

# The Exchange

NEWS FROM THE FINANCIAL ECONOMICS INSTITUTE AT CLAREMONT MCKENNA COLLEGE

VOLUME 30, FALL 2020

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## Director's Report

by Nishant Dass



Nishant Dass

IT IS MY GREAT pleasure to be writing my inaugural report as the new Director of CMC's Financial Economics Institute. Fall 2020 has wrapped up and as I look back on it, the overwhelming thought is that 2020 is going to be a memorable year for all of us. So much has happened this year that I wouldn't be able to summarize it all in this brief note. It was also a unique experience to start as a new faculty at the Robert Day School and as the Director of FEI without setting foot on campus! Despite these unusual circumstances, we continued with all the usual activities at the FEI and did accomplish a lot in this all-virtual environment. But first, I am fortunate that my loved ones and I, as well as everyone I have "met" in my first semester at CMC, is healthy and safe.

I start with a brief summary of all that we accomplished at the FEI in the Fall 2020 semester, followed by more detailed description of the various activities:

- Supporting student and faculty research
- Outreach to our stakeholders and constituents
- Invited talks
- Revamping the FEI website
- Planning for Spring 2021

## Research Support

The crown jewel of FEI is the research

assistantship program that gives students an opportunity to work on academic research projects with our esteemed faculty. Even though we were all scattered in different parts of the country (and even abroad) and could only communicate via Zoom calls, we tried to give students the same experience and even expanded the number of research assistants (RAs) to 35. These 35 students worked with 11 different faculty members on a wide variety of topics. We also had two student employees who served as tutors for Bloomberg, Capital IQ, and Excel; this service is particularly helpful in assisting students with their data collection and data analysis for their theses. Of these 37 students, 22 are working towards either the BA/MA degree or the Financial Economics Sequence and 4 are BMGI Fellows. We received 87 applications for these positions, indicating that the interest in research opportunities remains strong. That the research was even possible in this all-virtual working environment is due to the hard work of our Information Technology Services, who provided remote access to FEI workstations and other computing capabilities. The Human Resources Department also worked hard to find creative solutions for employing students, the vast majority of whom were stationed off-campus.

We finished the semester with Oral Defense presentations by students who completed their Senior Thesis requirement

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### Director's Report from page 1

for either the BA/MA degree or the Financial Economics Sequence. Five BA/MA students and seven FES students, advised by six faculty members, presented their research. This was a stressful semester for these students as they had to complete their thesis under the unusual circumstances presented by an all-virtual semester. They were particularly faced with challenges surrounding access to data and computing resources as well as face-time with their faculty advisor. In the end, it all came through nicely and the students prevailed despite the headwinds. We are proud of what our students have accomplished under such demanding circumstances.

Another way in which the FEI fulfills its research-oriented mission is to support the many data subscriptions that are useful to accounting, economics, and finance faculty not just at CMC but across the 5Cs. These databases are vital for research and we could not do what we do without financial support from the FEI's Advisory and Associates Boards, the President's office, and the Dean's office. Thanks also to the Claremont Colleges Library, the office of CMC's Chief Investment Officer, and the Randall Lewis Center of Innovation and Entrepreneurship, all of whom share the costs of some of our data subscriptions. We are indebted to all of them for sustaining this much-needed resource. For your reference, a list of all 28 databases and web-resources that we support can be found at: <https://fei.cmc.edu/research-2/databases/>.

### Outreach

Besides offering enriching research opportunities to our students and supporting faculty research, the FEI also held several other events in the fall. We kicked off the academic year with a couple of information sessions, including one at the Clubs and Institutes Fair, for new and returning students. This is an excellent opportunity for us and other institutes to reach out to students who may be interested in our programming. Although the festive mood of an in-person fair was missing from the virtual session, it was nonetheless a great experience – we hosted dozens of students

who were eager to learn more about FEI's offerings. I also separately met with the Associates and Advisory Boards in meet-and-greet style introductory meetings over Zoom. We are privileged to have such excellent representatives from our alumni on the FEI Boards; their support and counsel is invaluable.

### Invited Talks

Many new programming ideas emerged from these initial discussions with members of the two Boards. I would like to highlight two such programs – talks by our own FEI Board Members: one in October by Mr. Alan Delsman '68 on *Financial Services: So much more than M&A and IB* and another in November by Ms. Christine Huk Mann '87 about *Women on Wall Street*. The first talk gave students a lay of the land, when it comes to careers in financial services. Mr. Delsman's focus was on high-yield fixed income markets and sovereign debt markets, which offer exciting career opportunities but often get overshadowed by Mergers & Acquisitions, which has been glamorized in popular media representations of high finance. Mr. Delsman's talk was full of insights and entertaining anecdotes collected from working in numerous countries across four different continents. Ms. Mann has had a long career on Wall Street and her leadership role at a bulge bracket investment bank puts her in a unique position of witnessing many changes in the industry over the years. Over the course of her career, Wall Street has become much more diverse. She shared her insights about the different career paths and the unique challenges faced by women on Wall Street. Both talks were attended by several dozen students and were very well received, as evidenced from the active Q&A sessions following the talks.

The FEI Associates Board continues to provide support for one of the crucial student-activities on campus: the Student Investment Fund. Along with help from Prof. Eric Hughson and CMC's Chief Investment Officer, Mr. James Floyd, the Associates Board offers advice and critique to the managers of the Student Investment Fund (SIF). Under the leadership of Fredrik Linder, Max Dawson, and Michael Murphy, the SIF manages a multimillion-dollar

portfolio invested across six different sectors, each of which is overseen by a Portfolio Manager. Several student analysts are also engaged by the SIF for sector-specific equity research. The SIF reported on its portfolio performance to the Associates Board in October.

### New Website

We also spent some time this semester in sprucing up our website. The old website ([financial-economics-institute.org](http://financial-economics-institute.org)) has been retired and replaced with <https://fei.cmc.edu>. The new site is the result of many hours of hard work put in by our very own, Nicole Alonso '23. I welcome you all to try the site out. It is, of course, a work in progress and will be continually improved but I hope you will like the fresh look and its user-friendly design.

