

Northwestern | Kellogg

Finance 458
Winter 2022
Wednesday, 6:30 pm – 9:30 pm
Global Hub L120

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Asset Management Practicum

(October 7, 2021 – Subject to Change)

Course Modality: This will be an in-person class.

FINC 458 is the winter quarter offering of a three-quarter experiential learning sequence in asset management. The focus of this course sequence is to give the students both a theoretical foundation and practical experience in the management of investment portfolios. Students in the Asset Management Practicum are responsible for managing a portion of Northwestern University's endowment portfolio, currently divided into five funds (Commingled, Crown, Kenney, Nash, and Simpson Querrey). The equity portion of each fund is invested based on the fundamental security analyses of students in the class. Three of the funds allow short positions as well as long positions. Four of the funds allow the use of quantitative strategies as an overlay to the fundamental analyses.

Additional information about the course is available at:

http://www.kellogg.northwestern.edu/asset_management

and on the course **Canvas** site.

Overview of AMP

Classes: The class meets every Wednesday evening at 6:30 pm. A detailed schedule is provided in a separate document on canvas.

Recommended Textbook: Holthausen, Robert W. and Mark E. Zmijewski, *Corporate Valuation: Theory, Evidence, & Practice*. Cambridge Business Publishers, 2020.

Attendance: Students are expected to attend **all** class sessions. Students are also expected to participate in (at least) weekly face-to-face (not email) portfolio meetings. Zoom counts as face-to-face.

Teaching Assistant: The course teaching assistant is Jinpu Yang, jinpu.yang@kellogg.northwestern.edu.

The TA is a Finance PhD student and is available to help you with data and software issues.

Prerequisites: FINC 431 or FINC 440 or FINC 441, admission to AMP.

Co-requisites: Over the AMP sequence, students must take two quarter credits in asset management-related courses:

- 1) One of FINC 442, FINC 444, FINC 463, FINC 477 or ACCT 451– must be taken prior to or during the first quarter of the practicum.
- 2) FINC 950 Capital Markets or FINC 465 Derivative Markets I

Related Courses:

The following courses are recommended as complementary to AMP

ACCT 451	Financial Reporting and Analysis
ACCT 452	Financial Reporting and Analysis II.
FINC 442	Financial Decisions
FINC 444	Value Investing
FINC 447	Financial Strategy and Tax Planning
FINC 451	Money Markets and the Fed
FINC 463	Security Analysis
FINC 464	Fixed Income Securities
FINC 465	Derivative Markets I
FINC 467	Derivative Markets II
FINC 477	Global Entrepreneurial Finance
FINC 910	Asset Management Lab
FINC 940	Financial Modeling for Leveraged Buyout Transactions
FINC 941	Macroeconomic Policy and Global Capital Markets
FINC 950	Capital Markets

Code of Ethics:

Because you will be managing several millions of dollars of the Northwestern endowment, the Practicum faculty and advisory board expect the highest level of ethical behavior. All students in the Practicum must familiarize themselves with the *Practicum Code of Ethics*, which includes the *CFA Institute Code of Ethics and Standards of Professional Conduct*. A copy is available on Canvas. Students associated with the practicum must agree to abide by the *Practicum Code of Ethics*.

Code of Classroom Conduct:

Because this is an experiential learning class modeled on professional investment management as practiced, students are expected to act as professionals in the classroom. Please refrain from eating during class and be courteous with your attention to the presenter, whether a student or an outside speaker. Because the pitches include a spreadsheet, I permit laptops to be open during stock pitches. However, unrelated uses of the laptop such as surfing the web and reading/responding to emails are inappropriate. Questions and comments to the presenter should be professionally stated. Side conversations should be avoided. These requirements are consistent with the *Kellogg Code of Classroom Etiquette*.

Plagiarism Policy:

All students enrolled in the Asset Management Practicum must also agree to abide by the *Practicum Plagiarism Policy*. A copy is available on Canvas. Deliberate or “accidental” plagiarism will not be tolerated by AMP. Direct quotations as well as paraphrases of others’ work must be cited properly and direct quotes must be enclosed in quotation marks.

Please note that the plagiarism policy applies to others' financial models as well.

