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### PROPOSAL TO THE ACADEMIC SENATE TITLE

TITLE: Master of Finance, Full Proposal

SUBMITTED BY: Department of Economics and Finance, School of Business Administration

DATE: November 13, 2015

ACTION: Legislative Authority

REFERENCE: Constitution of the Academic Senate of the University of Dayton, Article II.B.1

# Master of Finance

Full Proposal

Department of Economics and Finance School of Business Administration University of Dayton

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#### 1. Designation of the New Degree Program

The Department of Economics and Finance at the University of Dayton proposes to develop a new Master of Finance (MF) degree program. This program intends to educate and train students in finance by offering a unique graduate-level curriculum. The graduates are expected to seek professional careers in business, in general, and careers in banking, corporate finance, investment management, investment banking, private wealth management, equity trading, derivatives trading, financial consulting, risk management, and insurance, in particular. The curriculum will also provide flexibility for those who wish to pursue a Ph.D. degree in finance.

The MF program is a stand-alone program. The MF degree is a non-thesis degree that requires a minimum of 33 credit hours. The curriculum is focused in finance, but is also broad enough for students to pursue careers in a wide spectrum of job opportunities. The Department of Economics and Finance's two trading centers, one in equity trading and another in derivatives trading, allow the proposed curriculum to be unique and innovative. Graduates of the program will have strong up-to-date knowledge and skills necessary to become effective and successful financial analysts for the corporations, financial institutions, and the investment communities in a global environment. The thorough understanding of how a free financial market works and the pros and cons of the regulatory environment is particularly insightful for international students who come from countries with primitive capital markets.

The proposed program will align with the School of Business Administration (SBA) vision, "educating the whole person and to connecting learning and scholarship with leadership and service in an innovative business curriculum designed to prepare ethical leaders for successful careers in a global business environment." Since ethical practices will be an integral part of the curriculum and a significant portion of the CFA preparatory course, it further supports SBA's mission of preparing ethical leaders who are committed to the Catholic and Marianist tradition. The University of Dayton has successfully placed its class of 2014 finance majors in companies such as BlackRock, Bloomberg, Credit Suisse, Fidelity, Fifth Third Bank, IBM, Johnson Controls, JP Morgan Chase, KeyBanc Capital Markets, Mid-America Asset Management, Northern Trust,

and Wells Fargo Securities, just to name a few. The quality of the program, the placement experience, and the alumni network will ensure the MF graduates with strong job prospects.

#### 2. Description of Proposed Curriculum

The MF is a non-thesis degree that requires 33 credit hours of course work to be completed in three semesters under normal conditions for full time students. However, completion between 12 and 24 months is also possible depending on a student's background and course arrangement. For example, students with a bachelor's degree majoring in finance may be able to waive 3 credit hours. Summer courses may be needed for students targeting graduation in 12 months. The program is designed for full time students, but part time students will also have enough flexibility to enroll although it will take longer to complete. The flexibility is provided by the availability of evening classes and course choices.

The curriculum is composed of 21 credit hours of required courses and 12 credit hours of electives depending on students' desired career paths. The 21 credits of required courses will be offered by finance faculty supplemented by economics and accounting faculty who will teach econometrics and accounting. Among the 21 hours of required courses, 12 would normally be completed in the first semester (with the exception of quantitative finance path), six in the second semester, and three in the final semester. Since a single degree with no special fields is proposed, the choices of 12 elective credits rest upon the students' desired career paths, which include asset management, corporate finance, and quantitative finance. Faculty advisors will work with students to make recommendations and to guide them through the choices of electives. In total, three electives (Financial Math I, II and Computational Finance) will be taught by faculty in the mathematics department; one elective (Advanced Financial Accounting) by accounting faculty; one required course (Econometrics) by economics faculty; and one required course (Financial Statement Analysis) by accounting faculty.

In addition to courses that one would expect to see from other master's degree programs, we propose to offer the following courses which are unique to our program. The offering of some of these courses is made possible only because the department has significant experiences in two

very unique trading centers – The Davis Center for Portfolio Management and the Hanley Trading Center. The former is designed for equity trading, securities analysis, and portfolio management, while the latter is for derivatives and foreign currency trading. Undergraduate student managers are already managing an equity portfolio worth \$22 million using the world-class facilities in the Davis Center, and both undergraduate and graduate students have experienced real-time foreign currency and energy trading in the Hanley Center. Courses such as Equity Trading, Fixed Income Trading, Investment Seminar (management of a real money equity portfolio), Derivatives and Risk Management, and Energy Trading & Risk Management will benefit substantially from the opportunities provided by these two centers. The successful placement of Davis Center student managers in major banks, investment banking firms and trading firms attest to the contribution of these facilities and programs, which can be easily extended to the proposed MF program. Table 1 summarizes the proposed curriculum for MF, with prerequisites stated in the bottom of this table. Note that topics of ethics in the financial markets will be incorporated in relevant courses.

The program is designed for full time students, but part time students will also have enough flexibility to enroll although it will take longer to complete. For example, a part time student can take two required courses in the first semester (e.g., Investments and Excel Finance Modeling), then proceed to take Portfolio Management and one of the electives in the second semester. In the second year, he/she can take the remaining two required courses (e.g., Financial Statement Analysis and Econometrics).

Culminating/Integrated Experience: In the final semester of the program, all students must take CFA Preparatory course (MF 670), which offers students a culminating experience, and prepares them for taking the CFA exam. Some scholarships may be given by the CFA Institute. The CFA exam encompasses topic areas including quantitative methods, economics, financial reporting and analysis, corporate finance, equity investments, fixed income, derivatives, portfolio management, and ethics. Since these topics constitute major components of the MF curriculum, the CFA Preparatory course provides the opportunity to integrate the learning experience. The CFA program includes a series of three exams, Levels I, II, and III. The CFA Preparatory course targets the Level I exam, though the complexity of the course materials also provide excellent

preparation for the Level II exam. The Level I exam is offered twice a year (June and December), while the Level II and III exams are offered once a year.

Table 1: Proposed Curriculum for MF							
Course	Credit	Required/ Elective	Recommended Courses				
1st Semester (9-12 Cro	edits requ	ıired; Ouan	atitative Finance path choose Financial Math I)				
Investments	3	R	All four courses are required for the program and highly				
Excel Fin Modeling	3	R	recommended for the 1 <sup>st</sup> semester. Students in the Quantitative				
Financial Statement	3	R	path may take three required courses and Financial Math I for				
Econometrics	3	R	- the 1 <sup>st</sup> semester. Students must complete prerequisites (stat				
Financial Math ]	3	E	in the bottom of this table) before registering for MF courses.				
Tillaliciai Mauli	3	L					
2nd Samostar (6 Crad	ite ara ra	anirod: cho	ose 6 Credits of electives )				
Portfolio Management	3	R	We recommend the following electives depending on career				
Advanced Corporate	3	R	objective:				
Equity Trading	3	E	1. Asset Management: Derivatives & Risk Management, Fixed				
Advanced Fin Acct.	3	E	Income Securities, Equity Trading				
Derivatives	3	E	2. Corporate Finance: Mergers & Acquisitions, Advanced				
Fixed Income Securities	3	E	Financial Accounting, International Finance				
Mergers & Acquisitions	3	E	3. Quantitative Finance: Derivatives & Risk Management,				
International Finance	3	E	Fixed Income Securities, Financial Math II				
Financial Math II	3	E	•				
3rd Semester (3 Credi	ts are re	quired; cho	ose 6 Credits of electives)				
CFA Preparatory	3	R	We recommend the following electives depending on career				
Fixed Income Trading	3	Е	objective:				
Energy Trading	3	Е	1. Asset Management: Fixed Income Trading, Energy Trading				
Securities Analysis	3	Е	& Risk Management, Investment Seminar, Securities				
Computational Finance	3	Е	Analysis, Finance Empirical Method				
Investment Seminar	3	Е	2. Corporate Finance: Investment Seminar, Securities				
Fin Empirical Method	3	Е	<ul> <li>Analysis, Finance Empirical Method</li> <li>3. Quantitative Finance: Computational Finance, Energy</li> </ul>				
			Trading & Risk Management, Finance Empirical Method				

# **Prerequisites for the MF Program (Undergraduate Level Equivalent)**

Principles of Economics (ECO 203 and ECO 204; or equivalent)

Statistics (DSC 210 and DSC 211, or MTH 367 and MTH 368; or equivalent)

Calculus (MTH 129; or equivalent)

Financial Accounting (Suggested course: MBA600A and MBA601A, or ACC 207 and ACC 208; or

equivalent)

Corporate Finance (Suggested course: MBA620, or FIN301; or equivalent)

**Note:** MF course numbers and brief descriptions are in Section 12.

# 3. Administrative Arrangements

The administrative function of the program will be located in the Department of Economics and Finance. The program director will be responsible for all administrative work (e.g., student advising) and assist the university in marketing and student recruiting. A program committee, consisting of the program director and two tenured and/or tenure-track finance faculty, will be responsible for curricular oversight and admission decisions. As the curriculum includes courses taught by accounting, economics, and mathematics faculty, the program will cooperate and coordinate with department chairs and faculties from these departments/disciplines.

### 4. Evidence of Need

The need for the proposed program is based upon the following factors:

The Market: The rapid globalization of the world's financial markets, advancement of technological computation, the demand for big data analysis, non-stop financial innovations, and changing regulatory environments provide unprecedented opportunity for graduates with a finance degree beyond the bachelor's level. The strong domestic demand for well-trained students with a master's degree in finance is reported in NACE's (National Association of Colleges and Employers) Job Outlook 2015. According to the report, at the master's degree level, finance tops the list of the most-in-demand majors (24.2% of the respondents will hire an MS in finance), followed closely by computer science (23.8%) and accounting (22%).

Increasing Popularity of Specialized Masters Degree Program: As the enrollments in traditional MBA degree programs have flattened and even begun to decline, the increasing interest in specialized business degrees at the master-level has grown rapidly. According to Bloomberg Business (November 2012), the market for specialized master's programs in accounting, finance, management, and a number of other business disciplines has never been stronger. A growing number of business schools, from Maryland's Smith School to Michigan State University, are riding on that wave of interest. University of Maryland's Smith School created an MS program for students wanting to specialize in finance in 2009. Today there are five such programs in the Smith School.

Strong Demand from the International Community: The globalization of the world's financial markets creates strong demand for professional and practical knowledge in financial markets; such demand is particularly strong in emerging markets such as China and India. Finance faculty at UD have strong connections with many first-tier Chinese universities through visiting and/or hosting exchange scholars. The possibility of offering a master's degree in finance has already invited many inquiries and strong interest. That being said, we envision a student body with diverse internationals. The Master in Financial Mathematics (MFM) program at the University of Dayton (offered by the Mathematics Department) recruits students from China, India, Saudi Arabia as well as domestic students. The experience is invaluable to the Master of Finance program.

Limited Number of Programs in Ohio: To our best knowledge, there are only three master's degree in finance programs in Ohio; offered by Ohio State University, Case Western Reserve University, and University of Cincinnati. Ohio University, however, offers a MS in financial economics by the economics department, which has a strong emphasis in economics but more limited choices in finance in comparison with the other three programs. The three existing master's in finance programs each offer some specialties. OSU's program is a nine-month intensive program with traditional finance courses and specialized topics such as private equity, behavior finance, credit risk, loan syndication, and real options. Students are allowed to choose one of four tracks. Case Western Reserve's program requires a total of 39 credits that can be completed in 9, 12, 16 or 21 months according to a student's own pace. In addition to traditional finance courses,

it also offers topics such as health finance. Among the three master's programs, UC is the newest, starting about four years ago with total enrollments of about 50. UC's program requires a total of 30 credits distributed as: 12 credits in core, 9 credits in "focus", 6-9 credits in electives, and/or a capstone of 3 credits. Besides traditional finance curriculum, UC also offers specialties with emphasis in real estate, such as Real Estate Development, Real Estate Valuation, and Real Estate Finance.

Our Niche: In addition to traditional finance courses, the existence of two unique finance labs (Davis Portfolio Center and Hanley Trading Center) at UD represents a rare opportunity for us to leverage our new program and to distinguish our program from others. Courses such as equity trading, fixed income securities trading, investment seminar (management of a real money equity portfolio), derivatives and risk management, and energy trading will be conducted in these two centers, which are equipped with real time data and state of the art software/hardware such as eight Bloomberg terminals, Morningstar Direct, and ForecastX in the Davis Center, and three Bloomberg terminals, FXCM trading station, and CQG Options trading platform in the Hanley Center. These specialty courses in conjunction with the mandatory CFA preparatory course represent a niche for the proposed program, which will attract student interest and enhance the marketability of the graduates.

#### **5. Prospective Enrollment**

Based upon the reported national and global demand trends for master's level training in finance, we predict a long-term increase in students' interest both domestically and internationally. Given the strong demand, the uniqueness of the program, and the recruiting effort, we are planning for a program size of 50 by the fourth year of the program, which is where we will cap the program given the planned resources. All MF courses will be delivered on the UD campus; no on-line delivery is being considered at this stage. It should be noted that UD has a campus in Suzhou, China (University of Dayton China Institute), which will be strategically positioned to assist student recruiting in China. There are also recruiting agencies in foreign countries. Contacts with

these agencies will ensure diversity in the international student body. Projected enrollment numbers are provided in Table 2 below:

Table 2: Projected Enrollment in MSF for the First Five Years								
	Year 1	Year 2	Year 3	Year 4	Year 5			
Enrollment	15	25	35	50	50			

Application Deadlines: Applications must be submitted online via the University of Dayton Graduate Admissions website. If the study starts with a Summer-Spring cycle, the deadline to apply for admission to the following Summer Semester is November 30; otherwise, for Fall Semester the deadline is February 28. Students who do not have adequate prerequisites may take these courses in the Summer Semester.

# **Application Requirements:** All applicants should submit:

- Official undergraduate university transcript
- Official GMAT or GRE score
- Official TOEFL score (or IELTS score) for international students. A minimum of 550 on TOEFL PBT, or 80 on the iBT TOFEL, or 6.5 on IELTS is required. International students with a U.S. undergraduate/graduate degree are exempted from TOEFL score. International students with a degree from another English-speaking country may be exempted from TOFEL or IELTS.
- Letter of reference (minimum two)
- Personal statement

In addition to the above documents, the admission committee will also consider applicants' prior experience in the industry. For example, experiences in the investment banks and/or security

firms enhance his/her credential. Although industrial experience is not mandatory, applicants with such experience receive preference, other things being equal.

**Prerequisites:** All applicants must hold a bachelor's degree from a recognized university or college. Undergraduate majors are not restrictive, but applicants with strong quantitative backgrounds are preferred. Prerequisites are Principles of Economics (micro & macro), Calculus, Statistics, Financial Accounting, and Corporate Finance. No MF courses can be registered until these prerequisites are satisfied. Please refer to Section 2: proposed curriculum, for more course details satisfying the prerequisites.

# 6. Enrollment of Underrepresented Groups

The UD Economics and Finance Department continues to be challenged to diversify its student body. However, the Department has witnessed an increase in diversity due to an increase in international students. The SBA Leadership has discussed the University level objective to redouble efforts to increase ethnic diversity. The SBA Dean and the Economics and Finance Department Chair have begun discussing possible programs that could be co-sponsored by the SBA, the Economics & Finance Department, and key stakeholders to enhance diversity and attract underrepresented groups to the MF program. We will actively recruit students with diverse cultural, gender, and racial backgrounds. The University of Dayton has a marketing plan devoted to recruiting underrepresented groups of students. The MF program will work closely with the University to recruit such students.

#### 7. Availability of Faculties and Facilities

Faculty: The department currently has six tenure/tenure track finance faculty, supplemented by an equal number of full-time and part-time non-tenure track faculty. The department also has employed a "Clinical Professor" in the past. These faculty together support the teaching of approximately 540 finance majors and the MBA program. We project the eventual need for two additional tenure-track finance faculty – preferably one in the first year of the program, and an additional one in the second or third year as the program grows to the anticipated capacity, for the

following reasons: (a) Four new courses taught by finance faculty will be needed in the proposed program (Investment Seminar, Finance Empirical Method, Securities Analysis, and CFA Preparatory); (b) Adequate variety of courses must be offered each semester to ensure students' graduation; and (c) As explained in (8) below, the program director's normal teaching load will be reduced by 1~2 courses. We believe a total of eight tenured/tenure track faculties are needed to ensure the quality of the program and provide adequate support to the function of the two Centers and administrative work.

*Facilities:* Facilities in the School of Business, including two Centers, and classrooms in Miriam Hall and the River Campus will be sufficient to accommodate the projected prgram size of 50.

#### 8. Need for Additional Facilities and Staff

As indicated in (7) above, the existing facilities in Miriam Hall and the River Campus will be sufficient to meet the program demand, hence no additional facilities are needed. The existing resources from the libraries are also sufficient for the needs of this program, so no additional library resources are needed. In the initial stage, one tenured/tenure-track faculty will serve as the program director with appropriate course load reduction (one course progresses to two courses as enrollments increase). The program director will be assisted by the existing administrative assistants in the department. A tenured/tenure-track finance faculty serving as the program director at this stage is essential to coordinate the curriculum and assist the department chair for teaching scheduling.

# 9. Projected Additional Costs Associated with the Program and Evidence of Institutional Commitment to Meet these Needs

As indicated in (7) and (8) above, the major costs of implementing the program consist of two tenure/tenure-track finance faculty. Other minor costs are related to administrative functions including the reduction in teaching load for the program director. There will also be some marketing and recruiting related costs.

The University of Dayton has identified the addition of new graduate programs as part of its strategic plan, and the University of Dayton's Interim Provost has endorsed the Master of

Finance program. Moreover, the Dean of the School of Business Administration and the core faculty have expressed a commitment to the program's development and implementation. In fact, the University has already authorized the department to convert one lecturer position in finance to a tenure-track position for the 2016-17 academic year.

#### 10. Response to comments from RACGS member institutions

### Cleveland State University

Comment #1: I believe that this is a very carefully conceived and ambitious plan that specifies how this program will differentiate itself from other similar programs in the state of Ohio...Most of the other business schools in Ohio offer a Finance concentration as part of their MBA program that usually consists of a small number of electives added to their MBA core courses. With a core of 18 credit hours of required Finance courses and additional 15 credit hours of electives, this MF program will provide students with a broader and deeper graduate-level Finance education than any of the MBA programs with a Finance concentration.

Our response: Thanks for the kind words. Indeed, we believe the proposed program will provide MF students with breadth and depth, which cannot be offered by a MBA degree with a concentration in Finance.

Comment #2: The program development plan states that a key differentiator between this MF program and other similar programs is its ability to offer unique courses that leverage the resources of the Davis Center for Portfolio Management and the Hanley Group Trading Center, both are existing facilities of the Business School at the University of Dayton. The proposal points out that these facilities are already being used successfully in existing undergraduate and graduate courses and that the successful placement of their students in investment banking and trading firms attest to the contribution of these facilities.

Our response: Thanks for the comments. We believe 16 years of experience with the Davis Center for Portfolio Management and 7 years of experience with the Hanley Trading Center provide us with a unique opportunity to extend the program to the MF program. The Centers are not new experiments; rather they are well-established, matured educational programs that will bring benefits to the graduate-level students. As indicated in Section 1, we have successfully placed our

2014 class finance majors in prestigious institutions such as BlackRock, Bloomberg, Credit Suisse, JP Morgan Chase, Fidelity Investments, Fifth Third Bank, and Wells Fargo Securities, among others.

Comment #3: Another differentiator of this proposed MF program is that all students in the program will be required to take a CFA exam preparatory course before completing the program. Although other schools may offer a CFA preparatory course, I am not certain that the course is a requirement at those schools (at Cleveland State it is an option). By requiring students to take this course, this MF program will set the students on the path toward the combined "MF, CFA" credential, which would be a very attractive combination to potential employers.

