Enhancing portfolio management with economic analysis

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DESCRIPTION

- An original idea for active stock portfolio management project in economics and finance curriculum for diverse student populations.
- Designed for a graduate course in Investment Analysis aligned with the Chartered Financial Analysis Institute (CFA) body of knowledge in the required respective content area.
- Suitable for students in the programs of MBA and MSF, offered in face-to-face and online delivery mode.
- This approach serves as a practical and applied experiential learning opportunity in the economics and finance curriculum with strong focus on ethical reasoning.
- Students construct their own stock portfolios in simulations according to assumptions provided in the course, manage and evaluate their performance in an approach reflecting investment process.
- Additionally, students consider investment policies and procedures under scrutiny of ethical conduct and regulatory compliance with deeper and practical understanding of portfolio investment.

RATIONALE

The design of this project was motivated by the following objectives:

- To integrate finance and economics in interdisciplinary approach for conceptual and critical thinking.
- To recognize economic drivers and assumptions underlying data analysis in the dynamic imperfect models.
- To create experience with interest and excitement and about portfolio investment with a broad perspective of economic environment.
- To apply theoretical concepts (both from finance and economics) in real-life problem solving in a comprehensive approach.
- To actively engage with the course contents from a professional perspective and with ethical conduct scrutiny concern.
- To engage in the topics students can relate to in the expanded approach.
- To create a long-lasting memory and well-motivated and thorough learning experience.
- To focus on the course learning goals with ethical reasoning and augmented practical application.

DESIGN

- Project description,
- The scaffolding of the project,
- Detailed step-by-step technical instructions,
- Compare & contrast approach,
- The outline,
- Topics enrooted in economics applied in the project,
- Evaluation Rubrics,
- Supporting resources.

PROJECT DESCRIPTION

Students work on individual projects throughout the course. Students are required to register for one of the available portfolio simulations listed in the Resources for the Project section of the course site. The project is divided in three parts reflecting the investment process of managing stock portfolios. The project is facilitated by discussion and assignments. The project needs to be submitted in the stipulated parts in order to capitalize on the feedback from the instructor. Although submitted in parts the coherence of the project should be maintained, as the issues are highly interrelated. Students are advised to work on the paper throughout the term to meet the assigned due dates. The project corresponds to the assigned readings and supplemental resources provided. Therefore, financial models, formulas, analytical tools and theoretical concepts should be strictly followed. The project must be based on careful research, well-referenced data and the individual creative input of each student. It should be theoretically sound and focused on the application of the proposed solutions in the investment field. Charts and tables are recommended and should be accompanied by interpretations of the data presented. Professional terminology is a must. The paper should include footnotes, endnotes, or parenthetical citations and a bibliography that documents the sources used. The project should be concise, comprehensive, and clearly articulated including the examples of the formal financial document at the executive level of managerial communication. Students should follow the provided outline of the project for inclusion of all components required.

SCAFFOLDING OF THE PROJECT

- Part 1: Portfolio Construction – top-down investment process – asset allocation and benchmarking against an index (including ethics).
- Part 2: Portfolio Review – bottom-up investment process – stock selection evaluation.
- Part 3: Portfolio Management, Performance Evaluation, and recommendations (including ethics).

TOPICS ENROOTED IN ECONOMICS APPLIED IN THE PROJECT

- Fundamental stock analysis
- Conducting stocks comparisons within the industry and cross-industry
- Economic growth theory, trends, and exogenous shocks to develop economic forecast
- Economic and business cycles
- Country and sector/industry analysis, linkages and regulatory framework
- Economic risks, sensitivity analysis, with asymmetry of information concerns
- Use of economic information in forecasting asset class returns
- Assumptions, trends, and expected changes and outlook in macroeconomic factors
- Rationale behind benchmark index selection, sustainability, and ESG criteria
- Capital market expectations
- Contrasting and comparing the assumptions and implications of random walk and efficient market hypothesis (EMH)
- Controversy over buying on margin and short sale, benefits and risks both for market participants and the effect on the market efficiency and regulation
- CAPM critique: assumptions, importance, implications and application (an arbitrage opportunity, market equilibrium).
- Advantages and limitations of DCF based evaluation models
- Challenges of constructing optimal risky portfolios
- Cost-benefit analysis
- Forecasting inflation, interest rates, and exchange rate linkages for implications for discount rate estimations
- Analyzing the yield curve as an economic predictor
- Equilibrium models and economic welfare
- Capital flows and central bank policy

CONCLUSIONS

- The multiyear evaluation and refinement of this project provided extensive research material for assessing the effectiveness of this activity in achieving learning goals of the course.
- This holistic, multifaceted learning strategy stimulates innovativeness, supports students' independent thinking and problem-solving while engaging purposefully in the intense faculty-supported research.
- Evidence from economic environment enhances students understanding of the interdependence in portfolio management for their recommendations in portfolio rebalancing.
- Students' appreciation of a wide spectrum of economic variables assists them with scrutinizing portfolios in mature, informed, and well-supported process matching individual risk profiles.
- Deep recognition of economic factors is evidenced in compelling and coherent narratives of students' revised investment policies for their portfolios and recommend trades (changes).

ECONOMIC ANALYSIS IN PORTFOLIO MANAGEMENT LITERATURE

- Economic analysis can be most effective if it is fully integrated into the investment decision process (Mennis, 1975).
- The application of economic outputs in the investment process has become even more necessary as companies, industries, markets, and economies have become more international and more complex in character (Baker et al., 1992).
- Economic inputs are useful in the analysis of individual securities, portfolio construction, and asset allocation" (Kent, 2009).
- While Looking at the present and at 35 years in the investment management field, it is important to note that the model inputs reflecting our fundamental expectations should be more rigorously grounded (Brinson, 2005).
- The evidence suggests that investment professionals should continue to consider monetary conditions when performing fundamental analysis of U.S. and international securities (Conover et al., 2005).
- On the sample of common stocks traded on NYSE, AMEX, and NASDAQ from July 1963 to December 2013, Yan & Zheng (2017) find that many fundamental signals are significant predictors of cross-sectional stock returns even after accounting for data mining.
- Li & Mohanram (2019) find that combining quality-driven and value-driven approaches substantially improves the efficacy of fundamental analysis for NYSE/AMEX firms as well as NASDAQ firms traded from 1974 to 2015.
- The mutual fund managers who employ quantitative approaches do not produce above-average performance results whereas the managers who use fundamental analysis generate unique fundamental information on individual stocks (Gregory-Allen et al., 2009).
- Low-frequency macroeconomic information improved the explaining ability of stock returns volatility from 1998 to 2018 in Morocco, particularly for the long-term variance component. Information in some indicators which represent forward-looking variables (i.e., international economic situation, interest rates, exchange rates and inflation) reflecting current economic situation was proven useful in the Moroccan stock market forecasting (Belcaid & El Ghini, 2021).
- Even with new generations of quantitative equity modeling (value, quality, and so forth), the raw material of information will be fundamental, and the goal will be to more efficiently mimic the best fundamental investors (Sorensen, 2009).

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