Course Material and Resources:

There is an AMP Canvas site with links to two Dropbox folders. The AMP Historical Archive contains historical AMP pitches, stock updates, portfolio updates, and research papers. This is a large folder and is read only (files can be downloaded but not uploaded or changed). The Dropbox link for Winter 2022 AMP is set up with file folders for each class. All class presentations and associated documents are to be uploaded to this site including stock pitches, stock updates, portfolio updates, and research reports. You will receive an invitation to join the Winter 2022 Dropbox site before the beginning of the quarter. If you have not, please let me know.

Practicum students have exclusive access to an office in room L094 in the Global Hub that has two Bloomberg terminals and other analytics software packages. There are also Bloomberg terminals in the computer lab on the second floor of the Global Hub and in the Schaffner Library in Wieboldt Hall.

Honor Code:

All students enrolled in the Asset Management Practicum must abide by the Kellogg Honor Code. If you are unsure of what this means, read the honor code:

http://www.kellogg.northwestern.edu/stu_aff/policies/honorcode.htm

Most of the formal assignments in the Practicum are individual assignments. You may discuss ideas and issues for your assignment with other member of the class, but the final work product must be your original work.

Office hours:

If you would like to set up an appointment, please email me. I am available most days.

Course Structure:

- Students have two main roles in the Practicum – portfolio manager and analyst. All students will spend one quarter as portfolio manager and one quarter as an analyst over the required two quarters of the Practicum. You may choose to take an optional third quarter.

Analysts

- Analysts are responsible for pitching a stock and providing one or more stock updates during the quarter. The schedule for the stock pitches and updates is in a separate document on Canvas. The requirements for the stock pitch are provided in **Attachment II** of this document. Please read **Attachment II** carefully and contact the Instructor with any questions. Prior AMP pitches are available on Dropbox and may be used for guidance.
- Each analyst is assigned to a portfolio team. These assignments are in a separate document on Canvas. Students generally remain with the same portfolio team throughout the course sequence.
- The portfolio managers will schedule weekly (or more frequent) meetings of the entire portfolio team (PMs and analysts). These in-person portfolio team meetings are an important part of the AMP experience. Electronic communication may supplement but may not replace the meetings. Attendance at these meetings is mandatory and failure to attend or participate will result in a

grade reduction. Analysts learn and must understand the rationale for the portfolio positions and the investment decisions. All analysts will become portfolio managers in subsequent quarters.

- The analyst may select a stock to pitch but **the name must be approved by the analyst's PMs and the instructor**. The PMs may suggest industries or particular stocks to the analyst based on portfolio needs. A stock pitch that has not been approved will not receive credit.
- Stock pitches are based on fundamental, bottoms up, analysis and should be pitched as either a long or short recommendation, not a hold.
- Each analyst will follow and prepare stock updates for 2 – 3 stocks held in the portfolio. Stock updates consist of a short written report and a **five minute** presentation to the class for each stock. In the update, the analyst should assess whether the original investment thesis is still valid and whether the portfolios should increase or decrease their position in the stock. More information about following a stock and stock updates can be found in **Attachment III**. Assigned dates for the in-class stock updates are provided in the separate schedule for the class and available on Canvas.
- In addition to the formal stock updates, each analyst should keep the PMs apprised of new developments for the stocks assigned to the analyst, such as upcoming earnings releases, conference calls, and other news.

Portfolio Managers (PMs)

- Portfolio managers may choose to give a stock pitch or to write a group research paper (up to 3 members). The research paper must be about an aspect of managing the portfolios, aside from pitching stocks. Some possibilities: evaluating the trading performance of the funds, finding better approaches to constructing portfolios, evaluating the sell discipline of the funds, using performance analytics to understand sources of risk and return.
- Portfolio managers are responsible for managing the fund's portfolio and ensuring that the portfolio is in compliance with the fund's Investment Policy Statement (attached). Managing the portfolio includes making decisions on whether to take a position in a security and, if so, how large a position, as well as when to add to a position, decrease a position, or close out a position, including ETFs.
- Portfolio managers schedule weekly (or more frequent) meetings of all investment committee members (that is, all PMs and analysts for the fund) assigned to the portfolio. These portfolio team meetings must take place in person (or on Zoom).
- Portfolio managers report on the fund's activities to the class according to the class schedule. **Attachment I** contains the specific requirements and suggestions for content of the portfolio updates.
- Portfolio managers document the ordering of trades using the AMP Trade Order Request Form (on Canvas in spreadsheet form).

