

Academic Program Review:

August 2016

Title: Masters of Science in Finance

Specialization: Graduate program

Department and College: Department of Economics and Finance, College of Business

Department Chair: Edward B. Barbier, ebarbier@uwyo.edu, 307-766-2358

1. Program Demand:

- a. Number of graduates over the past five-year period (2010-2015): 14¹
- b. Enrollment in program over past five-year period (2010-2015): 63²

2. Program Quality:

- a. Program accreditation: program is accredited through the college accreditation with the Association to Advance Collegiate Schools of Business (AACSB).

- Most recent accreditation date: October 2010
- Next review of college accreditation: September 2016.
- List of recommendations from past visit:

1. Complete and document program assessment plan and outcomes. This was part of a general requirement for the entire college. Visit date: Fall, 2015.

- b. Faculty Credentials

- List of faculty
 1. Sherrill Shaffer, PhD, Economics, Guthrie Distinguished Professor
 2. Fred Sterbenz, PhD, Economics, Professor
 3. Nicole Choi, PhD, Finance, Associate Professor
 4. Suman Banerjee, PhD, Finance, Associate Professor
 5. Sridhar Gogineni, PhD, Finance, Assistant Professor

- Gender, ethnicity breakdown

Name	Gender	Ethnicity
Fred Sterbenz	Male	Caucasian
Nicole Choi	Female	Asian
Suman Banerjee	Male	Asian
Sridhar Gogineni	Male	Asian
Pawan Jain*	Male	Asian
Sherrill Shaffer*	Male	Caucasian

* Shaffer retired June 2016, Jain begins Fall 2016.

¹ From "Degrees – dup Master" Excel Spreadsheet, Academic Affairs, 6/21/2016.

² From "2016 MS Program Assessment Data", Excel Spreadsheet, Department of Economics & Finance, 7/20/2016

- Grants awarded: none
- Grants applied for: none

- Publications/presentations (2010-2015):

Summary: All Program faculty (2010-2015):

Papers: 30

Presentations: 37

Sherrill Shaffer:

Papers

Refereed Journal Articles:

"The Panzar-Rosse Revenue Test and Market Power in Banking," with Laura Spierdijk, *Journal of Banking and Finance* 61, 340-347 (accepted September 2015).

"Time Compression and Saving Rates," *Journal of Neuroscience, Psychology, and Economics*, with David Aadland (accepted August 2015).

"Reciprocal Brokered Deposits, Bank Risk, and Recent Deposit Insurance Policy," with Guo Li, *North American Journal of Economics and Finance* 33, 2015, 366-384 (accepted June 2015).

"New Small Firms and Dimensions of Economic Performance," with Iftexhar Hasan and Mingming Zhou, *Economic Development Quarterly* 29(1), 2015, 65-78.

"Rural Economic Performance and U.S. Federal Credit Programs," with Robert N. Collender, *Journal of Rural and Community Development* 9 (3), 2014, 42-61.

"A Test of Competition in Chinese Banking," with Botao Qin, *Applied Economics Letters* 21 (9), 2014, 602-604.

"Information Immobility, Industry Concentration, and Institutional Investors' Performance," coauthored with Mark Fedenia and Hilla Skiba, *Journal of Banking and Finance* 37, 2013, 2140-2159.

"Coerced Reciprocity and the Leverage Theory," with Kalyn Coatney, *Journal of Competition Law and Economics* 9 (2), 2013, 473-493 (an Oxford journal).

"Reciprocal Deposits and Incremental Bank Risk," *Applied Economics* 45 (34), 2013, 4857-4860.

"Bank Loans to Newly Public Firms," with Tatyana Sokolyk, *Journal of Entrepreneurial Finance* 16 (2), Spring 2013, 33-56.

"Microeconomic Foundations of Earnings Valuation," *International Review of Applied Financial Issues and Economics* 4 (4), December 2012.

"Bank Failure Risk: Different Now?" *Economics Letters* 116, 2012, 613-616.

"Reciprocal Brokered Deposits and Bank Risk," *Economics Letters* 117, 2012, 383-385.

"External Economies in Banking," *Journal of Financial Economic Policy* 4(4), 2012, 354-365.

"Bank Loans and Under-Performers," with Tatyana Sokolyk, *International Research Journal of Applied Finance* 3 (8), August 2012, 1145-1150. J. A. Bikker, Sherrill Shaffer, and Laura Spierdijk.

"Assessing Competition with the Panzar-Rosse Model: The Role of Scale, Costs, and Equilibrium," *Review of Economics and Statistics*, 94 (4), November 2012, 1025-1044.

Kalyn Coatney, Sherrill Shaffer, and Dale Menkhous,

"Auction Prices, Market Share, and a Common Agent," *Journal of Economic Behavior and Organization* 81, 2012, 61-73. Sherrill Shaffer, "Strategic Risk Aversion," *Applied Financial Economics* 21 (13), 2011, 949-956.

Grace Li, Lee Sanning and Shaffer, "Forecasting Bank Failures: Timeliness vs. Number of Failures", *Applied Economics Letters*, first published on: 30 March 2011 (iFirst).

Sherrill Shaffer (2010)

"Internal Culture and Banks in Society, *Proceedings of an International Scientific Conference on Banking Culture* at Saratov State Socio-economic University (Russia)

Presentations

- "Reciprocal Brokered Deposits, Bank Risk, and Changes in the FDIC's Pricing," accepted for
- Presentation by coauthor Guo Li at the Southern Economic Association, Atlanta, November 2014.
- "Reciprocal Brokered Deposits and Bank Risk: New Evidence," Global Innovation Economic
- Congress, Da Lian, Liao Ning, China: presented by coauthor Guo Li, 2014.
- Royal University of Groningen (March 2013): "Moral Hazard, Reciprocal Brokered Deposits, and Bank Risk."
- Australian National University (March 2012): "Coerced Reciprocal Dealing and the Leverage Theory," coauthored with Kalyn Coatney.
- Australian National University (March 2012): "Information Immobility, Industry Concentration, and Institutional Investors," coauthored with Mark Fedenia and Hilla Skiba.
- University of Tasmania (March, 2012): "Information Immobility, Industry Concentration, and Institutional Investors," coauthored with Mark Fedenia and Hilla Skiba.
- University of Otago (New Zealand), April, 2012: "Assessing Competition with the Rosse-Panzar Model: The Role of Scale, Costs, and Equilibrium," coauthored with Jacob A. Bikker and Laura Spierdijk.

Fred Sterbenz

Papers

David Aadland and Frederic Sterbenz “The Economics of Emergency Meetings” Forthcoming **Economic Inquiry**.

James Gunderson and Frederic Sterbenz 2010 “The Impact on Interest Rates of Unemployment Announcements and Their Revisions” **The Financial Review** Vol. 45 pp.951-971.

Nicole Choi

Papers

Choi, Nicole, Mark Fedenia, Hilla Skiba, and Tatyana Sokolyk, 2015, Portfolio Concentration and Performance of Institutional Investors Worldwide, Accepted at **Journal of Financial Economics** (January 21, 2016)

Choi, Nicole and Hilla Skiba, 2015, Institutional Herding in International Markets, **Journal of Banking and Finance** 55, 246-259.

Choi, Nicole and Richard Sias, 2012, Why does financial strength forecast stock returns? Evidence from subsequent demand by institutional investors, **Review of Financial Studies** 25, 1550-1587

Presentations

- Northern Finance Association annual meeting, Lake Louise, AB, 2015
- Financial Management Association annual meeting, Nashville, TX, 2014
- American Accounting Association annual meeting, Atlanta, GA, 2014 (Presented by a co-author)
- Academy of Behavioral Finance and Economics annual meeting, Chicago, IL, 2013
- Asian Financial Management Association annual meeting, Phuket, Thailand, 2012
- Academy of Behavioral Finance and Economics annual meeting, New York, NY, 2012
- Midwest Finance Association annual meeting, New Orleans, LA, 2012
- Northern Finance Association annual meeting, Vancouver, Canada, 2011
- Asian FMA annual meeting, Queenstown, New Zealand, 2011
- Southern Finance Association annual meeting, Asheville, NC, 2011
- Financial Management Association annual meeting, New York, NY, 2010

Suman Banerjee

Papers

Legal-system Arbitrage and the Parent-Subsidiary Capital Structures with Professor Thomas H. Noe, Forthcoming **Management Science**.

Restraining overconfident CEOs through improved governance: Evidence from the Sarbanes-Oxley Act with Mark Humphery-Jenner and Vikram Nanda, **Review of Financial Studies**, October 2015, Volume 28, Number 10.

Cross country IPOs: What explains differences in underpricing? with Dai Lili and Keshab Shrestha, Journal of Corporate Finance, November 2011, Volume 17, Pages 1289 -1305.

Presentations

- American Finance Association Annual Meeting, Boston, January 2015.
- IFABS - International Finance and Banking Society, University of Oxford, Oxfordshire, UK, September 2015.
- SELS Global Junior Empirical Legal Scholars Workshop on at the Hebrew University of Jerusalem, December 17th and 18th 2015.*
- 10th Annual Conference on Empirical Legal Studies,. School of Law, Washington University, Saint Louis, October 2015.
- Australian Banking and Finance Conference at University of New South Wales, Sydney, Australia, December 17th and 18th 2015.
- Inaugural conference of the Global Corporate Governance Colloquia organized by ECGI, Stanford Law School, June 2015.
- Indian School of Business Summer Corporate Finance Conference, Hyderabad, July 2014.
- American Law Economics Association Meeting, School of Law, Columbia University, New York City, May 2015.
- 5th Indian Finance Conference, Indian Institute of Management, Calcutta, December 17-19, 2015.
- FMA Annual Meeting, Nashville, October 2014.
- The Annual Conference on Asia-Pacific Financial Markets, Seoul, Korea, December 2014.*
- FMA Annual Meeting, Orlando, Florida, October 2015.
- The Asian Bureau of Finance and Economics Research (ABFER), Singapore, May 2014.
- FMA Europe Annual Meeting, Venice, Italy, June, 2015.

Sridhar Gogineni

Papers

Gogineni, Sridhar, 2010. Oil and the Stock Market: An Industry Level Analysis. *The Financial Review*, 45, 995-1010

Gogineni, Sridhar and John Puthenpurackal, 2014. Target Management Involved Buyouts: Impact on Takeover Competition, Litigation Risk and Shareholder Returns. *The Journal of Financial Research*, 37(3), 323-356

Gogineni, Sridhar and William Megginson, 2010. IPOs and Other Non-Traditional Fundraising Methods of Private Equity Firms. Published as chapter in *Private Equity: Fund Types, Risks and Returns, and Regulation*

Presentations

- Overlapping Environmental and Financial Regulations: The Role of Corporate Governance. *Presented at: Financial Management Association annual meetings, Orlando, USA – October 2015; Association of Environmental and Resources Economists (AERE) summer conference, San*

Diego, USA – June 2015*; Allied Social Sciences Association (ASSA) annual meeting, Boston, USA – January 2015*

- Slumping shoulders and fat tail: Market microstructure and kurtosis of stock return Presented at: Australasian Finance and Banking Conference, Sydney, Australia – December 2015

* indicates presentation by co-authors

Pawan Jain

Papers

“Powerful Subordinates: Internal Governance and Stock Market Liquidity” with Christine Jiang and Mohamed Mekhaimer, the *Journal of Corporate Finance*, forthcoming.