### Planning for Spring 2021

We have started preparing for Spring semester already. For example, the cohort of sophomores that will be going on the New York Networking Trek in January has been selected after a rigorous application process managed by the Soll Center. The two dozen students have been assigned several readings and preparatory work before they embark on the Trek and visit our alumni at some of the most prestigious financial institutions. Although the Trek will be virtual this year, like everything else during this pandemic, we are all excitedly looking forward to it. One thing is for sure, however—no one will miss the cold January weather of New York City, and the sprint across town in leather shoes and formal clothes.

As we wrap up this semester, I will finish by laying down my vision for the future of FEI in the near-term. I have had time to absorb and learn a lot in the last few months, and we are ready to charge ahead. The overall goal is to complement all existing programs with new initiatives in fintech (broadly defined). I have had the opportunity to discuss some initial ideas with the faculty, Dean's office, the President, as well as the FEI Board. Thanks to their support, we are very well positioned to start building new programs next year. In

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## Financial Economics Institute

### Fall 2020 Student Research Analysts

During the Fall 2020 semester, thirty-five student Research Analysts were hired to work remotely for the FEI. The following is a list of students, their faculty advisors, and a brief description of the research projects in which they were involved or the type of tutoring they provided:

► **KARTIKEYA AGARWAL '22** worked with Professor Matthew Delventhal on a project that studies the impact of trade on a country (Spain) catching up to the industrial leader (the United Kingdom). Along with other analysts from the FEI and the Lowe Institute, I assisted in creating a database for Spain's trade records from 1850 to 2000 and distributing various products into different groups.

► **NICOLE ALONSO '23** is the FEI Web Editor and worked with Professor Nishant Dass to build a new website for the Financial Economics Institute.

► **ALEXANDER ALSOP '21** (BMGI/Larson Fellow) is the Bloomberg and Capital IQ tutor for the FEI.

► **SOMESWAR AMUJALA '23** worked with Professor Angela Vossmeier in trying to solve the "war puzzle". Through this project, we analyzed stock market volatility by sector compared to government receipts and expenditures to find relationships.

► **RAJ BHUTORIA '22** worked with Professor George Batta to develop natural language processing algorithms to process and

analyze over fifty thousand credit and loan agreements. The team utilized significant data retrieval and automated web-scraping techniques to create the historic dataset of agreements. Specifically, the project required a strong knowledge of legal agreements and accounting procedures, which was then applied to collection and analysis algorithms via a combination of R, Python, and Node.js.

► **SAMUEL BOGEN '23** worked with Professor Florian Madison on projects relating to home equity, entrepreneurial finance, and early-stage investment, particularly analyzing asymmetric information in financing and looking at the differences in motivation and risk between different methods of entrepreneurial finance.

► **NATHANIEL BRASWELL '23** worked with Professor Eric Helland on a project assessing the prevalence of potential double jeopardy in securities class-action filings and pharmaceutical MDLs.

► **COLEMAN CORNELL '21** worked with Professor Benjamin Gillen on a project regarding subset optimization for portfolio allocation. In particular, this involved

applying iterative methods to the existing subset optimization algorithm in order to make the eight of individual securities converge.

► **MIGUEL GARCIA '22** worked with Professor George Batta to measure non-price credit terms, especially with respect to Financial Covenants. Specifically, this involved categorizing credit agreements by definitions, covenant threshold and restrictions.

► **AUDREY GUILLOTEAU '22** worked with Professor George Batta categorizing credit agreements, particularly financial covenant thresholds, negative covenant definitions, and deductibles for various restrictions in order to potentially predict corporate credit bubbles.

► **MICHAEL HAO '23** worked with Professor Andrew Finley on finding which type of organizations (big 4/medium/small accounting firms, NFP, academic, or institutional investors) have the most influence on the Public Company Accounting Oversight Board's concept releases. I analyzed

See Fall RAs on page 4

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#### Director's Report from page 2

In addition to a focus on fintech, FEI will also contribute in multiple ways to advance the President's *Anti-Racism Initiative* that was launched this year in light of the social and cultural developments taking place across our country. We are looking forward to launching a variety of new initiatives and look forward to your participation and support.

In closing, I would like to express my sincere gratitude to all who made my first semester as FEI's Director a little bit easier and more enjoyable. I would especially like to thank: the outgoing Director and

Associate Director of FEI, Profs. Joshua Rosett and George Batta; the person who really runs the show at FEI behind the scenes, Ms. Nancy Faust; co-Chairs of the FEI Advisory Board, Mr. Alan Heuberger '96 and Mr. John Shrewsbury '87 P'24, and the Chair of the FEI Associates Board, Mr. John O'Brien '02, as well as all members of the FEI Advisory and Associates Boards; President Hiram Chodosh; former Vice President for Academic Affairs and Dean of the Faculty, Prof. Peter Uvin; Co-Interim Vice President for Academic Affairs and Dean of the Faculty and Associate Dean of the Faculty for Research, Prof. Shana Levin; my faculty colleagues at RDS; students

working at FEI; Director of the Quantitative and Computing Lab, Prof. Jeho Park; Computer Science Clinic Director at Harvey Mudd, Prof. Zach Dodds; Amy Flanagan, Freya Hurtado, and Ursula Diamond at the Soll Center for Student Opportunity; Susan Edwards, Ray Watts, and Michelle Chamberlain at the office of Development and External Relations; Director of the Robert Day Scholars program, Beth Milev; and many others.

Let's put Fall 2020 behind us and look ahead to a fresh start in 2021. Cannot wait to get started with the New Year! ▲



### Fall RAs from page 3

and organized over 500 concept release comments on topics such as mandatory audit firm rotation from the PCAOB's online database.

► **MATTHEW HINES '22** worked with Professor George Batta to analyze credit agreements, particularly with respect to financial covenant thresholds, financial terminology and categorization, and flexible credit terms. This end goal of the project is to create a machine-learning algorithm that can predict corporate credit bubbles and individual company default probabilities.

► **YUSUF ISMAEEL '21** worked with Professor Benjamin Gillen on a project analyzing the question of how an individual agent's risk aversion or attempt towards loss minimization affects their level of information acquisition and aggregation on social networks. We are also performing an analysis on how this relates to the agents revealed preferences as documented in a lab experiment.

► **ALEXANDER KARASINSKI '22** worked with Professor George Batta to categorize credit agreements, particularly financial covenant thresholds, definitions, and deductibles for various restrictions in order to potentially predict corporate credit bubbles.