Our response: Thank you for the comments. Indeed, the CFA preparatory course serves two purposes: provides the opportunity for students to integrate the learning experience and paves the way for a "MF, CFA" credential.

Comment #4: There is no current plan to offer any of the classes online, and the aggressive completion schedule proposed (12 to 24 months) suggests that part-time working students may not find this to be a hospitable program. Part-time working students are probably the majority in most MBA programs....some explicit statement addressing if and how part-time working students would be accommodated by this program and what their completion schedule might look like would be welcome addition to this proposal document.

Our response: Thank you for the comments. Yes, full-time students are our primary target. However, since many courses may be offered in the evening, part-time students will also find the program friendly. We have added some explanations to Section 2 of the proposal. The time required for part-time students will be longer, up to two times longer than full-time students. Assuming part-time students will take 6 credits per semester, the following example illustrates the schedule for a student pursuing the asset management path.

Year	Semester	Courses	Credits Completed
1	1	Investments; Financial Statement Analysis	6
1	2	Portfolio Management; Equity Trading	12
2	1	Advanced Corporate Finance; Excel Modeling	18
2	2	Derivatives; Fixed Income Securities	24
3	1	Fixed Income Trading; Econometrics	30
3	2	CFA Preparatory	33

### University of Akron

Comment #1: There are no sustentative concerns with the proposed Master of Finance degree from the University of Dayton...We see no material impact on existing degree programs at the University of Akron nor do we see any significant duplication of programs across the State of Ohio...Master of Finance offerings are becoming increasingly popular,...Due to the low penetration of MS/MA degree programs in finance in Ohio and nationally we are a long way away from saturation for this degree...This proposed Master of Finance program at most has a minor overlap with the MBA in finance program currently offered by the University of Akron...Hence we do not believe that the addition of this program at the University of Dayton represents any unnecessary duplication of programs in Ohio or nationally. The region, in particular, would benefit from the addition of other MA/MS in finance program.

Our response: Thank you for the comments. We agree with you that we are a long way away from saturation of this degree, and Ohio still can benefit from the addition of UD MF program.

Comment #2: There are at best limited opportunities for collaboration with the University of Akron...The main opportunity for collaboration would be in the area of financial forensics where the University of Akron has a unique JD/MSA degree. The option for University of Dayton finance masters students to add work in financial forensics would be valuable.

Our response: Thank you for the comments. Given the expertise of our finance faculty, it would be very hard for us to consider financial forensics although some of our economics faculty have experiences in forensic economics. Finance department at the University of Akron has faculty with Juris Doctorate degree, which gives UA unique human resources for such program.

Comment #3: Two substantive concerns arise with the program design. First, the program appears to be a bit light in corporate finance. A master's program in finance needs a more solid foundation in corporate finance than what is found in the program as it is constituted. Second, the 'options' for concentrations would be better as formal tracks – mirroring what Ohio State is doing with their specialized masters in finance degree.

Our response: Thanks for the comments. We agree that corporate finance provides foundation to all finance majors irrespective of concentrations. For this reason, we require that all students take Excel Finance Modeling and Financial Statement Analysis in the first semester, which should be very beneficial to second semester courses such as Advanced Corporate Finance, Mergers & Acquisitions and/or Portfolio Management. Please note that, in responding to your comments, we have added a new accounting course, Financial Statement Analysis in the first semester as a required course, and moved Advanced Corporate Finance to the second semester. Although corporate finance is a must in any finance program, undeniably our focus is a little leaning toward

asset management as can be seen from the program that there are far more courses in asset management than in others. This tilt is consistent with the intention of leveraging our successful experiences with the Davis Center for Portfolio Management and the Hanley Trading Center. The tilt also allows us to avoid the duplication of other Master of Finance programs in other Ohio universities. That being said, strengthening corporate finance area is one of our long-term goals, and one of our new recruits will specialize in corporate finance.

Comment #4: The University of Dayton should consider the following changes to their program.

- Advanced Financial Accounting should be required and added to the first semester. This would put the foundations classes all in the first semester.
- Advanced Corporate Finance should be moved to the second semester. There are a number of really good textbooks that use Excel to teach advanced corporate finance. Moving this class to the second semester will allow a more rigorous treatment of the subject matter as the students will have had the foundational accounting class and the spreadsheets class.
- Add a capital budgeting class (the additional corporate finance class) to the third semester and make this class required for all Master of Finance students (or at least for the ones specializing in corporate finance).
- Create formal finance specializations each should have two additional required classes depending on specialization. For instance, for quantitative finance you might require the two Financial Math classes, etc.

Our response: Thank you for the suggestions. As indicated in our response to your comment #3, we have added a new accounting course, Financial Statement Analysis in the first semester as a required course, and moved Advanced Corporate Finance to the second semester. Advanced Corporate Finance remains as a required course in the second semester. By adding a Financial Statement Analysis course, we strengthen students' accounting preparations for the courses in the second semester such as Advanced Corporate Finance and Mergers and Acquisitions. It also provides an intermediate course between fundamental financial accounting (prerequisites) and Advanced Financial Accounting. A stand-alone capital budgeting course may be valuable for corporate track students, which can be more easily implemented in a quarter system. Faculty at UD are certainly receptive to developing related courses in the future. As for formal finance specializations and additional required courses, we are more like Case Western Reserve and Cincinnati allowing students to choose courses consistent with their career objective without committing to "hard track" as in Ohio State. For example, University of Cincinnati offers four "focuses", but students are not required to specialize. "Hard track" approach requires large faculty and curriculum commitment that is more suitable for Ohio State University. Our "soft

track" approach allows for more flexible course offering depending on the student interest. Our faulty advisor, however, will work closely with students to make sure their curriculum portfolio is not a mix-and-match bag, but is the best for their future career objective.

## **Ohio State University**

Comment #1: While the program being offered duplicates our program, we have no concerns or objections to this program being launched.

Our response: Thank you for the comments.

## **University of Cincinnati**

Comment #1: I concur that the demand for finance majors is strong, with finance topping the list...In addition, there is increasing interest in specialized business degrees at the master level with a growing number of schools creating specialized master programs in accounting, finance and management. Both trends build a positive case for the University of Dayton's proposed new degree program, Master of Finance (MF).

Comment #2: U.S. enrollment by international students in U.S. master program has been on the increase for the last decade. However, U.S. enrollment of Chinese students in U.S. master programs experienced its first decline in 2014 (Bloomberg 11/17/14)...The prospective enrollments for the program's initial year appears reasonable. Due to the factors stated above I find the prospective enrollments for the subsequent years overly optimistic.

Our response: Thank you for the comments. We are cautiously optimistic about our estimates for the following reasons. First, as you concurred in comment #1, the demand for finance major is strong. Second, we envision a diverse student body. The Master of Financial Mathematics program at the University of Dayton (offered by the Mathematics Department) recruits students from China, India, Saudi Arabia as well as domestic students. The experience is invaluable to the Master of Finance program. The Council of Graduate Schools (CGS) reported first-time enrollment of students from India increased 27%, Brazil 91%, and Middle East 8% (November 12, 2014). Third, according to WES Research & Advisory Services (April 16, 2015), "although 2014 data show a one percent overall decline in new enrollments of Chinese graduate students, ...there are still bright spots in master's level enrollment data from China, with surging interest in U.S. business schools." Fourth, our faculty visited half-a-dozen Chinese universities this summer and were pleased to learn strong interest at UD's MF program. Moreover, University of Dayton has a campus (UDCI) in Suzhou, China, which will be strategically positioned to assist student

recruiting in China. In fact, UDCI has formed eight partner universities in China with a trend of further increases. These universities send their undergraduate students to UD every semester. We consider these partner universities an important market for MF student recruitment.

Comment #3: The three Ohio programs mentioned in the proposal are located in Ohio's three major population centers: Cleveland, Columbus, and Cincinnati. Since the major population centers are currently adequately served by an existing MS Finance program I question whether there is significant unfulfilled market demand within the Dayton market to warrant an additional MS Finance program within southwest Ohio.

Our response: Again, we are optimistic about expected enrollments because (a) the expected student body will go beyond the border of Ohio. More than 60% of the current UD students are out-of-state students. UD has excellent experience in recruiting out-of-state students; (b) your concern may be valid for part-time students. But even so, Dayton metropolitan, though not as big as Cincinnati, has a population size of nearly one million. Part-time students may find 60-70 miles of geographical distance too long to drive. This is evidenced by the little overlap between MBA students in Dayton area and Cincinnati area. (c) Our target is a program for full-time students supplemented by part-time students. Student body will include both international students and domestic students, hence the effect of geographical location in Ohio should have minimal impact on our enrollments.

Comment #4: I find value in the Dayton program's utilization of the two finance labs, I am concerned however that the labs may be a temporary point of distinction.

Our response: Thanks for the comments. As indicated in this proposal, we have accumulated significant experience with both Centers. Specifically, the Davis Center had been functioning for almost 16 years, while the Hanley Trading Center had been open for 7 years. Students in Davis Center manage an equity portfolio of \$22 million, which is one of the largest in the nation. Student managers have been placed in prestigious securities firms such as J.P. Morgan, Morgan Stanley, Credit Suisse, Bloomberg, and BlackRock. The Hanley Trading Center is specifically designed for derivatives trading. To our best knowledge, only a handful universities worldwide have such facilities and programs. In the U.S., Tulane University, University of Illinois-Chicago (International Center for Futures and Derivatives), and University of Colorado-Denver (J.P. Morgan Center for Commodities) are the ones with a derivatives trading center. As for foreign countries, University College Cork (Ireland), University of Warsaw (Poland), University of Glasgow (U.K.), City University of Hong Kong (China), and Monash University (Australia) are

only the few we know with such a trading center. Therefore, we hope the distinction is not temporary.

Comment #5: Since the CFA preparatory course is a required course I suggest that Equity Trading, Derivatives, Advanced Financial Accounting, and Fixed Income Securities become required as opposed to elective courses and Excel Financial Modeling become an elective as opposed to a required course. The suggested changes in required courses cover 10%, 5%, 20%, and 10% of the CFA Level I Exam respectively. In addition, it is strongly suggested that the curriculum for MF670 be modified to contain the CFA Ethical and Professional Standards (15% of CFA Level I Exam).

Our response: Thank you for the comments. Indeed, accounting provides foundation for most of the finance courses, and financial accounting accounts for 20% of the CFA Level I exam. For this reason, we have added an accounting course, Financial Statement Analysis, to the first semester requirement. We believe this arrangement not only addresses your concern, but also better prepares students for the CFA exam. This is because Advanced Financial Accounting mainly covers topics that are related to consolidated financial statements, multinational subsidiaries, and foreign currency transaction. These topics are not included in the CFA Level I exam. In recent years, the CFA Institute has shifted toward more financial accounting analysis, and less pure accounting topics. Moreover, Advanced Financial Accounting requires Intermediate Accounting as a prerequisite, which becomes impractical for the first semester students. That being said, we still retain Advanced Financial Accounting as an elective for students majoring in corporate finance. The addition of a Financial Statement Analysis also addresses the question raised by University of Akron.

We will keep Equity Trading as an elective for two reasons. First, Equity Trading focuses on technical trading instead of investments principles. The first semester required course, Investments, and the second semester required course, Portfolio Management, actually better prepare students for the CFA exam than Equity Trading. Some derivatives and bond analysis will also be covered in the Investments course. Based upon the CFA Program Candidate Body of Knowledge, we find this arrangement will provide adequate background entering the CFA Preparatory course (MF670). We will also incorporate ethical and professional standards in the course contents of Investments, Portfolio Management, and Financial Statement Analysis when appropriate. CFA Preparatory (MF670) will review and re-emphasize these concepts.

#### 11. Description of the Effect on Other Degree Programs

The potential overall impact on other UD degree programs is positive. The UD MBA now has a finance concentration with a limited number of course choices. The MF curriculum will

provide these students with richer finance electives. In fact, many MF courses will also be available for MBA students. Those courses will be cross-listed (see proposed curriculum). Since the career objective of MBAs is different from that of MFs, we expect minimal cannibalization. The wide spectrum of finance electives will also benefit students in the Master in Financial Mathematics (MFM). Similarly, MF students wishing to pursue a Ph.D. degree will benefit from the math courses offered by the Math department. The Department of Mathematics and Department of Economics and Finance have rich experiences of program collaboration. We see MFM and MF programs as complimentary instead of competitive. MFM students typically come from degrees with strong mathematics, while our proposed MF program expects to recruit most of the students from business schools. MFM graduates seek and obtain jobs in specialized finance fields such as financial engineering and the insurance industry with requirements of strong quantitative/mathematics skills and modeling, while MF students will typically seek jobs in more traditional asset management, investment banking, and corporate financial management. MFM and MF provide synergy for students in both disciplines, and they complement each other.

# 12. Course Descriptions

MF 600/MBA 625 Investments - Study of investment principles and techniques used by both individual and institutional investors. Topics include bond and stock markets, security valuation methods, portfolio theory and management, and investment institutions.

MF 601/MBA xxx Excel Financial Modeling -This lab course focuses on building financial models in Excel. Students will learn to construct models for practical, real-world applications that cover simple examples such as cash flow and ratio analysis to more complicated models of bond pricing, stock valuation and option pricing. In the process, students will master basic Excel skills and more advanced useful techniques.

MF 602 Econometrics - Training in the art of making economic measurements from empirical data using regression analysis as the principle tool; use of computer software to estimate and test regression equations; interpretation of results using statistical inference.

MF 603/MBA xxx Financial Statement Analysis – The course focuses on the analysis of financial statements by integrating accounting concepts and principles to assess a company's performance, quality of earnings, valuation and other issues. Specific topics may include analysis of balance sheet, income statement, cash flow, off-balance sheet assets/liabilities, intercorporate investments, and analysis of business combination.

**MF 620/MBA xxx** Advanced Corporate Finance - This course focuses upon corporate finance issues addressing short term financial management, long term capital budgeting, and long term

financing choices. The course requires that the students understand these issues through a series of cases and projects. A significant amount of spreadsheet modeling together with both individual and group work will be required to examine the cases and projects.

**MF 621/MBA 603A** Advanced Financial Accounting - Study of consolidated financial statements and accounting for business combinations, government organizations, multinational subsidiaries, and foreign currency transactions.

MF 622/MBA 629 Mergers and Acquisitions - In depth study of company valuation techniques and the influence of the governance structure - the CEO, President, and the Board of Directors - on company value.

MF 625/MBA 626 International Financial Management - Introduction to problems facing financial management of international companies, including foreign exchange risk, working capital and capital budgeting decisions for multinational corporations, international financing, accounting and control.

**MF 630** Portfolio Management - Advanced topics on portfolio management process for both individual and institutional portfolio management, including specifying and quantifying investor objectives and constraints, formulating portfolio policies and strategies, specifying capital market expectations, constructing portfolios, allocating assets and measuring portfolio performance against objectives.

**MF 631/MBA xxx** Securities Analysis - Stock intrinsic valuation by constructing FCFF Excel model, which includes forecasting firm financial statements, estimating levered beta and WACC, predicting free cash flows from firm and sensitivity analysis. Students will be selected to participate in the CFA Research Challenge.

MF 632/MBA 628 Fixed Income Securities - This class will expose students to a variety of fixed income instruments that are traded in the financial markets, their investment characteristics, the state-of-art technology for valuing them, technique for quantifying their interest rate risk, and portfolio strategies for using them.

MF 635/MBA 627 Derivatives and Risk Management - This course provides a theoretical foundation for the pricing of contingent claims and for designing risk-management strategies. It covers option pricing models, hedging techniques, and trading strategies. It also includes portfolio insurance, value-at-risk measure, multistep binomial trees to value American options, interest rate options, and other exotic options.

**MF 640** Fixed Income Trading - Theory and practice in active bond portfolio management. Literature and practical issues related to managing a bond fund. Seminar format; students are divided into teams, each responsible for a specific sector of the fixed income market.

**MF 641** Equity Trading - The art and science of technical equity trading. Students implement a trading plan in a real stock market environment under a set risk management policy. Students learn to watch the market, analyze profitable situations, and produce winning trades.

**MF 642** Energy Trading and Risk Management- Energy market portfolio skills: physicality of natural gas market, natural gas pricing, natural gas portfolio transactions including hedging, basic risk management. VaR simulation produced, power pricing and risk management, weather hedging, credit derivatives and their use in energy. Oil basics and pricing a tolling agreement.

**MF 643** Investment Seminar - Application of investment theory and techniques in a real-world setting. Students manage a funded portfolio in terms of establishing objectives, selecting securities to buy (sell), and evaluating portfolio performance. Emphasis is placed upon attempting to identify undervalued common stocks.

**MF 650** Financial Mathematics I - Discrete Model - Topics include introduction to financial derivatives, discrete probability theory, discrete stochastic processes (Markov chain, random walk, and Martingale), binomial tree models for derivative pricing and computational methods (European and American options), forward and futures, and interest rate derivatives.

MF 651 Financial Mathematics II - Continuous Model - Topics include review of continuous probability theory, Ito's Lemma, the Black-Scholes partial differential equation, option pricing via partial differential equations, analysis of exotic options, local and stochastic volatility models, American options, fixed income and stopping time. Computational methods are introduced.

**MF 652** Computational Finance - This course will introduce students to numerical methods and various financial problems including portfolio optimization and derivatives valuation. Students will learn the basics of numerical analysis, optimization methods, Monte Carlo simulations and finite difference methods for solving PDEs.

**MF 660** Finance Empirical Method – The course includes readings of finance literature in asset pricing, corporate finance and a mini project that requires the students to analyze topics in the financial markets using databases such as CRSP and Compustat. Various econometric methods will be employed; SAS and/or STATA programming codes are essential.

MF 670 CFA Preparatory – A course designed to prepare students for CFA Levels I and II exam. Some scholarships may be given by the CFA Institute. CFA exam encompasses topic

areas including quantitative methods, economics, financial reporting and analysis, corporate finance, equity investments, fixed income, derivatives, portfolio management, and ethics and professional standards. Since these topics constitute major components of the MF curriculum, CFA Preparatory provides the opportunity to integrate the learning experience.

#### 13. Appendix A: Faculty Vitae (Tenured/Tenure Track)

#### (1) Finance Faculty

#### SANDERS S. CHANG

Department of Economics and Finance University of Dayton 300 College Park Dayton OH 45469-2251

# 300 College Park Dayton, OH 45469-2251 Citizenship: USA Birthplace: California

#### **EDUCATION**

Ph.D., Economics and Finance (Dual), Michigan State University, 2010.

Fields: International Finance, Asset Pricing and Investments, Time Series and Financial

Phone: (937) 229-3974

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Econometrics, Market Microstructure, Monetary Economics (Dissertation Co-Chairs:

Richard T. Baillie and G. Geoffrey Booth).

M.A., Economics, Michigan State University, 2004.

B.A., Economics and Statistics (Dual), University of California, Berkeley, 1997.

#### **POSITIONS**

Assistant Professor of Finance, Department of Economics and Finance, School of Business Administration, University of Dayton. (August, 2010 – Present).

#### **PUBLICATIONS**

- "Adverse Selection and the Presence of Informed Trading" (with F.A. Wang), *Journal of Empirical Finance*, 33, 19-33, 2015.
- "A Dynamic Intraday Measure of the Probability of Informed Trading and Firm-Specific Return Variation" (with L.V. Chang and F.A. Wang), *Journal of Empirical Finance*, 29, 80-

94, 2014.