Each trade order request should be emailed to all AMP instructors and the fund's trader:

r-korajczyk@kellogg.northwestern.edu

Phillip-braun@kellogg.northwestern.edu

- The PMs for each fund are the designated the traders for the fund. Analysts should also learn how to trade in preparation for becoming portfolio managers.
- **Traders** are responsible for: determining the optimal trading strategies in order to minimize the implementation costs due to order execution; advising portfolio managers on the appropriate execution strategies; and devising pre-trade estimates and post-trade evaluation of execution costs. Traders must be familiar with trading procedures and must maintain a cumulative record of trades as outlined in the trade data spreadsheet (on Canvas in spreadsheet form). Copies of the trade data spreadsheet must be emailed to the portfolio managers requesting the trade as well as to the instructors:

r-korajczyk@kellogg.northwestern.edu
Phillip-braun@kellogg.northwestern.edu

- **Traders** should read the “AMP Trading Tutorial” on the Canvas site. AMP uses Interactive Brokers’ Trader Workstation platform. Traders may be assigned trading duties for the undergraduate Northwestern University Capital Management Fund.

All Students

- **At the end of the quarter, each portfolio team member will provide written assessments of all other portfolio team members. These assessments are mandatory and an important part of the grade. We expect active participation from all portfolio team members.**
- **All students should read carefully and understand the Investment Policy Statement and the Operational Rules for the funds. These documents are attached at the end of the syllabus and also posted on Canvas.**

Course Documents and Detailed Information:

- There is an Asset Management Practicum site on Canvas containing the syllabus, the schedule, links for the online evaluations, assignments, and other salient information for the course. These are also on the AMP Winter 2022 Dropbox site.
- Stock pitches, stock updates, portfolio updates, and research reports will all be uploaded to the Dropbox site for this quarter via the link on Canvas.
 - The naming conventions for the various postings are as follow:

For pitches:

TICKER YYYYMMDD Report/model/presentation Studentname.pdf/docx/xlsx/pptx

Example: SPW 20150218 report Aravindhan.docx

This is the pitch report for SPX Corporation (NYSE: SPW) submitted by Dinesh Aravindhan for the AMP class on February 18, 2015.

For portfolio updates:

Example: Commingled 20150218 port update.pdf

This is the portfolio update for the Commingled fund for the February 18, 2015 class.

For stock updates:

Example: DAL 20150218 update Fourness.pptx

This is a stock update of Delta Airlines (NYSE: DAL) by Joe Fourness for the February 18, 2015 class.

NOTE: each stock update should be in a separate document.

- There is a shared, read only, AMP Historical Archive Dropbox site which contains several folders. The URL for this is on Canvas. The archive contains folders with all of the historical AMP stock pitches, stock updates, portfolio updates, and research papers. Students may access and download documents from this Dropbox but may not upload or change any document in the archive.

Grading:

In addition to stock pitches, stock updates, and possibly a research report, another important part of the course is the evaluation of each stock pitch and research report. All students, whether portfolio managers or analysts, are responsible for providing feedback to the analyst making the pitch.

Guest lecturers may also require graded assignments for class.

The tentative specifics (pending any assignments by guest lecturers) of the grade determinants for winter quarter are as follow:

Stock pitch (analysts) or research report (PMs)	30 %
Written evaluations of stock pitches, research reports, speakers	30 %
Stock updates (analysts) or portfolio updates (PMs)	10 %
Class participation	20 %
Peer evaluation	10 %

The class participation component of the grade is based on contributions to the class discussion, including the question and answer period following each stock pitch.

Online Evaluations: Students should complete an online survey for the analyst presentations, guest speakers, and research reports. There is a link to an online survey for each analyst stock pitch, speaker, and research report on Canvas. The surveys for stock pitches are due no later than 6:00 PM on the day of class. The surveys for guest speakers and research reports are due the following **Friday at midnight** – no exceptions will be made. You will be asked to provide numerical and qualitative evaluations of the stock pitches and research reports. The comments will be distributed without attribution to the entire class so

all may benefit from the comments. A summary of the numerical evaluations will be given to the presenter together with the instructor's comments. The numerical scores are weighted averages of the instructor's scores and the student's scores. Thoughtful written comments are more valuable than the numerical score and such comments will receive more weight in the grade. Comments lacking substantive feedback (e.g., "good presentation!") will receive the same grade as no comment.

