and momentum strategies in the equity portfolio to maximize the diversification effects of the combined strategies.

The value strategy relies primarily on fundamental bottom-up qualitative analysis to identify individual securities showing value characteristics. Analyst teams conduct ongoing market research to identify and analyze potential value positions while monitoring current holdings to ensure strategy alignment. Top-down analysis is applied during the analysis process to identify potential risks and value triggers, which are found at the macro level that may impact sectors, industries, or individual firms. The value strategy uses a buy and hold approach as analyst teams attempt to find securities trading below intrinsic value that will appreciate over time as value triggers take effect. As detailed below, the value strategy focuses on small to mid-cap firms as research suggests superior performance compared to large-cap value firms (Piotroski, 2000). ESG considerations are taken into account during the value analysis process and applied to the investment decision.

The momentum strategy relies on a quantitative bottom-up approach based on sector returns. Quantitative and technical indicators, such as moving averages, trading volumes, and past returns are used to analyze broad S&P 500 sector ETFs and form investment recommendations. ETFs are selected to capture momentum in lieu of individual securities, as evidence suggests sector momentum to be more persistent and less volatile over time, compared to individual securities. The use of sector ETFs also reduces trading costs compared to individual momentum securities. Sector momentum is captured by rotating sector ETFs monthly. S&P 500 ETFs also provide excellent diversification qualities to value holdings as they are composed primarily of large-cap securities. ESG is not considered in the ETF analysis process since company specific holdings cannot be influenced.

The equity portfolio is heavily weighted toward domestic equity holdings as the economic forecast projects the U.S. economy to perform better than global economies over the next 12-18 months. In addition, an emphasis on domestic equity holdings is supported by projections for continued U.S. economic expansion, while global economic growth is expected to decline.

Construction of the equity portfolio relies on capturing the risk premia and diversification effects of the value and momentum strategies while focusing on capital preservation (Asness, Clifford S., 2009) As a result, individual equity holdings are selected for their long-term return potential and not for short-term trading profits. Momentum effects are captured in the short-term; however, trading costs and the persistence of momentum influences the decision to utilize sector ETFs as opposed to individual security holdings. The equity portfolio manages risk through the diversification properties of the strategies and by maintaining a conservative equity beta target, as detailed in the following section.

k. Describe your process for selection and valuation of specific securities:

Value Security Selection

The value security selection process relies heavily on a bottom-up qualitative security analysis to identify firms exhibiting value characteristics while avoiding value traps. Top-down consideration is also used to identify potential value triggers and risk factors that may stem from the macro environment and affect either the firm, the industry, or the entire sector. Analysts use a variety of information sources during the analysis process including the Bloomberg Terminals, ValueLine, Moody's, and other financial analysis and news providers, as well as firm websites, strategy statements, and quarterly and annual filings.

The primary method for identifying value securities is through the Price/Cash Flow (P/CF) ratio. P/CF is used rather than Price/Book (P/B) as P/CF is less susceptible to distortions from variations in accounting rules and concomitantly has shown to be the most effective single measure of value (Lakonishok, Shleifer, Vishny, 1994). Low P/CF securities are considered to have value characteristics as investors are willing to pay considerably less for each dollar of free cash flows compared to other firms. Firms with a P/CF in the bottom 60% of the market are considered as value securities.

To further narrow the value security universe, P/CF is combined with other fundamental criteria. Criteria include a market capitalization of $1B - $10B, beta less than 1, and trading volume below the relative sector average. Large-cap firms tend to operate in rapid information-dissemination environments with extensive analyst coverage and high share turnover causing value opportunities to disappear (Piotroski, 2000). More importantly, fundamental analysis is found to be most effective at finding differentiating qualities in overlooked firms with lower volatility. Low beta also supports characteristics of value and further reduces portfolio volatility

(Garcia-Feijoo, Kochard, Sullivan, Wang, 2015). Empirical evidence supports the combination of low market capitalization, low beta, and low trading volume produces underlying value not included in a firm's share price (Ibbotson, Chen, Kim, Hu, 2013). Narrowing security analysis to small-cap and mid-cap securities also provides additional diversification benefits to the momentum strategy as S&P sector ETFs are primarily composed of large-cap firms.

Analysts, next, group potential value securities into sectors to identify value clusters. Sector characteristics are evaluated in relation to economic forecasts and factors. Additionally, sector clusters are compared to momentum helping to identify relative sector performance and to avoid undesired sector exposure. ESG considerations are also reviewed to ensure compliance. Analysts further compare price/book (P/B) and enterprise value/EBITDA (EV/EBITDA) multiples to peers, examine earning growth rates, debt/equity, and break down financial metrics including leverage, volume, margins, and capital and tax structure to understand the fundamentals of the company and where value triggers may be found. A breakdown of the DuPont equation is a common tool used to understand the driving force behind return on equity (ROE), while Porter's Five Forces and SWOT analysis are used to identify the firm's positioning, opportunities, and threats to future performance.

Once value security targets are identified, analysts develop intrinsic value calculations using a combination of the discounted cash flow (DCF) method, the industry multiples approach, and the dividend discount model (DDM), where applicable. Future projections are created using a combination of analyst estimates, company projections, and internal projections. Based on intrinsic value calculations and the overall security analysis process, analyst teams make recommendations for specific securities to be included in the portfolio. The decision to add securities to the portfolio is completed with a vote requiring a supermajority of 60%.

Momentum Security Selection Process

The momentum security selection process uses a bottom-up quantitative approach to capture the momentum effect. As previously stated, S&P sector ETFs are used, instead of individual securities, to reduce transaction costs, increase portfolio diversification, and to capitalize on research asserting more persistent momentum found in sector ETFs. SPDR ETFs were chosen as the ETF family is highly liquid, has low expense ratios, and eliminates overlapping holdings between ETFs.