► **ADAM KOSZUT '23** worked with Professor Matthew Delventhal on a research project analyzing the cost of trade disruptions at different stages of Spain's economic development.

► **WILLIAM LI '21** (BMGI/Larson Fellow) worked with Professor Eric Hughson to study the effect of Fed interest rate policy on stock market returns during the zero lower bound period.

► **GRACE LU '23** worked with Professor William Lincoln in compiling and organizing papers published in The Journal of Finance, The Journal of Financial Economics, and The Review of Financial Studies.

► **YINGHE "MEI" MEI '21** worked with Professor Matthew Delventhal.

► **MELANIE MOORE '21** worked with Professor Joshua Rosett to compose research summaries and organize CPA Exam pass rate

data that will be used in a future analysis of the 150 hour rule.

► **JAY MORRIS '23** worked with Professor Matthew Delventhal in translating Spanish trade products from trade ledgers spanning over a century. The translation data would then be organized to allow for further analysis of changes in Spain's import/export products over time.

► **SHANA NARAYAN '23** worked with Professor Matthew Delventhal to analyze product-level data on Spain's trade with foreign countries. In particular, this involved performing data transcription, classification, processing, and analysis to better understand the evolution of Spain's trade and the relationship between foreign trade and economic development.

► **LUKE OSTRANDER '21** is the Excel tutor for the FEL.

► **KARINA PARK '22** (BMGI/Larson Fellow) worked with Professor Matthew Delventhal on a project that explores the impact of trade on Spain. More specifically, the project aims to study the effects of globalization on Spain since 1849. She helped create a database for Spain's trade records from 1849 to 2000.

► **SIDHANT RASTOGI '23** worked with Professor Benjamin Gillen on a project to implement regression-based techniques for estimating mean-variance optimized portfolio weights and sampling error using sample moments in MATLAB.

► **DAWSON RECKERS '21** worked with Professor Matthew Delventhal on a project aiming to capture the effects of globalization on the country of Spain since 1849. As part of the year-long project, he helped develop a translation database of Spanish trade terms and phrases.

► **JEREMY SEOW '21** works with Professor Nishant Dass on building financial technology (FinTech) initiatives in the institute. He is building the framework for a FinTech practicum course that will allow students to work with a financial firm during the academic year. Jeremy also spearheads the generation of educational FinTech content for the institute's website.

► **HALLIE SPEAR '22** worked with Professor Angela Vossmeier to analyze the importance

and effects of bank interconnectedness. In order to do this Hallie analyzed the effects of asset size, liability and other financial factors.

► **EMILY SPIELMANN '22** worked with Professor Angela Vossmeier to examine causes of bank failures during and after the Great Depression and to identify trends in relationships between bank acquirers and acquirees in takeovers.

► **JATIN SURI '23** worked with Professor Matthew Delventhal on a project documenting the changing composition of Spanish trade from the mid-19th to 20th century.

► **ADHITYA VENKATRAMAN '22** worked with Professor Florian Madison to uncover political drivers of dollarization policy in a variety of countries. Dollarization, the process of foreign nations adopting the United States Dollar in place of the domestic currency, has a number of potential determinants. The project involves the development of a theoretical model of dollarization based on social, political, and economic factors, while also performing statistical analysis to provide the model with a solid empirical foundation.

► **DEVON WOLFE '22** worked with Professor Nishant Dass to analyze the role that Chief Executive Officers play in firm innovation. Specifically, this involved sourcing and sorting data to provide updated analysis.

► **ZIXUAN "EVELYN" WANG '22** worked with Professor Benjamin Gillen.

► **JERI "RAIZEL" YU '22** worked with Professor Nishant Dass in developing a FinTech curriculum and FinTech blog on behalf of the FEL. She also worked with Professor George Batta to categorize credit agreements, particularly financial covenant thresholds, in order to analyze contract strictness and predict potential corporate credit bubbles.

► **LANGNING "LORAIN" ZHAO '21** worked with Professor Benjamin Gillen.

► **WILLIAM ZHOU '22** worked with Professor Eric Helland to document the prevalence of class-action lawsuits involving pharmaceutical companies using the Stanford Securities Litigation database. ▲

## FEI Fall 2020 Student Research Analysts



KARTIKEYA AGARWAL '22



NICOLE ALONSO '23



ALEXANDER ALSOP '21



SOMESWAR AMUJALA '23



RAJ BHUTORIA '22



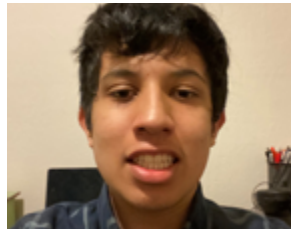
SAMUEL BOGEN '23



NATHANIEL BRASWELL '23



COLEMAN CORNELL '21



MIGUEL GARCIA '22



AUDREY GUILLOTEAU '22



MICHAEL HAO '23



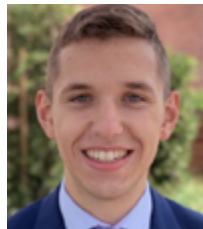
MATTHEW HINES '22



YUSUF ISMAEEL '21



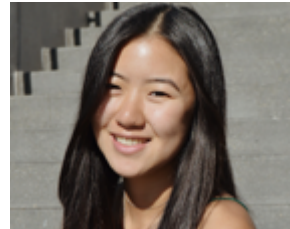
ALEXANDER KARASINSKI '22



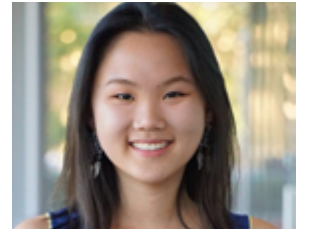
ADAM KOSZUT '23



WILLIAM LI '21



GRACE LU '23



YINGHE "MEI" MEI '21



MELANIE MOORE '21



JAY MORRIS '23



SHANA NARAYAN '23



LUKE OSTRANDER '21



KARINA PARK '22



SIDHANT RASTOGI '23



DAWSON RECKERS '21



JEREMY SEOW '21



HALLIE SPEAR '22



EMILY SPIELMANN '22



JATIN SURI '23



ADHITYA VENKATRAMAN '22



DEVON WOLFE '22



JERI "RAIZEL" YU '22



WILLIAM ZHOU '22



# Financial Economics Institute

## 2020 Summer Research Analyst Internship Projects

### SOMESWAR "SOMU" AMUJALA '23

*Faculty Advisor: Professor Angela Vössmeyer*

**Project:** The War Puzzle: Analyzing Low Stock Market Volatility During Wartimes

- Researched, summarized, and analyzed previous causes of stock market volatility
- Investigated various methods of governmental financing strategies for wartime expenditures
- Compiled data on US Imports and Exports from 1925-1963 to identify relationships to stock market volatility
- Collected and cleaned monthly data of total US receipts, total US expenditures, and defense expenditures from 1890 to 2020
- Interpreted and analyzed data accuracy and correlations between the monthly data and stock market volatility through STATA