- "Can Cross-Country Portfolio Rebalancing Give Rise to Forward Bias in FX Markets?" *Journal of International Money and Finance*, 32, 1079-1096, 2013.
- "Carry Trades, Momentum Trading and the Forward Premium Anomaly" (with R.T. Baillie), *Journal of Financial Markets*, 14, 441-464, 2011.
- "On the (In)feasibility of Covered Interest Parity as a Solution to the Forward Bias Puzzle" *Journal of International Financial Markets, Institutions & Money*, 21, 611-616, 2011.
- "An Obdurate Trading Strategy Perspective on the Forward Premium Anomaly" (with R.T. Baillie), *Quantitative and Qualitative Analysis in Social Sciences (QASS)*, 2, 25-44, 2008.
- "Inflation and Dollarization in a Dual-Currency Search-Theoretic Model" *Economics Letters*, 92, 353-359, 2006.

#### **BOOKS AND MONOGRAPHS**

"A Modern Econometric Analysis of an Ancient Exchange Rate Market" (with R.T. Baillie and G.G. Booth), In Contributions to Mathematics, Statistics, Econometrics, and Finance, Essays in Honour of Professor Seppo Pynnönen, *Acta Wasaensia*, 296, 267-290, 2014, Eds. Johan Knif and Bernd Pape.

#### WORKING PAPERS AND WORK IN PROGRESS

- "Domestic Exchange Rate Determination in Renaissance Florence" (with G.G. Booth). Revise and resubmit at *Cliometrica*.
- "Information Asymmetry, Liquidity, and Stock Returns" (with F.A. Wang). Working paper.
- "Flow Toxicity, Return Volatility, and the Flash Crash: Evidence from a Robust Informed Trading Metric" (with F.A. Wang). Work in progress.
- "Cross-Country Portfolio Rebalancing and Exchange Rate Dynamics: Can Covariance Risk Lead to Better Short-Run Forecasts?" Work in progress.
- "On the Pricing of Idiosyncratic Risk: Evidence from High-Frequency Volatility Forecasts" (with M.G. Schutte). Work in progress.

#### JOURNAL SERVICE

Associate Editor, *Journal of International Financial Markets, Institutions & Money*, March 2013 to present.

Ad hoc reviewer for: Journal of Banking and Finance; Journal of Empirical Finance; Journal of International Financial Markets, Institutions & Money; International Review of Economics and Finance; International Review of Financial Analysis; Economics Letters; Journal of Macroeconomics; Economic Modelling; Applied Economics Research Bulletin

#### ACADEMIC EXPERIENCE

Courses currently taught at University of Dayton:

FIN 371: Financial Markets and Institutions

FIN 450: International Business Finance

MBA 626: International Finance Management

Courses taught at Michigan State University:

FI 451: International Financial Management, Spring 2009.

PPL 802: Quantitative Methods in Public Policy II (Master's course), Spring 2008.

EC 201: Principles of Microeconomics, Fall 2007.

EC 805: Microeconomic Analysis (Master's course recitation), Spring 2006.

EC 330: Money, Banking and Financial Markets, Summer 2005.

EC 813A: Macroeconomics I (Ph.D. course recitation), Fall 2004.

Teaching Assistant, Department of Economics and Department of Finance, Michigan State

University. (Throughout Fall, 2004 – Fall, 2009).

Research Assistant, Department of Finance, Michigan State University. (Fall, 2008).

#### SEMINAR AND CONFERENCE PRESENTATIONS

Miami University, Department of Economics Research Seminar, Invited Speaker, April 2014.

National Taiwan University, Taipei, Taiwan, March 2014 (Presented by co-author).

National Sun Yat-sen University, Kaohsiung, Taiwan, March 2014 (Presented by co-author).

American Economic Association (AEA) Annual Meeting, Chicago, IL, January 2012.

Southwestern Finance Association (SWFA) Annual Meeting, Houston, TX, March 2011.

Midwest Finance Association (MFA) Annual Meeting, Chicago, IL, March 2011.

Financial Management Association International (FMA) Annual Meeting, New York, NY, October 2010.

LSF Lunch Seminar Series, Luxembourg School of Finance, University of Luxembourg, June 2010 (Presented by co-author).

Norges Bank Research Seminar Series, Norges Bank (Central Bank of Norway), Oslo,

June 2010 (Presented by co-author).

Midwest Macroeconomics Meetings, Michigan State University, April 2010. (Presented by co-author).

Society for Nonlinear Dynamics and Econometrics 17<sup>th</sup> Annual Symposium, Federal Reserve Bank of Atlanta, GA, April 2009. (Presented by co-author).

4<sup>th</sup> International Conference on Applied Financial Economics, Samos, Greece, April 2007. (Presented by co-author).

7<sup>th</sup> Annual Missouri Economics Conference, University of Missouri and Federal Reserve Bank of St. Louis, Columbia, MO, March 2007.

Research Seminar in Econometrics, Department of Economics, Michigan State University, February 2007.

#### HONORS AND AWARDS

Research Council Seed Grant, University of Dayton, Summer 2013, 2014.

Summer Research Grant, School of Business Administration, University of Dayton, Summer 2013, 2014, 2015.

University Research Fellow, University of Dayton, 2012.

University Research Fellows Grant-in-aid, Ryan C. Harris LTC, University of Dayton, 2012.

Best Paper in International Finance Award, Southwestern Finance Association, March 2011.

Dissertation Completion Fellowship, Michigan State University, Spring 2010.

MSU Department of Finance Graduate Student Teaching Excellence Award, 2009.

University Enrichment Fellowship, Michigan State University, 2003–2008.

Graduate School Summer Fellowship, Michigan State University, Summer 2009.

Conference Presentation Travel Grant, Michigan State University, Spring 2007.

## **CARL R. CHEN** (Dec. 2014)

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#### ACADEMIC TRAINING

Ph.D. Economics, University of Georgia M.S. Economics, Auburn University B.A. Economics, National Taiwan University

#### AREAS OF INTEREST

- Teaching: Corporate Finance, Investment Analysis, Derivatives.
- Research: Mutual Funds/Hedge Fund Performance, Asset Pricing Anomalies, Corporate Governance, Initial Equity Offerings, Information and Asset Price Discovery Process.

#### ACADEMIC APPOINTMENT

1998 - Present: Professor and William J. Hoben Professor of Finance, University of Dayton.

Other experiences: Honorary Professor, National Dong Hwa University; Visiting Chair Professor, National Cheng Kung University; Visiting Chair Professor, National Taiwan University; Visiting Professor, Remin University of China; Chairman, University of Dayton; Hobart Scholar; University of Dayton; Visiting Associate Professor of Finance, National Cheng-chi University; Associate and Assistant Professor of Finance, University of Dayton.

#### PROFESSIONAL APPOINTMENT

1991 - Present: Editor, International Review of Economics and Finance.

2006 – Present: Associate Editor, Review of Quantitative Finance and Accounting.

1990 - Present: Editorial Board, Advances in Investment Analysis and Portfolio Management.

- 2008 Present: Editorial Board, International Journal of Accounting and Information Management
- 2009 Present: Editorial Board, Journal of Financial Studies
- 2010 Present: Associate Editor, International Review of Applied Financial Issues and Economics
- 2012 Present: Editorial Editor, NTU Management Review
- 2014 Present: Editorial Board, International Economics and Finance Journal
- 2000 2005: Associate Editor, *Journal of Financial Research*.
- 2006 2013: Finance Editor, Journal of Asia Business Studies.

#### TEACHING EXPERIENCE

### 1. Undergraduate Courses Taught

- FIN301 Business Finance
- FIN360 Investments
- FIN460 Security Analysis and Portfolio Management
- FIN490 Advanced Financial Analysis (Re-numbered as FIN401)
- FIN480 Options and Futures Markets

#### 2. Graduate Courses Taught

- MBA500F Survey in Finance (Renumbered)
- MBA620 Financial Analysis and Markets
- MBA520 Managerial Finance (Renumbered)
- MBA629 Options and Futures
- MBA627 Derivatives and Risk Management
- MBA694 Managing Financial Resources for Marketing Strategies

#### 3. Courses Developed

- FIN460 Security Analysis and Portfolio Management
- FIN401 (FIN490 before renumbering) Advanced Financial Analysis
- FIN480 Options and Futures Markets
- MBA621 Derivatives and Risk Management

#### RESEARCH EXPERIENCE

#### 1. Referred Publications

- "The Incentive Effects of Executive Stock Options on Corporate Innovative Activities," with Y. Chen and C. Chu, *Financial Management*, 2014 (43), 271-290.
- "What Type of Traders and Orders Profit from the Futures Market Trading?" with C. Chen and Y. Huang, *Journal of Derivatives*, 2014 (21), 49-62.
- "Economic Policy Uncertainty and Corporate Investment: Evidence from China," with Y. Wang and Y. Huang, *Pacific-Basin Finance Journal*, 2014 (26), 227-243.
- "Where are the Sources of Stock market Mispricing and Excess Volatility?" with P. Lung and A. Wang, *Review of Quantitative Finance and Accounting*, 2013 (41), 631-650.
- "Are College Presidents Paid Like Corporate CEOs or Bureaucrats?" with Y. Huang, *Applied Economics*, 2012 (45), 3035-3043.
- "Stock and Option Market Divergence in the Presence of Noisy Information," with D. Diltz, Y. Huang, and P. Lung, *Journal of Banking and Finance*, 2011 (35), pp. 2001-2020.
- "Mutual Fund Governance and Performance: An Analysis of Morningstar's Stewardship Grade," with Y. Huang. *Corporate Governance: An International Review*, 2011 (19), pp. 311-333.
- "Financial Research in the European Region: A Long-term Assessment," with K. Chan and C.H. Chang. *European Financial Management*, 2011 (17), pp. 391-411.
- "First Author Conditions: Evidence from Finance Journal Co-authorship," with K. Chan and C. Brown. *Applied Economics*, 2011 (43), pp. 3687-3697.
- "Long-term Assessment of Finance Research Performance among Asia-Pacific Academic Institutions," with K. Chan and T. Lee. *Pacific-Basin Finance Journal*, 2011 (19), pp. 157-171.
- "Author Affiliation Index: A New Approach to Marketing Journal Ranking," with Y. Pan. *Marketing Education Review*, 2011 (21), pp. 275-287.
- "Market Contagion during Financial Crisis: A Regime Switching Approach," with F. Guo and Y. Huang. *International Review of Economics and Finance*, 2011 (20), pp. 95-109.
- "Are Member Firms of Corporate Groups Less Risky?" with W. Guo and N. Tay. *Financial Management*, 2010 (39), pp. 59-82.

"Net Buying Pressure and Implied Volatility in S&P500 Index Futures Options: The Effect of Market Cycles and Intraday Trading," with K. Chan and P. Lung. *European Financial Management*, 2010, pp. 624-657.

"Simultaneous Estimation of Executive Compensation and Firm Performance in the Banking Industry," with Y. Huang. *Advances in Quantitative Analysis of Finance and Accounting*, 2010, pp. 99-132.

"The Right to Fire: Stock Market Reaction to the Adoption and Subsequent Rescinding of the First Employment Contract in France," with N. Mohan. *International Review of Applied Financial Issues and Economics*, 2010 (2).

"Stock Market Mispricing: Inflation Illusion or Resale Option?" with P. Lung and A. Wang. *Journal of Financial and Quantitative Analysis*, 2009 (44), pp. 1125-1147.

"Mispricing and Cross-Section of Stock Returns," with P. Lung and A. Wang, *Review of Quantitative Finance and Accounting*, 2009 (32), pp. 317-349.

"Pedigree or Placement? An Analysis of Research Productivity in Finance" with K. Chan and H.G. Fung, *Financial Review*, 2009 (44), pp. 87-111.

"Economic Freedom, Equity Performance and Market Volatility," with Y. Huang, *International Journal of Accounting and Information Management*, 2009 (17), pp. 189-197.

"The Relationship between Executives Option-Based Compensation and Risk-Taking in the Property/Liability Insurance Industry: A Simultaneous Equation Approach," with M. Wen, *Journal of Insurance Regulation*, 2008 (26) pp. 85-108.

"Hourly Index Return Autocorrelation and Conditional Volatility in an EAR-GJR-GARCH Model with Generalized Error Distribution," with Y. Su and Y. Huang. *Journal of Empirical Finance*, 2008 (15), pp. 789-798.

"Determinants of Japanese Yen Interest Rate Swap Spreads: Evidence from a Smooth Transition Vector Autoregressive Model," with Y. Huang and M. Camacho. *Journal of Futures Markets*, 2008 (28), pp. 82-107.

"Author Affiliation Index, Finance Journal Ranking, and the Pattern of Authorship," with Y. Huang. *Journal of Corporate Finance*, 2007 (13), pp. 1008-1026.

"Global Ranking of Accounting Programmes and the Elite Effect in Accounting Research," with K. Chan and L. Cheng. *Accounting and Finance*, 2007 (47), pp. 187-220.

"Expected P/E, Residual P/E, and Stock Return Reversal: Time-Varying Fundamentals or Investor Overreaction?" with Y. Huang and C. Tsai. *International Journal of Business and Economics*, 2007 (6), 11-28.

"The Effect of Fed Monetary Policy Regimes on the US Interest Rate Swap Spreads," with Y. Huang, *Review of Financial Economics*, 2007 (16), 375-399.

"One-and-a-Half Decades of Global Research Output in Finance: 1900-2004," with K. Chan and P. Lung, *Review of Quantitative Finance and Accounting*, 2007 (28), 417-439.

"The Impact of the Sarbanes-Oxley Act on Firms Going Private," with N. Mohan, *Research in Accounting Regulation*, 2007 (19), 119-134.

"A Ranking of Accounting Research Output in the European Region," with K.C. Chan and L. Cheng. *Accounting and Business Research*, 2006, 3-18.

"Does Stock Option-Based Executive Compensation Induce Risk-Taking? An Analysis of the Banking Industry." with T. Steiner and A. Whyte, *Journal of Banking and Finance*, 2006, 915-946.

"Corporate Value, Managerial Stockholdings and Investments in Japanese Firms," with W. Guo and V. Mande. *Journal of International Financial Management and Accounting*, 2006, 29-51.

"Ranking of Finance Programs in the Asia-Pacific Region: An Update," with K. Chan and P. Lung, *Pacific-Basin Finance Journal*, 2005 (13-5), pp.584-600.

"Information Flow between the Stock and Option Markets: Where Do Informed Traders Trade?" with P. Lung and N. Tay. *Review of Financial Economics*, 2005 (14-1) pp. 1-23.

"Ranking Research Productivity in Accounting for Asia-Pacific Universities," with K. Chan and L. Cheng. *Review of Quantitative Finance and Accounting*, 2005 (24), pp. 47-64.

"Are IPOs Priced Differently Based upon Gender?" with Nancy Mohan, *Journal of Behavior Finance*, 2004, pp.57-65.

"Who is Publishing? An Analysis of Finance Research Productivity in the European Region," with K. Chan and T. Steiner, *Journal of Business Finance and Accounting*, April-May, 2004, pp.57-65.

"Managerial Ownership and Tobin's Q: Japanese Evidence," with W. Guo and M. Vivek, *Pacific-Basin Finance Journal*, vol. 11, 2003, pp.257-283.

"Production in Finance Literature, Institutional reputation, and Labor Mobility in the Academia: A Global Perspective," with K. Chan and T. Steiner, *Financial Management*, Winter 2002, pp. 131-156.

"Are All Security Analysts Equal?" with K. Chan and T. Steiner, *Journal of Financial Research*, 2002, pp. 415-430.

"Underwriter Spread, Underwriter Reputation, and IPO Underpricing: a Simultaneous Equation Analysis," with Nancy Mohan, *Journal of Business Finance and Accounting*, 2002, pp. 521-540.

"Research Productivity of the Finance Profession in the Asia-Pacific Region," with K. Chan and T. Steiner, *Pacific-Basin Finance Journal*, 2001.

"The Information Content of Lock-up Provisions in the Initial Public Offerings," with Nancy Mohan, *International Review of Economics and Finance*, 2001.

"Risk Taking Behavior and Managerial Ownership in the Insurance Industry," with Tom Steiner and Ann Marie Whyte, *Applied Financial Economics*, 2000.

"An Agency Analysis of Firm Diversification: The Consequences of Discretionary Cash and Managerial Risk Consideration," with Tom Steiner, *Review of Quantitative Finance and Accounting*, May 2000.

"Tobin's q, Managerial Ownership, and Analyst Coverage: A Non-linear Simultaneous Equation Model," with Tom Steiner, *Journal of Economics and Business*, 2000.

"Discount Rate Changes, Stock Market Returns, Volatility, and Trading Volume: Evidence from Intraday Data and Implication for Market Efficiency," with Nancy Mohan and Tom Steiner, *Journal of Banking and Finance*, June 1999.

"Managerial Ownership and Agency Conflict: A Nonlinear Simultaneous Equation Analysis of Managerial Ownership, Risk Taking, Debt Policy, and Dividend Policy," with Tom Steiner, *Financial Review*, Feb. 1999.

"Mutual Fund Manager's Effort and Performance," with James Ang and James Lin, *Journal of Investing*, November 1998.

"Risk Aversion, Market Segmentation, and the Firm Size Effects: Some Empirical Evidence," with James Lin, *Advances in Investment Analysis and Portfolio Management*, 1998.

"Optimism Biases among Brokerage and Non-Brokerage Firms' Equity Recommendations: Agency Costs in the Investment Industry," with Tom Steiner, *Financial Management*, Spring, 1998.

"Risk Taking Behavior and Management Ownership in Depository Institutions," with Tom Steiner and Ann Marie Whyte, *Journal of Financial Research*, Spring 1998.

"Earnings Surprises, Quantity and Quality of Information, and Stock Returns," with James Lin and David Sauer, *Journal of Financial Research*, Winter 1997.

"Mean Reversion in Asset Returns with Varying Debt and Equity Components: Evidence and Implications from Preferred Stock," with David Sauer, *Quarterly Review of Economics and Finance*, Fall 1997.

"Is Stock Market Overreaction Persistent over Time?" with David Sauer, *Journal of Business Finance and Accounting*, January 1997.

"From T-bills to Stocks: Additional Evidence on January Effect," with Anthony Chan, *Journal of Business Finance and Accounting*, June 1997.

"Mean Reversion in the United Kingdom Stock Market and Its Implications for a Profitable Trading Strategy," with David Sauer, December 1996, *Journal of Business Finance and Accounting*.

"January Seasonality in Preferred Stocks," Financial Review, February 1996.

"Japanese Toehold Investment in U.S. Companies: Some Empirical Evidence," with Nancy Mohan, *Advances in Pacific Basin Business, Economics, and Finance*, 1996.

"Poison Pill Adoption, Wealth Transfer Effect and Security Holder Returns," with Nancy Mohan, *Advances in Investment Analysis and Portfolio Management*, 1994.

"Timing the Disclosure of Information: Management's View of Earnings Announcement," with Nancy Mohan, *Financial Management*, Autumn 1994.

"Financial Ratio Adjustment Dynamics and Interest Rate Expectations," with Fall Ainena, *Journal of Business Finance and Accounting*. 1994.

"Asset Allocation Managers' Investment Performance," with Anthony Chan and Nancy Mohan, *Journal of Fixed Income*, December 1993.

"How Well Do Asset Allocation Managers Allocate Assets," with Anthony Chan, *Journal of Portfolio Management*, Spring, 1992.

"Money Demand: Aggregation Bias and the Dispersion of Income," with Anthony Chan, *Quarterly Review of Economics and Finance*, July 1992.

"A Cross-sectional Analysis of Mutual Funds, Market Timing and Security Selection Skill," with Cheng F. Lee, Shafiqur Rahman, and Anthony Chan, *Journal of Business Finance and Accounting*, Autumn 1992.

"A Note on the Tax Loss Carryback and Carryforward: A Common Negligence Found in Finance Textbooks," *Financial Practice and Education*, Spring 1991.

"A Review of the RJR-Nabisco Buyout," with Nancy Mohan, *Journal of Applied Corporate Finance*, Summer 1990.

"Interest Rate Sensitivity, Asymmetry, and the Stock Returns of Financial Institutions," with Anthony Chan, *Financial Review*, August 1989.