The strategy utilizes a quantitative ranking system to identify sector momentum over a trailing twelve-month (TTM) period minus the most recent month. The most recent month's returns are omitted to avoid skewing results due to a potential mean reversion. Sector TTM returns are ranked and the top 5 performing sector ETFs are chosen for the portfolio. The broad market S&P 500 ETF (SPY) will be ranked alongside the sector ETFs. If ranked in the top 5, the SPY will be included in lieu of any sector ETFs ranked below. ETF holdings are equally weighted to maintain compliance with the non-broad ETF guidelines of the Investor Policy Statement.

Sector rankings are constructed monthly and portfolio holdings are rebalanced according to the new rankings. Rebalancing decisions are made on the first trading day of each month and voting to approve momentum holding changes occurs during the meeting prior to the first trading day of the month. Monthly sector rankings are also utilized as a complement to economic analysis efforts and for value security analysis.

The aforementioned value and momentum security selection and valuation processes are followed as diligently as possible. Should economic conditions change, the strategy may be altered as necessary. Furthermore, the degree to which a listed factor falls beyond the expressed range will be evaluated on a security by security basis to include all possible investment opportunities.

l. How does your equity portfolio compare to the equity portion of the blended benchmark along the following dimensions?

	Less than	Approx. equal to	Greater than	Varies widely
Market Capitalization		X		
Portfolio Beta	X			
P/E Ratio	X			
P/B Ratio	X			
Dividend Yield		X		
Earnings Growth Rate			X	

The above holding characteristics for market capitalization, equity beta, P/E, P/B, dividend yield, and earnings growth rates are portfolio targets that will be adhered to under the majority of circumstances. At times, current or proposed equity holdings may fall outside the targets listed above, due to either changes in underlying securities or changes in the macroeconomic environment. In such cases, securities will be evaluated on an individual basis to determine the proper alignment with the overall strategy. Should the portfolio target profile change materially from above, Beach Investment Group will notify the Investment Committee of such changes.

m. Discuss how you are achieving diversification within your equity allocation:

Diversification is an important aspect of the portfolio management process and is imperative to managing the overall risk profile of the equity and the broader portfolio. Proper equity portfolio diversification is achieved in two ways; first, through the combination of value and momentum strategies and second, through strategic weighting of equity holdings.

As discussed above, empirical research asserts the combination of value and momentum strategies produces superior portfolio returns, reduces portfolio risk, and generates higher Sharpe ratios when compared to the combination of other risk factors (Asness, Clifford S., 2009). Additionally, the two strategies aim to capture risk premia from separate segments of the market. Momentum targets market sectors whose price performance has exceeded the markets over time. In contrast, the value strategy looks to identify firms whose price performance has lagged the market. The value strategy also targets small-cap and mid-cap firms, whereas the momentum strategy focuses on S&P sector ETFs which are primarily composed of large-cap firms. Under normal circumstances, sectors carrying momentum tend not to contain a high concentration of securities exhibiting value characteristics. As a secondary measure, to ensure sector and industry diversification, value analysts regularly consult with momentum analysts and review monthly sector momentum rankings to understand where momentum is found in the markets and to ensure the portfolio is not overly exposed to specific sectors.

As required by Investor Policy Statement guidelines, individual equity exposures will not exceed 5% of portfolio holdings, industry exposures will not exceed 10%, and sector exposures will not exceed 30%. Additionally, broad market ETF exposure is limited to a maximum of 50% and non-broad based ETF exposures are limited to a maximum of 10% of total equity holdings. Should any individual security surpass a 10% equity portfolio weight, it will be sold down to at least 5%.

The equity portfolio will remain, at a minimum, 80% invested at all times, with the goal of being generally fully invested. Equity holdings are equally weighted at the time of purchase and are adjusted periodically according to strategy guidelines. The equity portfolio will hold a minimum of 8 individual equity securities, with the goal of 10-15 positions when fully invested. Until the analyst team reaches the 8 security minimum, an appropriate value style based ETF will be purchased and sold down once individual equities are identified. Momentum holdings will range from 1-5 ETF securities. The total equity portfolio will target holding a combination of 13-20 equity and ETF securities to satisfy investor guidelines and provide adequate diversification.

n. Describe your sell discipline/risk management for individual equities:

Individual equity securities are actively managed in order to analyze major price movements and economic impacts. A 30% stop-loss will be placed on all individual security positions. Should an individual equity market price decline more than 15% from the purchase price, an immediate security review is triggered to determine whether it will continue to fall, or if it has the potential to recover to the intended price target. In addition, positions are reviewed if long periods of price stagnation are seen. Position reviews confirm or reject the presence of a value trigger to push the security price to target levels. Finally, should a security reach the calculated intrinsic value, a security review is triggered to determine if the target value should be increased or if the position should be liquidated.

MUTUAL FUND and/or ETF VALUATION AND SELECTION

o. What is your selection process for Mutual Funds and/or ETFs (fixed-income, balanced, or equity)?

Mutual fund and ETF selection is based on the portfolio and/or strategy for which the fund is satisfying. ETFs are the primary instruments used as their passive strategies result in lower expense ratios and tracking errors. Funds are specific to equity or fixed-income holdings and are used for broad market or segment exposure. Blended funds are not considered appropriate. Funds using leverage, short strategies or other derivatives as a primary strategy function are excluded from the portfolio in accordance with the Investor Policy Statement.

In general, a combination of historical fund and manager performance, expense ratio, tracking error and underlying holdings are used to evaluate funds. Funds targeting the categories or market segment exposures identified by analyst teams are identified and compared. Expense ratios and Sharpe ratios are excellent for relative comparison and are the primary differentiators for fund evaluation. Underlying fund holdings, while not a primary decision tool, provide additional insight into the fund’s exposure, relative to other portfolio holdings, and allow analysts and portfolio managers to better understand risk and potential return profiles.

p. What is your sell discipline for mutual funds and/or ETFs?

Mutual fund and ETF sell discipline is based on the portfolio strategy for which the fund is satisfying. Momentum ETFs are rotated monthly in accordance with the strategy ranking cadence. Identification of additional value equity positions, generally, result in sell downs of value ETFs. Changes in the economic outlook, deeming current exposures inappropriate, trigger the sale of fixed-income funds.

