



**TOPIC:** University of Maryland, College Park: Master of Finance

**COMMITTEE:** Education Policy and Student Life

**DATE OF COMMITTEE MEETING:** June 5, 2013

**SUMMARY:** Currently, students may pursue a MS in Business with a Finance concentration (MSBF). The University is proposing to offer a Master of Finance degree program to replace the MSBF. The new title will better articulate the credentials of students graduating from the program and make them more competitive in international markets where the degree in Finance is more common. No curriculum changes are anticipated.

Three other institutions in Maryland offer Master's programs in Finance – Johns Hopkins University, Loyola University Maryland, and the University of Baltimore. Given the current demand for the existing program concentration – over 1000 applicants for approximately 180 slots – there would appear to be no reason to expect demonstrable harm to the other institutions programs.

In addition to holding classes on the UMCP campus, the University is also seeking approval to offer the program at its Washington, D.C. location in the U.S. Department of Commerce building. This facility already contains adequate classrooms, computer facilities, study rooms, and administrative space for academic advising, career advising, and student activity support.

**ALTERNATIVE(S):** The Regents may not approve the program or may request additional information.

**FISCAL IMPACT:** No additional funding is necessary. The program will be supported through tuition.

**CHANCELLOR'S RECOMMENDATION:** That the Committee on Education Policy and Student Life recommend that the Board of Regents approve the proposal from the University of Maryland, College Park to offer the Master of Finance.

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COMMITTEE RECOMMENDATION: Approval

DATE: June 5, 2013

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BOARD ACTION:

DATE:

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## **Mission**

The University of Maryland College Park mission statement includes a goal to “continue to build a strong, university-wide culture of graduate and professional education” and to provide knowledge-based programs and services that are responsive to the needs of the citizens of the state and the nation. The Robert H. Smith School of Business promotes this mission through its objective to grow future leaders to address the increasingly relevant global issues of our time. As part of this goal, the Smith School currently offers an internationally competitive Master of Science in Business degree with several concentrations, one of which is a concentration in Finance (MSBF). *This proposal is to replace the MSBF with a standalone degree program with the title Master of Finance (MFin). No curriculum changes are anticipated*, but offering a separate degree with the word “Finance” in the title will better articulate on the diploma the credentials of students graduating from the program and make them more competitive in international markets where the degree in Finance is more common. It will also make our program more competitive with peer institutions at which such a degree has already been created.

The 2008 crisis on Wall Street and around the globe has forever changed the landscape of how we think about finance. The world of modern finance is now shaped by evolving regulation, globalization and a renewed focus on corporate responsibility. Now more than ever, financial planning and decision making depend on understanding and using the new ideas and tools required in sophisticated financial management. Students who complete the MFin degree will possess the knowledge and skills necessary to address the challenges confronting financial decision makers and financial market participants. The Smith School houses an exceptionally strong faculty in this area as well as a Center for Financial Policy, created in 2009. Faculty and staff currently affiliated with the center hold appropriate degrees in finance, economics, and public policy that are relevant and necessary for the Masters in Finance degree.

The Smith School also offers a joint MSBF-MBA degree and thus we also seek to convert this option to a joint MBA-MFin program.

## **Characteristics of the Proposed Program**

UMD’s MS in Business is a 30-credit program, with approximately 180 new students admitted per year into the Finance concentration. Approximately the same level of enrollment is expected in the MFin degree program. Applicants will apply to the University of Maryland Graduate School and must have completed all of the requirements for a baccalaureate degree prior acceptance, with particular emphasis on a sufficient mathematical background. All applicants must submit: a) transcripts from all undergraduate and graduate institutions that have been previously attended; b) Graduate Record Examination (GRE) scores or the Graduate Management Admissions Test (GMAT) scores; c) a complete online application form that includes a written essay articulating qualifications and motivation for pursuing advanced education; and d) two letters of recommendation from supervisors or from professors competent to judge the applicant’s probability of success in graduate school. Students

should submit application materials for the fall semester by April 1. This program does not accept applications for spring semester admission.