### RAJ BHUTORIA '22

*Faculty Advisor: Professor George Batta*

**Project:** Algorithmic analysis of non-price credit terms across the historic dataset of US credit and loan agreements

- Developed natural language processing algorithms to process and analyze over fifty thousand credit and loan agreements
- Utilized significant data retrieval and automated web-scraping techniques to create the historic dataset of agreements
- Applying a strong knowledge of legal agreements and accounting procedures to algorithms via R, Python, and Node.js

### NATHANIEL BRASWELL '23

*Faculty Advisor: Professor Eric Helland*

**Project:** The Effects of Jury Size Variation in Federal Civil Court Trials

- Built a data set of 1000s of federal civil court trials, including information on jury size and jury rule
- Evaluated the relative variation within federal districts to build a streamlined algorithm for future trials

### KATHERINE CHEN '23

*Faculty Advisor: Professor Eric Helland*

**Project:** Effects of jury size variation on court verdict

- Collected, processed, & analyzed jury data

from Public Access to Court Electronic Records (PACER) and Law360 for 16 different court districts

- Compiled datasets on available civil case reports at a county court level on facts such as jury size, trial date, jury rule
- Assisted in the construction of a database to provide evidence for future research related to civil litigation processes through MS Excel

### MIGUEL GARCIA '22

*Faculty Advisor: Professor George Batta*

**Project:** Measuring non-price credit terms, especially with respect to Financial Covenants

- Categorized credit agreements by definitions, covenant thresholds, and Restrictions
- Used the SEC Edgar Database and Law Insider to find credit agreements
- Created a guide for categorizing credit agreements

### SAM HARRISON '22

*Faculty Advisor: Professor Richard Burdekin*

**Project:** Global Financial Effect of COVID-19; Global Financial Effect of Spanish Flu (1918-1919)

- Collected market return data for 80 countries between 2019 and present day (2020) to create regression variables
- Access COVID data for each country including number of cases, deaths, and population based metrics
- Translate Spanish Flu statistics from historical publications to generate regression variables for analysis
- Navigate Bloomberg and the Global Financial Database to find early 20th century market return data to complete data sets
- Perform OLS and Panel Regressions upon both data series, and analyze the presence of serial correlation with the Durbin-H Test

### YUSUF ISMAEEL '21

*Faculty Advisor: Professor Benjamin Gillen*

**Project:** Information Aggregation on Networks

- Evaluated preferences for over 1500 individuals acquiring information from individuals in a social network
- Implementation of statistical models to link a consumer's characteristics to their preferences to explore the theory of information aggregation
- Designed and visualized a probabilistic model that simulates different social structures and their unique characteristics which was presented at Oxford University
- Ran several multinomial logistic regressions to calculate the different probabilities of a consumer's choice based on their risk aversion parameters

### ADAM KOSZUT '23

*Faculty Advisor: Professor Matthew Delventhal*

**Project:** The Cost of Trade Disruptions at Different Stages of Development

- Collected Spain's trade data broken down into specific products and countries from 1849 to mid-20th century off Spain's National Statistics Institute
- Analyzed the data using Excel to see relevant trends Spain experienced as it transformed from an agrarian economy to a services-based economy
- Compiled summary tables & graphs for Spain's main trade partners, along with key products imported and exported

### GRACE LU '23

*Faculty Advisor: Professor William Lincoln*

**Project:** Research on International Finance

- Conducted literature reviews about the relationship between business research and development and asset prices as well as how exchange rate fluctuations affect innovation
- Surveyed the literature that uses data from the US Census for a project on the relationship between globalization and financial markets

### YINGHE "MEI" MEI '21

*Faculty Advisor: Professor Matthew Delventhal*

**Summer RA Projects from page 6****Project:** U.S. Urban Structure after the COVID-19 Shock

- Conducted extensive research on the core-periphery urban model, spatial equilibrium model and the ways in which increased teleworking reshapes U.S. urban structure; wrote and used LaTeX to design the layout of an academic literature review
- Wrote Python and R programs to automate the download of large data sets from the LODS website and streamlined the process to tidy, aggregate and transform the data into a presentable form
- Used QGIS to generate graphs and attribute tables of work place characteristics and commute patterns within each U.S. 2010 Census tract

**MELAINE MOORE '21***Faculty Advisor: Joshua Rosett***Project:** The Impact of the 150 Hour Rule in Accounting on the Labor Market for Accountants

- Collected and compiled datasets of pass rate statistics from 1980 to 2017 NASBA Reports of CPA Examination candidates
- Searched for individual state CPA Examination certification provisions before

and after the state board implemented the 150 Hour Rule

- Compiled previous literature on the 150 Hour Rule from academic databases
- Summarized academic literature to utilize for future literature review

**JAY MORRIS '23***Faculty Advisor: Professor Matthew Delventhal***Project:** The Cost of Trade Disruptions at Different Stages of Development

- Digitized Spanish trade ledgers spanning from 1849 to the mid-20th century into relevant variables of interest
- Created summaries and graphs between these variables in order to visually represent certain aspects of Spain's economy through time
- Used excel to find trends between related or unrelated variables to help explain which factors in Spain's trading past lead to their transformation to a more service-based economy

**EMILY SPIELMAN '22***Faculty Advisor: Professor Angela Vössmeyer***Project:** Systemic Risk and the Great Depression

- Digitized historical records documenting

approximately 9,000 bank failures between 1934 and 1939

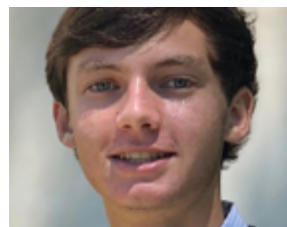
- Reconciled and categorized the reasons for these bank failures
- Identified and categorized relationships between banks to create extensive databases of bank information detailing acquirer and acquired banks