Jain P., Jain P., and McInish, T.H., 2016. Risks of High Speed Trading. *Journal of Financial Markets*, forthcoming.

Jain Pawan and Steven Jordan, 2016. Cancellation Latency: The Good, the Bad, and the Ugly. *Financial Management*, forthcoming.

Jain, P., Sunderman, M., Westby-Gibson, K. J. (2016). REITS and Market Microstructure: A Comprehensive Analysis of Market Quality. *Journal of Real Estate Research*, forthcoming.

Jain Pawan and Christine Jiang, 2014. Predicting Future Price Volatility: Empirical Evidence from an Emerging Limit Order Book Market. *Pacific-Basin Finance Journal* 27, 72-93.

Jain Pawan and Quentin, C. Chu, 2014. Global Investigation of Dividend Yields: Shareholder Demand, Agency Problem, and Market Quality. *Review of Quantitative Finance and Accounting*, 42(3), 509-534.

Jain Pawan and Mark Sunderman, 2014. Stock Price movement around merger announcements: Insider trading or market anticipation?” *Managerial Finance*, 40(8), 821-843.

Jain Smita and Jain Pawan, 2015. Designing interactive online nursing courses. *Education* 136(2), 179-191.

Jain, Smita and Jain, Pawan 2014. Factors affecting technology integration in K-12 classrooms. *Journal of Instructional Psychology* 43 (1), 43-51.

Jain, Pawan, Sachin Jain, and Smita Jain, 2011. Interaction among Online Learners: A Quantitative Interdisciplinary Study. *Education*, 131(3), 538-544.

Book Chapter 19: Pawan Jain and Smita Jain, 2011. “*Developing Learning Communities*” in *Instructional Design: Concepts, Methodologies, Tools and Applications*, publisher: IGI Global, 255-269.

Book Chapter 15: Pawan Jain and Smita Jain, 2010. “*Developing Learning Community: Improving interactivity of an Online Class*” in *Strategic Pervasive Computing Applications: Emerging Trends*, publisher: IGI Global, 280-294.

Jain, Pawan, 2006. Offshore Outsourcing “India Vs China”: An Empirical Investigation. *The Business Review*, 6(2), 316-324

Presentations

- *“Taxation and REIT market valuation”* Securities and Exchange Board of India (SEBI), March 2015.
- *“Systemic Microstructure Risks of High Speed Trading”* National Stock Exchange of India (NSE), December 2014.
- *“Powerful Subordinates: Internal Governance and Stock Market Liquidity”* Clarkson University, January 2013.
- *“Reduced Latency and Market Quality on the Tokyo Stock Exchange”* Securities and Exchange Commission (SEC), November 2012.
- *“Reduced Latency and Market Quality on the Tokyo Stock Exchange”* Worcester Polytechnic Institute, November 2012.
- *“Reduced Latency and Market Quality on the Tokyo Stock Exchange”* University of Wisconsin, Whitewater, November 2012.
- *“Reduced Latency and Market Quality on the Tokyo Stock Exchange”* Fairfield University, November 2012.
- *“Effective Online Teaching”* Organized professional development workshop at the University of Memphis, Memphis, TN, October, 2011
- *“Effective Online Teaching”* Organized professional development workshop at LeMoyne Owen College, Memphis, TN, January, 2011
- *“Technology in Teaching”* Invited speaker at the Institute of Professional Studies (IPS), India, October, 2008 and December, 2011

iv. Faculty Awards (2010-2015):

Shaffer:

- Listed on ideas.repec.org among top 5% of economists worldwide based on research publications as of 2015

Choi:

- Best Paper Award for “Portfolio concentration and performance of institutional investors worldwide”, Asian Financial Management Association, 2015
- Elbogen Center for Teaching and Learning Grant, First Year Experience annual conference, Dallas, TX, 2015
- Young Scholar Award, Korea America Finance Association, 2014
- Best Paper Award for “Why Does Financial Strength Forecast Stock Returns? Evidence from Subsequent Demand by Institutional Investors,” Korea America Finance Association, 2012
- Crocker Young Scholar Award for “Information Acquisition, International Under-diversification and Portfolio Performance of Institutional Investors,” University of Wyoming, 2012
- Best Paper Award, International Finance/Financial Markets for “Information Acquisition, International Under-diversification and Portfolio Performance of Institutional Investors,” Midwest Finance Association, 2012
- TIE (Technology Institutional Enhancements) Distance Education Grant, University of Wyoming Outreach School, 2010

Banerjee:

- BankScope Award for best paper in banking and finance, Australian Finance and Banking Association's Annual Meeting, Sydney, Australia, December 2010.

Jain:

- 2015 National Association of Real Estate Investment Trust (NAREIT) and the American Real Estate and Urban Economics Association (AREUEA) Real Estate Research Conference Distinguished Research Prize (June 8, 2015).
- Semifinalist for the best paper award in the Institutions and Markets category, Financial Management Association (FMA) (October 17, 2014).
- Best Paper: 1st prize, Indian Institute of Management (IIM) (May 13, 2014).
- Best Paper: 1st prize, Indian Institute of Management (IIM) (May 12, 2013).
- Outstanding Academic Paper in Investments Award at the Eastern Finance Association annual Meeting (2011).

c. Program Reputation:

- Rankings:
 - TFE MS Finance ranking: 86 (of 95 programs)
 - <https://tftimes.com/2016-msf-rankings/>
- Other Indicators: This program has been responsible for providing the workforce for much of the banking community in the state and the region. Several bank managers and executives in Wyoming are graduates of the program. Feedback from employers has been excellent for those students who have interned and hired from this program.

d. Program Curriculum:

Year 1

Fall Semester

FIN 4510 Banking Management
 FIN 5520 Financial Theory Seminar
 FIN 5400 Empirical Finance

Spring Semester

FIN 5310 Investment Management
 FIN 5320 Corporate Governance
 ECON 5340 Applied Econometrics

Year 2

Fall Semester

Grad Elective*
 Grad Elective*
 Grad Elective*

Spring Semester

Plan A of Plan B thesis.

These electives usually consist of related courses at the graduate or senior level in Economics or Accounting, and/or MBA classes.

- e. Distance delivery of Program:
 - Does not apply – program is offered only at the Laramie campus and is not offered at other locations or online.

- f. Quality of Assessment Plan/Data:
 - See Documents in Appendix A
 - Short Summary: The program is reviewed each year by the Graduate Coordinator and Department Chair, based on student assessments, enrolments and graduation rates and other assessment plan criteria. Recommendations for changes in curriculum, courses and assessments are then voted and decided on by Faculty.

The program is accredited through the college accreditation with the Association to Advance Collegiate Schools of Business (AACSB), and we are currently completing and documenting program assessment plan and outcomes for the next review of the College of Business accreditation in September 2016.

- g. Relevance to College Strategic Plan:
 - Not applicable – the College does not have a current strategic plan.

3. Mission Centrality:

- a. Wyoming offers more than 90 graduate degrees, providing the variety of subjects, the rigor of high quality education, and the depth of research that is associated with a top-tier land grant university. The University of Wyoming strengthens communities by training students in professions critical to the state and region. Arguably most critical for Wyoming is professional training in health care, education, business, and law. The MS in Finance provides a critical need in the banking sector where many of the graduates continue to live and serve the state and region in professional capacities in the financial sector (see placement data below).

We pride ourselves on our graduate placement record and dedication to mentoring students as they mature into professional economists, financial analysts, and future business leaders, many of whom work in Wyoming and neighboring states.

- b. Contributions to programs across campus: The graduate programs of the Department of Economics & Finance, which include the MS in Finance, produces among the highest amount of total credit hours across all programs at the University of Wyoming. From AY 2009-10 to AY 2013-14, the graduate programs of the Department of Economics & Finance averaged 960.6 credit hours per academic year.³

The following lists the placement of 9 of our 14 graduates from AY2009-10 to AY2014-15:

- Brandon Rude (2010) - Crop Production Services, Loveland, CO

³ From “UW – Program Review: Economics & Finance”, Excel Spreadsheet, Office of Institutional Analysis, 7/19/2016.

- Miranda (Lamb) Eisele (2010) - Reed & Ball Inc Wealth Management, Cheyenne, WY
- Phil Temte (2011) - Admissions, University of Wyoming, Laramie, WY
- Owen Brasington (2011) - Purchasing Specialist, Tata Chemicals North America, Rock Springs, WY
- MaryKate Scheinost (2012) - Senior Analyst Accounting, Union Pacific Railroad, Omaha, NE
- Alexandra Shuman (2013) - Analyst, Goldman Sachs, Salt Lake City, UT
- Sasa Nemcova (2013) - Financial Analyst, Contract Controller, IBM, Slovakia
- Kristina Huston (2015) - Union Pacific Railroad, Omaha, NE
- Sharif Ullah Mazumder (2016) - PhD program, Oklahoma State University

4. Cost

- a. Ratio of student credit hours per FTE: $44/5 = 8.8$ credit hours/FTE (AY2009-10 to AY2013-14)⁴
- b. Direct instructional expenditures
 - Per student credit hour: $\$1,154,147/44 = \$26,532.1^5$
 - Per total degrees awarded: $\$1,154,147/14 = \$82,439.07^6$
 - Non-personnel expenditures per total academic FTE: $\$106,909/5 = \$21,381.80^7$
- c. Course enrollment
 - Number of classes falling under University minimums: For all graduate programs, including the MS in Finance, offered by the Department of Economics and Finance, the number of group instruction classes falling below university minimums were

AY2009-10	8 classes
AY2010-11	2 classes
AY2011-12	1 class

⁴ Credit hours from “2014 National Study of Instructional Costs and Productivity (Delaware Cost Study) – University of Wyoming: Finance”, 7/25/2016. and 5 FTE for tenured and tenure-track faculty teaching the Masters in Finance (see 2.b.).

⁵ Credit hours and Instruction unit expenditures are from “2014 National Study of Instructional Costs and Productivity (Delaware Cost Study) – University of Wyoming: Finance”, 7/25/2016. *Note this cost includes the cost of graduate and undergraduate programs and so is inflated for graduate only.*

⁶ See previous note - *this cost includes the cost of graduate and undergraduate programs and so is inflated for graduate only.* Number of graduates from “Degrees – dup Master” Excel Spreadsheet, Academic Affairs, 6/21/2016. Instruction unit expenditures are from “2014 National Study of Instructional Costs and Productivity (Delaware Cost Study) – University of Wyoming: Finance”, 7/25/2016.

⁷ See previous note - *this cost includes the cost of graduate and undergraduate programs and so is inflated for graduate only.* Non-personnel expenditures are from “2014 National Study of Instructional Costs and Productivity (Delaware Cost Study) – University of Wyoming: Finance”, 7/25/2016 and 5 FTE for tenured and tenure-track faculty teaching the Masters in Finance (see 2.b.).