"The Impact of Maturity and Yield Effects on the Systematic Risk of Bonds," *Journal of Business Finance and Accounting*, Autumn, 1989.

"Restructuring vs. Greenmail in the Market for Corporate Control: The Effect on the Shareholders' Wealth," *Journal of Applied Business Research*, Spring 1989, (with Henry Stick and Steve Dawnkin)

"Some Empirical Evidence on the Yield Changes and Systematic Risk of Bonds," *Quarterly Journal of Economics and Business*, Winter 1989.

"The Link between Monetary Policy and Savings and Loans," with Anthony Chan, *Journal of Applied Business Research*, March 1988.

"Adjustable Rate Preferred Stocks: A New Short-term Investment," with Bernard Winger, *Journal of Cash Management*, 1987.

"Adjustable Rate Preferred Stocks," with Bernard Winger, John Martin, William Petty, and Steven Hayden, *Financial Management*,1986.

"Selectivity, Market Timing, and Random Beta Behavior of Mutual Funds," with Steve Stockum, *Journal of Financial Research*, 1986.

"Stationarity of the Optimal Hedge Ratio: A Random Coefficient test for Various Interest Rate Futures," *Journal of the Midwest Finance Association*. 1984.

"The Structural Stability of the Market Model after the Three Mile Island Accident," *Journal of Economics and Business*, 1984.

"The Stability of Urban Spatial Structure: An Empirical Investigation," with Cheng F. Lee and James Kau, *Journal of Urban Economics*, 1983.

"Beta Stability and Tendency: An Application of a Variable Mean Response Regression Model," with Cheng F. Lee, *Journal of Economics and Business*, 1982.

"Time-Series Analysis of Beta Stationarity and Determinants: A Case of Public Utilities," *Financial Management*, 1982.

"The Time Varying Response of Money Demand to Changes in Inflationary Expectations," *Journal of Economics*, 1981.

# 2. Other non-referee publications (Abstracts, book chapters, and Proceedings)

"Application of Simultaneous Equation in Finance Research," book chapter in *Hand Book of Quantitative Finance and Risk Management*, 2010, Springer, USA.

"Emerging Financial Markets," book review, Journal of Financial Research, 2001.

"Information Contents of Lock-up Provisions in the Initial Public Offerings," (coauthored). Abstract in *CFA Digest*, 2001.

"An Agency Analysis of Firm Diversification: The Consequences of Discretionary Cash and Managerial Risk Consideration," (coauthored). Abstract in the *Journal of Economic Literature*, December, 2000.

"Japanese Toehold Investment in U.S. Companies: Some Empirical Evidence," (coauthored), *Proceedings of Conference on Pacific Basin Business, Economics and Finance*, 1994.

"Performance of Asset Allocation Managers," with Anthony Chan, *Gestion Collective Internationale* (France), July/August 1993.

"How Well Do Asset Allocation Managers Allocate Assets?" (coauthored) Federal Reserve Bank of New York Research Paper, No. 9021, 1990.

"Adjustable Rate Preferred Stock," (coauthored), in *The Handbook of Financial Engineering*, edited by Clifford Smith and Charles Smithson, 1990.

"San Antonio Guardian Savings and Loan: Hedging with Interest Rate Futures, " in *Cases in Managerial Economics*, John Wiley and Sons, 1984.

"Restructuring vs. Greenmail in the Market for Corporate Control: The Effect on Shareholders' Wealth," (coauthored). Abstract in *Journal of Applied Business Research Index*, 1990.

"Some Evidence on Yield Changes and the Systematic Risk of Bonds," Abstract in the *Journal of Economic Literature*, September 1989.

## 3. Submissions and Completed Papers

"Non-Interest Income, Trading and Bank Risk," with Y. Huang and J. Zhang, R&R at *Journal of Financial Service Research*.

"Managerial Incentives and Valuation Effects of Joint Venture Investments," with J. Lai and L. Chen, under review.

"Hedge Fund Strategy, Systematic Risk Exposure, and Performance over Changing Market Condition —A Quantile Regression Approach," with Y. Huang and I. Kato, under review.

"Multiple Directorship and the Performance of mergers and Acquisitions," with L. Chen and J. Lai.

"Analysts' Forecast Dispersion and Stock Returns: A Panel Threshold Regression Analysis of the Conditional Limited Market Participation Hypothesis," with Ming-Yuan Li, under review.

"LIBOR Market Model with Jump Risk: An Analysis for Pricing Quanto Range Accrual Interest Rate Swap," with S. Lin and S. Wang, under review.

"Too Much Connection Can Harm Your Health: An Analysis of Political Connections and Firm Value," with D. Luo and J. Zhang, under review.

"Board Diversity and Firm Value," with J. Zhang, under review.

## 4. Unpublished Papers

"Have Japanese Individual Stocks Become More volatile? Organizational Differences and the Implication for International Diversification." With W. Guo and N. Tay.

"Are Japanese Managers Myopic as their American Counterparts? An Analysis of R&D Management and Management Incentives," with Short, Guo, and Mande.

"Mean Reversion in Stock Markets: Do Predictable Returns Generate Profitable Trading?" with David Sauer, unpublished paper.

"Stochastic Interest Rates and Option Pricing Bias: Some Empirical Evidence," with James Lin and David Sauer, unpublished paper.

"Who Has All the Medals? An Economic Analysis of the 1996 Centennial Olympic Games." with David Sauer, unpublished paper.

"Portfolio Risk, Agency Costs, and the Corporate Demand for Liquid Assets," with Tom Steiner, unpublished paper.

# 5. Professional Presentations

"Helping Hands or Grabbing Hands? Political Connections and Firm Value," with Luo, D., Zhang, J., presented at the 2014 Securities and Financial Markets conference, Taiwan.

"Board Diversity and Firm Value," keynote speech at the 2014 International Conference on Corporate Finance & Capital Markets, with J. Zhang, Zhejiang University, Hangzhou, China.

"Is Diversity Good? Analysis of Board Diversity and Firm Value," with J. Zhang, presented at the 2014 Financial Management Association conference, Nashville, TN.

"Political Connections and Firm Value," with Lu, D. and Zhang, J., keynote speech at the 2014 International Conference on Global Economy & Governance Bucharest, Romania.

"Board Diversity and Firm Value," with J. Zhang, keynote speech at the 2014 CTF and FEAT Joint Conference, Central Taiwan Finance Association, Taiwan.

"Political Connections, Firm Value, and Cross-Sectional Stock returns," with Luo, D., and Zhang, J., presented at the 2013 World Finance Conference, World Finance Association, Beijing, China.

"Analysts' Forecast Dispersion and Stock Returns: A Panel Thresholds Regression Analysis of the Conditional Limited Market Participation Hypothesis," with M. Li, presented at the 2013 Financial Management Association International, Chicago, Illinois.

"Non-Interest Income, Trading and Bank Risk," with Y. Huang and J. Zhang, presented at the 2013 Financial Management Association International, Chicago, Illinois.

"The Effectiveness of Changes in Settlement Procedures," with Lin, E. presented at the 10th Chinese Finance Annual Meeting, 2013, Peking University, Beijing, China; joint conference of the International Conference on Economics, Finance and Accounting (2013 IEFA) and The Conference on Cross-Strait Banking and Finance(2013 CSBF), Taipei, Taiwan.

- "Political Connections, Firm Value, and Cross-Sectional Stock returns," with Luo, D., Zhang, J., presented at the 2012 Financial Management Association International, Atlanta, Georgia.
- "Are Hedge Funds Exposed to Systematic Risk Factors? An Analysis of Hedge Fund Strategy and Performance over Market Regimes," with Huang, Y. S. and Kato, I., presented at the 2012 Asian Finance Association Conference, Taiwan.
- "Political Connections, Firm Value, and Cross-Sectional Stock returns," with Luo, D. and Zhang, J., presented at the 2012 AFR Summer Institute of Economics and Finance Conference, Zhejiang University, China, Hangzhou, China.
- "The Incentive Effects of Executive Stock Options on Corporate Innovative Activities," with Y. Chen and C. Chu, presented at the 2011 American Accounting Association conference, Denver, Colorado.
- "Are Hedge Funds Exposed to Systematic Risk Factor?" with Y. Huang and I. Kato, presented at the 2011 Conference on Theories and Practices of Securities and Financial Markets, Kaohsiung, Taiwan.
- "What Types of Traders and Orders Profit from the Futures Markets Trading?" with Y. Huang and C. Chen, presented at the 2011 Financial Management Association Conference, Denver, Colorado.
- "Mutual Fund Governance and Performance: A Quantile Regression Analysis of Morningstar's Stewardship Grade," with Y. Huang, presented at the 2010 Conferences on Theories and Practices of Securities and Financial Markets, Kaohsiung, Taiwan.
- "Stock and Option market Divergence in the Presence of Noisy Information," with D. Diltz, Y. Huang, and P. Lung, presented at the 2010 Asian Finance Association Conference, Hong Kong.
- "Anatomy of Hedge Fund Performance over Market Cycles and across Return Distribution: A Quantile Regression Analysis," with Y. Huang and I. Kato, presented at the 2009 Financial Management Association meetings, Reno, NV.
- "Are College Presidents Paid like Corporate CEOs of Bureaucrats?" with Y. Huang, presented at the 2009 Financial Management Association meetings, Reno, NV.
- "A Dynamic Long-Run Analysis of Asset Pricing and Bubbles: Heterogeneous Beliefs or Inflation Illusion?" with P. Lung and A. Wang, presented at the 17<sup>th</sup> PBFEAM and ICBA conference, 2009, Bangkok, Thailand.
- "The Discrepancy of Rationality between the Options and Equity Markets," with P. Lung and A. Wang, presented at the 2008 Financial Management Association meetings, Grapevine, TX.

- "Pedigree or Placement? An Analysis of Research Productivity in Finance," with K. Chan and H. Fung, presented at the 2008 Financial Management Association meetings, Grapevine, TX.
- "LIBOR Market Model with Jump Risk: An Analysis for Pricing Quanto Range Accrual Interest Rate Swap," with S. Wang and S. Lin, presented at the Asia-Pacific Association of Derivatives and Korea Stock Exchange conference, 2008, Pusan, Korea.
- "Mispricing and the Cross-Section of Stock Returns," with P. Lung and A. Wang, presented at the 2007 Financial Management Association meetings, Orlando, Florida.
- "The Effect of Net Buying Pressure on Implied Volatility: Intraday Pattern and Market Cycle," with K. Chan and P. Lung, presented at the 2007 Asia Financial Management Association meeting, Hong Kong.
- "How Much are College Presidents Paid?" with Y. Huang, presented at the 15<sup>th</sup> Conference on Pacific Basin Finance, Economics, and Accounting, Ho-Chi-Ming City, Vietnam, 2007.
- "Using Author Affiliation Index to Rank Finance Journals," with Y. Huang, presented at the 2006 Financial Management Association Meetings, Salt lake City, UT.
- "Stock Market Mispricing: Inflation Illusion or Speculative Bubbles?" with A. Wang and P. Lung, presented at the 2006 Financial Management Meetings, Salt lake City, UT, and 2007 China International Conference in Finance, Chengdu, China.
- "A Global Ranking of Finance Programs by Finance Literature Productions: 1990-2004," coauthored with K. Chan and P. Lung. Presented at the Financial Management Association Meetings, 2005. Chicago, IL.
- "First Author Conditions: Evidence from Finance Journal Coauthorship," coauthored with C. Brown and J. Chan. Presented at the Financial Management Association meetings, 2004. New Orleans, LA.
- "Bull, Bear, and the Asymmetric Flow of Information between the Equity and Options Markets," coauthored with P. Lung and N. Tay. Presented at the Financial Management Association meetings, 2004. New Orleans, LA.
- "Information Flow between Stock and Options Market: Where Do the Informed Trader?" Coauthored with P. Lung and N. Tay. Presented at the Financial Management Association meeting, 2003. Denver, Colorado.
- "The Dynamics of CEO Compensation and Firm Performance," Coauthored with T. Steiner. Presented at the Financial Management Association meeting, 2003. Denver, Colorado.
- "Have Japanese Individual Stocks Become More Volatile? An Analysis Based upon Risk Decomposition and the Implication for International Diversification," Coauthored with W. Guo

- and N. Tay. Presented at the 2003 Financial Management Association meeting, Denver, Colorado; 2003 Pacific-Basin Economics and Finance Conference, Taipei; 2004 ASSA conference, San Diego, CA.
- "Stock Return Autocorrelation and Volatility in the Short Horizon: Some Evidence from Intraday Index Returns," with Y. Su, presented at the 2002 Financial Management Association meetings, San Antonio, TX.
- "Does Executive Compensation Matter? The Impact of Executive Compensation on Performance in the Banking Industry," with Tom Steiner, presented at the 2002 Financial Management Association meetings, San Antonio, TX.
- "Production in Finance Literature, Institutional reputation, and Labor Mobility in the Academia: A Global Perspective," with K. Chan and T. Steiner, presented at the 2002 Financial Management Association meetings, San Antonio, TX.
- "Managerial Ownership and Tobin's Q: Japanese Evidence," with W. Guo and M. Vivek, presented at the 2002 Financial Management Association meetings, San Antonio, TX.
- "Risk-Taking and Stock-Option Based Executive Compensation in the Banking Industry," with Tom Steiner and Ann Marie Whyte, presented at the 2001 Financial Management Association meetings, Toronto, Canada.
- "Are All Security Analysts Equal? An Analysis of Their Monitoring and Information Dissemination Effect," with Johnny Chan and Tom Steiner, presented at the 2000 Financial Management Association Meetings.
- 'Tobin's q, Managerial Ownership, and Analyst Coverage: a Non-linear Simultaneous Equation Model," with Tom Steiner, presented at the 1999 Financial Management Association Meetings, Orlando, Florida.
- "Reputation Capital, Agency Costs, and Brokerage Firm Recommendations," with Tom Steiner, presented at the 1999 Eastern Finance Association meeting, Miami, Florida.

- "Portfolio Risk, Agency Costs, and the Corporate Demand for Liquid Assets," with Tom Steiner, presented at the 1998 Western Economic Association, Lake Taho.
- "Portfolio Risk, Agency Costs, and the Corporate Demand for Liquid Assets," with Tom Steiner, presented at the 1998 Financial Management Association Meeting, Chicago.
- "Managerial Ownership and Agency Conflict: A Nonlinear Simultaneous Equation Analysis of Managerial Ownership, Risk Taking, Debt Policy, and Dividend Policy," with Tom Steiner, to be presented at the 1998 Financial Management Association meeting, Chicago.
- "Firm Diversification, Managerial Ownership, and Free Cash Flow," with Tom Steiner, presented at the 1997 *Financial Management Association* meeting, Honolulu, Hawaii.
- "Managerial Ownership, Equity Analysts, and the Monitoring Activity of Corporations," with Tom Steiner, presented at the 1997 *Financial Management Association* meeting, Honolulu, Hawaii.
- "Underwriter Reputation, Underwriter Spread, and IPO Underpricing," with Nancy Mohan, presented at the 1997 *Financial Management Association* meeting, Honolulu, Hawaii.
- "Mutual Fund Managers Effort and Performance," with James Ang and James Lin, at the 1997 *Financial Management Association* meeting, Honolulu, Hawaii.
- "Risk Taking Behavior and Managerial Ownership in the Insurance Industry," with Tom Steiner and Ann Marie Whyte, presented at the 1997 Financial Management Association meeting, Honolulu, Hawaii.
- "Intraday Stock Returns and the Weekend Effect Reexamined," with David Sauer and James Lin, presented at the 1997 *Financial Management Association* meeting, Honolulu, Hawaii.
- "Agency Costs in the Investment Industry: An Analysis of the Investment Recommendations Made by Brokerage and Nonbrokerage Firms," with Willard Carleton and Tom Steiner, presented at the 1997 *Pacific Basin Business, Finance, and Economics Conference*, Singapore.
- "The Value of Analysts' Recommendations," with Tom Steiner, presented at the 1996 *Financial Management Association* meeting, New Orleans, LA.
- "Discount Rate Changes, Stock Market Returns, Volatility and Market Efficiency: Evidence from Intra-day Data," with Nancy Mohan, presented at the 1996 *Financial Management Association* meeting, New Orleans, LA.
- "Risk Aversion, Market Segmentation and the Firm Size Effect: Some Empirical Evidence," with James Lin, presented at the 1996 *Financial Management Association* meeting, New Orleans, LA.
- "The Principal/Agent Problem in the Investment Industry: Are Analysts' Recommendations Unbiased?" with Tom Steiner, presented at the 1996 *Eastern Finance\_Association* meeting, Charlotte, North Carolina.
- "Risk and Ownership Structure in Depository Institution," with Tom Steiner and Ann Whyte, presented at the 1995 *Financial Management Association* meeting, New York.

"Stochastic Interest Rates and Option Pricing Bias: Some Empirical Evidence," with James Lin, presented at the 1995 *Financial Management Association* meeting, New York.

"Mean Reversion in Preferred Stock Returns," with David Sauer, presented at the 1995 *Financial Management Association* meeting, New York, NY.

"Is Stock Market Overreaction Persistent over Time?" with David Sauer, presented at the 1995 *Eastern Finance Association* meeting, Hilton Head, South Carolina.

"Information Content of Lock-up Provisions in Initial Public Offerings," with Nancy Mohan, presented at the 1994 *Financial Management Association* meeting, St. Louis.

"Earnings Announcement, Quality and Quantity of Information, and Stock Price Changes," with James Lin, presented at the 1994 *Financial Management Association* meeting, St. Louis.

"Japanese Toehold Investment in U.S. Companies: Some Empirical Evidence," with Nancy Mohan, presented at the 1994 *Conference on Pacific Basin Business, Economics and Finance*, Hong Kong.

"Timing the Disclosure of Information: Management's View of Earnings Announcement," with Nancy Mohan, presented at the 1993 *Eastern Finance Association* meeting, Boston.

"Financial Ratio Adjustment Dynamics and Interest Rate Expectations," with Fall Ainia, presented at the 1991 *Financial Management Association* meeting, Chicago.

"Asset Allocation Funds and Market Timing," with Anthony Chan, presented at the 1990 *Midwest Finance Association* meeting, Chicago.

"Money Demand: Aggregation Bias and the Dispersion of Income," with Anthony Chan, presented at the 1990 *Western Economics Association* meeting, San Diego.

"Poison Pill Adoption, Wealth Transfer Effect and Security Holder Returns," with Nancy Mohan, presented at the 1989 *Financial Management Association* meeting, Boston.

"Interest Rate Sensitivity, Asymmetry, and the Stock Returns of Financial Institutions," with Anthony Chan, presented at the 1987 *Financial Management Association* meeting, *Las Vegas*.

"Interest Rate Changes, Asset-Liability Structure, and the Stock Returns of Financial Institutions," with Anthony Chan, presented at the 1987 *Financial Management\_Association* meeting, Las Vegas, Nevada.

"The Impact of Maturity and Yield Effects on the Bond Systematic Risk," presented at the 1987 *Midwest Finance Association* meeting, St. Louis, Missouri.

"Adjustable Rate Preferred Stocks: Risk and Return Measurements," presented at the 1986 *Midwest Finance Association* meeting, Chicago, Illinois.

"Stationarity of the Optimal Hedge Ratio: A Random Coefficient Test for Various Interest Rate Futures," presented at the 1983 meetings of the *Midwest Finance Association* meeting, Chicago, Illinois.

"Random Beta and Its Determinants: Empirical Evidence from the Time-series Analysis of Public Utilities," presented at the 1981 meetings of the *Midwest Finance Association*, Louisville, KY.

"The Time Varying Response of Money Demand to Changes in Inflationary Expectations," presented at the 1981 *Missouri Valley Economic Association* meeting, Oklahoma City.