After initial screening, the Smith School Admissions Office may select candidates for interviews which may be done in person or by telephone. Proof of English language proficiency (TOEFL or IELTS official scores) is also required unless the applicant has received an undergraduate or graduate degree from a select list of countries. For international student requiring an F1 visa, a completed certification of finance form and supporting financial documentation are required.

### **Catalog Description**

The Masters in Finance degree (MFin) is a professional degree for students wishing to pursue careers in investment banking, money management, commercial banking, corporate finance, and financial market regulation. Core courses provide excellent fundamentals and a large number of electives will allow students the flexibility to become specialists or highly qualified generalists. They will learn how to analyze and direct the financial decisions of an organization, and gain a fresh understanding and a deep appreciation for the theoretical foundations of finance today.

### **Curriculum**

The program requires 14 credits of required core courses and 16 credits of electives. Completion of the degree is feasible within one academic year, although many students may choose to spread their coursework over two academic years to offer an opportunity to gain experience from an internship during the summer. Course descriptions are provided in Appendix A.

While not required, some students may pursue the option of writing a master's thesis as part of reaching their 30 credit hours requirement. Others may take advantage of experiential learning opportunities for course credit. In both cases, such credit would be limited to 6 credit hours, be overseen by a faculty member, and follow the Graduate School's guidelines for the Master's degree with thesis.

### **Expected Learning Outcomes**

The proposed MFin program offered by the Robert H Smith School of Business will provide students with:

- a) Comprehensive knowledge of foundational financial concepts, products, and financial market structure necessary for engaging in any form of financial analysis;
- b) In-depth understanding of estimating value creation on the part of private enterprises;
- c) The ability to measure and manage trade-offs between risk and return;
- d) Analytical skills including detailed financial modeling, the ability to design and empirically estimate financial relationships, and the creation of financial statements and forecasts;
- e) Knowledge of the legal and ethical issues related to financial management and an understanding of the role of all stakeholders when capital allocation decisions are made;

- f) An understanding of the regulatory structure of financial markets and the role that policymakers and regulators play in the efficient operation of financial markets;
- g) Skills that will endure beyond the next business cycle and that will enable institutions to endure and thrive, even during times of economic downturn;
- h) Expertise in financial management that will make our students valuable contributors to a variety of employers and organizations in diverse communities.

A description of how the program outcomes will be organized and assessed is included as Appendix B.

While the University of Maryland's Robert H. Smith School of Business is accredited by the American Association of Collegiate Schools of Business (AACSB), no specialized accreditation is sought for this program.

### **Other programs within the state of Maryland**

Three other institutions within in the state of Maryland offer Masters programs in Finance: Johns Hopkins University, Loyola University Maryland, and University of Baltimore. The Carey Business School at Johns Hopkins University provides Master of Science in Finance degree that is a 36-credit one-year full-time program, as well as a part-time option. The Sellinger School of Business at Loyola University Maryland offers a Master of Science in Finance that is only offered as a part-time program during the evening. The University of Baltimore offers a Master of Science in Business-Finance that requires 30 credit hours, a similar arrangement to what currently exists within the Smith School at UMD. The 36-credit UB/Towson MBA also has a specialization in Finance as an alternate path. For all of the above programs, minimal work experience is required and course titles that are offered are rather similar, as one might expect.

The creation of a standalone MFin, along with the joint MBA/MFin option with an internationally highly ranked MBA program, distinguishes the UMD option. Student demand is very high, with a typical applicant pool of over 1000 students for less than 200 slots. Successful students have an average GMAT score of 720 and GPA of 3.5.

### **Academic Oversight, Quality Control and Student Services**

Primary oversight will be provided by a faculty member assigned to be the director of the program. A faculty committee has been created to address administrative issues including admissions, academic policies, student activities, and internship / placement opportunities. The program will also be overseen by the chair of the Finance department and the Office of the Dean.