AY2012-13 1 class
AY 2013-14 4 classes⁸

- Lower-division courses falling under University minimums: N/A

d. Other instructional cost drivers

- Section fill rates: N/A, as all courses were taught as single sections.
- Course completion rates: No data are currently available for AY2009-10 to AY2014-15.
- Curricular complexity: The MS in Finance includes advanced financial data, and advanced statistical analysis. Course curriculum can include PhD level economics classes. Many of our students who enroll in the foundation year of our MS in Finance (see 2.d. above) have the option of choosing to qualify in their 2nd year for the PhD in Economics or move to our MS in Economics and Finance, which includes 42 credit hours of
- Study in graduate level material in economics and Finance from the PhD and MS streams. Faculty course load: Over AY2009-10 to AY2014-15, the standard course load for tenured and tenure-track faculty is 4 courses per year (2:2 course load). The exception is for endowed professors (2:1 or 1:1, depending on research expectations), Department Chair (one-course reduction) and Undergraduate or Graduate Coordinators (one-course reduction each).

e. Research expenditures per tenured and tenure-track FTE: \$0⁹

f. Comparison to national benchmarks (Delaware data):¹⁰

Total student credit hours, graduate (AY 2013-14): 44

Total tenured and tenure-track faculty FTE (Fall 2013): 5

Total direct expenditures for instruction (AY 2013-14): \$1,154,147

Non-personnel expenditures (AY 2013-14): \$106,909

Research expenditures (AY 2013-14): \$0

Ratio of student credit hours per tenured and tenured track FTE: $44/5 = 8.8$

Direct expenditure for instruction/per graduate student credit hour: $\$1,154,147/44 = \$26,230.61$

Direct expenditure for instruction/per degrees awarded: $\$1,154,147/14 = \$82,439$

Research expenditures per tenured and tenured track FTE: $\$941,787.1/5 = \$188,357$

⁸ From "University of Wyoming, Economics & Finance, Standard Data Set", Office of Institutional Analysis, 2015.

⁹ According to "2014 National Study of Instructional Costs and Productivity (Delaware Cost Study) – University of Wyoming: Finance", 7/25/2016, there were no research expenditures for Finance Faculty.

¹⁰ From "2014 National Study of Instructional Costs and Productivity (Delaware Cost Study) – University of Wyoming: Economics", 7/25/2016.

Part II – Recommendations

2) Retain with Further Review Required

The MS in Finance is critical both as a stand-alone graduate degree program and has been essential to support the Financial Economics field the PhD in Economics offered by the department. Several changes however, have occurred in the organization of the department's graduate programs:

- 1) The PhD program has revised its curriculum and structure and the role of the Finance field now depends on student demand.
- 2) The department has recognized the fiscal challenges that lie ahead. These threaten to reduce or eliminate the stipends that have been historically depended upon to attract students.
- 3) The potential revenue-making opportunity the MS. Finance program offers creates an opportunity to revise the curriculum to address future fiscal challenges and to create a revenue opportunity.
- 4) Faculty retirements are likely to change specialties the program can offer.

For these reasons, over the past year a comprehensive program review was conducted internally to develop a new MS Finance curriculum. The goals of the review were to (i) better align curriculum with regional demand, (ii) better align curriculum with faculty specialties, (iii) to reduce program cost, and (iv) develop new revenue opportunities.

Appendix B includes a summary of proposed program changes that were adopted in Spring 2016 by the department. To allow the program changes to occur, admission to the program was suspended in 2017 to allow previously enrolled students to graduate under the previous program standards, and to then allow a new program to begin.

Alignment of a new curriculum with new more practical focus will potentially create additional demand. The old program was based on a traditional academic MS program curriculum in part aimed at preparing students for a PhD in Finance. As such, it focused less on practical application and more on theoretic and academic rigor. The new program will be more experiential and focus on critical job skills in the area of finance. This is anticipated to create significantly more demand. For example, at Colorado State University, such an MS Finance curriculum has attracted over 200 students currently enrolled in the program, and almost all of these pay differentially higher tuition than other graduate programs without stipend support. The proposed changes to the UW program, which will go into effect for admission in 2017, are anticipated to eventually create additional tuition revenues for the institution while lowering stipend costs. Further, the new Finance program will also offer an MBA concentration in Finance, allowing additional revenue generation through increased enrollment in that program.

To allow consideration of the impact of these changes on program outcomes, and to assess the possible revenue generation opportunities, the current recommendation for this program is to review it again after the impacts of the new program changes can be assessed.

Further, the relevant to this determination, the elimination of this program would result in the elimination of another graduate program in the Department of Economics and Finance that relies on this program's courses: the MS in Economics and Finance. Also, the cost data shown here relies on institutional data that cannot separate out undergraduate and graduate costs in Finance. At best the elimination of this program would result in the need of one fewer full-time faculty position, saving the institution of between \$150,000 and \$175,000, not including employee benefits costs.

The graduate programs of the Department of Economics & Finance, which include the MS in Finance, produce among the highest amount of total credit hours (ca. 1,000 credit hours per year) across all programs at the University of Wyoming. The MS in Finance is not duplicated by any other graduate program offered at the University of Wyoming, and the new revisions to the program are anticipated to expand demand significantly while also increasing the offered courses in UW MBA program, potentially allowing that program to offer an additional concentration. In addition, the program has an excellent graduate placement record and has produced finance professionals and future business leaders, many of whom work in Wyoming and neighboring states. For all of these reasons, the recommendation of this review is to retain the program pending later review of program to determine the impact of pro-active changes made by the Department to both enhance revenues and to better align the program with the needs of the region and talents of the faculty.

Assessment of the Graduate MS Finance Program

The AACSB Assurance of Learning Standards are intended to support accountability and continuous improvement. Loosely, the outcome assessment process comes down to four basic questions:

1. What will our students learn in our program? What are our expectations?
2. How will they learn it?
3. How will we know they have learned it or not?
4. What will we do if they have not learned it?

We respond to each of these in turn:

1. What will our students learn in our program? What are our expectations?

Our MS Finance program has six learning goals. We expect our program to provide the necessary environment for our graduating students to

1. be effective communicators—in writing and in speaking
2. be able to identify, frame, and pursue a publishable research question in the area of economics
3. be proficient in analytical modeling techniques used to address economic problems
4. be proficient in techniques of quantitative analysis used to address economic problems
5. understand the importance of research ethics
6. understand the importance of behaving ethically in their professional lives

2. How will they learn it?

Students develop the knowledge and skills required to achieve goals 1 through 4 in a four-step training process:

1. Students take a core financial theory course, FIN 5520 (Financial Theory Seminar), and two core econometrics courses, FIN 5400 (Empirical Finance) and ECON 5340 (Applied Econometrics), to learn the fundamental analytical and quantitative techniques necessary to address financial problems.
2. Students extend and deepen their skills by taking three additional core courses: FIN 4510 (Banking Management), 5310 (Investment Management), and 5320 (Corporate Governance).

3. Students further broaden their expertise by taking a total of three elective courses if they aim to write a Plan A, or four if they aim to write a Plan B thesis. At least one of these electives must be in either finance or economics, but students may also take classes in other disciplines such as statistics or management.
4. Students apply their training to write their thesis.

To achieve learning goal 5, students attend a research-methods workshop that discusses ethical challenges and standards of ethical behavior in conducting economic research.

Lastly, to achieve learning goal 6, students complete a case study assignment in FIN 5310 that focuses on ethical behavior in the professional practice of finance.

3. How will we know they have learned it or not?

We measure students' progress toward achieving our goals through assessing the learning objectives for each goal shown in Annex 1 below, using the rubrics shown in Annex 2.

For learning goal 1 (our graduating students should be effective communicators—in writing and in speaking), we assess students' ability to write professional-quality research documents and give professional-quality research presentations. They do so at various stages in their graduate career: first as part of class projects, next through writing and presenting their thesis proposal, and lastly through writing and presenting their final thesis.

For learning goal 2 (our graduating students should be able to identify, frame, and pursue a research question in the area of finance), we assess students' identification and framing of a research question in their thesis proposal as well as their final thesis, and assess their pursuit of that research question in the thesis.

For learning goal 3 (our graduating students should be proficient in analytical modeling techniques used to address financial problems), we assess students' ability to develop and analyze a theoretical model of a financial problem through a class project in FIN 5520.

For learning goal 4 (our graduating students should be proficient in techniques of quantitative analysis used to address economic problems), we assess students' ability to identify, collect, and analyze data on a financial problem through a class project in ECON 5340.

For learning goal 5 (our graduating students should understand the importance of research ethics), we assess, in our research-methods workshop, students' ability to (i) identify the activities/issues in financial research that may present ethical challenges; (ii) identify the standards of ethical behavior appropriate to each activity/issue; and (iii) articulate the reasons underlying those standards.

Lastly, for learning goal 6 (our graduating students should understand the importance of behaving ethically in their professional lives), we assess, as part of the ethics case study assignment in FIN 5310, students' ability to (i) identify the activities/issues in financial practice that may present ethical challenges; (ii) construct ethical arguments by applying moral standards and ethics frameworks; and (iii) propose and defend a resolution justified by the arguments.

4. What will we do if they have not learned it?

We will conduct our assessment annually, by defining one or more research questions and reviewing the assessment results in relation to these questions over time. We can then see trends that allow us to either change or affirm elements of our program, curriculum, and/or our assessment process itself.

Each of the six learning goals will be assessed at least twice within each AACSB review cycle, i.e., twice every five years. Data collected for the annual research question(s) chosen will be analyzed by a standing faculty assessment committee. The analysis, and any recommended changes in response to the results, will be discussed in an annual faculty meeting, and also shared with the College of Business leadership.

For each individual learning objective, we will also apply a benchmark that, if not met, will trigger an automatic review by the faculty assessment committee. The benchmark requires at least 70% of students to achieve an average score of 2 (“acceptable”) on the rubric associated with the objective. To avoid small-numbers problems, we will apply this benchmark whenever cumulatively 10 or more new students have been assessed using the rubric in question. For the PhD program, this will usually be every two years; for the Master’s programs, given their lower enrollments, it may be every three or years or so.

Both the periodic learning-goal reviews and reviews triggered by failure to meet our benchmark may prompt a range of adjustments, including changes to the curriculum, to the content of specific courses, and to extracurricular offerings such as workshops and seminars. Faculty may also be called upon to place more emphasis on a learning objective when they serve as advisors or as members of graduate-student committees. In addition, the format of examinations and rubrics used to measure performance may be adjusted.

Annex 3 provides more specifics, organized by rubric, about the strategies we will employ to review and improve our program’s performance, both overall (i.e., our performance in aggregate across students) and at the level of individual students judged at risk of failing to achieve our learning goals.