#### **SERVICE**

## 1. Service to the Profession

**Editor:** *International Review of Economics and Finance.* 

**Associate Editor:** Review of Quantitative Finance and Accounting, International Review of

Applied Financial Issues and Economics, Finance Letters.

**Editorial Board:** Advances in Investment Analysis and Portfolio Management, International

Journal of Accounting and Information Management, Journal of Financial Studies, NTU Management Review, International Economics and Finance

Journal.

**Past Finance Editor:** *Journal of Asia Business Studies.* 

**Past Associate Editor:** *Journal of Financial Research.* 

## External Examiner/Assessor/Program Reviewer:

External MBA Programme Examiner (Banking and Finance) for the Nanyang Technological University, Singapore; the Department of Finance and Insurance, Lingman University, Hong Kong; Department of Finance and Quantitative Analysis, University of San Francisco.

**External Research Grant Assessor: Social** Sciences and Humanities Research Council of Canada; City University of Hong Kong.

External P&T Reviewer: Arizona State University, University of San Francisco, Fairfield University,

Villanova University, St. Thomas University, Nanyang Technological University (Singapore), Montana State University, University of Wisconsin – Parkside, University of Michigan – Dearborn, Oregon State University, University of Macau (China), Michigan Technological University, Wright State University, University of Rhode Island, University of Colorado – Denver, University of South Florida – St.

Petersburg, Virginia Commonwealth University.

External Reviewer for Distinguished Professorship: University of Akron.

#### Ad Hoc Referee:

Journal of Political Economy, Journal of Corporate Finance, Journal of Financial and Quantitative Analysis, Financial Review, Journal of Financial Research, Journal of Banking and Finance, Financial Management, Journal of Economics and Business, Journal of the Midwest Finance Association, Quarterly Journal of Business and Economics, Review of Quantitative Finance and

Accounting, Review of Business Studies, Quarterly Review of Economics and Finance, Advances in Investment Analysis and Portfolio Management, Journal of Applied Business Research, International Journal of Production Economics, Pacific Basin Finance Journal, Accounting and Business Research, Accounting and Finance, European Journal of Operation Research, Applied Economics, and Review of Financial Economics.

## **Keynote Talks:**

2014 GEG Conference, Bucharest, Romania

2014 CTF and FeAT joint conference, Taichung, Taiwan

2014 International Conference on Corporate Finance, Hangzhou, China

#### **Seminar Talks:**

U.S.: St. John's University; University of Akron; University of Missouri – St. Louis;

**Taiwan:** National Chengchi University; National Cheng Kung University; National Dong-Hwa University; Tamkung University, National Kaohsiung University, National Kaohsiung First University of Science and Technology, National Chiao Tung University, National Central University, Yi-Shou University, National Tsing Hwa University, Tong Hai University, National Chung Hsing University, Yuan Ze University, National Taipei University, National Chang-Hwa University of Education, National Taiwan University, National Chung Cheng University, Feng Chia University;

**China:** People's University of China (Renmin University); Ocean University of China, Fudan University, Zhejiang University, Nanjing University, Wuhan University, Sun Yet-San University.

#### **Conference Committee**

1986 and 1991 Midwest Finance Association Program Committee.

1993 Midwest Finance Association, Best Paper Award Evaluation Committee.

1999 and 2000 Eastern Finance Association Program Committee.

1999, 2006, 2007 Financial Management Association Program Committee.

2015 Asian Finance Association Program Committee.

2015 IFABS Conference Program Committee.

2000 ~ 2005 best paper award committee for the *Journal of Financial Research*.

Served as session chair and/or discussant for many professional conferences, 1978 - present.

## 2. Service to the University

Academic Senate, University of Dayton, 2003 – 2009.

Advisory Board, Master in Financial Mathematics Program, University of Dayton, 2003 – present.

## Master Thesis Advised:

- "Financial Mathematics Clincial Thesis: The ability of technical analysis to predict stock and options markets" (May 2014 Present). Advised: Martin, Morrison
- "Financial Mathematics Clinical Thesis: Asset Pricing and Policy Uncertainty" (January 2014 December 2014).

  Advised: Hanan, Aljubran
- "Financial Mathematics Clinical Thesis: Trading Strategy based on Default Probability" (January 2014 December 2014).

  Advised: Chenyu, Qiu
- "Financial Mathematics Clinical Thesis: Comparison of Bankruptcy Models", (August 2013 Dec. 2014). Advised: Nei, Jing
- "Financial Mathematics Clinical Thesis: Idiosyncratic Risk and the Cross-section of Expected Stock Returns: A Threshold Regression Approach", (August 2012 May 2014). Advised: Pei, Zhang
- "Financial Mathematics Clinical Thesis: Momentum vs. Mean Reversion Model of Stock Returns in China" (Completed), Advised: Jizhe, Zhang
- "Financial Mathematics Clinical Thesis: The Prediction Ability of Credit Risk Models in China" (Completed), Advised: Song, Chao
- "Financial Mathematics Clinical Thesis: Systematic Risk, Idiosyncratic Risk, and CDS Spreads" (Completed), Advised: Christina, Hass
- "Financial Mathematics Clinical Thesis: Predict Chinese Stock Returns Using Dividend Yield and Book-to-Market Cointegration Model" (Completed), Advised: Jung Yu, Liu
- "Financial Mathematics Clinical Thesis: Mutual Fund Cash Flows and Stock Market Reteurns" (Completed), Advised: Linjiang, Gui

Hosted visiting Fulbright Scholar from National Cheng Kung University, Taiwan, 2012.

Hosted visiting scholars from the Securities and Exchanges Commission, Taiwan.

Hosted visiting scholar from the Trade & Economic Cooperation of Shandong Province, China.

Chair, Promotion and Tenure Committee, School of Business, University of Dayton, 1995, 1998.

Chair, Promotion and Tenure Committee, Department of Economics & Finance, 1995, 1996, 1998.

Member, Promotion and Tenure Committee, SBA, University of Dayton, 2001, 2002, 2003, 2006.

Member, Graduate Committee, School of Business, University of Dayton, 1994-1995, 2005.

Member, Administrative Committee, School of Business, University of Dayton, 1989-92.

Member, School of Business Summer Research Grant Committee, University of Dayton, 2000, 2001, 2006.

Member, Finance Curriculum Standards Committee, SBA, University of Dayton.

Member, Faculty Development Committee, SBA, University of Dayton, 1994-1995.

Member, Miriam Hall Renovation Committee, SBA, University of Dayton, 1992-1993.

Member, Academic Computing Committee, University of Dayton. 1991-1992.

Member, Vax Computer System Replacement Committee, University of Dayton, 1994-95

Assisted the SBA, University of Dayton to establish the University of Augsburg (Germany) International Program.

Assisted the SBA, University of Dayton to establish relationship with the People's University of China (Renmin University), Beijing, China.

Supervision of student independent research projects, 1985-2006.

## 3. Service to the Community, Government, and Business

Delivered speech to the Securities and Exchanges Commission, China Investment and Trust, and Capital Investment Corporation, 1985, Taipei, Taiwan.

Board of Directors, Ohio Chinese Academic and Professional Association, 1989 - 1999.

Advisory Board, Ohio Chinese Academic and Professional Association, 2002 – 2006.

President, Ohio Chinese Academic and Professional Association, 1995.

Co-chair, 1995 Ohio Symposium on Advances in Information, Science, and Technology.

Provided seminar to the Copeland Corporation, 2000.

## **NANCY MOHAN**

Associate Professor of Finance University of Dayton

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#### **Education**

- Ph.D. in Finance, University of Cincinnati, 1986. Thesis: Going Private.
- M.B.A. in Finance, Wright State University, Dayton Ohio, 1977.
- B.S. in Marketing, Indiana University, 1975.

# **Employment**

- School of Business, University of Dayton.
  - o Visiting Lecturing, Finance 1987-1988
  - o Assistant Professor, Finance 1988-1994
  - o Associate Professor, Finance 1994- present
  - Associate Professor Professor/Department Chair 2006 2009
- School of Business, Wright State University.
  - o Instructor, Finance. 1986-1987
  - o Adjunct instructor, finance, 1981-1984, 1985-1986
- School of Business, University of Cincinnati, Instructor, finance 1979-1980.
- Mead Corporation, analyst, 1977-1978.

## **Teaching Interests**

- Corporate Finance, primary
- Financial Institutions, secondary
- Financial Modeling using Excel

## **Research Interests**

- Initial Public Offerings
- Acquisition/Divestitures
- Gender Differences and Firm Performance
- Pension Funds

#### **Courses Taught**

- FIN 402 Mergers, Acquisitions, Capital Restructuring and Corporate Governance
- MBA 629, Special Topics: Valuation Using Monte Carlo Simulation (Crystal Ball)
- MBA796 Corporate Finance
- Fin471 Managing Financial Institutions
- FIN315 Financial Modeling Using Excel
- Fin430 Short-term Financial Management
- Fin 371 Financial Markets and Institutions
- Fin 401 Advanced Financial Analysis
- Fin 301 Business Finance
- Fin 330 Insurance and Risk Management
- Fin494 Financial Modeling Using Lotus 123
- MBA 694 Financial Resources for Marketing Strategies
- MBA 520 Managerial Finance

#### **Selective Service Activities**

- SBA Faculty Affairs Committee (December 2014 to Present)
- Member CAP Leadership Committee (August 2011 2014)

- Member of Administrative (2006 to 2009) and Undergraduate Committees 2008 to present, SBA
- Served on SBA Dean Search Committee 2007
- Developed and presented 3-day seminar on Corporate Control for Group ESSCA, Angers, France 2005
- Certified University Trainer, Training for Intervention Procedures, 2002. Certified to conduct campus workshops (at UD or other campuses) with the objective of reducing alcohol misuse on college campuses.
- Book Review Editor of International Review of Economics and Finance, 1991-1993.
- Organized and presented materials for seminar on Financial Management presented to local companies, 1988.
- Served on search committee for Associate Dean and MBA Director, 1989.
- Served on various committees for new Finance faculty search.
- Member of various school and university wide committees; Chair, University Attendance Appeals Board (1992-1993); Chair, Undergraduate Committee, School of Business, 1990-1991.

## **Professional Activities**

- Membership in Profession Associations: Financial Management Association, Financial Education Association
- Journal Referee for: International Review of Economics and Finance, Review of Business Studies, Financial Practice and Education, Journal of Multinational Financial Management, The Financial Review, Journal of Economics and Business, Journal of Business Finance and Accounting.
- Activities for Professional Associations: member of 1998 FMA Program Committee

#### **Publications**

A Review of the Gender Effect on Pay, Corporate Performance and Entry into Top Management, International Review of Economics & Finance, 34 (November 2014) 41-51.

An Analysis of Risk-taking for Public Defined Benefit Pension Plans, with Jeffrey Zhang, Journal of Banking & Finance, 40 (2014) 403-419.

An Analysis of Risk-taking for Public Defined Benefit Pension Plans, with Jeffrey Zhang, working paper (funded by Upjohn Institute for Employment Research) available at <a href="http://research.upjohn.org/up\_workingpapers/179/">http://research.upjohn.org/up\_workingpapers/179/</a>, 2012.

On the Use of Non Tenure Track Faculty and the Potential Effect on Classroom Content and Student Evaluation of Teaching. *Journal of Financial Education*, 37(1/2), 2011, 29-42

Sovereign Wealth Funds: Investment and Governance Practices. With M.F. Ainina, *Journal of Asia-Pacific Business*, 11(4), 2010, 278-295.

- The Right to Fire: Stock Market Reaction to the Adoption and Subsequent Rescinding of the First Employment Contract in France, with Carl Chen, *International Review of Applied Financial Issues and Economics*. 2, (1), 2010, 4 17.
- The Impact of the Sarbanes-Oxley Act on Firms Going Private, with Carl Chen, *Research in Accounting Regulation*, 19, 2007, 119-134.
- Influence of Firm Performance and Gender on CEO Compensation, with John Ruggiero, *Applied Economics*, 39, April-May 2007, 1107 -1113.
- A Note on the Information Content of Put Writing Used by Companies to Reduce the Cost of Treasury Stock, *Journal of Financial Education*, 30, Summer 2004, 1-8.
- Are IPOs Priced Differently Based Upon Gender? with Carl Chen, *Journal of Behavorial Finance*, 5, 2004, 57-65.
- Compensation Differences between Male and Female CEOs for Publicly Traded Firms: A Nonparametric Analysis," with John Ruggiero, The *Journal of Operations Research Society*, 54, 2003, 1242-1248.
- Underwriter reputation, Underwriter Spread and IPO Underpricing, with Carl Chen, *Journal of Business Finance and Accounting*, 29, April/May 2002, 521-540.
- Information Content of Lock-up Provisions in Initial Public Offerings, with Carl Chen, *International Review of Economics and Finance*, 10, 2001, 41-59.
- Discount Rate Changes, Stock Market Returns, Volatility, and Trading Volume: Evidence from Intraday Data and Implications for Market Efficiency, with Carl Chen and Tom Steiner, *Journal of Banking and Finance*, 23, 1999, 897-924.
- Interstate Bakeries Corporation: Creating Brand Loyalty and Economic Value, with Bill Sekely, *Journal of Financial Education*, 25, Spring 1999, 82-91.
- Kinetiks.com: Marketing and Financing a Technology Product through Its Infant State, with Bill Sekely, *Business Case Journal*, 6, winter 1998, 47 –58.
- The German Reunification, Changing Market Conditions, and the Performance of German Initial Public Offerings, with Stefan Steib, *The Quarterly Review of Economics and Finance*, 37, 1997, 115-137.
- Japanese Toehold Investment in U.S. Companies: Some Empirical Evidence, with Carl Chen, *Advances in the Pacific Basin in Business, Economics and Finance*, 2, 1996, 245-262.
- Timing the Disclosure of Information: Management's View of Earnings Announcements, with Carl Chen, *Financial Management*, 23, 1994, 63-69.
- Global Initial Public Offerings, with David Sauer and Beng Chong, *Journal of Multinational Financial Management*, 4, 1994, 105-115.

- Poison Pill Adoption, Wealth Transfer, and Security Holder Returns, with Carl Chen, in *Advances in Investment Analysis and Portfolio Management*, 1994, 159-172.
- Asset Allocation Managers' Investment Performance, with Carl Chen and Anthony Chan, *The Journal of Fixed Income*, 3, 1993, 46-53.
- Leveraged Buyouts: A Comparison of OTC and Exchange Listed Companies, with M.F. Ainina and P.W. Bacon, *Journal of Applied Business Research*, 9, 1992-1993, 109-117.
- The Impact of Corporate Downsizing via Leveraged Buyouts on Internal Auditing, with Jane Campbell, *Internal Auditing*, 7, 1992, 3-9.
- When LBOs Go IPO, with M. F. Ainina, *Journal of Business Finance and Accounting*, 18 1991, 393-403.
- Acquisition/Divestiture Valuation Practices in Major U.S. Firms, with M. F. Ainina, D. Kaufman, B. Winger, *Financial Practice and Education*, 1, 1991, 73-81.
- A Review of the RJR-Nabisco Buyout, with Carl Chen, Journal of Applied Corporate Finance, 3, 1990, 102-108. Note this paper was cited in two popular textbooks, (1) Principles of Corporate Finance, 4<sup>th</sup> edition, Stewart C. Myers and Richard A. Brealy, McGraw-Hill, 1991 and (2) Financial Management: Theory and Practice seventh edition, Eugene F. Brigham, Louis C. Gapenski, The Dryden Press, 1994.
- Time Diversification Revisited, with B.J. Winger and M. F. Ainina, *Advances in Investment Analyses and Portfolio Management*, 1, 1991, 197-213.
- Do LBOS Sustain Efficiency Gains? Akron Business and Economic Review, 21, 1990, 91-99.
- Investment Risk and Time Diversification, with B. J.Winger, *Journal of Financial Planning*, 1, 1988, 45-48.
- Financial Characteristics of Firms Adopting Poison Pill Plans, M. Fall Ainina and Daniel J. Kaufman, Jr., *Journal of Applied Business Research*, 4, 1988, p. 61-70.

# MARIA GABRIELA (VIVERO) SCHUTTE

Department of Economics and Finance University of Dayton ph:(937) 938-7435

Email: mschutte2@udayton.edu

#### **Education**

Ph D, Finance. University of Missouri - Columbia, 2007. MBA, Finance. University of Notre Dame, 1995.

BS, Economics. Pontifical Catholic University of Ecuador - Quito, 1993.

#### **Academic Positions**

University of Dayton

Assistant Professor - Department of Economics and Finance School of Business Administration (August, 2013 - present).

Michigan Technological University

Assistant Professor - School of Business & Economics (August, 2007 - May 2013).

University of Missouri – Columbia

Graduate Assistant (August 2003 – June 2007).

University of Wisconsin – Eau Claire

Lecturer - Department of Economics (August, 2001 - May, 2002).

## **Professional Memberships**

Western Finance Association. (since March 2004).

European Finance Association. (since December 2005).

American Finance Association. (since August 2005).

Financial Management Association International. (since August 2005).

Multinational Finance Society (since January 2012).

Midwest Finance Association (since October 2013).

# **Awards and Honors**

- 2011 Scholarship and Creativity Grant Michigan Technological University Research Excellence Fund (\$10,929) for "Specialization, Information Acquisition, and Asset Prices: Evidence from Institutional Portfolios"
- 2010 Best Finance Article co-authored by a faculty member (Ivonne Liebenberg) for "Comovement, Information Production, and the Business Cycle". University of Mississippi College of Business Administration.
- 2009 Graham and Dodd Scroll Award of Excellence for "Do Security Analysts Reduce Noise?" The CFA Institute.
- 2006 College of Business Outstanding Research Assistant, University of Missouri.
- 2005 University of Missouri Summer Research Fellowship, University of Missouri.
- 2004 Greenberg Scholarship, University of Missouri, Finance Department.
- 2003-2007 Ponder Graduate Scholarship, University of Missouri.

## **Courses Taught**

University of Dayton (Fall 2013 - present)

Financial Markets and Institutions, 2 course.

Investments, 1 course.

Introduction to Financial Management, 1 course

Michigan Technological University (Fall 2007 – Spring 2013)

Principles of Finance, 13 courses.

Global Finance, 7 courses.

Security Analysis, 1 course.

Banking and Financial Institutions, 3 courses.

University of Missouri – Columbia (Fall 2003 – Spring 2006)

Management of Financial Institutions, 2 courses.

Corporate Financial Management Policy, 1 course. Financial Management Writing Intensive Lab, 1 course.

University of Wisconsin – Eau Claire (Fall 2001 – Spring 2002) Principles of Microeconomics, 10 courses.

### **Summer Teaching**

Universidad de los Andes International Summer School (Bogota, Colombia, July 2009) International Finance (for MS in Finance and MBA students), 1 course.

#### Research

#### Journal Articles

- Brockman, P., Liebenberg, I. Schutte, M. G., 2010, Comovement, Information Production, and the Business Cycle. Journal of Financial Economics, 97(1), pp. 107-129.
- Schutte, M. G., Liebenberg, I., 2010, Information Production and Stock Return Comovement in Emerging Countries. Cuadernos de Administración, 23(40), pp. 215 238.
- Schutte, M. G., Unlu, E., 2009, Does Analyst Coverage Reduce Noise? Financial Analyst Journal. 65(3) pp. 40 54. CFA Institute's Graham and Dodd Scroll Award for Excellence.