**JOHN "WILL" WALLACE '23***Faculty Advisor: Professor Eric Helland***Project:** Jury Size Variation in Federal District Courts

- Gathered and organized jury data from various federal district court cases in 2015 and 2016 from corresponding PACER documents
- Synthesized data to identify courts with significant variation in jury size

**WILLIAM ZHOU '23***Faculty Advisor: Professor Eric Helland***Project:** Jury Size Variation in Federal District Courts

- Collected information on jury size, court division, assigned judge, and verdict date from court cases using PACER
- Built database using jury data from federal court cases in 2015 and 2016 ▲

**SOMESWAR "SOMU" AMUJALA '23****RAJ BHUTORIA '22****NATHANIEL BRASWELL '23****KATHERINE CHEN '23****MIGUEL GARCIA '22****SAM HARRISON '22****YUSUF ISMAEEL '21****ADAM KOSZUT '23****GRACE LU '23****YINGHE "MEI" MEI '21****MELAINE MOORE '21****JAY MORRIS '23****EMILY SPIELMAN '22****JOHN "WILL" WALLACE '23****WILLIAM ZHOU '23**

## Fall 2020 Financial Economics Sequence and BA/MA Oral Defense Presentations

THE FINANCIAL ECONOMICS Sequence and BA/MA in Finance are both parts of the Robert Day School of Economics and Finance at Claremont McKenna College. These curricula are designed for students interested in pursuing careers in the financial sector and/or subsequent graduate education in economics, finance, and related fields.

The Sequence has a rigorous quantitative focus and is designed to complement majors in economics, economics-accounting, and mathematics, as well as dual majors having an economics component. In addition, the Sequence is complementary to the coursework required for the undergraduate Robert Day Scholars Program. Under the auspices of the Financial Economics Institute (FEI), students complete the Sequence, which is noted on the transcript, thereby attesting to their solid understanding of the discipline.

The BA/MA provides additional depth in finance that results in the awarding of the Masters degree as well as the BA after the student completes their four years of study at CMC. After completing prerequisite courses in economics, corporate finance and accounting, students complete 9 units of Masters-level finance along with a seminar in research methods, and they write and defend a finance thesis. Students admitted to the BA/MA program are Robert Day Scholars.

The following is a list of the students who passed their presentations this fall along with the titles of their senior theses and the Abstracts of their theses:

### **ALEXANDER ALSOP, BA/MA**

#### ***Investigating the Power of Analyst Price Targets in Generating Abnormal Returns***

"There has been a considerable amount of literature on equity research analysts and their price targets, but much of it does not address how it could be used to generate alpha in a practical way. When the research does address accuracy, it does not consider that analyst's bias and inaccuracy can be accounted for through an econometric

model. This paper seeks to address these issues and determine whether there is information contained in analysts' price targets that could be used to outperform the market. This paper employs an OLS regression model to determine if the analyst's predicted alpha, implied through the price target, is a good predictor of realized alpha. The resulting power of the model is significantly stronger than that employed in previous research which used statistical models as the predictor rather than analyst price targets. There is also evidence that some analyst's price targets contain more predictive power than others and some indication that this higher than average predictive power is persistent. This provides evidence that analyst price targets could be used in a portfolio construction model to outperform the S&P 500 on a risk-adjusted basis."

### **ALEXANDER BARKER, FES**

#### ***The Impact of Credit Rating Adjustment Methodologies on Market Perceptions of Default Risk***

"This study focuses on the market's perception of default risk following changes to firm rating methodologies, measured by bond credit spreads. Using data from 2004 through 2007, a 2006 change to Moody's pension and operating lease adjustment methodologies is found to have a statistically significant impact on bond yield spreads and thus the market's assessment of the probability of default. Although the debt-to-asset, debt-to-EBITDA, and interest coverage ratios are shown to have little economic importance, firm size and equity return volatility are proven to be highly significant. This finding indicates that ratings agencies seek to update adjustment methodologies to more accurately reflect firm debt profiles without causing significant impacts on market perceptions of default."

### **REBECCA BERGER, FES**

#### ***What Factors are Responsible for the Variation in Stock Market Returns of G20 Country Benchmark Indices During the 2020 COVID-19 Pandemic?***

"This paper examines the relationship of economic, health, and Covid-19 indicators on pandemic market performance of G20 countries. Returns are measured through benchmark indices of each respective country. Previous literature examines the relationship of economic policies on returns but fails to incorporate response protocols. This thesis builds on previous literature by adding response mechanisms while also controlling for country corruption and development. I seek to provide policy implications for future pandemics based on my findings. Using Trading Economics, Our World In Data, and an Ordinary Least Squares regression framework, I find that death rates have the greatest impact on excess returns and that lockdown leniency has a positive impact. My results reveal the importance of open economies and market freedom for better stock performance during the pandemic."

### **MAXWELL DAWSON, BA/MA**

#### ***How Good are Equity Analysts? Investigating the Impact of Analyst Recommendations on Portfolio Performance***

"This paper lies at the convergence of the portfolio optimization literature and the equity research industry. I attempt to quantify the benefit provided to an investor by equity analysts from an asset allocation perspective, and hypothesize that no significant benefit exists because of the incentive misalignments facing analysts as well as the inherent difficulty of valuing stocks. Using a Bayesian regression framework with prior beliefs for alpha generated based on equity analysts' recommendations, I find no significant difference in out-of-sample performance between portfolios which take analyst recommendations into account and portfolios which do not."

### **RISHI RAJ DEVA, FES**

#### ***The Effect of Firm ESG Performance on the Cost of Issuing Corporate Bonds in the***



**Oral Defense Presentations from page 8****U.S. Debt Market**

“Environmental, Social, and Governance (ESG) has seen a growing importance in the global economy with firms constantly evaluating ways to comply with rising standards of sustainability. Previous empirical work on ESG performance in the U.S. corporate debt market raises the question of how an intangible factor such as ESG is valued in the bond market, particularly in terms of the cost firms incur when issuing bonds. Using firm-specific and bond-specific data from a sample of 698 bond issuances in the United States between the 2015-2019 period, this paper finds a negative association between firm ESG performance and the cost of issuing corporate bonds. It also establishes this relationship to be linear across all levels of ESG performance, and significant only for investment grade bond issuers. As firms faring poorly in ESG are associated with paying higher risk premiums for corporate bonds, the findings suggest that stakeholders perceive firms with better ESG performance to be more creditworthy.”