Completion of AMP sequence (two quarters): the asset management practicum is structured as a required two-course sequence (with a third optional) and, as such, students are expected to complete the sequence. Any exceptions must be discussed with the instructors and will result in a one letter grade penalty (10 points out of the cumulative AMP grade)

Completion of co-requisites: If a student does not complete the course co-requisites by the end of the AMP sequence, a half- letter-grade reduction will be imposed for each course deficit (5 points out of the cumulative AMP grade). Please note: the co-requisites may be completed by graduation without penalty, however grades will not be given until all co-requisites are completed.

Course Grades upon completion of sequence. Because the two quarters of the course are meant to be taken as an integrated whole, students will receive official course grades for all quarters at the completion of the sequence. The lack of interim "grades" will not affect grade point averages or eligibility for any awards.

The instructor will provide each student with a relative and absolute performance assessment in writing at the end of the quarter.

Peer evaluation: All students will complete peer reviews of their portfolio team, both portfolio managers and analysts. These reviews will be available on Canvas at the end of the quarter. The peer reviews should be completed carefully and completely. Failure to complete the peer reviews or completion in a perfunctory manner (e.g., with no comments) will result in a penalty to the preparer's participation grade.

Attachment I

Requirements for Portfolio Updates by Investment Managers

Each AMP investment committees should present a report on the risk and performance of its fund according to the schedule posted on Canvas. The report is due by 5 pm on the day of the update.

When the portfolio team presents the results in class, the report should include, at a minimum:

- A statement of the committee's chosen target asset allocation. This should include an analysis of cash versus equity, market capitalization of the fund's holdings, and any selected sector exposures via ETFs.
- A report on the fund's assets under management (AUM) and the fund's profit and loss since the last portfolio update.
- A report on the trades made since the last report including the rationale behind the trade.
- Decisions on any pitches given since the last portfolio update
- An analysis of the fund's performance July 1, 2021 to date, calendar quarter to date, and any other period of the managers' choice.
- Analysis of each position's contribution to the fund's performance.
- A check of adherence to all of the fund's restrictions as outlined in the current Investment Policy Statement.

When the portfolio team is not reporting results to the class, the team should report performance and show that the portfolio meets all requirements of the investment policy statement.

An electronic version of this report should be placed by each investment team on Dropbox by 5:00 PM on class days.

Attachment II

Stock Pitch Guidelines and Requirements

Analysts choose the company on which they make stock recommendations (long or short) after consulting with their fund's portfolio managers. The PMs may have concerns about sectors or industries that are under-represented in the portfolio. **The stock selected for the pitch must then be cleared with the instructor.**

The analyst must get email approval of the selected name from their fund's PMs and the instructor.

Because we are making recommendations for investments, the goal is to choose a stock for which a **buy** or **sell** (short) recommendation can be made. Hold recommendations should be avoided.

Each portfolio's Investment Policy Statement requires that investments be made on the basis of a **fundamental analysis** of the company being pitched. A fundamental, or bottoms up, analysis should include, at a minimum:

- 1) an analysis of the firm's business and its industry, including its strategy and the competitive landscape
- 2) an analysis of the firm's financial condition including profitability, balance sheet, and cash flow generation
- 3) a forecast of the firm's future performance structured as pro forma financial statements with well-articulated assumptions about the key value drivers
- 4) a DCF valuation of the firm based on the financial projections
- 5) a target price or price range and a related target date for attaining that price
- 6) communication with the firm and/or its suppliers, customers, and competitors
- 7) for a short recommendation, an assessment of the cost of borrowing the shares (this can be obtained from Interactive Brokers by your fund's trader).
- 8) an assessment of any ESG headwinds or tailwinds for the firm.

PLEASE NOTE THESE REQUIREMENTS CAREFULLY AS FAILURE TO COMPLY WILL RESULT IN A GRADE REDUCTION.

The analyst should provide information as to how the stock was selected. If a screen or set of screens was used, the numerical results of each of the screens should be provided. Please note this requirement as it is frequently overlooked.

The analyst should provide the investment committees with a downside price at which the analyst recommends the portfolio exit the position if a long, or cover the position if a short, if the thesis does not play out.