Sell review triggers may include simple technical indicators. Such indicators may include a 50-day SMA moving below the 200-day SMA. Review triggers are used to manage downward price movements prior to changes in the economic outlook.

GENERAL ISSUES IN PORTFOLIO MANAGEMENT AND CONSTRUCTION

q. Describe your portfolio construction process:

Beach Investment Group constructs portfolios in adherence with investor guidelines and risk/return objectives. Only firms with market capitalizations of $1B or greater trading on the NYSE, AMEX, NASDAQ or regional exchanges are considered. Exposure to foreign equities is limited to ADR's, U.S. traded foreign stocks or through Exchange Traded Funds (ETF). ETFs will generally be considered in lieu of mutual funds in consideration of fee structures, tracking error, and general liquidity considerations. Beach Investment Group does not utilize leverage, short strategies or derivatives and will avoid ETFs whose core strategy incorporates the use of these investment tools. Beach Investment Group may use insights from the derivatives markets to better identify risk and may present this information as a rationale for investment decisions.

Qualitative processes are the primary tools for portfolio construction. The 12-18 month economic outlook guides a top-down target asset allocation decision and helps create sector profiles. Analyst teams use these profiles to identify economic factors that may act as headwinds or tailwinds for sectors, industries, and individual firms. Teams further utilize both macro trends and sector characteristics to determine optimal sector exposures for their respective portfolio segments.

Equity portfolio construction equally weights value and momentum holdings. As previously referenced, research suggests the combination of these strategies provides superior returns and diversification benefits (Asness, Clifford S., 2009). Holdings target domestic firms and ETFs given the economic forecast depicting more advantageous domestic markets. Equity strategies also review current holdings to ensure proper diversification and avoid overexposure to sectors or industries. In compliance with portfolio guidelines, no single equity security will constitute greater than 5%, industry exposure will not exceed 10%, and sector exposure will not exceed 30% of the equity portfolio at the time of purchase. Should an individual equity position appreciate to exceed 10% of the equity portfolio, the position will be sold down to 5%.

The value equity strategy uses a combination of top-down and bottom-up qualitative process to screen for and analyze individual equity securities. Once security screeners are complete, value analyst team groups securities by sector and industry, applying sector profile information to better understand potential performance and value triggers. The value portfolio will consist of 8-15 equally weighted value securities and may include broad-based index ETFs during the security analysis process.

The momentum equity strategy utilizes a quantitative approach to portfolio construction. As referenced above, the momentum strategy aims to capture the momentum effect through quantitative sector ranking. Sector rankings dictate momentum rebalancing decisions and helps further refine sector profiles. The momentum portfolio will consist of up to five equally weighted sector ETFs, which may include the broad-based SPDR index ETF.

Fixed-income security selection uses a combination of top-down and bottom-up qualitative analysis to screen for and analyze bond ETFs. The analyst team uses a top-down approach to determine bond asset category exposures. The analyst team then conducts bottom-up analysis to assess category ETFs for portfolio selection. Security weights are determined by over- and underweighting against the benchmark given the economic outlook and projections for the fixed-income category.

Once analyst teams have created their respective portfolio segment construction recommendations, the portfolio analysis team conducts a quantitative study to determine the proposed portfolio's expected return and volatility, as measured by standard deviation. Diversification properties are also measured by creating a covariance matrix to ensure risk across holdings is properly identified and managed.

Benchmark tracking error is an important facet of the portfolio construction and analysis process. Evaluating the underlying index for strategy fit is a critical step in evaluating ETFs during portfolio construction. Equally important is a thorough review of the funds benchmark tracking error to ensure the fund's manager effectively tracks index performance. Extreme variation from index performance may indicate unintended risks to portfolio returns. Beach Investment Group implements active management strategies; therefore, benchmark tracking error is an important metric for fund performance. Benchmark tracking error gives investors insight into the capabilities of the portfolio management team.

Beach Investment Group is constantly striving to expand our understanding of investment management concepts, regardless of their implementation in the current portfolio investment process. One such endeavor is the construction of a quantitative asset allocation model based on Markowitz's Modern Portfolio Theory. Expected returns for the equity and fixed-income markets, implied volatility, and historic correlations can be used to construct a Portfolio Possibilities Curve. Top-down asset allocation targets can be evaluated against the resulting set of optimal portfolio to better understand the risk and return profile of the portfolio. While not currently in use, Beach Investment Group looks to further develop the model to strengthen our asset allocation strategy in the future and enhance the educational benefits of the program for students.

r. What is your team's definition of risk with respect to this portfolio?

Beach Investment Group broadly defines and manages portfolio risk in terms of volatility, measured by standard deviation of returns, and systematic risk, measured by portfolio beta. Keeping the goal of capital preservation at the forefront of investment management activity, Beach Investment Group attempts to reduce portfolio risk to the minimum level necessary to achieve return objectives. Beach Investment Group utilizes all risk management tools at its disposal and actively researches new techniques for risk identification and management that may ultimately lead to a greater risk/reward profile for the investor.

The volatility of returns, as measured by standard deviation, is a widely accepted measure of portfolio risk as increasing uncertainty of future returns correlates to an increase in potential capital loss. Managing portfolio volatility involves analysis of individual holding return characteristics and correlation and covariance between holdings. Overall portfolio volatility is reduced by diversification; therefore, portfolio holdings are routinely analyzed to ensure proper diversification.

Systematic risk, as measured by portfolio beta, is the investors' exposure to market wide risk by simply participating in the market. Properly diversifying the portfolio allows Beach Investment Group to effectively mitigate idiosyncratic risk and focus more specifically on systematic risk undertaken on behalf of the investor. Actively managing portfolio beta manages systematic risk exposure. Portfolio construction, management of exposure weighting, and overall asset allocation strategy contribute to beta management efforts. Portfolio beta is targeted to remain in the range of .65-.85 relative to the S&P 500.