**DAVID “JAKE” HALLE, FES*****Twitter’s Relationship with Overreaction in Individual Security Returns***

“Using stock market return data from 2007 to 2019 from The Center for Research in Security Prices, I inquire into the impact that Twitter has on the overreactions of individual stock returns by breaking down returns into pre and post-Twitter periods. I examine negative serial correlation, demonstrating return reversals, between a lag crossed Twitter dummy variable and initial returns. With stock reversals serving as an indicator of initial overreaction and assuming stationarity of overreactions over time, I find that the presence of Twitter results in significantly more overreactions for highly followed companies when using monthly returns. However, when assessing Twitter’s influence using weekly returns, the results suggest the possibility of return momentum. Similarly, Twitter’s influence on overreaction is a highlighted when evaluating only negatively or positively large returns, producing greater significance

despite a decrease sample size. While these promising results are not economically significant and thus do not reveal a viable contrarian investment strategy, my paper lays the foundation for a predictive model based of Twitter’s influence on company returns.”

**DECLAN JUDGE, BA/MA*****Did Sarbanes-Oxley Alter M&A Activity Among Corporations Charged With Financial Accounting Fraud?***

(Abstract unavailable)

**MATISS OZOLS, FES*****Zoom In, Class Out: An Event Study on Publicly Traded Ed Tech Firm Valuations During COVID-19***

“This paper examines how publicly traded Ed Tech firms reacted to negative announcements regarding COVID-19. Using an event study method, I document how an international portfolio of Ed Tech firms react across multiple event windows. The results show that Ed Tech firms reacted positively to the announcement of the first US death and negatively to the World Health Organization’s declaration that COVID-19 was a pandemic. Additionally, differences in geographical location did not impact cumulative abnormal returns across event windows. Finally, firm-specific characteristics such as volatility and financial leverage had little or no significance on stock returns.”

**DAWSON RECKERS, FES*****A Relationship in Flux: Changes in Stock Market Linkages between China and Africa***

“The total value of Chinese contract projects in African countries has grown substantially over the past twenty years. In exchange for the development of key infrastructure projects such as dams or railroad systems, Chinese firms are compensated with access to natural resources present in the country. This study tests whether the rise in value of Chinese construction contracts in African countries over the years 1998 to 2018 increases the correlation of stock market returns between the Shanghai Stock Exchange and the stock markets of six African countries. The analysis finds that contract revenue does

not serve as a significant predictor of stock market linkages between China and the African countries included in the sample. The study also finds that the COVID-19 pandemic has weakened correlations between Chinese and African stock market performance.”

**MICHAEL “MATT” SILL, BA/MA*****Don’t Get Screwed: What Factors Determine the Inclusion of J. Crew Blockers?***

“A “J. Crew Maneuver” is a type of collateral-stripping event that transfers the value of a nearly insolvent company from the lender to the borrower. This concept matters to lenders because it exposes them to significant downside risk through the loss of hundreds of millions of pledged collateral. While credit analysts and debt lawyers have commented on the importance of preserving creditor value ex ante through lender-protective clauses embedded within debt documents, this paper breaks ground on empirically studying the determinants of these protective clauses known as “J. Crew Blockers”. I hypothesize that private equity backing, a contractionary credit environment, contractual “stickiness” and the presence of an innovative law firm all influence the likelihood of observing J. Crew Blockers in debt documents. Using a multiple regression analysis as my primary regression, I analyze 10,370 debt contracts to find that contractual stickiness is the greatest contributing factor to likelihood of J. Crew Blocker inclusion, with other factors contributing residually.”

**JOHN SORANNO, FES*****VC Portfolio Size: Is Bigger, Better?***

“This paper looks at the spray and pray investment strategy for venture capital funds. Spray and pray is a strategy whereby VC funds make a larger quantity of investments with lower capital committed to each investment. I calculated OLS regressions using a dataset of United States VC funds from 2013-2018 from Pitchbook. I investigated the effect spray and pray strategy had on venture capital returns. This paper finds that, while there

# CMC's Student Investment Fund

By: Fredrik Linder '21, Chief Executive Officer (2020-2021)

## Adaptations to the New Normal

The year 2020 presented an array of challenges to the Student Investment Fund that few could have anticipated. As the novel Coronavirus rampaged throughout the world, it didn't take long for effects to be seen and felt in the United States. When members of the fund were informed of restrictions enforced in California, significant transformations to their educational plans with CMC ensued. As Max, Michael and I sat down two weeks after being elected to lead the fund, we faced an enormous challenge of attempting to retain the value that SIF brings to our members, albeit in a virtual setting. Like the rest of the CMC community, this was an obstacle we had never faced before. Nonetheless, not once did we consider canceling SIF operations following the summer break.

The fall semester of 2020 was a period of significant transition for the fund as we maintained our regular operations though with the help of Zoom. We realized that this would fundamentally change the SIF experience, as our functioning is hinged on a collaborative, intimate process predicated on day-to-day interactions with the team, but most importantly, friends. Merely continuing our old approach to general fund meetings would not suffice in a virtual environment, so our priority was to pivot to smaller group discussions where engagement from every member was emphasized. We introduced a new structure to our pitching process, ensuring that every meeting and interaction had a clear purpose, we experimented with breakout rooms to motivate all members of the fund to contribute their valuable perspectives, and we admitted success and defeat where we had to, recognizing that this was a period of true trial and error.

While every battle in the virtual setting could not be won, we quickly saw incredible results from this shift: an exceptional quality of pitches, greater *degree* and *depth* of discussion, engagement from *every* member, and an overall conducive learning

environment, all invaluable elements of the SIF experience.

## Fall Recruiting

Prior to solidifying our new structure for the fall semester, we had a looming sense of uncertainty as to whether our recruiting efforts in October would be fruitful. We worried that first year students entering CMC in a virtual setting were already burdened with the heavy load of not meeting their classmates and friends in person – how could our club then provide any better alternative? That sprung us into action, and two club fairs and a recruiting information session shortly followed, with a record breaking 65 attendees in the spring and 39 in the fall. In the interest of opening further to the CMC community, the executive and management team offered one-on-one calls for applicants who were interested in learning more about the fund.