MS Finance Program Learning Goals

Learning Goals	Learning Objectives	Measurement Method	Benchmark
1. Our graduating students should be effective communicators—in writing and in speaking.	1. Students will write a professional-quality research document.	Master’s thesis, thesis proposal, class-project papers in FIN 5520 and ECON 5340	70% of students score at least 2 (“acceptable”)
	2. Students will make a professional-quality research presentation.	Master’s thesis defense, thesis proposal defense, class-project presentations in FIN 5520 and ECON 5340	70% of students score at least 2 (“acceptable”)
2. Our graduating students should be able to identify, frame, and pursue a research question in the area of finance.	1. Students will identify and frame a research question in finance.	Master’s thesis, thesis proposal	70% of students score at least 2 (“acceptable”)
	2. Students will pursue this research question in a research paper, using current financial knowledge and appropriate research methods.	Master’s thesis	70% of students score at least 2 (“acceptable”)
3. Our graduating students should be proficient in analytical modeling techniques used to address financial problems.	1. Students will develop a theoretical model that captures the essence of a financial problem.	Class project in FIN 5520	70% of students score at least 2 (“acceptable”)
	2. Students will analyze this model to generate predictions or other implications.	Class project in FIN 5520	70% of students score at least 2 (“acceptable”)
4. Our graduating students should be proficient in techniques of quantitative analysis used to address financial problems.	1. Students will identify and collect data relevant to analyzing a financial problem.	Class project in ECON 5340	70% of students score at least 2 (“acceptable”)
	2. Students will analyze these data using statistical software and econometric techniques.	Class project in ECON 5340	70% of students score at least 2 (“acceptable”)
5. Our graduating students should understand the importance of research ethics.	1. Students will identify the activities/issues in financial research that may present ethical challenges.	Assessment embedded in research-methods workshop	70% of students score at least 2 (“acceptable”)
	2. Students will identify the standards of ethical behavior appropriate to each activity/issue.	Assessment embedded in research-methods workshop	70% of students score at least 2 (“acceptable”)
	3. Students will articulate the reasons underlying those standards.	Assessment embedded in research-methods workshop	70% of students score at least 2 (“acceptable”)
6. Our graduating students should understand the importance of behaving ethically in their professional lives.	1. Students will identify the activities/issues in financial practice that may present ethical challenges.	Case study assignment in FIN5310	70% of students score at least 2 (“acceptable”)
	2. Students will construct ethical arguments by applying moral standards and ethics frameworks.	Case study assignment in FIN5310	70% of students score at least 2 (“acceptable”)
	3. Students will propose and defend a resolution justified by the arguments.	Case study assignment in FIN5310	70% of students score at least 2 (“acceptable”)

MS Thesis Rubric – Plan A

Attribute	Very Deficient 0	Somewhat Deficient 1	Acceptable 2	Very Good 3	Outstanding 4
Potential for publication	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Unlikely without much additional work 	<ul style="list-style-type: none"> • Possible, with additional work 	<ul style="list-style-type: none"> • Likely, with some additional work 	<ul style="list-style-type: none"> • High, with little or no additional work
Quality of research question	<ul style="list-style-type: none"> • Not stated, or very unclear • Entirely derivative • Closer to BS than MS work 	<ul style="list-style-type: none"> • Stated somewhat confusingly • Slightly original, but largely derivative • Makes minor contributions 	<ul style="list-style-type: none"> • Stated explicitly • Somewhat original and creative • Makes limited contributions 	<ul style="list-style-type: none"> • Stated explicitly and clearly • Clearly original and creative • Makes at least one good contribution 	<ul style="list-style-type: none"> • Articulated very clearly • Highly original and creative • Makes several important contributions
Quality of analysis	<ul style="list-style-type: none"> • Demonstrates little or no critical thinking • Demonstrates little or no understanding of theoretical concepts • Uses inappropriate analytical and/or quantitative tools • Many major errors 	<ul style="list-style-type: none"> • Demonstrates rudimentary critical thinking • Demonstrates somewhat shaky understanding of theoretical concepts • Misses some important analytical and/or quantitative tools • Some important errors 	<ul style="list-style-type: none"> • Demonstrates average critical thinking • Demonstrates understanding of theoretical concepts • Uses appropriate analytical and/or quantitative tools • No major errors 	<ul style="list-style-type: none"> • Demonstrates mature critical thinking • Demonstrates clear understanding of theoretical concepts • Uses advanced analytical and/or quantitative tools • Very few errors 	<ul style="list-style-type: none"> • Demonstrates sophisticated critical thinking • Demonstrates superior understanding of theoretical concepts • Uses highly advanced analytical and/or quantitative tools • No errors
Quality of writing	<ul style="list-style-type: none"> • Very poorly organized • Very difficult to read and understand • Teems with typos and grammatical errors • Needs complete rewrite 	<ul style="list-style-type: none"> • Somewhat disorganized • Somewhat difficult to read and understand • Numerous typos and grammatical errors • Substantial revisions required 	<ul style="list-style-type: none"> • Mostly well organized • Mostly easy to read and understand • Some typos and grammatical errors • Some normal revisions required 	<ul style="list-style-type: none"> • Well organized • Easy to read and understand • Very few typos or grammatical errors • Very few revisions required 	<ul style="list-style-type: none"> • Very well organized • Very easy to read and understand • No typos or grammatical errors • No revisions required; acceptable as is
Quality of oral presentation	<ul style="list-style-type: none"> • Very poorly organized • Poor-quality slides or handouts • Was unable to address key questions 	<ul style="list-style-type: none"> • Somewhat disorganized • Some unclear slides or handouts • Had difficulty with several questions 	<ul style="list-style-type: none"> • Mostly well organized • Mostly clear slides and handouts • Addressed most questions acceptably 	<ul style="list-style-type: none"> • Well organized • Well thought-out slides and handouts • Addressed almost all questions professionally 	<ul style="list-style-type: none"> • Very well organized • Outstanding slides and handouts • Addressed all questions professionally

MS Thesis Proposal Rubric – Plan A

Attribute	Very Deficient 0	Somewhat Deficient 1	Acceptable 2	Very Good 3	Outstanding 4
Potential for success	<ul style="list-style-type: none"> • Low or no potential for success 	<ul style="list-style-type: none"> • Somewhat tenuous potential for success 	<ul style="list-style-type: none"> • Adequate potential for success 	<ul style="list-style-type: none"> • High potential for success 	<ul style="list-style-type: none"> • Excellent potential for success
Quality of research question	<ul style="list-style-type: none"> • Not stated, or very unclear • Entirely derivative • Anticipate no contribution 	<ul style="list-style-type: none"> • Stated somewhat confusingly • Slightly original, but largely derivative • Anticipate minor contributions 	<ul style="list-style-type: none"> • Stated explicitly • Somewhat original and creative • Anticipate limited contributions 	<ul style="list-style-type: none"> • Stated explicitly and clearly • Clearly original and creative • Anticipate at least one good contribution 	<ul style="list-style-type: none"> • Articulated very clearly • Highly original and creative • Anticipate several important contributions
Quality of proposed analysis	<ul style="list-style-type: none"> • Demonstrates little or no critical thinking • Demonstrates little or no understanding of theoretical concepts • Proposes inappropriate analytical and/or quantitative tools 	<ul style="list-style-type: none"> • Demonstrates rudimentary critical thinking • Demonstrates somewhat shaky understanding of theoretical concepts • Misses some important analytical and/or quantitative tools 	<ul style="list-style-type: none"> • Demonstrates average critical thinking • Demonstrates understanding of theoretical concepts • Proposes appropriate analytical and/or quantitative tools 	<ul style="list-style-type: none"> • Demonstrates mature critical thinking • Demonstrates clear understanding of theoretical concepts • Proposes advanced analytical and/or quantitative tools 	<ul style="list-style-type: none"> • Demonstrates sophisticated critical thinking • Demonstrates superior understanding of theoretical concepts • Proposes highly advanced analytical and/or quantitative tools
Quality of writing	<ul style="list-style-type: none"> • Very poorly organized • Very difficult to read and understand • Teems with typos and grammatical errors 	<ul style="list-style-type: none"> • Somewhat disorganized • Somewhat difficult to read and understand • Numerous typos and grammatical errors 	<ul style="list-style-type: none"> • Mostly well organized • Mostly easy to read and understand • Some typos and grammatical errors 	<ul style="list-style-type: none"> • Well organized • Easy to read and understand • Very few typos or grammatical errors 	<ul style="list-style-type: none"> • Very well organized • Very easy to read and understand • No typos or grammatical errors
Quality of oral presentation	<ul style="list-style-type: none"> • Very poorly organized • Poor-quality slides or handouts • Was unable to address key questions 	<ul style="list-style-type: none"> • Somewhat disorganized • Some unclear slides or handouts • Had difficulty with several questions 	<ul style="list-style-type: none"> • Mostly well organized • Mostly clear slides and handouts • Addressed most questions acceptably 	<ul style="list-style-type: none"> • Well organized • Well thought-out slides and handouts • Addressed almost all questions professionally 	<ul style="list-style-type: none"> • Very well organized • Outstanding slides and handouts • Addressed all questions professionally
Other – explain					

MS Thesis Rubric – Plan B

Attribute	Very Deficient 0	Somewhat Deficient 1	Acceptable 2	Very Good 3	Outstanding 4
Quality of research question	<ul style="list-style-type: none"> • Not stated, or very unclear • Entirely derivative • Closer to BS than MS work 	<ul style="list-style-type: none"> • Stated somewhat confusingly • Slightly original, but largely derivative • Makes minor contributions 	<ul style="list-style-type: none"> • Stated explicitly • Somewhat original and creative • Makes limited contributions 	<ul style="list-style-type: none"> • Stated explicitly and clearly • Clearly original and creative • Makes at least one good contribution 	<ul style="list-style-type: none"> • Articulated very clearly • Highly original and creative • Makes several important contributions
Quality of analysis	<ul style="list-style-type: none"> • Demonstrates little or no critical thinking • Demonstrates little or no understanding of theoretical concepts • Uses inappropriate analytical and/or quantitative tools • Many major errors 	<ul style="list-style-type: none"> • Demonstrates rudimentary critical thinking • Demonstrates somewhat shaky understanding of theoretical concepts • Misses some important analytical and/or quantitative tools • Some important errors 	<ul style="list-style-type: none"> • Demonstrates average critical thinking • Demonstrates understanding of theoretical concepts • Uses appropriate analytical and/or quantitative tools • No major errors 	<ul style="list-style-type: none"> • Demonstrates mature critical thinking • Demonstrates clear understanding of theoretical concepts • Uses advanced analytical and/or quantitative tools • Very few errors 	<ul style="list-style-type: none"> • Demonstrates sophisticated critical thinking • Demonstrates superior understanding of theoretical concepts • Uses highly advanced analytical and/or quantitative tools • No errors
Quality of writing	<ul style="list-style-type: none"> • Very poorly organized • Very difficult to read and understand • Teems with typos and grammatical errors • Needs complete rewrite 	<ul style="list-style-type: none"> • Somewhat disorganized • Somewhat difficult to read and understand • Numerous typos and grammatical errors • Substantial revisions required 	<ul style="list-style-type: none"> • Mostly well organized • Mostly easy to read and understand • Some typos and grammatical errors • Some normal revisions required 	<ul style="list-style-type: none"> • Well organized • Easy to read and understand • Very few typos or grammatical errors • Very few revisions required 	<ul style="list-style-type: none"> • Very well organized • Very easy to read and understand • No typos or grammatical errors • No revisions required; acceptable as is
Quality of oral presentation	<ul style="list-style-type: none"> • Very poorly organized • Poor-quality slides or handouts • Was unable to address key questions 	<ul style="list-style-type: none"> • Somewhat disorganized • Some unclear slides or handouts • Had difficulty with several questions 	<ul style="list-style-type: none"> • Mostly well organized • Mostly clear slides and handouts • Addressed most questions acceptably 	<ul style="list-style-type: none"> • Well organized • Well thought-out slides and handouts • Addressed almost all questions professionally 	<ul style="list-style-type: none"> • Very well organized • Outstanding slides and handouts • Addressed all questions professionally