Beach Investment Group manages portfolio volatility and beta through a combination of advanced risk scenario functions and portfolio administration tools on the Bloomberg Terminal, Excel reporting and regular monitoring. Analyst teams monitor portfolio performance daily and distribute consolidated portfolio reports at weekly team meetings. Portfolio managers also monitor return volatility and beta measures of the portfolio components they are responsible for ensuring volatility and beta measures remain within acceptable ranges for the strategy.

In line with the educational goals of the CFAOC program, Beach Investment Group is attempting to develop an additional risk management tool based on the Chicago Board Options Exchange Volatility Index (VIX). This tool utilizes movements of the VIX to identify periods of increasing or decreasing market risk to trigger reviews of asset allocation. By setting bands around the VIX, spikes and crashes in implied market volatility can trigger reviews of underlying market conditions and potentially an alteration to the portfolio asset allocation target. Further refinement and backtesting of the underlying assumptions of this risk management tool are currently underway. While not currently used in the portfolio management process, Beach Investment Group looks to further develop this tool for potential use in the future and to further enhance the educational experience of team participants.

Cash reserves are not currently held as a method of risk control. The portfolio remains, generally, fully invested given the current economic outlook. Should economic conditions change or materially deteriorate, the decision to use cash reserves may be revised.

s. How will the portfolio be monitored?

The Portfolio Analysis team is responsible for monitoring and reporting on portfolio positions. Weekly team meetings include performance and compliance updates to ensure the group remains aware of changes to portfolio positions and holding performance. Portfolio positions are confirmed quarterly in alignment with the portfolio rebalancing cadence. Once submitted, trades are confirmed by the trader and confirmations are provided to portfolio managers.

Portfolio performance and stop loss levels are monitored through a combination of Bloomberg Terminals and Excel reports. Bloomberg Terminals allow the team to constantly monitor price movements and assess portfolio attributes in real-time. Excel reports provide historic and trending performance information; reports with historical prices information are used to monitor stop loss levels and ensure positions are not stopped out.

t. How will you monitor the portfolio's adherence to its investment guidelines? What checks and balances do you have in place?

The Portfolio Analysis team performs weekly compliance checks and reports to ensure adherence with investment policy guidelines. The team analyzes individual positions for overall portfolio weight as well as industry and sector weighting. Compliance and performance reports are distributed weekly to ensure the team is well apprised of portfolio movement, areas of concern or necessary rebalancing.

u. Describe your policy on rebalancing your portfolio:

Portfolio rebalancing occurs quarterly to manage transaction costs and comply with portfolio turnover guidelines. Portfolio rebalancing includes returning asset allocation weights to strategy targets and bringing value and momentum holdings back to equal weighting.

At any time between quarterly rebalancing, should the economic outlook materially change causing a shift in asset allocation targets, portfolio holdings may be rebalanced to maintain optimal positioning with the new forecast. Additionally, should portfolio holdings or allocations vary 20% or more from target, a portfolio review will be triggered. During this review process, the group will determine if intermittent rebalancing is necessary based on a review of the economic environment and current portfolio holdings.

Portfolio rebalancing is immediately triggered should asset or holding weights exceed portfolio guidelines. Holdings will be rebalanced at the next group meeting to bring weights back into compliance.

v. Describe the sources of information used to select securities and how this information will be processed:

Beach Investment Group utilizes multiple sources to complete macroeconomic and security analysis. Bloomberg is a fundamental information source and is used as the primary tool for portfolio analysis, consensus estimates, firm information, and market news updates. Other sources include ValueLine, Moody's, and other financial analysis and news providers, as well as firm websites, strategy statements, and quarterly and annual filings.

Beach Investment Group allocates approximately 75% of research efforts to bottom up security analysis. The remaining 25% is allocated to top-down macroeconomic research and portfolio analysis and reporting. During the analysis process, analysts and researchers use industry respected methods of researching, analyzing and evaluating macro and firm specific information to arrive at fundamentally sound recommendations and investment theses.

In efforts to further enhance student participation and learning, the team engages in active research and development of unique or alternative analysis methods, including potential projection models, allocation tools, and risk management methods. Internally developed methods are generally used to validate positions or theories otherwise asserted using the industry accepted analysis principles discussed in this RFP response.

w. Attach any additional information to describe your investment process that you would like the CFAOC to consider?