The stock pitch comprises two parts. The first is a written report with supporting exhibits, providing an in depth analysis of the company and the bases for the recommendation. Included in this written report, in excel format, must be a complete set of pro forma financial statements for the firm as well as a DCF valuation analysis. Additional analyses may be provided but the pro forma financial statements and DCF valuation analysis are required. The analyst should specify the assumptions behind the pro forma financial statements and provide both sensitivity analysis and scenario analysis.

An analyst should also provide a relative valuation (multiples) analysis of the stock being pitched in anticipation of questions from pitch evaluators such as “how does the stock trade relative to its peers?” The relative valuation can be used to triangulate the DCF analysis. An analyst should also be prepared to respond to questions about how the “street” considers the stock (sentiment) and how the analyst’s projections differ from the “street’s” or “the consensus.”

Analysts provide either a Word or PDF document for the report and the pro forma financial statements in a separate Excel document. It is important that the pro forma financial statements be in excel format, not PDF, so students in the class can trace the analyses and even do their own sensitivity analysis if desired. To that end, the spreadsheets should be formatted so that they can be printed easily by the class members.

The report and spreadsheets **must** be placed in the AMP dropox by **9 am on the Monday before the Wednesday presentation unless noted otherwise on the syllabus**. If a report is late, the analyst must email all students when the report is available. All students are expected to read the report and study the spreadsheet financials before class. The report must contain all of the substantive information and analyses for the stock pitch.

If the report is submitted late, 2 points (out of a 100) will be deducted for each 4 hour period, or portion thereof, it is late.

Please read this paragraph carefully. The second component of the analysis is a set of power point slides for presentation to the class. The report and model contain all of the detail and the backup for the presentation. The purpose of the presentation is to sell the idea. Because all students will have read the report before class, the purpose of the power point slides is not to educate the audience of potential investors but rather to emphasize the main points and the recommendations from the written report and to stress the key reason/s why your investment idea should be acted upon. The power point presentation must be posted on the AMP Dropbox site by **3 pm on the day of the presentation**.

The analyst will have a maximum of **5 minutes** to make the pitch followed by a maximum of 15 minutes of questions from the class. Note this time limit. Your presentation should be no more than 4-5 slides. You may have additional slides in the deck in anticipation of questions but not as part of the main presentation.

The point of view in asking questions should be that of an investment committee analyzing the potential investment.

All students and the instructor will provide a written evaluation of the stock pitch via Canvas, assessing the quality of the written report and of the oral presentation. The key considerations are the effectiveness of the stock pitch and whether the evaluator would support the recommendation made in the stock pitch for the AMP funds. The written evaluations consist of numerical scores for several portions of the evaluation and written comments to support those scores.

The stock pitches will be broadcast via Zoom to the AMP’s Council of Advisors and interested alumni who may ask questions of the presenter.

As noted above, all prior stock pitches are posted on Dropbox under in the AMP Historical Archive and can serve as both references and examples for subsequent analysis.

Attachment III

Updates on Portfolio Holdings – or How to “Follow” a Stock

Analysts are assigned to “follow” stocks that are currently held by one or more funds in the portfolio that often were pitched by students who have graduated from Kellogg.

Analysts should work with their portfolio managers to determine which stocks they should update. This information should be communicated to all portfolio managers in order to avoid duplication of effort.

Following the stock involves making recommendations to the investment committee about continuing to hold the stock, purchasing more of the stock, reducing the position, or closing out the position.

Each stock in the portfolio should be updated at least once per quarter. The assigned analyst should review the original stock pitch (generally posted on the Dropbox site under the AMP Historical Archive) as well as any updates to the pitch (also posted on the AMP Historical Archive) in order to understand the original investment thesis or theses.

An update should be made to the class (maximum 5 minutes in length) which includes the stock’s performance since its addition to the portfolio and performance relative to the pitch’s target price and target date. The update should include information about what portfolios hold the stock, the dates on which the stock was purchased or shorted, and the dates of any subsequent changes to the holdings.

The analyst should provide guidance for subsequent monitoring and trading of the stock. For example, on a hold recommendation the analyst should also provide a stop loss price and a selling/covering price recommendation together with dates for exiting the stock if neither the floor nor ceiling are reached. All stocks in the portfolios should have upper and lower bounds as triggers for action together with appropriate dates.

Examples of stock updates from previous quarters are on the Dropbox site. The analyst should provide appropriate analysis and background in the update for the recommendation made in class. In other words, the update documentation may be more in depth than the update presentation. If updating more than one stock, please do a separate report and presentation for each stock. The updates should be uploaded to Canvas by **3 pm of the date presented**.