After receiving 89 applications and conducting 67 interviews, 24 second round interviews, as well as concluding placement interviews, we were excited to admit 14 new Analysts to the team in the fall of 2020. Our new members consisted of 50% female, 50% male, 50% sophomore and 50% first year students. Our focus this year was to hire individuals who are intellectually curious and have a demonstrated interest in learning, whether that may be about finance or not. As such, we were experience agnostic, and rather looked for students who we believed could tackle the steep learning curve presented by the training program with a demonstrable inquisitiveness and differentiated perspective.

The new Analysts were all part of an incredibly competitive application process and have all contributed extensively to the culture and growth of the fund since joining us. I am incredibly proud of their accomplishments to date, particularly considering the challenging environment they joined us in, and have no doubt that they will continue to serve as superb ambassadors for the fund in the future.

Max Dawson, the fund's CIO, prepared

a new, exciting training program for incoming analysts this fall, calibrating his material to varying levels of experience in the field of finance. New analysts had the chance to establish a foundational understanding of the stock market, financial statement analysis, and company analysis in the fall. During the spring, new analysts will dive deeper into forecasting, valuation, and comparable analysis, amongst a vast array of topics, allowing them to hone their investing skills and broaden their interest in the field of finance. Despite our new analysts being largely scattered across the world, training in the fall was conducted synchronously.

## Portfolio Management

As we took on our roles as the new executive team in March, the fund had nearly US\$1.7m in Assets Under Management. Wrapping up the year we closed off with US\$2.4m in Assets Under Management, welcoming 15 new additions to our portfolio, with a significant amount of new equities introduced in the Technology, Media & Telecommunications portfolio. Our investment strategy this year has continuously been to further diversify our six individual industry group portfolios and to focus on active management, reducing our exposure to ETFs significantly and encouraging intermittent 2% positions rather than exclusively pitches to the general fund. This has been a welcome transition and has introduced a significant degree of flexibility in idea generation. Additionally, taking on smaller positions, bypassing the general fund approval process, has allowed for a swifter trade execution to capture a greater degree of upside.

## Concluding Thoughts

I want to thank Max and Michael for truly working with me as a collective unit throughout this year. While our duties have differed greatly, you have provided invaluable input that has been all-encompassing and instrumental in

**SIF from page 10**

tackling the vast array of issues which surfaced behind the scenes this year. To Max, who created a remarkable training program this year, I thank you for instilling an unrelenting sense of excitement and curiosity in our junior analysts. To Michael, I thank you for your consequential input on our portfolio management related activities; without your fresh perspective on our pitches and investment strategies, we would not be where we are today. To our Portfolio Managers, Alex, Audrey, David, JD, Matiss and Will: your tenacity is nothing short of remarkable, and I thank you for keeping the backbone of the fund intact during this tumultuous time. You have continually impressed the fund with your excellent leadership abilities and have helped immensely in instilling the vital premise that everyone's contribution matters.

The SIF community would not be what it is today without our VPs and analysts. You ask the tough questions and construct the well informed answers with a sense of humility that is hard to find elsewhere. You have all kept me motivated to push the fund's capabilities and scopes to greater heights, and I relish getting to hear your stories, perspectives, and see your growth in and outside the fund. Despite the challenges we face, I have no doubt that the spring semester will culminate into one of the more successful ones in SIF history.

**A Thank You to Our FEI Family**

Finally, I would like to acknowledge Professor Eric Hughson, Jim Floyd, Nancy Faust, the entire FEI team, and Board of Associates for all of their work that allows SIF to stay on track on a day-to-day basis, as well as sustaining our long-term aspirations.

The longest-standing member of the fund, Professor Hughson, is not only well respected for his academic contributions to CMC, but also for his unwavering support of SIF, our mission, and most of all, our members. I have come to realize Professor

Hughson's title of faculty advisor to the fund never quite effectively captured the true importance of his involvement with the fund. Working in the Robert Day School of Economics and Finance, he is CMC students' go-to for all things portfolio management related, but to SIF he is that and so much more. Few members of the fund seem as excited to watch our analysts pitch to the general fund on Tuesday evenings as Professor Hughson. Humble, intellectually curious and stimulating, he is someone who consistently keeps us on our toes, asks thought-provoking questions, and most of all, fosters a community built on collaboration, support, and shared enthusiasm in the never-ending pursuit of knowledge. He is, and always will be, a pivotal pillar of the fund. The entire SIF family wishes to extend their endless gratitude for his tireless efforts to make the SIF experience as great as it can be.

I would also like to thank Jim Floyd and Nancy Faust for working closely with SIF for as long as I can remember, offering vital administrative, operational, and personal support. Without it, SIF's activities would be impossible. Jim Floyd serves as the custodian for the SIF portfolio and assists significantly with not only placement of trades, but with the overall asset allocation strategies of the fund. His continued support through weekly interactions with our COO, as well as his valuable insight raised at our biannual meetings with the Board of Associates, are integral in ensuring the continuity and structure of the fund. Finally, I would like to thank Nancy Faust – Assistant to the Director – but more colloquially known as the unsung hero within the SIF community, for her steady support of the fund on all facets of our operations. In challenging situations, particularly during recruiting seasons, Nancy never fails to aid the fund in any capacity. Her continued patience and support is always appreciated by each member of our team, and we look forward to working more closely with her and the rest of the FEI in the future. ▲

**Oral Defense Presentations from page 9**

is a negative relationship between a fund's average investment size and returns, there is no relationship between returns and the fund's strategy. This implies that there is no statistical difference in returns between spray and pray and non-spray and pray funds."