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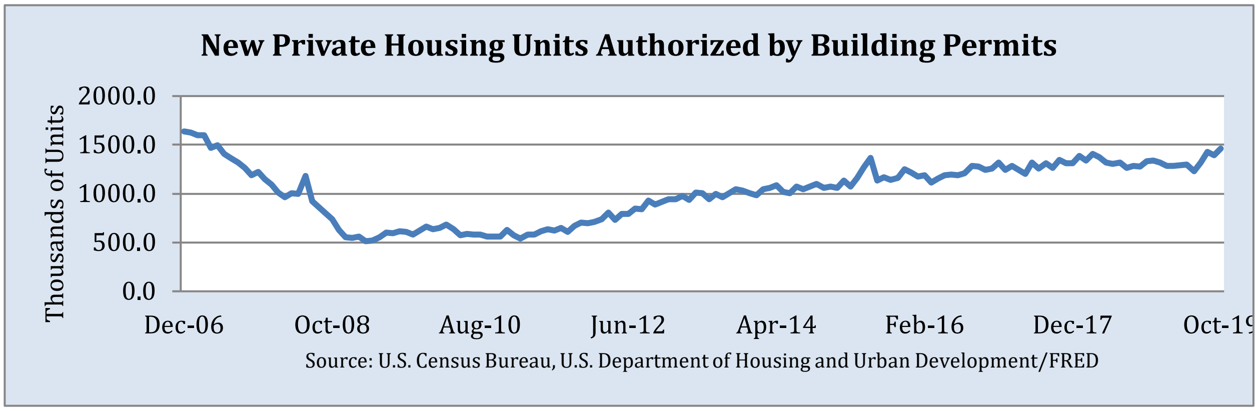
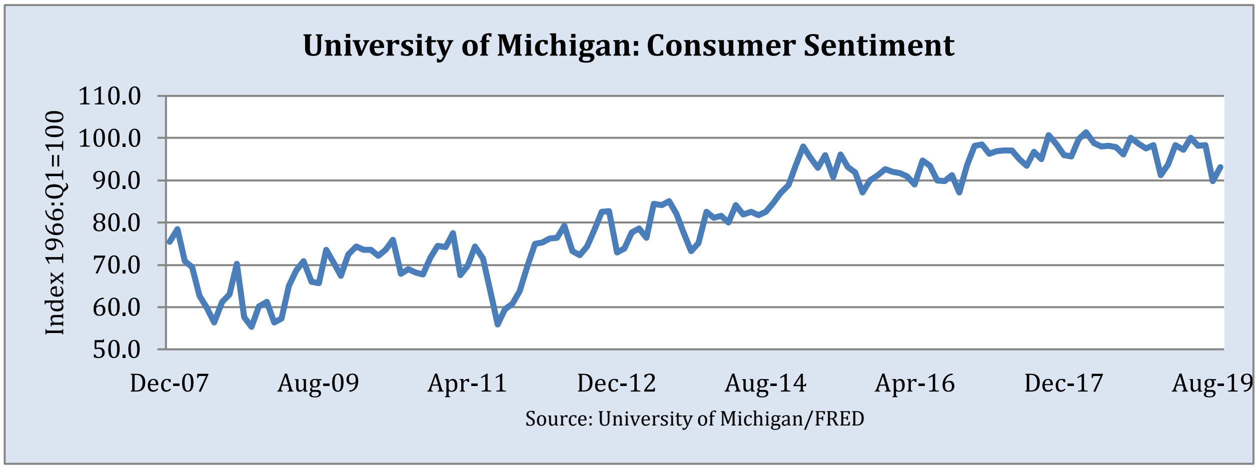
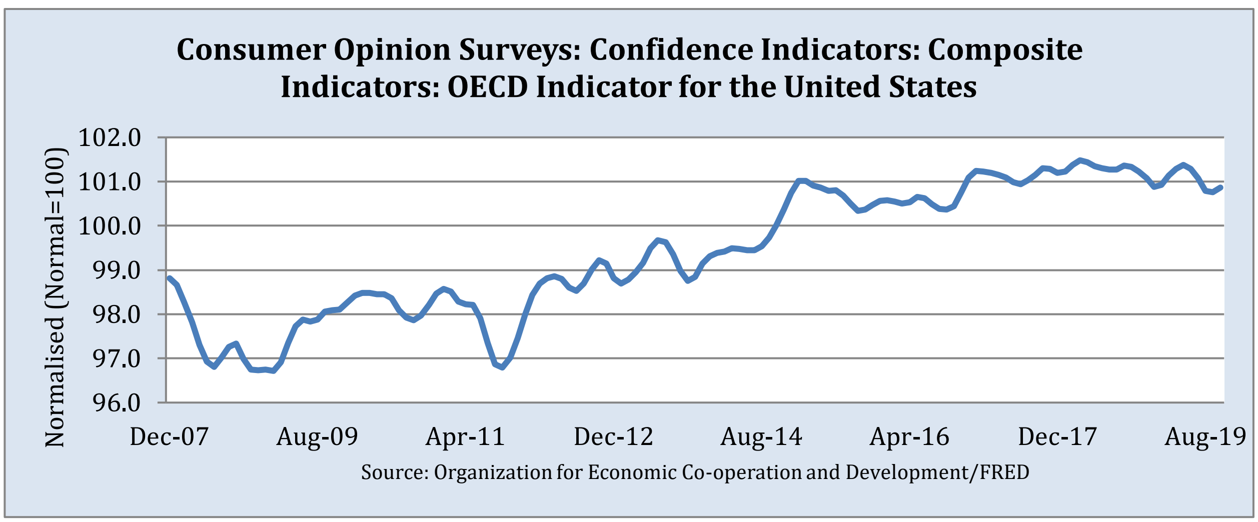
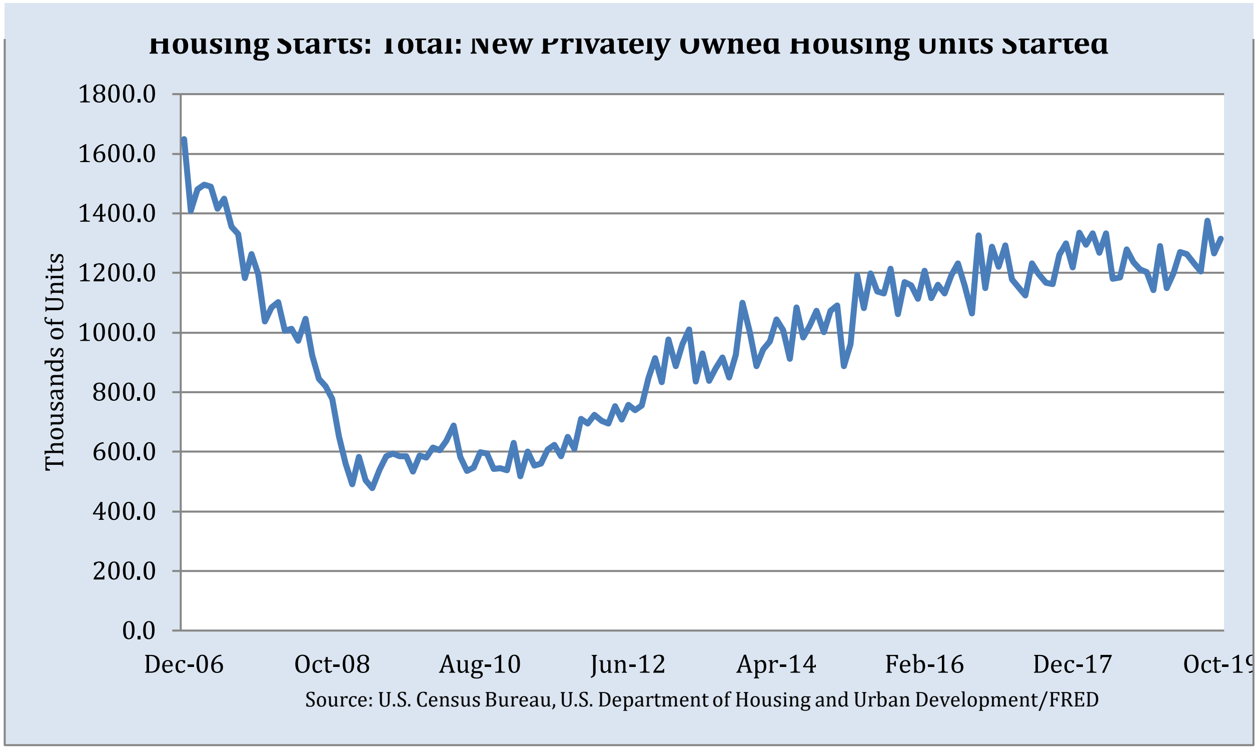
Exhibit 1: Economic Indicators