The analyst should keep abreast of new developments with respect to the stock that could affect the recommendation in the future—for example, earnings announcements, management changes, regulatory issues, etc. The analyst should communicate these updates via an email to the class, summarizing the recent development and providing any change in recommendation as a result. However, if there is a potentially important change, a short presentation (5 – 10 minutes) to the class is warranted. An invitation to provide updates on the existing positions will be made at the beginning of each class.

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Asset Management Practicum
FIN 456, 457, 458

Operational Rules

It is natural for those in asset management to focus on the financial risks associated with the investments made by the fund. There are many operational risks faced by asset management companies. We must minimize operational risks by adhering to strict operational rules.

- 1) All participants must abide by and sign the Practicum code of ethics.
- 2) Each Fund must adhere to the Investment Policy Statement for that Fund.
- 3) Only securities/strategies presented in class are eligible for inclusion in Funds (with exceptions stated in the investment policy statement).
- 4) Only designated student traders are authorized to trade assets for the fund. Trades should only be made during trading hours on the Exchange. Limit orders should be used rather than market orders to protect against trading errors.
- 5) When a fund team decides to make a trade in an asset, they should e-mail instructions to the trader and copy the course instructors. Instructions should include a specific description of the asset, the size (in shares) and direction (buy, sell, short, cover) of the trade, and an indication of urgency. The fund team must also make sure that sufficient funds are available to cover the trade, and that the trade does not cause the fund to be in violation of the investment policy statement. The fund team must also determine that the fund's positions will not trigger UBIT (unrelated business income tax).
- 6) **Before** a short sale, the trader must ensure that our broker has shares to lend. **It is illegal to execute a short sale without locating the shares.**
- 7) The trader is encouraged to have a second practicum participant confirm the accuracy of the trade before submitting it to the executing broker. Post execution, the trader must send a confirming e-mail to the fund team (and copy the course instructors) confirming the execution of the trade with amounts and transaction prices.
- 8) Traders **MUST NOT** override the trading limits in the trading software.
- 9) If the trader is unable to trade the order, the trader or the fund team can ask the instructors to trade the order.

- 10) Fund teams must present a weekly report of fund valuation, risk, and adherence to the fund's investment policy statement. If the fund is found to be out of compliance with the investment policy statement, the managers must bring the fund into compliance on the next day that markets are open.
- 11) The fund teams must keep a record of execution costs and analyst performance for periodic reporting purposes.

Northwestern | Kellogg

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FIN 456, 457, 458

Investment Policy Statement

The Asset Management Practicum portfolio consists of five sub-funds:

The Crown Fund
The Kenney Fund
The Nash Fund
The Commingled Fund
The Simpson Querrey Fund

No fund may use leverage.

If a fund is found to be out of compliance with the investment policy statement at a weekly portfolio update, the managers must bring the portfolio back into compliance on the next day the markets are open.

The Crown, Kenney, and Commingled Funds:

The Crown, Kenney, and Commingled Funds are to be invested in equities traded in the United States, exchange traded funds (ETF), and cash reserves. Positions may be long or short and must be based on fundamental security analysis.

The funds should have a net exposure (beta) to the S&P 500 between 0.7 and 1.3.

The funds should be diversified to the extent that tracking error, relative to the S&P 500, should not exceed 5% per month.

All individual stock positions must be from the set of stocks pitched in class. Existing positions can be adjusted at any time. A stock is eligible for inclusion as a new position in the portfolio for up to four weeks following the date of the pitch or of an in-class update.

Stocks that have been pitched or updated in class during the preceding two academic quarters can become eligible following an email update to the class and instructors containing at least the following information:

- 1) a summary of the original investment thesis, target price, target date, and catalysts;
- 2) an analysis of important changes to the firm and the industry since the pitch or update;

3) the current thesis, target price, target date, and catalysts.

Stocks that have not been pitched or updated in class in the last two quarters require a detailed update of the stock in class to re-qualify the stock for inclusion in the portfolio.

Portfolio managers can take discretionary positions of up to 2% in stocks not yet pitched (not to exceed a total of 8% of the portfolio). If the stock is not pitched within 4 weeks of taking the position, or by the end of the quarter, the position must be closed.