**DAVID YING, BA/MA**

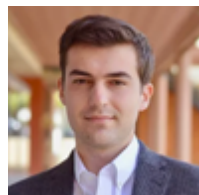
*The Predictive Power of the Variance Risk Premium Model on Equity Returns in Emerging Markets During the COVID-19 Global Pandemic*

(Abstract unavailable) ▲



## 2020-2021 BMGI/Michael Larson Asset Management Fellows

The BMGI/Michael Larson Asset Management Fellowship Program offers financial support and research experience for juniors and seniors at Claremont McKenna College who are interested in careers involving asset management and investment management. The recipients of this year's scholarships are:



### ***Simon Alexander '21***

Simon is a first-semester senior at CMC, graduating in December 2021. He is pursuing a Bachelor's degree in Economics with a Sequence in Financial Economics. In addition to being a two-time BMGI/Michael Larson Asset

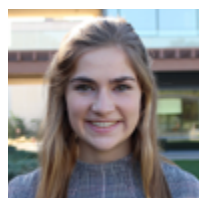
Management Research Fellow, he is the Chief Technology Officer of the Student Investment Fund and a Consultant at the Claremont Consulting Group. Simon was an early member of StemRad, Inc., a venture-backed startup that works with NASA and Lockheed-Martin. He also founded a company specializing in payment solutions for competitive eSports. Simon is working in investment banking this upcoming summer. In his free time, Simon enjoys equestrian, composing jazz music, and playing tennis.



### ***Alexander Alsop '21***

Alex is receiving his Bachelors in Economics and his Masters in Finance through the Robert Day School of Economics and Finance. He is a BMGI Scholar, as well as a Robert Day Scholar, a tutor for both Bloomberg and Capital

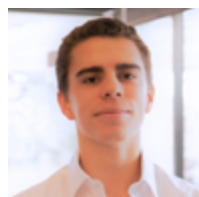
IQ, the Portfolio Manager of the Consumer group in the Student Investment Fund and was previously the COO. Upon graduation he will be joining the CitiGroup Institutional Clients Group in LA as an Investment Banking Analyst where they focus on mergers and acquisitions within the industrials space.



### ***Brooklyn Button '22***

Brooklyn is a junior at CMC majoring in Applied Mathematics and Economics with a Sequence in Financial Economics. Though she grew up in Iowa and the Netherlands, she is originally Canadian, and now calls Irvine, California home.

In addition to being a BMGI/Michael Larson Asset Management Fellow, she is a Robert Day Scholar, as well as a member of the Varsity Cross Country and Track teams, the CMC Student Investment Fund, SOURCE, and a CMC Tour Guide. Brooklyn has worked as a fall/winter private equity intern at the Riverside Company and will be interning in the investment banking division of Citigroup this coming summer. In her free time, Brooklyn enjoys running, surfing, creating art, and volunteering.



### ***Juan Diego Herrera '21***

Juan Diego is a senior at CMC from La Paz, Bolivia, majoring in Economics and Computer Science. In addition to being a BGMI/Michael Larson Asset Management

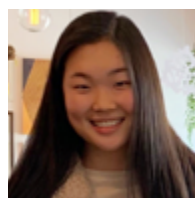
Fellow, he is also a McKenna Award recipient, the Portfolio Manager for the Financials and REITS Industry Group at the Student Investment Fund, and a member of the CMS Swim and Dive team. Juan Diego spent his previous summers interning at Volcan Compañía Minera S.A, a Glencore subsidiary in Peru, and at Panamerican Investments, a Bolivian investment bank. In his free time, Juan Diego enjoys reading Scientific American, playing volleyball, and coding personal projects.



### ***William Li '21***

William is a junior at CMC from Honolulu, Hawaii, majoring in Mathematics and Economics with a sequence in Computer Science. In addition to being a BMGI/Michael Larson Asset Management Fellow, he

is also a Robert Day Scholar, the Technology Portfolio Manager for the Student Investment Fund, a Managing Director for the Claremont Consulting Group, and a research analyst for the Financial Economics Institute. Last summer, William interned in the technology investment banking division of Citigroup and will be returning there upon graduation. In his free time, he enjoys reading, listening to podcasts, and learning something new.



### ***Karina Park '22***

Karina is a junior at CMC, majoring in Science Management (Data Science Track) with a sequence in Financial Economics. In addition to being a BMGI/Michael Larson Asset Management Fellow, she is also a Robert Day

Scholar, tour guide, research analyst for the Financial Economics Institute, analyst for the Student Investment Fund, mentor for the Asia Pacific American Mentoring Program, research analyst for the Lowe Institute of Political Economy, Resident Technology Assistant, and Center for Innovation and Entrepreneurship fellow. Karina spent the summer after her freshman year interning at Boston Consulting Group Digital Ventures, a corporate investment and incubation firm that invents, builds, and invests in startups with the world's most influential companies, and at The Schulten Group, a wealth management firm in Long Beach. This past summer, she was supposed to intern at Bank of America's New York office, but was relocated to the Seoul office due to COVID-19. Next summer, Karina will be interning at Bank of America in New York as an investment banking analyst for the Leveraged Finance group. In her free time, Karina enjoys hiking, traveling, reading, and finding and trying new restaurants. ▲

## SPRING EVENTS

### New York City Networking Trek

**January 10–15, 2021**

Twenty-four CMC students virtually visited prestigious firms in NYC to gain exposure to various job opportunities in the financial markets and to establish relationships with CMC alumni working at these companies. The goal is for these relationships to evolve into summer internship and full-time job opportunities for student attendees. Visits this year included Atalaya, BDT Capital, Cowen, Goldman Sachs, Moelis & Company, Morgan Stanley, Perella Weinberg Partners, S&P Global, and Wells Fargo Securities. The trip is sponsored by the Financial Economics Institute and Robert Day Scholars Program.

### Algorithmic Bias: The New Form of Discrimination

**February 5, 2021**

In light of President Chodosh's Initiative on Anti-Racism, the Financial Economics Institute (FEI) hosted a panel discussion on a new form of racism and discrimination in the 21st century—Algorithmic Bias!

### FEI FinTech Hackathon Event

Sponsored by S&P Global

**April 5-16, 2021**

### BMGI/Michael Larson Stock Pitch Event

**April 15, 2021**



FINANCIAL ECONOMICS  
INSTITUTE

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*The mission of the Financial Economics Institute is to provide unique research, curricular and extracurricular opportunities engaging the Claremont Colleges in both the theory and practice of financial economics. The FEI administers three programs directed at these objectives. First, the FEI supports collaborative, advanced student/faculty research in financial economics and overlapping disciplines. Second, the FEI oversees the Financial Economics Sequence, a unique curriculum grounded on rigorous quantitative courses in a liberal arts context, preparing students for career opportunities in finance. Third, the FEI sponsors activities for the broader community, including oversight of the Student Investment Fund, provision of databases, space and hardware for multiple purposes, and support for conferences, workshops, internships, networking trips and other events.*