MS Thesis Proposal Rubric – Plan B

Attribute	Very Deficient 0	Somewhat Deficient 1	Acceptable 2	Very Good 3	Outstanding 4
Potential for success	<ul style="list-style-type: none"> • Low or no potential for success 	<ul style="list-style-type: none"> • Somewhat tenuous potential for success 	<ul style="list-style-type: none"> • Adequate potential for success 	<ul style="list-style-type: none"> • High potential for success 	<ul style="list-style-type: none"> • Excellent potential for success
Quality of research question	<ul style="list-style-type: none"> • Not stated, or very unclear • Entirely derivative • Anticipate no contribution 	<ul style="list-style-type: none"> • Stated somewhat confusingly • Slightly original, but largely derivative • Anticipate minor contributions 	<ul style="list-style-type: none"> • Stated explicitly • Somewhat original and creative • Anticipate limited contributions 	<ul style="list-style-type: none"> • Stated explicitly and clearly • Clearly original and creative • Anticipate at least one good contribution 	<ul style="list-style-type: none"> • Articulated very clearly • Highly original and creative • Anticipate several important contributions
Quality of proposed analysis	<ul style="list-style-type: none"> • Demonstrates little or no critical thinking • Demonstrates little or no understanding of theoretical concepts • Proposes inappropriate analytical and/or quantitative tools 	<ul style="list-style-type: none"> • Demonstrates rudimentary critical thinking • Demonstrates somewhat shaky understanding of theoretical concepts • Misses some important analytical and/or quantitative tools 	<ul style="list-style-type: none"> • Demonstrates average critical thinking • Demonstrates understanding of theoretical concepts • Proposes appropriate analytical and/or quantitative tools 	<ul style="list-style-type: none"> • Demonstrates mature critical thinking • Demonstrates clear understanding of theoretical concepts • Proposes advanced analytical and/or quantitative tools 	<ul style="list-style-type: none"> • Demonstrates sophisticated critical thinking • Demonstrates superior understanding of theoretical concepts • Proposes highly advanced analytical and/or quantitative tools
Quality of writing	<ul style="list-style-type: none"> • Very poorly organized • Very difficult to read and understand • Teems with typos and grammatical errors 	<ul style="list-style-type: none"> • Somewhat disorganized • Somewhat difficult to read and understand • Numerous typos and grammatical errors 	<ul style="list-style-type: none"> • Mostly well organized • Mostly easy to read and understand • Some typos and grammatical errors 	<ul style="list-style-type: none"> • Well organized • Easy to read and understand • Very few typos or grammatical errors 	<ul style="list-style-type: none"> • Very well organized • Very easy to read and understand • No typos or grammatical errors
Quality of oral presentation	<ul style="list-style-type: none"> • Very poorly organized • Poor-quality slides or handouts • Was unable to address key questions 	<ul style="list-style-type: none"> • Somewhat disorganized • Some unclear slides or handouts • Had difficulty with several questions 	<ul style="list-style-type: none"> • Mostly well organized • Mostly clear slides and handouts • Addressed most questions acceptably 	<ul style="list-style-type: none"> • Well organized • Well thought-out slides and handouts • Addressed almost all questions professionally 	<ul style="list-style-type: none"> • Very well organized • Outstanding slides and handouts • Addressed all questions professionally
Other – explain					

Class Project Rubric - Analytical

Attribute	Very Deficient 0	Somewhat Deficient 1	Acceptable 2	Very Good 3	Outstanding 4
Quality of research question	<ul style="list-style-type: none"> • Not stated, or very unclear • Entirely derivative • Closer to BS than MS work 	<ul style="list-style-type: none"> • Stated somewhat confusingly • Slightly original, but largely derivative • Makes minor contributions 	<ul style="list-style-type: none"> • Stated explicitly • Somewhat original and creative • Makes limited contributions 	<ul style="list-style-type: none"> • Stated explicitly and clearly • Clearly original and creative • Makes at least one good contribution 	<ul style="list-style-type: none"> • Articulated very clearly • Highly original and creative • Makes several important contributions
Quality of the model	<ul style="list-style-type: none"> • The model is inappropriate to the problem 	<ul style="list-style-type: none"> • The model fails to capture some important features of the problem 	<ul style="list-style-type: none"> • The model mostly captures the essence of the problem 	<ul style="list-style-type: none"> • The model captures the essence of the problem in a skillful way 	<ul style="list-style-type: none"> • The model captures the essence of the problem in a sophisticated or creative way
Quality of analysis	<ul style="list-style-type: none"> • Demonstrates little or no critical thinking • Demonstrates little or no understanding of relevant concepts • Uses inappropriate tools • Many major errors 	<ul style="list-style-type: none"> • Demonstrates rudimentary critical thinking • Demonstrates somewhat shaky understanding of relevant concepts • Misses some important tools • Some important errors 	<ul style="list-style-type: none"> • Demonstrates average critical thinking • Demonstrates understanding of relevant concepts • Uses appropriate tools • No major errors 	<ul style="list-style-type: none"> • Demonstrates mature critical thinking • Demonstrates clear understanding of relevant concepts • Uses appropriate tools skillfully • Very few errors 	<ul style="list-style-type: none"> • Demonstrates sophisticated critical thinking • Demonstrates superior understanding of relevant concepts • Demonstrates superior skill in the use of tools • No errors
Quality of writing	<ul style="list-style-type: none"> • Very poorly organized • Very difficult to read and understand • Teems with typos and grammatical errors 	<ul style="list-style-type: none"> • Somewhat disorganized • Somewhat difficult to read and understand • Numerous typos and grammatical errors 	<ul style="list-style-type: none"> • Mostly well organized • Mostly easy to read and understand • Some typos and grammatical errors 	<ul style="list-style-type: none"> • Well organized • Easy to read and understand • Very few typos or grammatical errors 	<ul style="list-style-type: none"> • Very well organized • Very easy to read and understand • No typos or grammatical errors
Quality of oral presentation	<ul style="list-style-type: none"> • Very poorly organized • Poor-quality slides or handouts • Was unable to address key questions 	<ul style="list-style-type: none"> • Somewhat disorganized • Some unclear slides or handouts • Had difficulty with several questions 	<ul style="list-style-type: none"> • Mostly well organized • Mostly clear slides and handouts • Addressed most questions acceptably 	<ul style="list-style-type: none"> • Well organized • Well thought-out slides and handouts • Addressed almost all questions professionally 	<ul style="list-style-type: none"> • Very well organized • Outstanding slides and handouts • Addressed all questions professionally

Class Project Rubric - Quantitative

Attribute	Very Deficient 0	Somewhat Deficient 1	Acceptable 2	Very Good 3	Outstanding 4
Quality of research question	<ul style="list-style-type: none"> • Not stated, or very unclear • Entirely derivative • Closer to BS than MS work 	<ul style="list-style-type: none"> • Stated somewhat confusingly • Slightly original, but largely derivative • Makes minor contributions 	<ul style="list-style-type: none"> • Stated explicitly • Somewhat original and creative • Makes limited contributions 	<ul style="list-style-type: none"> • Stated explicitly and clearly • Clearly original and creative • Makes at least one good contribution 	<ul style="list-style-type: none"> • Articulated very clearly • Highly original and creative • Makes several important contributions
Quality of data	<ul style="list-style-type: none"> • Data are clearly inadequate for answering the research question 	<ul style="list-style-type: none"> • Data are somewhat inadequate for answering the research question 	<ul style="list-style-type: none"> • Data are mostly adequate for answering the research question 	<ul style="list-style-type: none"> • Data are clearly adequate for answering the research question and collected or constructed skillfully 	<ul style="list-style-type: none"> • Data are clearly adequate for answering the research question, and collected or constructed in a sophisticated or creative way
Quality of analysis	<ul style="list-style-type: none"> • Demonstrates little or no critical thinking • Demonstrates little or no understanding of relevant concepts • Uses inappropriate tools • Many major errors 	<ul style="list-style-type: none"> • Demonstrates rudimentary critical thinking • Demonstrates somewhat shaky understanding of relevant concepts • Misses some important tools • Some important errors 	<ul style="list-style-type: none"> • Demonstrates average critical thinking • Demonstrates understanding of relevant concepts • Uses appropriate tools • No major errors 	<ul style="list-style-type: none"> • Demonstrates mature critical thinking • Demonstrates clear understanding of relevant concepts • Uses appropriate tools skillfully • Very few errors 	<ul style="list-style-type: none"> • Demonstrates sophisticated critical thinking • Demonstrates superior understanding of relevant concepts • Demonstrates superior skill in the use of tools • No errors
Quality of writing	<ul style="list-style-type: none"> • Very poorly organized • Very difficult to read and understand • Teems with typos and grammatical errors 	<ul style="list-style-type: none"> • Somewhat disorganized • Somewhat difficult to read and understand • Numerous typos and grammatical errors 	<ul style="list-style-type: none"> • Mostly well organized • Mostly easy to read and understand • Some typos and grammatical errors 	<ul style="list-style-type: none"> • Well organized • Easy to read and understand • Very few typos or grammatical errors 	<ul style="list-style-type: none"> • Very well organized • Very easy to read and understand • No typos or grammatical errors
Quality of oral presentation	<ul style="list-style-type: none"> • Very poorly organized • Poor-quality slides or handouts • Was unable to address key questions 	<ul style="list-style-type: none"> • Somewhat disorganized • Some unclear slides or handouts • Had difficulty with several questions 	<ul style="list-style-type: none"> • Mostly well organized • Mostly clear slides and handouts • Addressed most questions acceptably 	<ul style="list-style-type: none"> • Well organized • Well thought-out slides and handouts • Addressed almost all questions professionally 	<ul style="list-style-type: none"> • Very well organized • Outstanding slides and handouts • Addressed all questions professionally

Research Ethics Rubric

Attribute	Very Deficient 0	Somewhat Deficient 1	Acceptable 2	Very Good 3	Outstanding 4
Identification of activities/issues in research that may present ethical challenges	<ul style="list-style-type: none"> • Fails to properly identify most or all ethical challenges 	<ul style="list-style-type: none"> • Fails to identify some key ethical challenges 	<ul style="list-style-type: none"> • Mostly identifies the key ethical challenges 	<ul style="list-style-type: none"> • Clearly identifies all ethical challenges 	<ul style="list-style-type: none"> • Clearly identifies all ethical challenges, showing deep understanding
Identification of standards of ethical behavior appropriate to each activity/issue	<ul style="list-style-type: none"> • Fails to properly identify most or all ethical standards 	<ul style="list-style-type: none"> • Fails to identify some key ethical standards 	<ul style="list-style-type: none"> • Mostly identifies the key ethical standards 	<ul style="list-style-type: none"> • Clearly identifies all ethical standards 	<ul style="list-style-type: none"> • Clearly identifies all ethical standards, showing deep understanding
Articulation of reasons underlying those standards	<ul style="list-style-type: none"> • Articulates no underlying reasons or does so very poorly 	<ul style="list-style-type: none"> • Articulates underlying reasons somewhat imperfectly or unclearly 	<ul style="list-style-type: none"> • Adequately articulates most underlying reasons 	<ul style="list-style-type: none"> • Clearly articulates all underlying reasons 	<ul style="list-style-type: none"> • Clearly articulates all underlying reasons, showing deep understanding
Other – explain					