Housing Starts: Total: New Privately Owned Housing Units Started
Thousands of Units
1800.0
1600.0
1400.0
1200.0
1000.0
800.0
600.0
400.0
200.0
0.0
Dec-06
Oct-08
Aug-10
Jun-12
Apr-14
Feb-16
Dec-17
Oct-19
Source: U.S. Census Bureau, U.S. Department of Housing and Urban Development/FRED

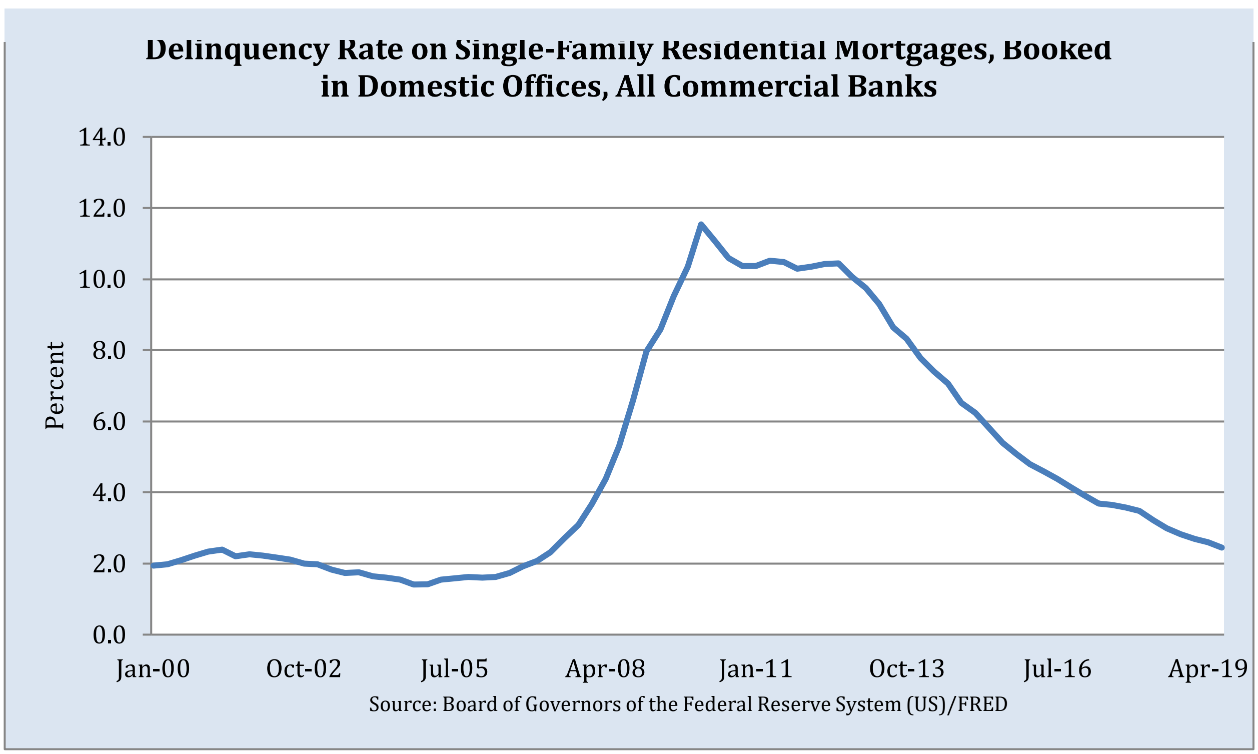
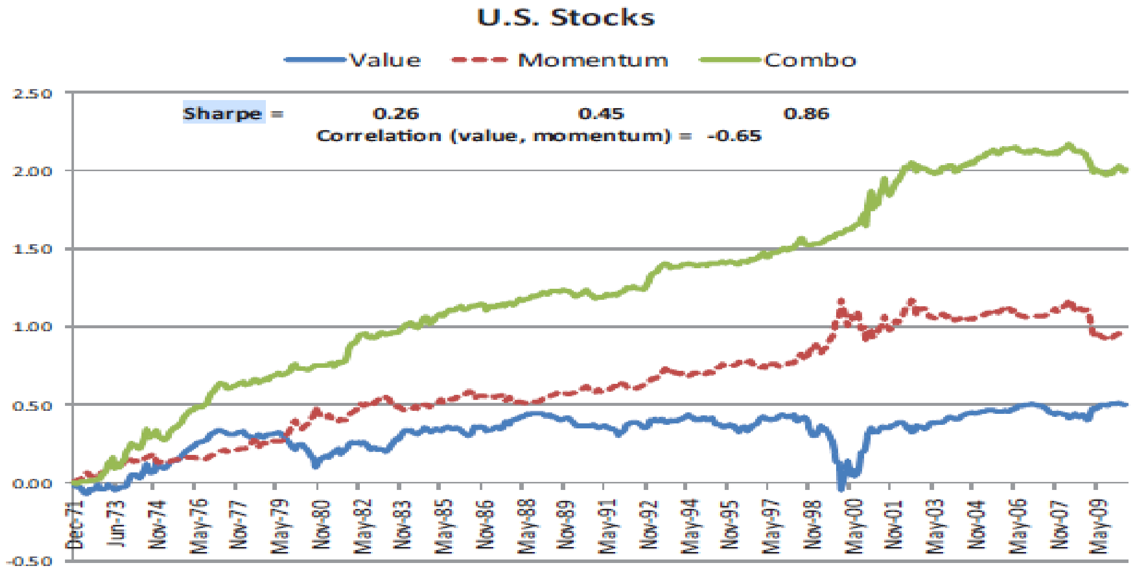