The Finance department of the Robert H Smith School of Business currently has 28 FTE faculty, of whom 21 are tenure/ tenure track. All 21 have doctoral degrees in economics, finance, or industrial engineering. Seven additional teaching faculty also have graduate degrees in economics, finance, or business.

## **Method of Delivery**

Currently, the program is structured to be entirely delivered in a traditional classroom setting. Over time, we may evaluate online learning opportunities, but nothing is currently scheduled. Should we move towards some courses being offered online, all online courses would adhere to the policies and concerns outlined in the University of Maryland document, Principles and Guidelines for Online Programs.

In addition to holding classes on the UMCP campus, we also request to offer this program at our Washington, DC, location in the US Department of Commerce building. This facility already contains adequate classrooms, computer facilities, study rooms, and administrative space for academic advising, career advising, and student activity support.

## **Commitment to Diversity and the State's Minority Achievement Goals**

The Robert H. Smith School of Business community is multifaceted at every level – students, staff and faculty represent a diverse blend of backgrounds, nationalities, ethnicities and experiences. About a dozen Smith School and student clubs are focused on bringing members together who have similar interests in gender, nationality, religion, and sexual orientation.

To attract the most diverse population possible for the proposed Master of Finance, Smith School recruiting staff will focus on attracting more domestic students. These efforts will be targeted at recruiting U.S. minorities and American women of all ethnicities.

Current efforts include a wide range of recruiting efforts, including visits to academic program fairs, use of social media, visits to U.S. colleges and universities, presentations at professional conferences, and participation in Graduate Business Education events targeted for populations typically underrepresented in graduate business programs, particularly U.S. minorities and women. Future efforts will include targeted recruiting towards military families and veterans, highlighting of alumni and current graduate students who reflect a more diverse population.

## **Resources and Finance**

Because this program replaces a current concentration within another program and we do not at this time anticipate growing it beyond its current scale, no additional courses, changes in advising, or administrative workload are anticipated.

The President assures that institutional library resources meet new program needs.

Tables of anticipated resources and expenditures are included below.

## Appendix A: Course Descriptions

All courses are 2 credits.

### Sample Student Schedule

Below are tables showing how a typical MFin student can complete the required coursework over a one-year period as a full-time student and over a two-year time period as a full-time or part-time student.

#### Student Schedule for Full-time MFin, Masters in Finance, completed in one year

Fall A	Fall B	Spring C	Spring D
BUSI 610*	BUFN 750*	BUFN 758N*	BUFN 758O*
BUSI 640*	BUFN 761 *	BUFN 754	BUFN 751
BUFN 740*	BUFN 760	BUFN 763	BUFN 765
	BUFN 762	BUFN 773	BUFN 766

#### Student Schedule for Full-time MFin, Masters in Finance, completed in two years

	Fall A	Fall B	Spring C	Spring D
First Year	BUSI 610* BUSI 640* BUFN 740*	BUFN 750* BUFN 761*	BUFN 758N* BUFN 754 BUFN 763	BUFN 758O* BUFN 751
Second Year	BUFN 755 BUFN 770	BUFN 760 BUFN 762	BUFN 773	

\*Core MFin Course

### Core Courses

**BUSI 610 Introduction to Financial Accounting:** Provides an overview of financial accounting, periodic financial statements and the financial reporting process.

**BUSI 640 Financial Management:** Explores capital budgeting, security portfolio theory, operation and efficiency of financial markets, options pricing, financing decisions, capital structure, payout policy and international finance.

**BUFN740 Capital Markets:** Designed to deepen the foundations necessary to finance focused students, especially those intending to specialize in the quantitative areas of finance including investments, fixed income, and financial engineering.

**BUFN 750 Valuation in Corporate Finance:** Examines investment decisions by corporations, using various tools such as NPV, APV, and real option valuation. Particular attention is paid to cost of capital computation, pro forma cash flow statements, and other important elements of carefully executed evaluation of capital investments.