Professional Ethics Case Study Rubric

Attribute	Very Deficient 0	Somewhat Deficient 1	Acceptable 2	Very Good 3	Outstanding 4
Identification of activities/issues in financial practice that may present ethical challenges	<ul style="list-style-type: none"> • Fails to properly identify most or all ethical challenges 	<ul style="list-style-type: none"> • Fails to identify some key ethical challenges 	<ul style="list-style-type: none"> • Mostly identifies the key ethical challenges 	<ul style="list-style-type: none"> • Clearly identifies all ethical challenges 	<ul style="list-style-type: none"> • Clearly identifies all ethical challenges, showing deep understanding
Construction of ethical arguments by applying moral standards and ethics frameworks	<ul style="list-style-type: none"> • Fails to properly construct ethical arguments • Fails to properly apply moral standards and ethics frameworks 	<ul style="list-style-type: none"> • Constructs somewhat inadequate ethical arguments • Applies moral standards and ethics frameworks in somewhat flawed ways 	<ul style="list-style-type: none"> • Constructs adequate ethical arguments • Applies moral standards and ethics frameworks mostly correctly 	<ul style="list-style-type: none"> • Constructs clear ethical arguments • Applies moral standards and ethics frameworks skillfully 	<ul style="list-style-type: none"> • Constructs sophisticated ethical arguments • Applies moral standards and ethics frameworks showing deep understanding
Proposal and defense of resolution justified by arguments	<ul style="list-style-type: none"> • Proposes no resolution or offers a very poor defense 	<ul style="list-style-type: none"> • Proposes a resolution with a somewhat imperfect defense 	<ul style="list-style-type: none"> • Proposes and adequately defends a resolution 	<ul style="list-style-type: none"> • Proposes and skillfully defends a resolution 	<ul style="list-style-type: none"> • Proposes a resolution and offers an impressively sophisticated defense
Other – explain					

MS Thesis Rubric – Plan A, Strategies for Review and Improvement

Attribute	Strategies for Review	Strategies for Individual Student Performance and Program Improvement
Potential for publication	<ul style="list-style-type: none"> •After each thesis defense, the thesis committee reviews the potential for publication •The assessment committee will periodically review the publication potential of theses defended 	<ul style="list-style-type: none"> •Individual students may be asked to edit and improve the overall quality of the thesis and the potential for publication. To improve the potential for publication, they may be asked to review a range of recent high-quality published papers and consult and work with faculty with extensive publication experience. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on improving the publication potential of theses. Persistent problems with the publication potential of theses may lead to department program changes.
Quality of research question	<ul style="list-style-type: none"> •After each thesis defense, the thesis committee reviews the quality of the research question •The assessment committee will periodically review the quality of the research questions in theses defended 	<ul style="list-style-type: none"> •Students may be asked to reconsider and revise their research question or minor questions within their general question. For example, they may be asked to review and improve their understanding of the most recent academic literature related to their research, in order to sharpen or focus their question or to better address an outstanding question in the research community. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the research questions in theses. Persistent problems with the quality of research questions in theses may lead to department program changes.
Quality of analysis	<ul style="list-style-type: none"> •After each thesis defense, the thesis committee reviews the quality of the analysis •The assessment committee will periodically review the quality of the analyses in theses defended 	<ul style="list-style-type: none"> •Students may be asked to consult faculty, journal articles and textbooks in order to improve their analysis. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the analyses in theses. Persistent problems with the quality of analyses in theses may lead to department program changes.
Quality of writing	<ul style="list-style-type: none"> •After each thesis defense, the thesis committee reviews the quality of the writing •The assessment committee will periodically review the quality of the writing in theses defended 	<ul style="list-style-type: none"> •Students may be asked to attend English language and writing courses; schedule one-on-one or group conferences at the Writing Center in the Ellbogen Center for Teaching and Learning; review examples of high-quality past MS plan A theses and guidelines for high-quality thesis writing; review examples of problematic parts of their writing and discuss remedial actions with their advisors; schedule weekly appointments with their advisors to document improvements in writing quality; and schedule appointments at the Business Communications Office. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the writing in theses. Persistent problems with the quality of the writing in theses may lead to department program changes, such as mandatory writing courses or mandatory appointments at the Business Communications Office before the defense.
Quality of	<ul style="list-style-type: none"> •After each thesis defense, the thesis committee reviews the quality of the oral 	<ul style="list-style-type: none"> •Students may be asked to attend a public speaking course; appropriate English language and writing courses; schedule an appointment at the Business Communications Office to improve oral communications skills; attend

<p>oral presentation</p>	<p>presentation</p> <ul style="list-style-type: none"> •The assessment committee will periodically review the quality of the oral thesis defenses 	<p>research presentations by other students and faculty; review the presentation materials or audio-visual recordings of high-quality past research presentation as well as written guidelines for high-quality presentations; review examples of problematic parts of their presentations and discuss potential remedial courses or action with their thesis advisors; and schedule weekly appointments with their advisors to document improvements in their presentation quality.</p> <ul style="list-style-type: none"> •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of their oral thesis presentations. Persistent problems with the quality of oral thesis presentations may lead to department program changes.
<p>Other – explain</p>	<ul style="list-style-type: none"> •After each thesis defense, the thesis committee reviews any other issues related to the quality of the thesis •The assessment committee will periodically review the set of other issues discussed following thesis defenses 	<ul style="list-style-type: none"> •The students may be asked to take different actions, which will depend on the relevant issue, in order to improve these aspects of the thesis quality. •Future thesis advisors and committees may choose to pay special attention, and future students may be asked to pay special attention, to thesis attributes which differ from the ones discussed above but which have been considered important. •Persistent problems with other important thesis attributes, apart from the ones discussed above, may lead to department program changes.

MS Thesis Proposal Rubric – Plan A, Strategies for Review and Improvement

Attribute	Strategies for Review	Strategies for Individual Student Performance and Program Improvement
Potential for success	<ul style="list-style-type: none"> •After each proposal defense, the thesis committee reviews the potential for success •The assessment committee will periodically review the success potential of thesis proposals defended 	<ul style="list-style-type: none"> •Individual students may be asked to edit and improve the overall quality of the thesis proposal and the potential for success. For example, they may be asked to reformulate, narrow or expand the scope of the research question or reconsider the feasibility of the theoretical or empirical inquiry. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on improving the potential for success of thesis proposals. Persistent problems with the success potential of theses may lead to department program changes.
Quality of research question	<ul style="list-style-type: none"> •After each proposal defense, the thesis committee reviews the quality of the research question •The assessment committee will periodically review the quality of the research questions in thesis proposals defended during the year 	<ul style="list-style-type: none"> •Students may be asked to reconsider and revise their research question or minor questions within their general question. For example, they may be asked to review and improve their understanding of the most recent academic literature related to their research, in order to sharpen or focus their question or to better address an outstanding question in the research community. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the research questions in thesis proposals. Persistent problems with the quality of research questions in thesis proposals may lead to department program changes.
Quality of proposed analysis	<ul style="list-style-type: none"> •After each proposal defense, the thesis committee reviews the quality of the proposed analysis •The assessment committee will periodically review the quality of the proposed analyses in thesis proposals defended. 	<ul style="list-style-type: none"> •Students may be asked to consult faculty, journal articles and textbooks in order to understand the limitations and improve the quality of their proposed analysis. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the analyses that are proposed in thesis proposals. Persistent problems with the quality of proposed analyses in thesis proposals may lead to department program changes.
Quality of writing	<ul style="list-style-type: none"> •After each proposal defense, the thesis committee reviews the quality of the writing •The assessment committee will periodically review the quality of the writing in thesis proposals defended 	<ul style="list-style-type: none"> •Students may be asked to attend English language and writing courses; schedule one-on-one or group conferences at the Writing Center in the Ellbogen Center for Teaching and Learning; review examples of high-quality past MS plan A proposals and guidelines for high-quality thesis writing; review examples of problematic parts of their writing and discuss remedial actions with their advisors; schedule weekly appointments with their advisors to document improvements in writing quality; and schedule appointments at the Business Communications Office. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the writing in proposals. Persistent problems with the quality of the writing in theses may lead to department program changes, such as mandatory writing courses or mandatory appointments at the Business Communications Office before the defense.
Quality of oral presentation	<ul style="list-style-type: none"> •After each proposal defense, the thesis committee reviews the quality of the oral presentation •The assessment committee will 	<ul style="list-style-type: none"> •Students may be asked to attend a public speaking course; appropriate English language and writing courses; schedule an appointment at the Business Communications Office to improve oral communications skills; attend research and proposed research presentations by other students and faculty; review the presentation materials or audio-visual recordings of high-quality past research and research proposal presentations as well as written

	periodically review the quality of the oral proposal defenses	<p>guidelines for high-quality presentations; review examples of problematic parts of their proposal presentations and discuss potential remedial actions with their thesis advisors; and schedule weekly appointments with their advisors to document improvements in their presentation quality.</p> <ul style="list-style-type: none"> •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the oral presentation of thesis proposals. Persistent problems with the quality of oral presentations of thesis proposals may lead to department program changes.
Other – explain	<ul style="list-style-type: none"> •After each proposal defense, the thesis committee reviews any other issues related to the quality of the thesis •The assessment committee will periodically review the set of other issues discussed following proposal defenses 	<ul style="list-style-type: none"> •The students may be asked to take different actions, which will depend on the relevant issue, in order to improve these aspects of the proposal quality. •Future thesis advisors and committees may choose to pay special attention, and future students may be asked to pay special attention, to proposal attributes which differ from the ones discussed above but which have been considered important. •Persistent problems with other important proposal attributes, apart from the ones discussed above, may lead to department program changes.

MS Thesis Rubric – Plan B, Strategies for Review and Improvement

Attribute	Strategies for Review	Strategies for Individual Student Performance and Program Improvement
Quality of research question	<ul style="list-style-type: none"> •After each thesis defense, the thesis committee reviews the quality of the research question •The assessment committee will periodically review the quality of the research questions in theses defended 	<ul style="list-style-type: none"> •Students may be asked to reconsider and revise their research question or minor questions within their general question. For example, they may be asked to review and improve their understanding of the most recent academic literature related to their research, in order to sharpen or focus their question or to better address an outstanding question in the research community. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the research questions in theses. Persistent problems with the quality of research questions in theses may lead to department program changes.
Quality of analysis	<ul style="list-style-type: none"> •After each thesis defense, the thesis committee reviews the quality of the analysis •The assessment committee will periodically review the quality of the analyses in theses defended 	<ul style="list-style-type: none"> •Students may be asked to consult faculty, journal articles and textbooks in order to improve their analysis. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the analyses in theses. Persistent problems with the quality of analyses in theses may lead to department program changes.
Quality of writing	<ul style="list-style-type: none"> •After each thesis defense, the thesis committee reviews the quality of the writing •The assessment committee will periodically review the quality of the writing in theses defended 	<ul style="list-style-type: none"> •Students may be asked to attend English language and writing courses; schedule one-on-one or group conferences at the Writing Center in the Ellbogen Center for Teaching and Learning; review examples of high-quality past MS Plan B theses and guidelines for high-quality thesis writing; review examples of problematic parts of their writing and discuss remedial actions with their advisors; schedule weekly appointments with their advisors to document improvements in writing quality; and schedule appointments at the Business Communications Office. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the writing in theses. Persistent problems with the quality of the writing in theses may lead to department program changes, such as mandatory writing courses or mandatory appointments at the Business Communications Office before the defense.
Quality of oral presentation	<ul style="list-style-type: none"> •After each thesis defense, the thesis committee reviews the quality of the oral presentation •The assessment committee will periodically review the quality of the oral thesis defenses 	<ul style="list-style-type: none"> •Students may be asked to attend a public speaking course; appropriate English language and writing courses; schedule an appointment at the Business Communications Office to improve oral communications skills; attend research presentations by other students and faculty; review the presentation materials or audio-visual recordings of high-quality past research presentation as well as written guidelines for high-quality presentations; review examples of problematic parts of their presentations and discuss potential remedial courses or action with their thesis advisors; and schedule weekly appointments with their advisors to document improvements in their presentation quality. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of their oral thesis presentations. Persistent problems with the quality of oral thesis presentations may lead to department program changes.