ETF positions are meant to control the overall market and style exposure of the funds. The following ETFs can be traded without prior instructor approval: S&P Depository Receipts (SPY), Vanguard large/small capitalization, value/growth, and total market VIPERS (VV, VB, VUG, VTV, and VTI). Other ETF positions must be approved by the instructors and may require a short presentation to the class.

Quantitative Overlays: Up to 10% of the fund may be allocated to a particular quantitative strategy (up to 40% across strategies) after a presentation to the class (including past research reports) and with permission of the instructors. Once the strategy is approved, stocks chosen by the strategy do not need to be pitched.

Position Limits: A long position in an individual security should not exceed 8% of the fund's market value. A short position in an individual security should not exceed 4% of the fund's market value. These limits do not apply to cash or securities that are, themselves, well-diversified, such as exchange traded funds linked to market indices. Total short positions should not exceed 30% of the fund's market value.

The funds' portfolios must be structured to avoid incurring unrelated business income tax (UBIT).

The Nash Fund:

The Nash Fund is to be invested in equities traded in the United States, exchange traded funds, and cash reserves. Positions must be long and based on fundamental security analysis.

The fund should have a net exposure to the S&P 500 between 0.7 and 1.3.

The fund should be diversified to the extent that tracking error, relative to the S&P 500, should not exceed 5% per month.

Each quarter the PMs must designate a "long term" stock and take an initial 5%-8% position in that stock; the stock need not be a new position, but must be different from other "long-term" stocks chosen in the past two years. This position MUST be held for two years. Should the position rise above the 8% holding limit, the position must be trimmed to be compliant with the 8% holding limit. A file showing all "long-term" positions and the date to which they must be held is on the AMP Archive site, in a folder titled "Nash Fund Long-term positions."

All individual stock positions must be from the set of stocks pitched in class. Existing positions can be adjusted at any time. A stock is eligible for inclusion as a new position in the portfolio for up to four weeks following the date of the pitch or of an in-class update. Stocks that have been pitched or updated in class during the preceding two academic quarters can become eligible following an email update to the class and instructors containing at least the following information:

- 1) a summary of the original investment thesis, target price, target date, and catalysts;
- 2) an analysis of important changes to the firm and the industry since the pitch or update;
- 3) the current thesis, target price, target date, and catalysts.

Stocks that have not been pitched or updated in class in the last two quarters require a detailed update of the stock in class to re-qualify the stock for inclusion in the portfolio.

Portfolio managers can take discretionary positions of up to 2% in stocks not yet pitched (not to exceed a total of 8% of the portfolio). If the stock is not pitched within 4 weeks of taking the position, or by the end of the quarter, the position must be closed.

ETF positions are meant to control the overall market and style exposure of the funds. The following ETFs can be traded without prior approval: S&P Depository Receipts (SPY), Vanguard large/small capitalization, value/growth, and total market VIPERS (VV, VB, VUG, VTV, and VTI). Other ETF positions must be approved by the instructors and may require a short presentation to the class.

Position Limits: A position in an individual security should not exceed 8% of the fund's market value. This limit does not apply to cash or securities that are, themselves, well-diversified, such as exchange traded funds linked to market indices.

The fund's portfolio must be structured to avoid incurring unrelated business income tax (UBIT).

The Simpson Querrey Fund:

The Simpson Querrey Fund is to be invested in equities traded in the United States. Positions must be long and based on fundamental security analysis.

The Fund's portfolio must be concentrated, with at least five and no more than eight stocks. No position in a single security may exceed 20% of the Fund's market value. Cash positions may not exceed 5% of the Fund.

All individual stock positions must be from the set of stocks pitched in AMP. Existing positions can be adjusted at any time. A stock is eligible for inclusion as a new position in the portfolio for up to four weeks following the date of the pitch or of an in-class update. Stocks that have been pitched or updated in class during the preceding two academic quarters can become eligible following an email update to the class and instructors containing at least the following information:

- 1) a summary of the original investment thesis, target price, target date, and catalysts;
- 2) an analysis of important changes to the firm and the industry since the pitch or update;
- 3) the current thesis, target price, target date, and catalysts.

Stocks that have not been pitched or updated in class in the last two quarters require a detailed update of the stock in class to re-qualify the stock for inclusion in the portfolio.

The fund's portfolio must be structured to avoid incurring unrelated business income tax (UBIT).