**BUFN 758N/O Financial Econometrics I/II:** Introduces the basic skills for analyzing financial data and testing financial models. The course includes a review of linear optimization for use in factor models, the statistical properties of asset returns, event studies, time series analysis and models of stochastic volatility. The course will include theory mixed with several applications.

**BUFN 761 Derivative Securities:** Introduces options and futures contracts, and presents an overview of why and how they are used. The course focuses on the valuation, and the measuring and management of risk exposure, of options and futures. Derivative securities on various underlying assets (equities, indices, commodities, foreign exchange, etc.) are analyzed, using different application contexts

The part-time curriculum consists of the same core courses. However, part-time students who are unable to take the Financial Econometrics classes may substitute for this requirement by taking at least four credits in the more quantitative finance electives upon approval of the Academic Director. Possible options include:

**BUFN 758Q Quantitative Investment Strategies:** Provides an advanced treatment of asset allocation strategies and performance evaluation. Quantitative techniques are applied to examine equity and fixed-income portfolio management strategies. The course provides a deeper understanding of the measurement of risk and its relationship to return, as well as of multi-factor models. Implementation issues, including statistical estimation, back testing and portfolio construction, are covered, as are strategic versus tactical asset allocation, and performance evaluation.

**BUFN 765 Fixed Income Derivatives:** Introduces the use and valuation of fixed income assets such as exchange-traded bond futures and options, forward contracts on interest rates, fixed and floating rate bonds with embedded options, floating rate notes, caps, collars, floors, interest rate swaps, and mortgage backed securities. Tools include the application of binomial option pricing trees, and the analysis of stochastic yield curves.

**BUFN 766 Financial Engineering:** Introduces and applies various computational techniques useful in the management of equity and fixed income portfolios and the valuation of financial derivatives and fixed income securities. Techniques include Monte Carlo Simulation and binomial/lattice pricing models. Emphasis is on bridging theory with the design of algorithms and models that can be directly applied in practice.

### **Elective Courses**

All courses listed below are 2 credit courses. In addition to these finance electives and upon approval of the academic advisor, students may take up to six credits in related fields.

**BUFN 751 Financial Strategy For Corporations:** An advanced course in corporate finance, focusing on the issues that firms face when they plan to raise external capital from financial markets. The focus is on the financing problems faced by mid-market to large firms and on capital raised from public markets. The forms of external finance vary from simple debt or equity to more complex securities that bundle with an element of risk management.

**BUFN 752 Financial Restructuring:** Examines alternative ways to increase firm value through corporate restructuring, including domestic and international acquisitions, spin-offs, carve-outs, and leveraged buy-outs. Focus is on theory, practice, and empirical evidence related to each of these forms of restructuring, and emphasis is placed on valuation analysis and strategic considerations.

**BUFN 753 Corporate Governance:** Examines corporate governance and its impact on shareholder value. Topics include conceptual foundation for corporate governance, the role and duties of the board of directors, indicators of board effectiveness and best practices, design features of executive compensation contracts, the significance and prevalence of stock options, the perverse incentives of stock options and controversy over compensation practices, corporate governance failures and anatomy of corporate scandals, the essentials of the Sarbanes-Oxley Act and other regulatory reforms.

**BUFN 754 Corporate Risk Management:** Explores the theory and practice of financial risk identification, measurement, and mitigation at financial and non-financial firms. Topics include hedging with options and futures, interest rate risk management, Value-at-Risk (VaR), Cashflow-at-Risk (CaR), Earnings-at-risk (EaR), credit risk, equity risk, commodities risk, exchange rate risk, and lessons from risk management disasters.

**BUFN 755 Entrepreneurial Finance and Private Equity:** Explores advanced topics in corporate finance, with major emphasis on how financiers help firms plan for growth and develop finance strategies firms use for different types of securities at different points in the industry's and firm's life. Securities will include private financing and placements, Venture Capital (VC), Initial Public Offerings (IPOs), Private Equity and Leveraged Buyouts.