<p>Other – explain</p>	<ul style="list-style-type: none"> •After each thesis defense, the thesis committee reviews any other issues related to the quality of the thesis •The assessment committee will periodically review the set of other issues discussed following thesis defenses 	<ul style="list-style-type: none"> •The students may be asked to take different actions, which will depend on the relevant issue, in order to improve these aspects of the thesis quality. •Future thesis advisors and committees may choose to pay special attention, and future students may be asked to pay special attention, to thesis attributes which differ from the ones discussed above but which have been considered important. •Persistent problems with other important thesis attributes, apart from the ones discussed above, may lead to department program changes.
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MS Thesis Proposal Rubric – Plan B, Strategies for Review and Improvement

Attribute	Strategies for Review	Strategies for Individual Student Performance and Program Improvement
Potential for success	<ul style="list-style-type: none"> •After each proposal defense, the thesis committee reviews the potential for success •The assessment committee will periodically review the success potential of thesis proposals defended 	<ul style="list-style-type: none"> •Individual students may be asked to edit and improve the overall quality of the thesis proposal and the potential for success. For example, they may be asked to reformulate, narrow or expand the scope of the research question or reconsider the feasibility of the theoretical or empirical inquiry. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on improving the potential for success of thesis proposals. Persistent problems with the success potential of theses may lead to department program changes.
Quality of research question	<ul style="list-style-type: none"> •After each proposal defense, the thesis committee reviews the quality of the research question •The assessment committee will periodically review the quality of the research questions in thesis proposals defended during the year 	<ul style="list-style-type: none"> •Students may be asked to reconsider and revise their research question or minor questions within their general question. For example, they may be asked to review and improve their understanding of the most recent academic literature related to their research, in order to sharpen or focus their question or to better address an outstanding question in the research community. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the research questions in thesis proposals. Persistent problems with the quality of research questions in thesis proposals may lead to department program changes.
Quality of proposed analysis	<ul style="list-style-type: none"> •After each proposal defense, the thesis committee reviews the quality of the proposed analysis •The assessment committee will periodically review the quality of the proposed analyses in thesis proposals defended. 	<ul style="list-style-type: none"> •Students may be asked to consult faculty, journal articles and textbooks in order to understand the limitations and improve the quality of their proposed analysis. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the analyses that are proposed in thesis proposals. Persistent problems with the quality of proposed analyses in thesis proposals may lead to department program changes.
Quality of writing	<ul style="list-style-type: none"> •After each proposal defense, the thesis committee reviews the quality of the writing •The assessment committee will periodically review the quality of the writing in thesis proposals defended 	<ul style="list-style-type: none"> •Students may be asked to attend English language and writing courses; schedule one-on-one or group conferences at the Writing Center in the Ellbogen Center for Teaching and Learning; review examples of high-quality past MS plan B proposals and guidelines for high-quality thesis writing; review examples of problematic parts of their writing and discuss remedial actions with their advisors; schedule weekly appointments with their advisors to document improvements in writing quality; and schedule appointments at the Business Communications Office. •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the writing in proposals. Persistent problems with the quality of the writing in theses may lead to department program changes, such as mandatory writing courses or mandatory appointments at the Business Communications Office before the defense.
Quality of oral presentation	<ul style="list-style-type: none"> •After each proposal defense, the thesis committee reviews the quality of the oral presentation •The assessment committee will 	<ul style="list-style-type: none"> •Students may be asked to attend a public speaking course; appropriate English language and writing courses; schedule an appointment at the Business Communications Office to improve oral communications skills; attend research and proposed research presentations by other students and faculty; review the presentation materials or audio-visual recordings of high-quality past research and research proposal presentations as well as written

	periodically review the quality of the oral proposal defenses	<p>guidelines for high-quality presentations; review examples of problematic parts of their proposal presentations and discuss potential remedial actions with their thesis advisors; and schedule weekly appointments with their advisors to document improvements in their presentation quality.</p> <ul style="list-style-type: none"> •Future thesis advisors and committees may choose to focus more, and future students may be asked to focus more, on the quality of the oral presentation of thesis proposals. Persistent problems with the quality of oral presentations of thesis proposals may lead to department program changes.
Other – explain	<ul style="list-style-type: none"> •After each proposal defense, the thesis committee reviews any other issues related to the quality of the thesis •The assessment committee will periodically review the set of other issues discussed following proposal defenses 	<ul style="list-style-type: none"> •The students may be asked to take different actions, which will depend on the relevant issue, in order to improve these aspects of the proposal quality. •Future thesis advisors and committees may choose to pay special attention, and future students may be asked to pay special attention, to proposal attributes which differ from the ones discussed above but which have been considered important. •Persistent problems with other important proposal attributes, apart from the ones discussed above, may lead to department program changes.

Class Project Rubric – Analytical, Strategies for Review and Improvement

Attribute	Strategies for Review	Strategies for Individual Student Performance and Program Improvement
Quality of research question	<ul style="list-style-type: none"> •The instructor reviews the quality of the research question. •The assessment committee will periodically be briefed by the relevant instructor regarding the quality of the research questions. 	<ul style="list-style-type: none"> •Students may be asked to reconsider and revise their research question or minor questions within their general question. For example, they may be asked to review and improve their understanding of the most recent academic literature related to their research, in order to sharpen or focus their question or to better address an outstanding question in the research community. •Future instructors may choose to focus more, and future students may be asked to focus more, on the quality of the research questions in the class project. Persistent problems with the quality of the research questions in the class projects may lead to changes in the design of the project assignment or course.
Quality of the model	<ul style="list-style-type: none"> •The instructor reviews the quality of the model. •The assessment committee will periodically be briefed by the relevant instructor regarding the quality of the models. 	<ul style="list-style-type: none"> •Students may be asked to reconsider and revise their model or minor aspects of their model. For example, they may be asked to review and improve their modeling assumptions, solutions concepts and solution techniques. •Future instructors may choose to focus more, and future students may be asked to focus more, on the quality of the models in the class project. Persistent problems with the quality of the models in the class projects may lead to changes in the design of the project assignment or course.
Quality of analysis	<ul style="list-style-type: none"> •The instructor reviews the quality of the analysis. •The assessment committee will periodically be briefed by the relevant instructor regarding the quality of the analysis. 	<ul style="list-style-type: none"> •Students may be asked to meet with the instructor and review particular textbooks and course materials in order to improve their analysis. •Future instructors may choose to focus more, and future students may be asked to focus more, on the quality of the analysis in the class project. Persistent problems with the quality of analyses in the class projects may lead to changes in the design of the project assignment or course.
Quality of writing	<ul style="list-style-type: none"> •The instructor reviews the quality of the writing. •The assessment committee will periodically be briefed by the relevant instructor regarding the quality of the writing. 	<ul style="list-style-type: none"> •Students may be asked to schedule one-on-one or group conferences at the Writing Center in the Ellbogen Center for Teaching and Learning; review examples of high-quality past projects and guidelines for high-quality project writing; review examples of problematic parts of their writing and discuss potential remedial actions with the instructor; schedule weekly appointments with the instructor to document improvements in the writing quality; and schedule appointments at the Business Communications Office. •Future instructors may choose to focus more, and future students may be asked to focus more, on the quality of the writing in the class project. Persistent problems with the quality of the writing in the project may lead to changes in the design of the project assignment or course, such as mandatory appointments at the Business Communications Office before the project completion.
Quality of oral presentation	<ul style="list-style-type: none"> •The instructor reviews the quality of the oral presentation. •The assessment committee will periodically be briefed by the relevant instructor regarding the quality of the 	<ul style="list-style-type: none"> •Students may be asked to schedule an appointment at the Business Communications Office to improve oral communications skills; attend research presentations by other students and faculty; review the presentation materials or audio-visual recordings of high-quality past presentation as well as written guidelines for high-quality presentations; review examples of problematic parts of their presentations and discuss potential remedial actions with the instructor.

	oral presentations.	<ul style="list-style-type: none"> •Future instructors may choose to focus more, and future students may be asked to focus more, on the quality of the oral project presentation. Persistent problems with the quality of the oral presentations may lead to changes in the design of the project assignment or course.
Other – explain	<ul style="list-style-type: none"> •The instructor reviews other aspects of the project quality. •The assessment committee will periodically be briefed by the relevant instructor regarding other aspects of the project quality. 	<ul style="list-style-type: none"> •The students may be asked to take different actions, which will depend on the relevant issue, in order to improve these aspects of the project quality. •Future instructors may choose to focus more, and future students may be asked to focus more, on project attributes which differ from the ones discussed above but which have been considered important. •Persistent problems with other important project attributes, apart from the ones discussed above, may lead to changes in the design of the project assignment or course.

Class Project Rubric – Quantitative, Strategies for Review and Improvement

Attribute	Strategies for Review	Strategies for Individual Student Performance and Program Improvement
Quality of research question	<ul style="list-style-type: none"> •The instructor reviews the quality of the research question. •The assessment committee will periodically be briefed by the relevant instructor regarding the quality of the research questions. 	<ul style="list-style-type: none"> •Students may be asked to reconsider and revise their research question or minor questions within their general question. For example, they may be asked to review and improve their understanding of the most recent academic literature related to their research, in order to sharpen or focus their question or to better address an outstanding question in the research community. •Future instructors may choose to focus more, and future students may be asked to focus more, on the quality of the research questions in the class project. Persistent problems with the quality of the research questions in the class projects may lead to changes in the design of the project assignment or course.
Quality of data	<ul style="list-style-type: none"> •The instructor reviews the quality of the data. •The assessment committee will periodically be briefed by the relevant instructor regarding the quality of the project data. 	<ul style="list-style-type: none"> •Students may be asked to reconsider and revise their data selection or parts of their data selection. For example, they may be asked to review and improve the quality of the data and its relevance to answer the stated research question. •Future instructors may choose to focus more, and future students may be asked to focus more, on the quality of the data in the class project. Persistent problems with the quality of the data in the class projects may lead to changes in the design of the project assignment or course.
Quality of analysis	<ul style="list-style-type: none"> •The instructor reviews the quality of the analysis. •The assessment committee will periodically be briefed by the relevant instructor regarding the quality of the analysis. 	<ul style="list-style-type: none"> •Students may be asked to meet with the instructor and review particular textbooks and course materials in order to improve their analysis. •Future instructors may choose to focus more, and future students may be asked to focus more, on the quality of the analysis in the class project. Persistent problems with the quality of analyses in the class projects may lead to changes in the design of the project assignment or course.
Quality of writing	<ul style="list-style-type: none"> •The instructor reviews the quality of the writing. •The assessment committee will periodically be briefed by the relevant instructor regarding the quality of the writing. 	<ul style="list-style-type: none"> •Students may be asked to schedule one-on-one or group conferences at the Writing Center in the Ellbogen Center for Teaching and Learning; review examples of high-quality past projects and guidelines for high-quality project writing; review examples of problematic parts of their writing and discuss potential remedial actions with the instructor; schedule weekly appointments with the instructor to document improvements in the writing quality; and schedule appointments at the Business Communications Office. •Future instructors may choose to focus more, and future students may be asked to focus more, on the quality of the writing in the class project. Persistent problems with the quality of the writing in the project may lead to changes in the design of the project assignment or course, such as mandatory appointments at the Business Communications Office before the project completion.
Quality of oral presentation	<ul style="list-style-type: none"> •The instructor reviews the quality of the oral presentation. •The assessment committee will periodically be briefed by the relevant instructor regarding the quality of the oral presentations. 	<ul style="list-style-type: none"> •Students may be asked to schedule an appointment at the Business Communications Office to improve oral communications skills; attend research presentations by other students and faculty; review the presentation materials or audio-visual recordings of high-quality past presentation as well as written guidelines for high-quality presentations; review examples of problematic parts of their presentations and discuss potential remedial actions with the instructor. •Future instructors may choose to focus more, and future students may be asked to focus more, on the quality of

		the oral project presentation. Persistent problems with the quality of the oral presentations may lead to changes in the design of the project assignment or course.
Other – explain	<ul style="list-style-type: none"> •The instructor reviews other aspects of the project quality. •The assessment committee will periodically be briefed by the relevant instructor regarding other aspects of the project quality. 	<ul style="list-style-type: none"> •The students may be asked to take different actions, which will depend on the relevant issue, in other to improve these aspects of the project quality. •Future instructors may choose to focus more, and future students may be asked to focus more, on project attributes which differ from the ones discussed above but which have been considered important. •Persistent problems with other important project attributes, apart from the ones discussed above, may lead to changes in the design of the project assignment or course.