Delinquency Rate on Single-Family Residential Mortgages, Booked in Domestic Offices, All Commercial Banks
Percent
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Jan-00
Oct-02
Jul-05
Apr-08
Jan-11
Oct-13
Jul-16
Apr-19
Source: Board of Governors of the Federal Reserve System (US)/FRED

Exhibit 2: Value and Momentum Sharpe Ratio



Source: Asness, C. S., Moskowitz, T. J., & Pedersen, L. H. (2009). Value and Momentum Everywhere.

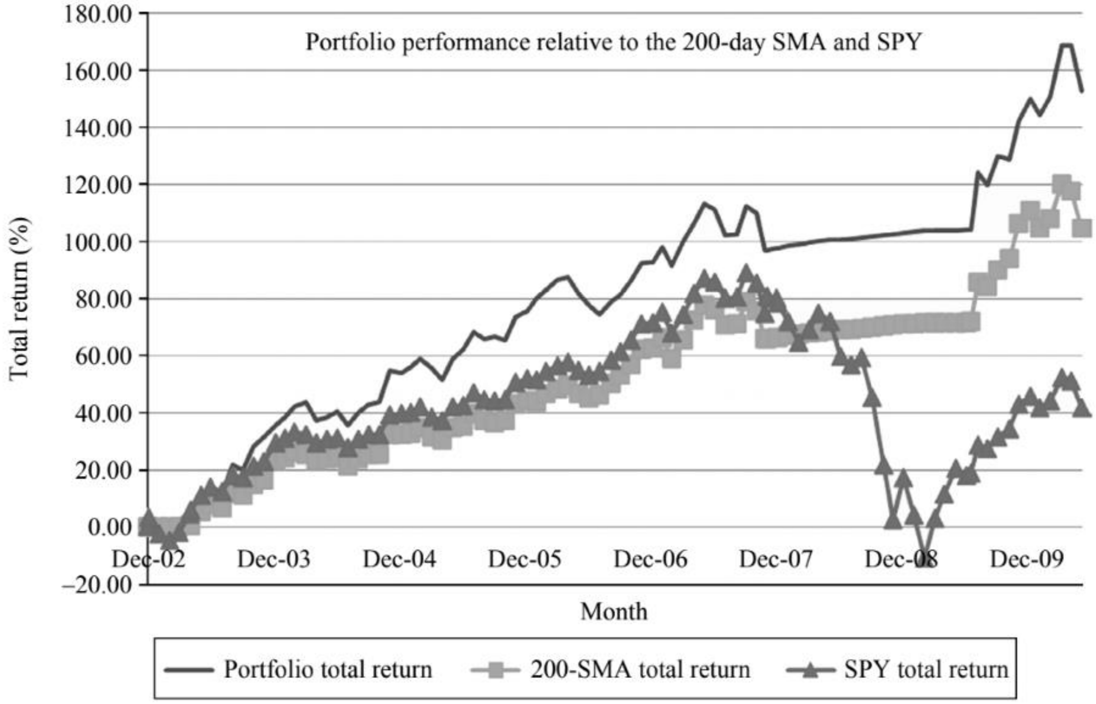
Exhibit 3: Liquidity and Capitalization Returns

Size and Liquidity Quartile Portfolios, 1972-2011

Quartile	Low Liquidity	Mid-Low Liquidity	Mid-High Liquidity	High Liquidity
Microcap				
Arithmetic Mean	17.92%	20.00%	15.40%	6.78%
Standard Deviation	23.77%	29.41%	35.34%	34.20%
Average no. of stocks	323	185	132	103
Small Cap				
Arithmetic Mean	17.07%	16.82%	15.38%	9.89%
Standard Deviation	20.15%	24.63%	28.22%	31.21%
Average no. of Stocks	196	193	175	179
Midcap				
Arithmetic Mean	15.01%	15.34%	14.51%	11.61%
Standard Deviation	17.91%	20.10%	22.41%	28.71%
Average no. of Stocks	141	171	197	233
Large Cap				
Arithmetic Mean	12.83%	12.86%	12.81%	11.58%
Standard Deviation	16.68%	15.99%	18.34%	25.75%
Average no. of Stocks	83	194	238	227

Source: *Value Investing: The Use of Historical Financial Statement Information to Separate Winners from Losers*

Exhibit 4: Sector ETF Rotation Performance



Note: Buy-and-hold vs long-flat vs long-flat with style-rotation overlay, December 31, 2002-June 2, 2010

Source: Ammermann, Peter & Runyon, L.R. & Conceicao, Reuben. (2011). A new quantitative approach for the management of a student-managed investment fund. Managerial Finance.

CFA Society Orange County SMIF Investment Policy Statement

PURPOSE

The purpose of this Statement is to provide a clear understanding of the investment objectives, policies, and guidelines for the CFAOC SMIF Portfolio(s). This Statement will outline an overall philosophy that is specific enough to allow the Student Investment Management Team to know what is expected, while at the same time giving flexibility for changing economic conditions.

RETURN OBJECTIVE

The CFAOC's total annual return objective is equal to the spending rate plus the expected tuition inflation rate, thus maintaining the real value of the Portfolio and any applicable scholarships.