**BUFN 758Q Quantitative Investment Strategies:** Provides an advanced treatment of asset allocation strategies and performance evaluation. Quantitative techniques are applied to examine equity and fixed-income portfolio management strategies. The course provides a deeper understanding of the measurement of risk and its relationship to return, as well as of multi-factor models. Implementation issues, including statistical estimation, backtesting and portfolio construction, are covered, as are strategic versus tactical asset allocation, and performance evaluation.

**BUFN 760 Applied Equity Analysis:** Applies financial concepts and tools to the analysis and valuation of equity securities. In addition to focusing on fundamental (DCF based) analysis of corporations, the course covers topics such as the EIC (Economy/Industry/Company) framework, financial statement analysis, relative value analysis, and contingent value analysis. Students will apply tools to value stocks and provide stock recommendations.



**BUFN 762 Fixed Income Analysis:** Focuses on understanding and valuing financial instruments whose market values are tied to interest rate movements. Develops tools such as discount functions, duration, convexity, and immunization to analyze the interest rate sensitivity and value of fixed income securities and portfolios. A variety of fixed income securities are examined, particularly zero coupon and coupon bearing bonds.

**BUFN 763 Portfolio Management:** Examines the theory and application of portfolio management techniques in detail, including the use of various asset classes in constructing efficient portfolios. Various risk and performance measurements for portfolios are examined, drawing on classic portfolio theory, as well as more recent index and factor models.

**BUFN 770 International Investment:** Examines foreign exchange markets (spot, forwards, futures, swaps, options), focusing on the use and valuation of these instruments. Other issues related to international security markets (equities and bonds/interest rates) and global portfolio management are discussed.

**BUFN 771 International Corporate and Project Finance:** Focuses on the role of financial management in the multinational firm, and the financing and management of international projects. Topics include international capital budgeting, global cost of capital, project financing, and the measurement and management of exchange rate exposure by corporations.

**BUFN 772 Bank Management:** Examines the economic role and regulation of banks and other financial institutions, and the structure of assets, liabilities and capital in these institutions. Tools are presented to analyze the various risks faced by banks, including interest rate risk, market risk, operational risk and off-balance sheet risk. Topics also include liquidity risk, liability risk, reserve management, deposit insurance, and capital requirements.

**BUFN 773 Institutional Asset Management:** Examines how money is managed by organizations such as university endowments, pension funds, mutual funds, hedge funds, and private equity funds. Emphasizes the incentives professional money managers face within the context of the organizational structure in which they operate. Particular attention will be paid to compensation structures and monitoring mechanisms.

## Appendix B: Student Learning Outcomes and Assessment

<b>Learning Outcome 1</b>	Students will demonstrate a clear understanding of the basic concepts of Corporate Finance, Capital Markets, Financial Accounting and Financial Econometrics.
Measure:	Students will be required to pass a core set of classes in each of these areas.
Criterion:	At least 90% of students will receive a rating of “Satisfactory” or better from the Academic Director, who will review their performance in the core classes. The Academic Director will meet with students rated below “Satisfactory” to help improve their performance or determine their continued participation in the program.
Assessment:	Every Year, starting in the 2012-2013 academic year.
<b>Learning Outcome 2</b>	Students will demonstrate critical reasoning and written communication skills through the analysis of financial case studies.
Measure:	Students must take at least one class that uses the case study method.
Criterion:	At least 90% of students will receive a rating of “Satisfactory” or better from the course instructor.
Assessment:	Every Year, starting in the 2012-2013 academic year.
<b>Learning Outcome 3</b>	Students will demonstrate oral communication skills through the presentation of a financial case study.
Measure:	Students must make at least one presentation of a case study.
Criterion:	At least 90% of students will receive a rating of “Satisfactory” or better from the course instructor.
Assessment:	Every Year, starting in the 2012-2013 academic year.
<b>Learning Outcome 4</b>	Students will demonstrate their ability to work effectively with other members of a team in the preparation of a group project..
Measure:	Students must prepare group projects as part of a class.
Criterion:	At least 90% of students will receive a rating of “Satisfactory” or better from the course instructor.
Assessment:	Every Year, starting in the 2012-2013 academic year.
<b>Learning Outcome 5</b>	Students will demonstrate a deeper understanding of one or more areas of Finance, related to their chosen career path or specialized plan of study
Measure:	Students will be required to pass elective classes related to their educational plan.
Criterion:	At least 90% of students will receive a rating of “Satisfactory” or better from the Academic Director, who will review their