Research Ethics Rubric, Strategies for Review and Improvement

Attribute	Strategies for Review	Strategies for Individual Student Performance and Program Improvement
Identification of activities/issues in research that may present ethical challenges	<ul style="list-style-type: none"> •The instructor reviews the degree of success in identification of activities /issues in research that may present ethical challenges •The assessment committee will periodically be briefed by the relevant instructor regarding the degree of success. 	<ul style="list-style-type: none"> •Students may be asked to reflect and meet with the instructor to discuss how activities/issues in the research process and particular research projects may present ethical challenges. They may be asked to review the workshop materials and read a collection of research ethics studies that successfully identify activities/issues in research that may present ethical challenges. •Future instructors may choose to focus more, and future students may be asked to focus more, on identification of activities/ issues in research that may present ethical challenges. Persistent problems with the identification of activities/issues in research that may present ethical challenges may lead to changes in the design of the workshop.
Identification of standards of ethical behavior appropriate to each activity/issue	<ul style="list-style-type: none"> •The instructor reviews the degree of success in identification of standards of ethical behavior appropriate to each activity/issue •The assessment committee will periodically be briefed by the relevant instructor regarding the degree of success. 	<ul style="list-style-type: none"> •Students may be asked to reflect and critically asses their identification of standards of ethical behavior appropriate to different research-related activities/issues. They may be asked to review the workshop materials and read a collection of research ethics studies that successfully identify standards of ethical behavior appropriate to different activities/issues. •Future instructors may choose to focus more, and future students may be asked to focus more, on identification of standards of ethical behavior appropriate to specific research-related activities/issues. Persistent problems with identification of standards of ethical behavior appropriate to specific activities/issues may lead to changes in the design of the workshop.
Articulation of reasons	<ul style="list-style-type: none"> •The instructor reviews the degree of success in articulation of reasons 	<ul style="list-style-type: none"> •Students may be asked to reflect and critically asses their articulation of reasons underlying the standards they identify. They may be asked to revise, refine, expand and better justify the reasoning underlying the standards.

underlying those standards	<p>underlying those standards.</p> <ul style="list-style-type: none"> •The assessment committee will periodically be briefed by the relevant instructor regarding the degree of success. 	<ul style="list-style-type: none"> •Future instructors may choose to focus more, and future students may be asked to focus more, on articulation of reasons underlying ethics standards appropriate to specific research-related activities/issues. Persistent problems with articulation of reasons underlying ethics standards may lead to changes in the design of the workshop.
Other – explain	<ul style="list-style-type: none"> •The instructor reviews other aspects of the research-methods workshop experience. •The assessment committee will periodically be briefed by the relevant instructor regarding other aspects of the workshop experience. 	<ul style="list-style-type: none"> •Students may be asked to reflect and critically assess other ethics-related aspects of the research process and particular research projects. They may be asked to review the workshop materials and read a collection of comparable case studies that will help them to address these other aspects. •Future instructors may choose to focus more, and future students may be asked to focus more, on other ethics-related aspects in research or linked to particular research projects. Persistent problems with addressing other ethics-related aspects in research or particular research projects may lead to changes in the design of the workshop.

Professional Ethics Case Study Rubric, Strategies for Review and Improvement

Attribute	Strategies for Review	Strategies for Individual Student Performance and Program Improvement
Identification of activities/ issues in finance that may present ethical challenges	<ul style="list-style-type: none"> •The instructor reviews the degree of success in identification of activities /issues in finance that may present ethical challenges •The assessment committee will periodically be briefed by the relevant instructor regarding the degree of success. 	<ul style="list-style-type: none"> •Students may be asked to reflect more on their case study and meet with the instructor to discuss how the activities/issues in the case study may present ethical challenges. They may be asked to identify, review and apply the philosophical, psychological, sociological and experimental economics and finance literature that is related to their case study to improve the identification of potential ethics-related activities/issues. They may be asked to review the course materials, read a collection of comparable case studies that successfully identify activities/ issues in finance that may present ethical challenges. •Future instructors may choose to focus more, and future students may be asked to focus more, on identification of activities/ issues in finance that may present ethical challenges. Persistent problems with the identification of activities/ issues in finance that may present ethical challenges may lead to changes in the design of the project assignment or course.
Construction of ethical arguments by applying moral standards and ethics frameworks	<ul style="list-style-type: none"> •The instructor reviews the degree of success in construction of ethical arguments by applying moral standards and ethics frameworks •The assessment committee will periodically be briefed by the relevant instructor regarding the degree of success. 	<ul style="list-style-type: none"> •Students may be asked to reflect, critically asses and meet with the instructor to discuss the construction of their ethical arguments by applying moral standards and ethics frameworks. They may be asked to revise, refine or expand the moral standards and ethics frameworks which they use to build their arguments and to clarify, better justify and further develop the arguments. •Future instructors may choose to focus more, and future students may be asked to focus more, on construction of ethical arguments by applying moral standards and ethics frameworks. Persistent problems with construction of arguments by applying moral standards and ethics frameworks in the case studies may lead to changes in the design of the assignment or course.
Proposal and defense of resolution justified by arguments	<ul style="list-style-type: none"> •The instructor reviews the degree of success in proposal and defense of resolution justified by arguments •The assessment committee will periodically be briefed by the relevant instructor regarding the degree of success. 	<ul style="list-style-type: none"> •Students may be asked to reflect, critically asses and meet with the instructor to discuss their proposal and defense of resolution of ethical challenges justified by the arguments. They may be asked to revise, refine or expand the proposal and to further develop the defense for the solution proposal. •Future instructors may choose to focus more, and future students may be asked to focus more, on proposal and defense of resolution justified by arguments. Persistent problems with proposal and defense of resolution justified by arguments in the case studies may lead to changes in the design of the assignment or course.
Other – explain	<ul style="list-style-type: none"> •The instructor reviews other aspects of the ethics case study. •The assessment committee will periodically be briefed by the relevant instructor regarding other aspects of the case studies. 	<ul style="list-style-type: none"> •Students may be asked to reflect and meet with the instructor to discuss other ethics-related aspects of the case study. They may be asked to review the course materials and read a collection of comparable case studies that will help them to address these aspects. •Future instructors may choose to focus more, and future students may be asked to focus more, on other ethics-related aspects of the case study. Persistent problems with addressing other ethics-related aspects of the case studies may lead to changes in the design of the assignment or course.

Appendix B

MS Finance Program Review

Goal: to restructure MS finance program to attract students who have a business background and are interested in pursuing careers in the financial industry, such as portfolio managers, financial analysts, banking management, and financial planners, among others.

The program will help students prepare for various professional certifications such as Chartered Financial Analyst (CFA), and Certified Financial Planner(CFP), and Chartered Financial Consultant (ChFC), among others.

- Implementation details:
 - Requirement: 30 credit hours with total of at least 21 credit hours of course work at the 5000 level, and at least 21 credit hours of 4000 or 5000 core course work (same as the current Plan B requirement except for the thesis)
 - Proposed curriculum: new courses are highlighted

Fall, Year 1	Spring, Year 1	Summer, Year 2	Fall, Year 2
Banking Management (FIN 4510)	Investment Management (FIN5310)	Optional Internship?	<u>Financial Planning & Wealth Management</u>
<u>Financial Modeling</u>	Corporate Finance (FIN 5320)		Elective
Risk Management (FIN4710)-Crosslist	Energy Trading (MBAM5506)		Elective
1 additional elective if no internship			

- Either Pawan or Nicole can teach Financial Modeling. Nicole would teach Financial Planning & Wealth Management (planning on taking the CFP exam herself).
- Possible FIN electives: Empirical Finance, Finance Theory or replacement, Options & Futures, Portfolio Management
- Possible STAT electives: Applied Multivariate Analysis; Regression Analysis; Categorical Data Analysis; Time Series Analysis, Data Analysis
- If the student does not take FIN 5990 (Internship) then one elective needs to be 5000 level to meet 21 credit hours of grad level course requirement
- Every core class is either cross-listed (Risk Management), undergrad level (Banking Management), current (energy trading), or potential MBA finance concentration course (Financial Modeling, Investment Management, Corporate Finance), so no additional resource is required to implement the

change, except for Financial Planning & Wealth Management (justified later in the document)

- 3+2 option can be implemented. Still need to iron out the details.

MBA Concentration option

We can offer finance concentration option without requiring ANY additional resource. This option is for students who are interested in general management positions that involve decision making in the field of finance. Initiating the concentration option can increase the enrollment in MS finance classes and potentially generate additional revenue through differential tuition structure.

- Proposed curriculum: Year 1 is the same as general MBA. MS finance course highlighted.

Fall, Year 2	Spring, Year 2
Capstone	<u>Investment Management</u>
Business Law	<u>Corporate Finance</u>
<u>Financial Modeling</u>	Energy Finance
<u>Banking Management</u>	Energy Trading

Long term goal: To Become a CFP Board-Registered Program

- Why start CFP program at UW?
 - Financial planning is the fastest growing area of finance and CFP is the most highly regarded certificate in the field. The demand for financial planners/advisors and wealth managers are expected to grow by 30% by 2021 (CNN/Money Magazine).
 - CFP requires 18 credit hours in financial planning/wealth management courses before taking the exam. Completing MS program with Financial Planner Concentration will fulfill the curriculum and education requirement. Currently CSU and CU-Boulder are CFP Board-registered program at their undergrad level.
- Sample curriculum (following Wisconsin-Madison’s model): Highlighted classes are already in the proposed curriculum

Required classes at Wisconsin-Madison	Equivalent at UW
Risk Management	<u>Risk Management (FIN4710)</u>
Taxation for Business and Personal Planning	Tax Plan: Individual & Estate (ACCT5075)
Estate Planning	N/A
Introduction to Finance	<u>FIN 5320</u>
Investment Theory & Practice	<u>FIN 5310</u>
Wealth Management & Financial Planning	<u>New proposed MS finance class</u>

- **We need only one more course (Estate Planning) to be a CFP-board registered program.** Doesn’t even have to be a full time position. One section a year. Maybe online?