#### Other Publications

- DeLisle, R. J., French, D. W., Schutte, M. (2015)., *Comovement, Passive Institutional Ownership and Price Informativeness*. Proceeding of the Midwest Finance Association Annual Conference. Chicago, IL. *Forthcoming*.
- Schutte, M., Fierro, L. A. (2014). *Playing with Fire: Ecuador's Aggresively Rising Debt* (vol. 242). Quito, Ecuador: Revista Gestion.
- Filzen, J. J., Schutte, M. (2014). Financial Reporting Complexity and Information Markets: Evidence from Changes in 10-Q Lengths. Proceedings of the Midwest Finance Association Annual Conference.
- Schutte, M. G., 2012, Stock Return Comovement in the New Millennium. Proceedings of the 19th Meeting of the Multinational Finance Society (MC12~223).
- Fu, F., Schutte, M. G., 2010, Investor Diversification and The Pricing of Idiosyncratic Risk. Proceedings of the 2010 Center for Research in Security Prices (CRSP) Forum. University of Chicago Booth Graduate School of Business.

## **Working Papers**

- DeLisle, J., French, D., Schutte, M.G., 2015, Co-movement, Passive Institutional Ownership and Price Informativeness: Evidence from Individual R<sup>2</sup> Trends. Paper under review at the Journal of Financial and Quantitative Analysis.
- Filzen, J., Schutte, M.G., 2014, Financial Reporting Complexity and Information Markets: Evidence from Changes in 10-Q Lengths.
- Brockman, P., Schutte, M.G., Yu, W., 2013, Is Idiosyncratic Risk Priced? The International Evidence.
- Guo, T., Schutte, M.G., 2013, Does it Pay to Specialize? A Look at Undiversified Institutional Portfolio Returns.

#### **Academic Presentations**

Financial Reporting Complexity and Information Markets: Evidence from Changes in 10-O Lengths.

Western Region of the American Accounting Association, San Marcos, CA. (April 25, 2014).

Midwest Finance Association Conference, Orlando, FL (March 7, 2014)

Michigan Technological University, Houghton, MI [by coauthor] (September 10, 2012)

Co-movement, Passive Institutional Ownership and Price Informativeness: Evidence from Individual R<sup>2</sup> Trends

Eastern Finance Association Meetings, New Orleans, LA. (April 8, 2015).

Southwest Finance Association Conference, Houston, TX. (March 11, 2015).

Midwest Finance Association (MFA), Chicago, IL. (March 5, 2015).

First Paris Financial Management Conference, Paris, France [by coauthor] (December 16, 2013)

University of Dayton, Dayton, OH (December 12, 2012).

University of Texas at Arlington, Arlington, TX (December 1, 2012). Financial

Management Association Meetings. Atlanta, GA (October 20, 2012).

19th Meeting of the Multinational Finance Society, Krakow, Poland (June 25, 2012).

Federal Reserve Bank of Chicago, Chicago, IL. (November 7, 2011)

Michigan Technological University, Houghton, MI (November 4, 2011)

## Times Series Techniques in Business and Economics

Michigan Technological University, Houghton, MI (February 20, 2011)

A Test of the Generalized Capital Asset Pricing Model with Imperfect Idiosyncratic Volatility Estimators Wilfrid Laurier University, Waterloo, Ontario, Canada (November 25, 2010).

Investor diversification and the Pricing of Idiosyncratic Risk

The CRSP Forum, Chicago, IL. (November 4, 2010).

Financial Management Association Meetings. New York, NY. (October 22, 2010).

Asian Financial Management Association Meetings, Singapore. (July 14, 2010).

China International Conference in Finance. Beijing, China. [by coauthor] (July 4, 2010).

# Comovement, Information Production and the Business Cycle

European Financial Management Association Meetings, Turin. Italy (June 4, 2009).

KPMG/PhD Project Finance DSA Conference, Big Ski, MT. (June 21, 2007).

## Do Security Analysts Reduce Noise?

Financial Management Association Meetings. Orlando, FL. [by coauthor] (October 16, 2007).

KPMG/PhD Project Finance Doctoral Student Association Conference. Keystone, CO. (June 20, 2006).

#### Creative Destruction and Firm-Specific Volatility Around the World

Financial Management Association Meetings. Grapevine (Dallas), TX. (October 8, 2008).

Missouri Economics Conference. Federal Reserve Bank of St. Louis, Columbia, MO. (April 15, 2007).

Kansas State University. Manhattan, KS. (November 2006).

University of Texas at San Antonio. San Antonio, TX. (November 2006).

Michigan Technological University. Houghton, MI. (November 2006).

KPMG/PhD Project Finance Doctoral Student Association Conference. Keystone, CO. (June 20, 2006).

#### Does Size Erode Mutual Fund Performance? Evidence from Bond Funds

Financial Management Association Meetings. Salt Lake City, UT. (October 16, 2006).

KPMG/PhD Project Finance Doctoral Student Association Conference. Portland, OR. (June 2005).

#### **Review Activities**

Referee: Managerial Finance (February 2014); Journal of Banking and Finance (February 2014); Financial Analyst's Journal (March 2010, February 2011, September 2011, January 2012, February 2013); The Financial Review (February 2010); Cuadernos de Administración (October 2010); Quantitative Finance (January 2012, September 2012, February 2013); Pacific-Basin Finance Journal (April, 2012).

Program Committee- Asset Pricing Track . Financial Management Association Annual Conference (2009-2011).

#### **General Service**

#### Professional

Discussant, Midwest Finance Association (Chicago, March 2015, programmed).

Discussant, Midwest Finance Association (Orlando, March 2014).

Discussant, 19th Meeting of the Multinational Finance Society (Krakow, June 2012).

Session Chair, Financial Management Association Annual Conference (New York, October 2010).

Discussant, Asian Financial Management Association Conference (Singapore, July 2010).

Discussant, European Financial Management Association Conference (Turin, June 2009).

Discussant, Financial Management Association Annual Conference (2005-2008, 2010).

## **Student Organizations**

Faculty Advisor. Michigan Tech Hispanic Student Association - Nosotros. (2008 - 2012).

Faculty Advisor. The PhD Project Doctoral Student Association. (2007, 2008).

Program Committee. The KPMG PhD Project Annual Conference. (2007, 2008).

Finance Session Panelist. The KPMG PhD Project Annual Conference. (2007-2011, 2013, 2014).

#### **Media References**

Allen, R. The Occupy Wall Street Movement. Houghton Community Broadcasting Corporation (WHKB 102.3 FM). December 9, 2011.

Jenkins, T. The Effects of Sovereign Debt Defaults on Ordinary People: The Case of Ecuador, Argentina, and Russia. BBC World New Service, September 29, 2011.

Bonasia, J. Buy, Sell, Hold Stock Ratings Being Replaced by New Terms that Stand for ... Buy, Sell, Hold. Investor's Business Daily, September 28, 2009.

## **FUKUO ALBERT WANG**

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Cell Phone: (937) 296-0196 Email: fwang1@udayton.edu

## **EMPLOYMENT**

Associate Professor of Finance (with tenure), Department of Economics and Finance, University of Dayton, August 2009 to present.

Associate Professor of Finance, Department of Economics and Finance, University of Dayton, August 2005 to July 2009.

Assistant Professor of Finance, Jones Graduate School of Management, Rice University, July 1998 to July 2005.

Assistant Professor of Finance, Graduate School of Business, Columbia University, July 1994 to June 1998.

## **EDUCATION**

Kenan-Flagler Business School, UNC-Chapel Hill, Ph.D., Finance, 1994

Kenan-Flagler Business School, UNC-Chapel Hill, MBA, 1989

National Taiwan University, B.A., Economics, 1982

## RESEARCH INTEREST

Asset Pricing, Behavioral Finance, Market Microstructure, Systemic Risk

## TEACHING AREA

Investments and Financial Markets, Fixed-Income Securities and Analysis, Seminar in Bond Portfolio Management

## **PUBLICATION**

- "Speculation Duopoly with Agreement to Disagree: Can Overconfidence Survive the Market Test?" (with Albert Kyle), 1997, *Journal of Finance*, 52, 2073-2090.
- "Strategic Trading, Asymmetric Information and Heterogeneous Prior Beliefs," 1998, *Journal of Financial Markets*, 1, 321-352.
- "Economic News and Stock Market Linkages the Evidence from the U.S., U.K., and Japan," (with Robert Connolly), 1998, in <u>Proceedings of the Second Joint Central Bank Research Conference on Risk Management and Systemic Risk</u>, 211-240.
- "Overconfidence, Investor Sentiment, and Evolution," 2001, *Journal of Financial Intermediation*, 10, 138-170.
- "Closed-End Fund Discounts with Informed Ownership Differential," (with Gustavo Grullon), 2001, *Journal of Financial Intermediation*, 10, 171-205.
- "International Equity Market Comovements: Economic Fundamentals or Contagion?" (with Robert Connolly), 2003, *Pacific-Basin Finance Journal*, 11, 23-43.

- "Mispricing and the Cross-Section of Stock Returns," (with Carl Chen and Peter Lung), 2009, <u>Review of Quantitative Finance and Accounting</u>, 32, 317-349.
- "Stock Market Mispricing: Money Illusion or Resale Option?" (with Carl Chen and Peter Lung), 2009, <u>Journal of Financial and Quantitative Analysis</u>, 44, 1125-1147.
- "Informed Arbitrage with Speculative Noise Trading," 2010, *Journal of Banking and Finance*, 34, 304-313.
- "Where are the Sources of Stock Market Mispricing and Excess Volatility," (with Carl Chen and Peter Lung), 2013, *Review of Quantitative Finance and Accounting*, 41, 631-650.
- "Financial Crisis and Credit Crunch in the Housing Market," (with Jeffrey Zhang), 2014, <u>Journal of Real Estate Finance and Economics</u>, 49, 256-276.
- "The Effect of Unfunded Pension Liabilities on Corporate Bond Ratings, Default Risk, and Recovery Rate" (with Jeffrey Zhang), 2014, *Review of Quantitative Finance and Accounting*, 43, 781-802.
- "A Dynamic Intraday Measure of the Probability of Informed Trading and Firm-Specific Return Variation" (with Sanders Chang and Lenisa Chang), 2014, *Journal of Empirical Finance*, 29, 80-94.
- "Adverse Selection and the Presence of Informed Trading" (with Sanders Chang), 2015, <u>Journal of Empirical Finance</u>, 33, 19-33.

## **WORKING PAPERS**

- "Information Asymmetry, Liquidity, and Stock Returns" (with Sanders Chang)
- "Leverage Cycle, Interest Rate, and Financial Crisis"
- "Why Does Bad News Increase Volatility and Interest Rate, and Decrease Optimism, Asset Prices and Leverage?"
- "Housing Market, Leverage Cycle, and Crash"

## **CONFERENCE PRESENTATIONS**

- "Strategic Trading, Asymmetric Information and Heterogeneous Prior Beliefs" The Western Finance Association Meetings, June 1995, Aspen, CO. New York University, May 1995, New York, NY.
- "Speculation Duopoly with Agreement to Disagree: Can Overconfidence Survive the Market Test?" with Albert ("Pete") Kyle
  - The American Finance Association Meetings, January 1998, Chicago, IL.
  - The Econometric Society Meetings, January 1997, New Orleans, LA.
- "Economic News and Stock Market Linkages—The Evidence from the U.S., U.K., and Japan" with Robert Connolly
  - The Joint Central Bank Research Conference on Risk Management and Systemic Risk, November 1998, Bank of Japan, Tokyo, Japan.

"Overconfidence, Investor Sentiment, and Evolution"
 International Monetary Fund (IMF), November 2000, Washington, D.C.
 The Western Finance Association Meetings, June 1998, Monterey, CA.
 The Western Finance Association Meetings, June 1997, San Diego, CA.
 The NBER Behavioral Finance Program Meeting, April 1997, Cambridge, MA.

• "International Equity Market Comovements: Economic Fundamentals or Contagion?" with Robert Connolly

The 7<sup>th</sup> Global Finance Conference, April 2000, Chicago, IL. The Best Paper Award.

The Western Finance Association Meetings, June 1999, Santa Monica, CA.

The Fifth International Finance Conference, April 1999, Atlanta, GA.

- "Closed-End Fund Discounts with Informed Ownership Differential" with Gustavo Grullon The 1<sup>th</sup> Annual Financial Economics and Accounting Conference, November 2000, Ann Arbor, MI. The 2<sup>nd</sup> Annual Texas Finance Festival, April 2000, San Antonio, TX.
- "Smart Money and Naïve Speculators"
   Duke University, February 2004, Durham, NC.
- "Stock Market Mispricing: Money Illusion or Resale Option?" with Carl Chen and Peter Lung Financial Management Association Meetings, October 2006, Salt Lake City, UT.
   China International Conference in Finance, July 2007, Chengdu, China.
   U.S. Securities and Exchange Commission (SEC), February 2008, Washington, DC.
- "Mispricing and the Cross-Section of Stock Returns" with Carl Chen and Peter Lung
  DePaul University, People & Money Symposium on Topics in Behavioral Finance, June 2007, Chicago,
  IL.
   Financial Management Association Meetings, October 2007, Orlando, FL.

Asia16th Conference on Pacific Basin Finance, Economics, Accounting and Management, July 2008, Brisbane, Australia.

- "A Dynamic Long-Run Analysis on Asset Pricing and Bubbles: Heterogeneous Beliefs or Inflation Illusion?" with Carl Chen and Peter Lung PBFEAM and ICBA 17th Conference, July 2009, Bangkok, Thailand.
- "Liquidity Crisis and Credit Crunch: Default, Leverage, and Pyramiding" Financial Management Association Meetings, October 2009, Reno, NV.
- "The Effect of Pension Obligation Overhang on Bond Ratings: Evidence from Bond Seniority, Default Probability and Recovery Rate" with Jeffrey Zhang Eastern Finance Association, April 2009, Washington, DC American Risk and Insurance Association Conference, August 2009, Providence, RI Financial Management Association Meetings, October 2010, New York, NY.
- "The Effect of Unfunded Pension Liabilities on Bond Ratings, Default Probability and Recovery Rate" with Jeffrey Zhang American Accounting Association, 2012 Washington, DC.
- "Liquidity Crisis and Credit Crunch in the Housing Market" with Jeffrey Zhang Financial Management Association Meetings, October 2013, Chicago, IL.

• "Why Does Bad News Increase Volatility and Interest Rate, and Decrease Optimism, Asset Prices and Leverage?"

7<sup>th</sup> NCTU International Finance Conference, January 2014, Hsinchu, Taiwan. Institute of Economics, Academia Sinica, April 2014, Taipei, Taiwan.

 "A Dynamic Intraday Measure of the Probability of Informed Trading and Firm-Specific Return Variation" with Sanders Chang

National Taiwan University, March 2014, Taipei, Taiwan.

National Sun Yat-sen University, March 2014, Kaohsiung, Taiwan.

## REFEREE ACTIVITY

Journal of Finance, Review of Financial Studies, American Economic Review, Econometrica, Quarterly Journal of Economics, Journal of Business, Journal of Financial and Quantitative Analysis, Journal of Financial Markets, Management Science, Journal of Empirical Finance, Financial Management, Pacific-Basin Finance Journal, Games and Economic Behavior, Journal of Economics & Management Strategy, Journal of the European Economic Association, Economics Letters, Review of Quantitative Finance and Accounting, International Review of Economics and Finance

# TING ZHANG, PhD

Department of Economics & Finance, School of Business Administration

University of Dayton, Dayton, OH 45469

Office Phone: (937) 229-3428 Email: tzhang1@udayton.edu

## **Academic Position**

Associate Professor of Finance (with tenure), Department of Economics & Finance, University of Dayton, Dayton, OH, USA 45469

Aug. 2015

Assistant Professor of Finance, Department of Economics & Finance, University of Dayton, Dayton, OH, USA 45469

Aug. 2009 to May 2015

#### **Education**

PhD Finance, University of Rhode Island, Kingston, RI, 02881, USA, May 2009

MBA/MAcc University of Northern Iowa, Cedar Falls, IA, 56691, USA

BA Economics, Shanghai International Studies University, Shanghai, China

## **Research Interest**

Corporate finance, corporate governance, empirical asset pricing, and international finance

#### **Publications**

- 1. Chen, C., Huang, S., Zhang, T. Non-interest income, Trading, and Bank Risk. *Journal of Financial Services*, forthcoming.
- 2. Chen, S., Lin, B., Lu, R., Zhang, T. (2015). Controlling Shareholders' Incentives and Executive Payfor-Performance Sensitivity: Evidence from the Split Share Structure Reform in China. *Journal of International Financial Markets, Institutions and Money*, 34, 147-160.

- 3. Mohan, N., Zhang, T. (2014). An Analysis of Risk-Taking for Defined Benefit Public Pension Plans. *Journal of Banking and Finance*, 40, 403-419.
- 4. An, H., Lee, Y., Zhang, T. (2014). Do Corporations Manipulate Earnings to Meet or Beat Analysts' Expectations? Evidence from Pension Plan Assumption Changes. *Review of Accounting Studies*, 19(2), 698-735.
- 5. Wang, F., Zhang, T. (2014). Financial Crisis and Credit Crunch in the Housing Market. *Journal of Real Estate Finance and Economics*, 49, 256-276.
- 6. Chen, X., Yao, T., Yu, T., Zhang, T. (2014). Learning and Incentive: A Study Based on Analyst Response to Pension Underfunding. *Journal of Banking and Finance*, 45, 26-42.
- 7. Wang, F., Zhang, T. (2014). The Effect of Unfunded Pension Liabilities on Bond Ratings, Default Probability and Recovery Rate. *Review of Quantitative Finance and Accounting*, 43(4), 781-802. (Featured by the CFA Selection)
- 8. An, H., Zhang, T. (2013). Stock Price Synchronicity, Crash Risk, and Institutional Investors? *Journal of Corporate Finance*, 21, 1-15. (leading article)
- 9. An, H., Huang, Z., Zhang, T. (2013). What Determines Corporate Pension Fund Risk-Taking Strategy? *Journal of Banking and Finance*, 37(2), 597-613 (**Featured by the CFA Selection**)
- **10.** Chen, X., Yu, T., Zhang, T. (2013). What Drives Corporate Pension Plan Contributions: Moral Hazard or Tax Benefits? *Financial Analysts Journal*, 69(4), 58-72.(Interviewed by the CFA Institute)
- 11. Lin, B., Lu, R., and Zhang, T. (2012). Tax-Induced Earnings Management in Emerging Markets: Evidence from China. *Journal of the American Taxation Association*, 34(2), 19-44.
- **12.** Yao, T., Yu, T., Zhang, T., Chen, S. (2011). Asset Growth and Stock Returns: Evidence from Asian Financial Market. *Pacific-Basin Finance Journal*, 19(1), 115-139. (**Featured by the CFA Selection**)
- 13. Huang, Z., Heian, J., Zhang, T. (2011). Difference of Opinion, Overconfidence, and the High-volume Return Premium. *Journal of Financial Research*, 34(1), 1-25. (**leading article; Best Paper award** by Journal of Financial Research in 2011)

## **Research Funding**

- 2008, Research grant of from Network of Pensions, Aging and Retirement (Netspar), the Netherlands, on "Testing Moral Hazard and Tax Benefit Hypotheses: Evidence from Pension Plan Contributions and Asset Allocation", with T. Yu.
- 2011, Research grant from Upjohn Institute for Employment Research on "An Analysis of Risk-Taking for Defined Benefit Public Pension Plans", with N. Mohan.
- 2011, SBA Summer Research Grant and UD Research Council Seed Grant on "Do Stock Returns Reflect Pension Underfunding Risk?"
- 2012, SBA Summer Research Grant and UD Research Council Seed Grant on "Pension Underfunding and Cost of Capital"
- 2013, SBA Summer Research Grant and UD Research Council Seed Grant on "Public Information Arrival and Stock Analyst Responses"
- 2014, SBA Summer Research Grant and UD Research Council Seed Grant on "Boardroom Diversity and Cost of Capital"

## **Conference Presentations** (including those presented by co-authors; more than 30 times):

WFA, FMA, EFA, MFA, AAA, ARIA, NFA, Netspar International Pension Workshop, World Finance Conference, Chinese International Conference in Finance

## Journal/Conference Review:

- o Journal of Corporate Finance
- o Financial Review
- o International Journal of Economics and Finance
- Quarterly Journal of Finance and Accounting
- o Journal of International Financial markets, Institutions & Money

- o Emerging Markets Finance and Trade
- Accounting and Finance Research
- The 2012 Society of Finance Study Finance Cavalcade (Organized by *Review of Financial Study*) paper reviewer
- EFA 2010 Conference paper reviewer
- MFA 2010 Conference paper reviewer
- FMA 2011 and 2012 Conference paper reviewer and program organizer
- World Finance Conference 2011 paper reviewer
- FMA 2012 Program Committee member and reviewer
- FMA 2013 Program Committee member and reviewer
- Reviewer for The Swiss National Science Foundation and Research Grants Council of Hong Kong

**Editorial board member**: Accounting and Finance Research; J. of Finance and Economics; International J. of Bond and Derivatives

• Special issue editor of <u>Public Finance and Management</u>

Membership: AFA, FMA, ARIA, CFA Institute, Dayton CFA Society

**Professional Experience:** More than 10 years' work experience as a foreign exchange trader and stock analyst; passed the CFA level II exam in 2003.