performance in the core classes.

Assessment: Every Year, starting in the 2012-2013 academic year.

The Master in Finance degree is designed to be a flexible program that allows students to specialize in one area of finance or to become a generalist. All students are required to gain a basic understanding of each major area of Finance through taking core classes in Corporate Finance, Capital Markets, Financial Accounting, Derivative Securities, Corporate Valuation and Financial Econometrics. All students must take electives to enhance this basic training. Some students may want to be generalists to give them more options for the future or to prepare for the Certified Financial Analyst certification. Others may want to do advanced work in preparation for a career track in Finance. The department has identified five career tracks and has made suggestions for how students can best prepare for these fields. The tracks are:

- Corporate Finance
- Investment banking
- Equity Analysis/Portfolio Management
- Financial Engineering/Risk Management
- Commercial Banking

<b>Table 1: Resources</b>			
<b>Resources Categories</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>1. Reallocated Funds</b>	None	None	None
<b>2. Tuition/Fee Revenue ("a x d" below)</b>	\$5,985,000	\$6,164,550	\$6,349,487
<b>a. FT Students</b>	280	280	280
<b>b. Credit Hour Rate</b>	\$1,425	\$1,467.75	\$1,512
<b>c. Annual Credit Hours</b>	15	15	15
<b>d. Annual Fee Rate<sup>1</sup></b>	\$21,375	\$22,016	\$22,677
<b>3. Grants, Contracts, &amp; Other External Sources</b>	None	None	None
<b>4. Other Sources<sup>2</sup></b>	None	None	None
<b>TOTAL (Add 1 - 4)</b>	\$5,985,000	\$6,164,550	\$6,349,487

<b>Table 2: Expenditures</b>			
<b>Expenditure Categories</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>1.Total Faculty* (b+c below)</b>	\$2,671,875	\$2,752,031	\$2,834,592
<b>a. #FTE</b>	12	12	12
<b>b. Total Salary</b>	\$2,137,500	\$2,201,625	\$2,267,674
<b>c. Total Benefits</b>	\$534,375	\$550,406	\$566,918
<b>2.Total Administrative(b+c below)</b>	\$298,573	\$307,530	\$316,756
<b>a. #FTE</b>	3	3	3
<b>b. Total Salary</b>	\$238,858	\$246,024	\$253,404
<b>c. Total Benefits</b>	\$59,715	\$61,506	\$63,351
<b>3.Total Support Staff (b+c below)</b>	\$692,638	\$713,417	\$734,819
<b>a. #FTE</b>	9	9	9
<b>b. Total Salary</b>	\$554,110	\$570,733	\$587,855
<b>c. Total Benefits</b>	\$138,528	\$142,683	\$146,964
<b>4. New or Renovated Space</b>			
<b>5. Student Services</b>	\$207,500	\$207,500	\$207,500
<b>6. Marketing</b>	\$50,000	\$50,000	\$50,000
<b>7. Recruiting &amp; Admissions</b>	\$55,000	\$55,000	\$55,000
<b>8. Career Services</b>	\$150,750	\$150,750	\$150,750
<b>9. Student Aid</b>	\$250,000	\$250,000	\$250,000
<b>10. Other Expenses</b>	\$0	\$0	\$0
<b>TOTAL (Add 1 - 10)</b>	\$5,367,557	\$5,507,186	\$5,651,004