- To guide the Student Investment Management Team, it is directed that this long-term objective be achieved by adhering to a benchmark composed of 50% Russell 3000, 20% MSCI All Country World ex US Index and 30% Bloomberg Barclays U.S. Aggregate Bond Index. Rebalancing to this benchmark is to occur regularly by the SMIF teams.

DEFINITIONS

Total annual return equals the sum of dividends, interest, and other current income, plus the net impact of price change, time-adjusted for capital additions and withdrawals, all after transaction costs and management fees, for a given fiscal year.

Spending rate, set as a percentage of the previous year's ending market value, includes annual scholarships and all management expenses, and is initially targeted at 6% (5% for scholarships and 1% for operating expenses).

Tuition inflation rate is the average rise in tuition cost at the 6 major Orange County/Long Beach Universities offering business programs in Orange County, California (Chapman, CSULB, CSUF, Pepperdine, UCI, and USC) over the academic year.

Risk Tolerance: The need to pay out annual scholarships and to maintain the real value of those scholarships; the inexperienced and annually rotating management team; and the expectations of the learning process, all dictate moderate risk for the fund.

Time Horizon: Infinite Portfolio horizon, short-term management horizon.

Liquidity Requirements: Due to the long-term time horizon, minimum liquidity is required to meet the periodic distributions described by the spending rate. The initial targeted spending rate is 6%, with that rate being set annually by the IPC. 1% is targeted for operating expenses throughout the year. These liquidity needs are typically satisfied via funds that are separate from the student-managed portfolios. Thus, although the Investment Policy Statement establishes target asset allocation guidelines for these portfolios (see below), there are no specific liquidity requirements imposed on the operations of the student investment-management teams.

Tax Considerations: The Portfolio is not subject to excise taxes.

Regulatory Issues: In general non-profits/foundations are subject to little in the way of federal regulation. The Portfolio would be subject to California State regulation of non-profits/foundations.

Unique Circumstances: The CFAOC faces a unique challenge in that its Portfolio assets are overseen by the volunteer Investment Policy Committee and managed by the Student Investment Management Team, both with changing memberships each year. Both of these groups will consist of members with varying levels of investment skill, experience, and understanding. They will have a wide range of personal preferences, prejudices, and investment styles.

PORTFOLIO GUIDELINES

Permissible Investments

- **All assets must have readily ascertainable market value and be easily marketable.**
- **Any proposed position requires the submission to the IPC of concrete evidence of due diligence conducted on the proposed investment. In practice - a one to three-page summary of the recommendation with discussion of investment valuation, price target and risk(s) is sufficient. Templates have been provided to all teams for this purpose.**
- **Equity**
    - Equity investments may be chosen from the NYSE, the AMEX, the NASDAQ, and regional exchanges.
    - The portfolio will be generally fully invested with minimal emphasis on market timing and broadly diversified, with no individual equity exceeding 5%, no industry exceeding 10%, and no sector exceeding 30% of the equity portfolio at time of purchase. If any individual stock should rise to 10% of the equity portion of the portfolio, the security must be sold down to at least 5% of the equity portfolio.
    - Market capitalization restrictions:
        - Investment in stocks of firms with a total market capitalization of less than $1 billion is prohibited.
        - No more than 50% of the equity allocation of the portfolio may be invested in small-cap stocks (market capitalization of between $1 billion and $2 billion).
        - Up to 100% of the equity allocation of the portfolio may be invested in mid- to large-cap stocks (market capitalization of greater than $2 billion).
    - Foreign equities are limited to ADRs, U.S. listed foreign stocks, and ETFs and should not exceed 30% of the portfolio at time of purchase.
- **Fixed Income**
    - Investments in fixed income securities should be limited to mutual funds, exchange traded funds (ETFs), and or preferred stock until such time as the Portfolio grows to $500,000 in assets. All Non-Investment Grade debt not to exceed 25% of the entire Fixed Income allocation.
    - The maximum allocation of Preferred Stock is capped at a maximum of 10% of the entire portfolio.

- **Exchange-Traded Funds (ETFs)**
  - The use of ETFs must be consistent with the guidelines of the IPS.
  - The holdings of any proposed ETF position must conform to the restrictions and diversification guidelines of the IPS.
  - The trading techniques utilized by the proposed ETF must also conform with the trading techniques allowed by the IPS.
  - Equity ETFs:
    - One or more broad market ETFs (e.g., SPY, NYC) can comprise a total of no more than 50% of the equity allocation of the portfolio.
    - No non-broad-based equity ETFs can comprise more than 10% of the equity allocation of the portfolio.
  - Fixed Income ETFs:
    - Up to 100% of the fixed income allocation of the portfolio may be invested in one or more well-diversified fixed income ETFs.
- **Other Assets**
  - The Manager may not purchase assets other than those previously mentioned without a written permission from the CFAOC Board of Directors.

Prohibited Transactions and Types

- **Buying on margin**
- **Short selling**
- **Any ETFs utilizing leverage, short positions, or the equivalent are also prohibited**
- **Options, Futures, and Commodities**
- **Private Placements**

Asset Allocation

It is understood that changing market cycles require that some flexibility in asset allocation be permissible. Minimum and maximum asset allocation restrictions are given to allow movement of capital within the asset classes as deemed appropriate by the Managers for the purpose of increasing investment returns and/or reducing risk. Accordingly, the allowable asset mix ranges are as follows:

	Acceptable Target Range
Cash & Equivalents	0-20%
Equities	60-80%
Fixed Income	20-40%

Review Procedures

The Investment Policy Committee will review all objectives, policies, and guidelines for appropriateness and adherence, on at least an annual basis.

Evaluating Performance

- The IPC will evaluate the performance of the Portfolio against a benchmark consisting of 50% Russell 3000, 20% MSCI All Country World ex US Index and 30% Bloomberg

Barclays U.S. Aggregate Bond Index. However, should the SMIF team feel that a customized benchmark better reflects their specific strategy – one customized benchmark (with sufficient explanation) is permitted. Thus, the mandated 70/30 benchmark, and an optional customized benchmark, will be provided by the respective SMIF teams in their Proposals.