## (2) Financial Mathematics Faculty

## RuiHua Liu

Department of Mathematics University of Dayton 300 College Park Dayton, OH 45469-2316

<u>Tel:(937)229-1021</u>; Fax: (937)229-2566 Web: http://academic.udayton.edu/ruihualiu

## **EDUCATION**

Ph.D., August 2001, Applied Mathematics University of Georgia, Advisor: Qing Zhang, Dissertation Title: Control and Filtering of Stochastic Markovian Systems.

M.S., August 2001, Computer Science University of Georgia, Advisor: Thiab Taha, Thesis Title: Numerical and Parallel Algorithms of CMKdV Equation.

Ph.D., June 1994, Control Theory and Application Nankai University, Tianjin, China, Advisor: Fengsheng Tu, Dissertation Title: On Some Problems of Discrete Event Dynamic Systems.

M.E., June 1988, Control Theory and Application Nankai University, Advisor: Zhuzhi Yuan, Thesis Title: Generalized Predictive Self-tuning Control and Applications.

B.E., June 1985, Control Theory and Application Nankai University.

#### **ACADEMIC EXPERIENCE**

Tenured Associate Professor, August 2010 - present Department of Mathematics, University of Dayton, Ohio.

Visiting Associate Professor, August 2011 - July 2012 Department of Mathematical Sciences, Stevens Institute of Technology, Hoboken, New Jersey.

Tenure-Track Assistant Professor, August 2004 - August 2010 Department of Mathematics, University of Dayton, Ohio.

Postdoctoral Research Associate, August 2003 - August 2004 Operations Management Area, School of Management, University of Texas at Dallas.

Teaching/Research Assistant, September 1996 - May 2001 Department of Mathematics, University of Georgia.

Associate Professor, December 1993 - August 1996 Department of Computer and System Sciences, Nankai University, Tianjin, China.

Lecturer, July 1990 - December 1993 Department of Computer and System Sciences, Nankai University, Tianjin, China.

Assistant Lecturer, June 1988 - July 1990 Department of Computer and System Sciences, Nankai University, Tianjin, China.

#### **AWARDS AND HONORS**

2011 College of Arts & Sciences Award for Outstanding Scholarship, University of Dayton.

2000-2001 University of Georgia Graduate School Doctoral Research Assistantship award (An award granted to selected exceptional doctoral candidates for their final year in the school). 1993 Nankai University Award for Exceptional Doctoral Candidate (top 2%).

1990 Nankai University Teaching Award.

1989 First Class Award for Advancement in Science and Technology (Awarded by the State Education Commission of China, one of the top awards in China for research achievements).

1988 Winner for Best Master Degree Thesis of Nankai University.

#### **RESEARCH INTERESTS**

• Financial Mathematics and Computational Finance.

- Stochastic Optimal Control and Applications.
- Applied Stochastic Analysis.

#### **RESEARCH GRANTS**

- University of Dayton Research Council SEED Grant, \$6000, Summer 2008.
- University of Dayton Research Council SEED Grant, \$6000, Summer 2007.
- University of Dayton Research Council SEED Grant, \$4750, Summer 2006.
- University of Dayton Research Council SEED Grant, \$4000, Summer 2005.

#### **PUBLICATIONS**

#### A. Journal Article.

- 1. R.H. Liu and D. Nguyen, "A tree approach to option pricing under regime switching jump diffusion models." International Journal of Computer Mathematics (2015, accepted for publication). DOI: 10.1080/00207160.2015.1073266.
- 2. M. Yousuf, A.Q.M. Khaliq, and R.H. Liu, "Pricing American options under multistate regime switching with an efficient L-stable method." International Journal of Computer Mathematics (2015, accepted for publication). DOI: 10.1080/00207160.2015.1071799.
- 3. R.H. Liu, "Optimal investment and consumption with proportional transaction costs in regime-switching model." Journal of Optimization Theory and Applications, Vol. 163, No. 2 (2014), 614-641. DOI 10.1007/s10957-013-0445-y.
- 4. R.H. Liu, "A finite-horizon optimal investment and consumption problem using regimes witching models." Int. J. Theor. Appl. Finance, Vol. 17, No. 4 (2014) 1450027 (18 pages). DOI: 10.1142/S0219024914500277.
- 5. I. Florescu, R.H. Liu, M. Mariani & G. Sewell, "Numerical schemes for option pricing in regime-switching jump diffusion models." Int. J. Theor. Appl. Finance, Vol. 16, No. 8 (2013) 1350046 (25 pages). DOI: 10.1142/S0219024913500465.
- 6. R.H. Liu & J.L. Zhao, "A lattice method for option pricing with two underlying assets in regime-switching model." Journal of Computational and Applied Mathematics, Vol. 250 (2013), 96-106.
- 7. I. Florescu, R.H. Liu & M. Mariani, "Solutions to a partial integro-differential parabolic system arising in the pricing of financial options in regime-switching jump diffusion models." Electron. J. Diff. Equ., Vol. 2012, No. 231 (2012), 1-12.
- 8. A.Q.M. Khaliq, B. Kleefeld & R.H. Liu, "Solving complex PDE systems for pricing American options with regime-switching by efficient exponential time differencing schemes." Numerical Methods for Partial Differential Equations, Vol. 29, No. 1 (2012), 320-336.
- 9. R.H. Liu, "A new tree method for pricing financial derivatives in a regime-switching mean reverting model." Nonlinear Analysis: Real World Applications, Vol. 13 (2012), 2609-2621.

- 10. P. Eloe & R.H. Liu, "Upper and lower solutions for regime-switching diffusions with applications in financial mathematics." SIAM Journal on Applied Mathematics, Vol. 71, No. 4 (2011), 1354-1371.
- 11. R.H. Liu & Q. Zhang, "Valuation of guaranteed equity-linked life insurance under regimes witching model." Dynamic Systems and Applications, Vol. 20 (2011), 101-128.
- 12. R.H. Liu, "Regime-switching recombining tree for option pricing." Int. J. Theor. Appl. Finance, Vol. 13, No. 3 (2010), 479-499.
- 13. R.H. Liu & Y. Raffoul, "Boundedness and exponential stability of highly nonlinear stochastic differential equations." Electron. J. Diff. Equ., Vol. 2009, No. 143 (2009), 1-10.
- 14. R.H. Liu, "Analytical approximation method of option pricing under geometric mean reverting process." International Journal of Computer Mathematics, Vol. 86, No. 6 (2009), 1082-1092.
- 15. P. Eloe, R.H. Liu, & J.Y. Sun, "Double barrier option under regime-switching exponential mean-reverting process." International Journal of Computer Mathematics, Vol. 86, No. 6 (2009), 964-981.
- 16. A.Q.M. Khaliq & R.H. Liu, "New numerical scheme for pricing American option with regime-switching." Int. J. Theor. Appl. Finance, Vol. 12, No. 3 (2009), 319-340.
- 17. P. Eloe, R.H. Liu, M. Yatsuki, G. Yin & Q. Zhang, "Optimal selling rules in a regimes witching exponential Gaussian diffusion model." SIAM Journal on Applied Mathematics, Vol. 69, No. 3 (2008), 810-829.
- 18. R.H. Liu, Q. Zhang & G. Yin, "Option pricing in a regime switching model using the Fast Fourier Transform." Journal of Applied Mathematics and Stochastic Analysis, Vol. 2006, Article ID 18109, doi:10.1155/JAMSA/2006/18109.
- 19. A. Bensoussan, R.H. Liu & S.P. Sethi, "Optimality of an (s, S) policy with compound Poisson and diffusion demands: a QVI approach." SIAM Journal on Control and Optimization, Vol. 44, No. 5 (2006), 1650-1676.
- 20. G. Yin, Q. Zhang, F. Liu, R.H. Liu & Y. Cheng, "Stock liquidation via stochastic approximation using NASDAQ daily and intra-day data." Mathematical Finance, Vol. 16, No. 1 (2006), 217-236.
- 21. Q. Zhang, G. Yin & R.H. Liu, "A Near-optimal selling rule for a two-time-scale market model." SIAM Journal on Multiscale Modeling and Simulation, Vol. 4, No. 1 (2005), 172-193.
- 22. G. Yin, R.H. Liu & Q. Zhang, "Recursive algorithms for stock liquidation: a stochastic optimization approach." SIAM Journal on Optimization, Vol. 13, No. 1 (2002), 240-263.
- 23. R.H. Liu, Q. Zhang & G. Yin, "Asymptotically optimal controls of hybrid linear quadratic regulators in discrete time." Automatica, Vol. 38 (2002), 409-419.

- 24. R.H. Liu, Q. Zhang & G. Yin, "Nearly optimal control of singularly perturbed Markov decision processes in discrete time." Applied Mathematics and Optimization, Vol. 44 (2001), 105-129.
- 25. R.H. Liu & Q. Zhang, "Nonlinear filtering: a hybrid approximation scheme." IEEE Trans. Aerospace and Electronic System, Vol. 37, No. 4 (2001), 470-480.
- 26. R.H. Liu, Q. Zhang & G. Yin, "Nearly optimal control of nonlinear Markovian systems subject to weak and strong interactions." Stoch. Anal. Appl , Vol. 19, No. 3 (2001), 361-386.
- 27. R.H. Liu, Q. Zhang & G. Yin, "Singularly perturbed Markov decision processes with inclusion of transient states." J. Systems Science and Complexity, Vol. 14, No. 2 (2001), 199-211.
- 28. R.H. Liu & F.S. Tu, "Local function expression approach of a class of tandem queueing networks." Acta Automatica Sinica, Vol. 23, No. 3 (1997), 418-420.
- 29. R.H. Liu & F.S. Tu, "A new approach to estimate the gradient of the GI/G/m queueing systems." Acta Automatica Sinica, Vol. 21, No. 6 (1995), 696-705.
- 30. R.H. Liu & F.S. Tu, "Modeling and stability of fork-join queueing networks." Chinese Journal of Control and Decision, Vol. 9, No. 3 (1994), 161-166.
- 31. R.H. Liu & F.S. Tu, "Critical path and new perturbation analysis algorithm for a class of tandem processing networks." Chinese Journal of Systems Engineering, Vol. 1, No. 9 (1994), 12-21.
- 32. Z.Q. Chen, R.H. Liu & Z.Z. Yuan, "Some problems on the applications of predictive control to industrial processes." Chinese Journal of Automatic Instruments and Meters, No. 1 (1994), 1-6.
- 33. Z.Z. Yuan, R.H. Liu & Z.Q. Chen, "Self-tuning control system of a ring-shape heating furnace." Chinese Journal of Information and Control, No. 3 (1991), 14-19.

## B. Book Chapter.

- 1. R.H. Liu, "Recombining tree for regime-switching model: algorithm and weak convergence." in Stochastic Analysis, Stochastic Systems, and Applications to Finance (2011), Allanus Tsoi et al. Eds., 211-232, World Sci. Publishing.
- 2. G. Yin, J.W. Wang, Q. Zhang, Y.J. Liu & R.H. Liu, "Pricing American put options using stochastic optimization methods." in Stochastic Processes, Optimization, and Control Theory: Applications in Financial Engineering, Queueing Networks, and Manufacturing Systems (2006), H.M. Yan et al. Eds., 301-329, Springer.
- 3. Q. Zhang, R.H. Liu & G. Yin, "Nearly optimal controls of Markovian systems." in Stochastic Modeling and Optimization (2003), D. Yao et al. Eds., 43-86, Springer-Verlag.
- 4. G. Yin, Q. Zhang & R.H. Liu, "Using stochastic approximation algorithms in stock liquidation."

Recent Developments in Mathematical Finance (Shanghai, 2001), 238–248, World Sci. Publishing, River Edge, NJ, 2002.

#### C. Book Review.

1. "Hybrid Switching Diffusions: Properties and Applications" (Yin, G.G. and Zhu, C.; 2010), IEEE Control Systems Magazine, Vol. 30, No. 5 (2010), 74-75. Reviewer: R.H. Liu.

## D. Paper Appeared in Refereed Conference Proceeding.

- 1. R.T. Thiab & R.H. Liu, "Parallel split-step Fourier methods for the CMKdV equation." Proceedings of the international conference on parallel and distributed processing techniques and applications, PDPTA '03, June 23-26, 2003, Las Vegas, Volume 3, 1317-1323.
- 2. R.H. Liu & Q. Zhang "Nonlinear filtering: a hybrid approximation scheme." The proc. Of the 38th IEEE Conference on Decision and Control (1999), Phoenix, 4917-4922.
- 3. R.H. Liu & F.S. Tu, "A control policy for fork-join queueing networks." The proc. of the 34th IEEE Conference on Decision and Control (1995), New Orleans, Vol. 4, 3648-3649.
- 4. R.H. Liu & F.S. Tu, "Modelling and infinitesimal perturbation analysis of a class of fork-join manufacturing systems." Proc. of the international conference on Data and Knowledge Systems for Manufacturing and Engineering (1994), Hong Kong, Vol. 2, 566-571.
- 5. R.H. Liu & F.S. Tu, "A new approach to analyze the unbiasedness of the sampled derivatives for the GI/G/m queues." Proc. of the first Asian Control Conference (1994), Japan, Vol. 3, 571-574.
- 6. R.H. Liu & F.S. Tu, "Study of serial production lines with stochastic processing times." Proc. of the international conference on Computer Integrated Manufacturing (1993), Beijing, China, 110-114.
- 7. Z.Z. Yuan & R.H. Liu, "Recursive synthetic generalized predictive self-tuning controller." Proc. of the 8th IFAC/IFORS Symposium on Identification and System Parameter Estimation (1988), Beijing, China, Vol. 1, 414-419.
- 8. Z.Z. Yuan & R.H. Liu, "A practical software package of identification and self-tuning control system." Proc. of the 8th IFAC/IFORS Symposium on Identification and System Parameter Estimation (1988), Beijing, China, Vol. 3, 1986-1989.
- 9. Z.Z. Yuan & R.H. Liu, "Recursive generalized predictive STC and its application to a power plant." Proc. of IEEE Asian Electronics Conference (1987), Hong Kong, 566-570.

#### E. Paper Submitted and Work in Progress.

- 1. R.H. Liu, "Optimal stopping of switching diffusions with state dependent switching rates." Stochastics An International Journal of Probability and Stochastic Processes (accepted subject to minor revisions).
- 2. J.X. Jiang, R.H. Liu and D. Nguyen, "A Recombining Tree for Switching Jump Diffusion Models with State Dependent Switching Rates." Int. J. Theor. Appl. Finance (accepted subject to minor revisions).

- 3. "Optimal Investment and Consumption Problems with State-Dependent Regime-Switching." Work in progress.
- 4. "American Options Valuation under Multistate Regime Switching and Jump Diffusion Models with Non-Uniform Meshes." Work in progress.

## **TALKS AND PRESENTATIONS (Since 2004)**

- 1. (Invited Talk) "Regime-Switching Models and Applications in Financial Engineering." Department of Financial Management, Business School, Nankai University, Tianjin, China, July 20, 2015.
- 2. (Invited Talk) "Apply Stochastic Optimal Control to Investment and Consumption with Regime-Switching and Transaction Cost." College of Computer and Control Engineering, Nankai University, Tianjin, China, July 20, 2015.
- 3. (Invited Talk) "Optimal Investment and Consumption with Proportional Transaction Costs in Regime-Switching Model." School of Mathematical Science, Beijing Normal University, Beijing, China, July 16, 2015.
- 4. (Contributed Talk) "A Tree Method for Option Pricing in Switching Models with State Dependent Switching Rates." Mathematical Finance & Partial Differential Equations Conference. Rutgers University, NJ, May 1, 2015.
- 5. (Invited Talk) "Optimal Stopping and American Option in A State Dependent Regime Switching Model." Special Session on New Developments in Stochastic Analysis, Stochastic Control and Related Fields, the AMS Central Spring Sectional Meeting. Michigan State University, East Lansing, MI, March 14-15, 2015.
- 6. (Invited Talk) "Optimal Stopping and American Option in Switching Diffusion Models with State Dependent Switching Rates." Department of Mathematics Seminar, Wayne State University, Detroit, MI, June 24, 2014.
- 7. (Invited Talk) "Optimal Investment and Consumption with Proportional Transaction Costs in Regime-Switching Model." Special Session on Mathematical Finance, the AMS Western Spring Sectional Meeting. University of New Mexico, Albuquerque, NM, April 4-6, 2014.
- 8. (Invited Talk) "Optimal Stopping of Switching Diffusions with State Dependent Switching Rates." Special Session on Partial Differential Equations, Stochastic Analysis, and Applications to Mathematical Finance, the AMS Fall Eastern Sectional Meeting. Temple University, Philadelphia, October 12-13, 2013.
- 9. (Invited Talk) "Apply Stochastic Optimal Control to Investment and Consumption Problems with Regime-Switching." Mini symposium on New Developments in Stochastic Analysis, Control, and Their Applications, 2013 SIAM Conference on Control and Its Applications. San Diego, CA, July 8-10, 2013.
- 10. (Contributed Talk) "Optimal Investment and Consumption Problem with Markovian Parameters." 2013 Joint Mathematics Meetings. San Diego, January 9-12, 2013.
- 11. (Invited Talk) "Optimal Investment and Consumption in Regime-Switching Model with Transaction Costs." Special Session on Nonlinear Stochastic Systems and Applications, The International Conference on the Theory, Methods and Applications of Nonlinear Equations. Texas A&M University-Kingsville, December 17-21, 2012.

- 12. "Merton's Investment and Consumption Problem in Regime-Switching Model." University of Dayton Mathematics Colloquium, September 13, 2012.
- 13. (Invited Talk) "An Optimal Investment and Consumption Problem in Regime-Switching Model." The 4th Annual Modeling High Frequency Data in Finance Conference, Stevens Institute of Technology, New Jersey, July 19-22, 2012.
- 14. "Option Pricing in Regime-Switching Models." Graduate Seminar, Department of Mathematical Sciences, Stevens Institute of Technology, New Jersey, Oct 24, Oct 31, 2011.
- 15. (Invited Talk) "Regime-Switching Recombining Tree for Option Pricing." Department of Mathematical Sciences Seminar, Stevens Institute of Technology, New Jersey, April 25, 2011.
- 16. "Optimal Stopping in A Regime-Switching Model." University of Dayton Mathematics Colloquium, March 31, 2011.
- 17. (Invited Talk) "Regime-Switching Recombining Tree for Option Pricing." Department of Mathematics Seminar, Wayne State University, Detroit, MI, October 8, 2009.
- 18. (Invited Talk) "New Numerical Scheme for Pricing American Option with Regime-Switching." Department of Mathematical Sciences Seminar, Middle Tennessee State University, Murfreesboro, TN, October 31, 2008.
- 19. (Invited Talk) "Regime-Switching Recombining Tree for Option Pricing." Special Session on Mathematical Finance of the AMS Fall Central Section Meeting, Western Michigan University, Kalamazoo, MI, October 17-19, 2008.
- 20. (Contributed Talk) "Implicit Penalty Method for Pricing American Option with Regime Switching." CBMS/NSF Regional Research Conference in Mathematical Sciences: Malliavin Calculus and its Applications, Kent State University, Kent, Ohio, August 7-12, 2008.
- 21. (Invited Talk) "Valuation of Guaranteed Equity-Linked Life Insurance with Option of Early Surrender." Special Session on Financial Mathematics of the AMS Fall Southeastern Meeting, Middle Tennessee State University, Murfreesboro, TN, November 3-4, 2007.
- 22. "Option Pricing for An Inhomogeneous Stochastic Differential Equation." University of Dayton Mathematics Colloquium, October 26, 2006.
- 23. (Invited Talk) "Valuing Guaranteed Unit-Linked Life Insurance Under Regime-Switching Model." Special Session on Financial and Actuarial Mathematics of the AMS Fall Central Section Meeting, University of Cincinnati, Cincinnati, Ohio, October 21-22, 2006.
- 24. (Invited Talk) "Valuing Options Written on Variable Universal Life Insurance." International Conference on Management Sciences in Honor of Professor Suresh Sethi, University of Texas at Dallas, May 20-22, 2006.
- 25. (Invited Talk) "Option Pricing in a Regime Switching Model Using the Fast Fourier Transform."

Special Session on Financial Mathematics of the AMS Spring Southeastern Meeting, Florida International University, Miami, Florida, April 1-2, 2006.

- 26. (Contributed Talk) "A Boundary Value Problem Arising in Financial Security Trading Policy." 25th Southeastern-Atlantic Regional Conference on Differential Equations (SEARCDE), University of Dayton, Ohio, October 7-8, 2005.
- 27. "Option Pricing in a Regime Switching Model Using the Fast Fourier Transform." University of Dayton Mathematics Colloquium, November 17, 2005.
- 28. (Invited Talk) "Optimal Selling Rule Based on Regime-switching Model." the 2004 Tri-State Actuarial Club meeting, Columbus, Ohio, September 30, 2004.
- 29. "Introduction of Derivative and Derivative Pricing." University of Dayton Mathematics Colloquium, September 16, 2004.
- 30. (Invited Talk) "Asymptotically Optimal Controls of Hybrid Linear Quadratic Regulators." Department of Mathematical Sciences Seminar in Stochastic System, Stevens Institute of Technology, New Jersey, February 19, 2004.
- 31. "The Mode-Switching Model for Stock Price and An Optimal Selling Rule." University of Dayton Mathematics Colloquium, February 10, 2004.

# COURSES TAUGHT (Since 1998) University of Dayton

#### **Undergraduate Courses**

- MTH 168 Analytic Geometry & Calculus I (Fall 2004, Fall 2005, Fall 2007, Fall 2014)
- MTH 169 Analytic Geometry & Calculus II (Winter 2006, Fall 2006, Winter 2008, Fall 2009, Summer 2013, Spring 2014, Summer 2015)
- MTH 218 Analytic Geometry & Calculus III (Winter 2010, Fall 2010, Fall 2012, Fall 2013, Spring 2015)
- MTH 219 Applied Differential Equations (Winter 2005, Summer 2005, Winter 2007, Fall 2008, Fall 2009, Spring 2011, Spring 2013, Spring 2014, Summer 2014, Spring 2015, Summer 2015, Fall 2015)
- MTH 250 Advanced Technical Mathematics (Winter 2005, Fall 2005, Winter 2006, Winter 2007, Fall 2007)
- MTH 138 Calculus I with Review (Summer 2005)
- MTH 207 Introduction to Statistics (Summer 2009, Summer 2010)
- MTH 310 Linear Algebra & Matrices (Summer 2013, Summer 2014, Fall 2015)
- MTH 343 Mathematics for Electrical and Computer Engineers (Winter 2008, Winter 2009)
- MTH 435 Advanced Multivariate Calculus (Winter 2006, Winter 2009)
- MTH 458 Mathematical Models in Finance (Fall 2008) Graduate Courses
- MTH 555 Numerical Analysis I (Fall 2014)
- MTH 558 Financial Mathematics I. Discrete Model (Fall 2008, Fall 2009, Fall 2010, Fall 2012, Fall 2015)
- MTH 559 Financial Mathematics II. Continuous Model (Winter 2009, Winter 2010, Spring 2011, Spring 2013)
- MTH 590 Advanced Topics in Financial Mathematics (Fall 2013)
- MTH 528 Stochastic Processes (Fall 2005, Fall 2007)
- MTH 538 Introduction to Financial Mathematics (Fall 2004)

- MTH 551 Methods of Mathematical Physics (Winter 2007)
- MTH 590 Stochastic Differential Equations in Finance (Reading course, Winter 2006)
- MTH 590 Advanced Interest Rate Models (Reading course, Winter 2007)

## **Graduate/Undergraduate Combined Course**

• MTH 490/590 - Mathematical Models in Finance (Fall 2006)

#### **Other Courses**

• ASI 150 - Introduction to the University Experience (Fall 2006, Fall 2009) Stevens Institute of Technology, New Jersey

#### **Graduate Courses**

- MA-810 Special Topics in Stochastic Systems (Fall 2011, jointly taught by a group of 5 faculty members including myself)
- MA-623 Stochastic Processes (Spring 2012)
- MA-661 Stochastic Optimal Control and Dynamic Programming (Spring 2012) University of Georgia

## **Undergraduate Courses**

- Math1113 Pre-calculus (Fall 1998)
- Math2200 Analytic Geometry and Calculus (Summer 1998, Spring 2000)
- Math2200L Differential Calculus Lab (MAPLE) (Fall 1998, Spring 1999, Fall 1999)

## **GRADUATE STUDENTS SUPERVISED**

University of Dayton, students in Master of Financial Mathematics (MFM) Program

- 1. Yidan Shi (2015). Project: Stock Loan Valuation
- 2. Jingdan Zhang (2014). Project: Pricing Options Using the Tree Method in A Switching Model with State Dependent Switching Rates
- 3. Zhiyang Zhang (2014). Project: Pricing Options in Jump Diffusion Models Using the Fast Fourier Transform
- 4. Min Chen (2014). Project: Implementation of A Numerical Scheme for Pricing European Options in Regime-Switching Jump Diffusion Models
- 5. Pei Xiao (2013). Project: Numerical solutions for option pricing in regime-switching jump diffusion with Kou's model
- 6. Gracie Fasano and Sophia Munyemana (2013). Project: A Comparison of the Merton Jump Diffusion and Kou Double Exponential Model for European Options
- 7. Jiuxin Jiang (2013). Project: A recombining Tree Method for Option Pricing in a Regime Switching Jump Diffusion Model
- 8. Weidong Li (2011). Project: Upper and Lower Solutions for Double Barrier Options in Regime-Switching Models

- 9. Jialin Zhao (2011). Project: A Lattice Method for Option Pricing with Two Underlying Assets in Regime-Switching Model
- 10. Rick Wuebker (2010). Project: Analysis of the Pricing and Hedging of Spread Options
- 11. Elham Negahdary (2010). Project: Pricing Options in Mean-Reversion Jump-Diffusion Model by Radial Basis Functions
- 12. Melissa Mattson (2008). Project: Valuing American Put Options with Regime Switching
- 13. Jinyang Sun (2008). Project: Double Barrier Option Pricing in Regime-Switching Models
- 14. Xiaoyan Ruan (2007). Project: Implied Volatility of S&P500 Options and Soybean Options
- 15. Fatima Bousso (2006). Project: Pricing American Options with Monte Carlo Simulation
- 16. Ran Huang (2006). Project: Valuation of Variable Universal Life Rider

#### **UNDERGRADUATE STUDENTS ADVISED**

University of Dayton, College of Arts and Sciences

- 15 undecided majors in science (UNS) (2006-2008)
- 10 mathematics majors (2009-2013)

#### **DOCTORAL ADVISORY COMMITTEE**

- 1. Temesguen Messay-Kebede, Ph.D. in Electrical and Computer Engineering, 2014, Department of Electrical and Computer Engineering, School of Engineering, University of Dayton.
- 2. Thomas Lonon, Ph.D. in Mathematics, 2013. Stevens Institute of Technology, Hoboken, New Jersey.
- 3. Jian Zhu, Ph.D. in Electrical and Computer Engineering, 2012, Department of Electrical and Computer Engineering, School of Engineering, University of Dayton.
- 4. Chunlei Zhang, Ph.D. in Electrical and Computer Engineering, 2006, Department of Electrical and Computer Engineering, School of Engineering, University of Dayton.

## UNIVERSITY, COLLEGE AND DEPARTMENT SERVICES

**Department Committee** 

Executive Committee (elected) 2009-2011, Department of Mathematics, University of Dayton. Vision Committee 2009-2010, Department of Mathematics, University of Dayton. Graduate Curriculum Committee 2005-2008, Department of Mathematics, University of Dayton. Hiring Committee 2006-2007, 2007-2008, 2010, 2012-2013, Department of Mathematics, University of Dayton.

Tenure and Promotion Committee 2010-, Department of Mathematics, University of Dayton. Chaired the committee in the fall 2014.

## College Committee

Tenure and Promotion Committee (elected) 2013-, College of Arts and Sciences, University of Dayton.

## **University Committee**

Academic Senate (elected) 2009-2011, University of Dayton.

Academic Policies Committee 2009-2010, University of Dayton.

Student Academic Policies Committee 2010-2011, University of Dayton.

Proposal Review Committee 2014 and 2015 Graduate Student Summer Fellowship (GSSF) program, University of Dayton.

#### **PROFESSIONAL SERVICES**

Guest Editor Special Issue on "Recent Developments on the Stability and Control of Stochastic Systems." Mathematical Problems in Engineering. 2014-.

Program Committee SIAM Conference on Control and Its Applications (CT15), July 8-10, 2015, Paris, France. Program Committee SIAM Conference on Control and Its Applications (CT13), July 8-10, 2013, San Diego. Local Organizing Committee the 25th Southeastern-Atlantic Regional Conference on Differential Equations (SEARCDE), University of Dayton, Ohio, October 7-8, 2005.

#### **Reviewer for Mathematical Reviews**

#### Referee for:

- Abstract and Applied Analysis
- Advances in Difference Equations
- Applicable Analysis
- Asia-Pacific Journal of Operational Research
- Asymptotic Analysis
- Automatica
- Birkhauser
- Communications in Statistics Theory and Methods
- European Journal of Operational Research
- IEEE Transactions on Automatic Control
- IMA Journal of Management Mathematics
- International Journal of Computer Mathematics
- Journal of Systems Science and Complexity (JSSC)
- The International Journal of Production Economics
- Mathematical Methods of Operations Research
  Nonlinear Analysis Series B: Real World Applications
- Operations Research
- Science Press, China Science Publishing Group
- SIAM Journal on Control and Optimization
- Springer
- Stochastics: An International Journal of Probability and Stochastic Processes

# Dan Ren

Contact Information	Department of Mathematics University of Dayton Dayton, OH 45469	Office: SC 313E Phone: (937) 229-2549 E-mail: dren01@udayton.edu
Research Interests	Mathematical finance, stochastic control, optimal stopping.	
Employment	University of Dayton, Dayton, OH Assistant Professor (tenure-track)	
Education	<ul> <li>Boston University, Boston, MA</li> <li>Ph.D., Mathematics &amp; Statistics</li> <li>Advisors: Constantinos Kardaras, Paolo C</li> <li>Dissertation Title: Stochastic Optimization</li> </ul>	
	<ul> <li>New Mexico State University, Las Cruces, NM</li> <li>M.S., Mathematics</li> <li>Advisor: Hung Nyugen</li> </ul>	
	<ul><li>Beijing Normal University, Beijing, China</li><li>B.S., Computer Science and Technology</li></ul>	
Honors and Awards	Summer Research Fellowship with Gran June 10 – August 25, 2015.	t-In-Aid, University of Dayton,
	<b>Summer Research Fellowship with Grant-In-Aid</b> , University of Dayton June 10 – August 25, 2014.	
	Presidential Fellowship, Boston University 2008 – 2009	
	Research Fellowship, Boston University 2009, 2011 – 2012, 2013	
	Teaching Fellowship, Boston University 2009-2010, 2012	
Publications	On the upper bound of the number of modes of a multivariate normal mixture, with Surajit Ray, <b>Journal of Multivariate Analysis</b> , Vol. 108, July 2012, pp. 41–52.	
Submitted and Working Papers	• Resilience, with Paolo Guasoni and Gur Huberman.	
	• Shortfall Aversion, with Paolo Guasoni and Gur Huberman. (Submitted to Econometrica)	
	• Optimal Stopping for the Last Exit Time and the Ultimate Maximum Time, with Constantinos Kardaras.	
	• Valuation and Hedging of Barrier Options in Diffusion Financial Models, with Constantinos Kardaras	

# Teaching Experience

## University of Dayton, Dayton, OH

• As instructor

Graduate course: Financial Mathematics I & II

<u>Undergraduate Course</u>: Theory of Interest, Analytic Geometry and Calculus

## Boston University, Boston, MA

• As instructor

**Graduate course**: Probability Theory

• As teaching assistant

<u>Graduate courses</u>: *Linear Models, Probability Theory, Mathematical Statistics* Undergraduate courses: *Linear Algebra, Analysis of Variance, Applied* 

Statistics, Statistics I and Basic Statistics and Probability

## New Mexico State University, Las Cruces, NM

• As instructor

Undergraduate course: College Algebra

• As teaching assistant

<u>Undergraduate course</u>: Mathematics Appreciation

## Beijing Normal University, Beijing, China

• As instructor

Adult education course: Webpage Design and Database (SQL)

• As teaching assistant

Graduate course: Computer Algebra

# Talks and Presentations

- (Poster) Methods of Mathematical Finance: a conference in honor of Steven Shreve's 65th birthday, Carnegie Mello University, June 1 5, 2015.
- SIAM Conference on Financial Mathematics & Engineering, Chicago, Nov 13 15, 2014.
- (Invited) AMS Sectional Meeting, University of New Mexico, April 5 6, 2014.
- AMS Eastern Sectional Meeting, Boston College, April 6 7, 2013.
- Mathematics Colloquium, University of Dayton, February 5, 2013
- The Seventh World Congress of the Bachelier Finance Society in Sydney, Australia, June 19-23, 2012.
- $\bullet$  Probability, Control and Finance: A conference in honor of Prof. Ioannis Karatzas, June 4 8, 2012.
- 2012 New England Statistics Symposium, Department of Mathematics and Statistics and Department of Biostatistics, Boston University, April 21, 2012.
- 2010 New England Statistics Symposium, Department of Statistics, Harvard University, April 16-17, 2010.



October 6, 2015

To whom it may concern:

The Department of Economics and Finance met multiple times over the 2013-2014 and 2014-2015 academic years to discuss offering a Master in Finance program. After many deliberations and permutations, we came to a curriculum that everyone agreed with. Dr. Carl Chen wrote a Program Development Plan (PDP), which was approved by our department on May 11, 2015. That PDP was sent to the Ohio Regents' Advisory Committee on Graduate Study (RACGS) on June 12, 2015. We made some minor modifications to the proposed curriculum upon receiving feedback from member institutions and created a full proposal. That full proposal was voted on and approved by the following entities: (i) the Department of Economics and Finance on September 4, 2015, (ii) the SBA Graduate Program Committee on September 18, 2015, and (iii) the full SBA faculty on October 2, 2015. I believe this proposal creates a quality curriculum and fits with the University's goal of developing new graduate programs. It has my full support.

Sincerely,

Trevor C. Collier, Ph.D. Associate Professor and Chair, Department of Economics and Finance



September 16, 2015

Dear Dr. Collier,

We are writing to express our support of the proposed Master of Finance. We believe that this program will create further opportunities for interaction between the Department of Mathematics and the Department of Economics and Finance. In particular, the students in our Master of Financial Mathematics program will benefit from the proposed courses in Derivatives & Risk Management (which is required for our students), Investment, Portfolio Management, Fixed Income Securities, and Energy Trading & Risk Management. The last four of these courses would make excellent electives for our students. Our department can also provide a service to the students in the Master of Finance program through our courses Financial Mathematics I and II (MTH 558 and MTH 559 respectively) and Computational Finance (MTH 563). We can envision working with the Department of Economics and Finance to create new courses to benefit both program if the need arises.

We also have two certificate programs which will benefit from the Master of Finance. These are the certificate in Financial Risk Management and the certificate in Computational Finance.

We do not see the proposed program as competition for the Master of Financial Mathematics, but look forward to the collaboration and interaction which the Master of Finance will make possible.

Sincerely,

Joe Mashburn, PhD Professor and Chair

Department of Mathematics

goe mashburn

DEPARTMENT OF MATHEMATICS 300 College Park Dayton, OH 45469-2316 Phone: (937) 229-2511 Fax: (937) 229-2566



September 16, 2015

To Whom It May Concern:

On behalf of the MBA Program, I am writing to provide my support for the University of Dayton's (UD) proposed Master of Finance Program (MF).

Currently, the MBA Program is the only option for students wishing to pursue a graduate degree in business at the University of Dayton. As such, it has been the primary choice for those who begin their graduate business degree directly following completion of their UD undergraduate degree and for international students who enroll at UD to pursue a graduate business degree. However, we understand that some students would prefer a specialized master's program over an MBA. The introduction of the Master of Finance will provide those students the opportunity to complete their degree at UD, rather than enroll elsewhere.

In the past few years, the MBA Program has enrolled approximately 40 to 50 international students annually who attend UD on a full-time basis. Due to several factors, that number has recently decreased to 15 to 20 students. We understand that this is the primary target group for the new Master of Finance Program, since the MF is designed for full-time students. Given that some students will likely still favor an MBA over the specialized degree, we estimate the impact to the MBA Program will be a loss of 8 to 10 students annually. To help off-set this loss of students, we are developing plans to introduce a blended MBA format that will provide greater geographic reach and draw additional students into the program.

While increased competition for graduate business students will likely result in an initial reduction in enrollment in the MBA Program, we believe the Master of Finance is a good addition to the graduate degree offerings at UD and will strengthen the overall reputation of the University of Dayton.

Best regards,

John Gentner

Director, MBA Program

MBA PROGRAM

School of Business Administreation 300 College Park, Dayton, Ohio 45469-7020 Phone: (937) 229-3733 Fax: (937) 229-3882 Email: mba@udayton.edu

http://business.udayton.edu/mba



October 5, 2015

To Whom It May Concern:

As Dean of the School of Business Administration (SBA), I strongly endorse the Master of Finance proposal that has been developed by the Economics & Finance Department.

The most recent University of Dayton Strategic Plan as well as the SBA Strategic Plan (approved August 28, 2015) focus on the creation of new graduate programs and the modification of existing graduate programs to include alternative delivery methods. Currently, the MBA is the only graduate program offered by the SBA. Over the past five years, it has become increasingly evident that the MBA is not adequately addressing the demand for specialization, in particular, specialization in the area of finance. The Master of Finance (MF) proposal builds upon our successful undergraduate finance major and combines a focused curriculum to be delivered by an outstanding faculty with some unique SBA investments, e.g. two fully equipped trading labs.

With the addition of the MF to our graduate portfolio, we anticipate reaching groups of students who may not be interested in the MBA, which has at its focus general management. We expect that this new degree would be very appealing to many of our international students as well as recent business undergraduates desiring more depth into the finance knowledge base and the complementary skills needed to be successful in the field.

Lastly, we, as an AACSB accredited business school, view this curriculum as being innovative and allowing us to engage with and have an impact on the practice of finance.

Sincerely,

Paul M. Bobrowski, PhD

Dean

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