2017

FINC 607-4S Portfolio and Hedge Fund

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Course Objective

FINC 607, Portfolio and Hedge Fund Construction, examines the types, construction, and management of different types of investment funds used in the financial industry. The course covers the construction and analysis of different portfolios, integrating investment concepts and using the Bloomberg platform in the portfolio construction. Portfolios constructed include equity portfolios benchmarked against a broad-base index, investment-grade fixed-income funds, high-yield bond funds, equity style portfolios, sector portfolios, global equity funds, immunized bond funds, hedged and enhanced equity funds, hedged and enhanced bond funds, balance investment funds, and alternative-investment funds.

There are two weekend (Friday and Saturday) onsite classes covering portfolio and investment theory and concepts and Bloomberg applications. Students submit detailed portfolio reports during a two-week period following the onsite weekend sessions.

Portfolios Reports
- Equity Portfolios Benchmarked Against a Broad-Based index
- Sector Portfolio
- Style Portfolio
- Country or Global Portfolio
- Investment-Grade Bond Portfolio
- High-Yield Bond Portfolio
- Hedged and Enhanced Equity Portfolios
- Immunized Bond Portfolio
- Hedged and Enhanced Bond Portfolios
- Alternative-Investment Portfolios

Reading and Course Material
- Chapters from Johnson, *Debt Markets and Analysis*, Bloomberg Press/Wiley (Canvas)
- Chapters from Johnson, Introduction to Derivative, Oxford University Press (Canvas)
- PPTs (Canvas Modules)
- Audio/PPT (Canvas Modules)
- Zoom Recording of Lectures (Canvas Modules)

Canvas
- Assignments: Information on the 10 portfolio assignments and online submission
- Modules: Reading and course material
- Calendar

Schedule
- May 19, 5:00-9:00: Lecture: Portfolio Analysis, CAPM, APT, Fundamental and Technical Analysis, and Efficient Market Analysis
- May 20, 9:00-4:00: Bloomberg workshop and Bloomberg Equity Portfolio Construction
- May 26: Equity portfolios Benchmarked against a Broad-Based index
• May 29: Sector Portfolio
• May 31: Style Portfolio
• June 1: Country or Global Portfolio
• June 2, 5:00-9:00: Lecture: Equity Derivatives, Bond Evaluation and Selection, Fixed-Income Securities and Markets, and Debt Derivatives
• June 3, 9:00-4:00: Bloomberg Derivative, Bond Portfolio, and Alternative Fund Construction
• June 7: Investment-Grade Bond Portfolio
• June 10: High-Yield Bond Portfolio
• June 12: Hedged and Enhanced Equity Portfolios
• June 13: Immunized Bond Portfolio
• June 17: Hedged and Enhanced Bond Portfolios
• June 19: Alternative-Investment Portfolios

**Fifth-Third Trading Center Hours**

**Grading**
Based on the quality of the reports
- 15 pts: Equity Portfolios Benchmarked Against a Broad-Based index
- 10 pts: Sector Portfolio
- 10 pts: Style Portfolio
- 10 pts: Country or Global Portfolio
- 15 pts: Investment-Grade Bond Portfolio
- 10 pts: High-Yield Bond Portfolio
- 10 pts: Hedged and Enhanced Equity Portfolio
- 5 pts: Immunized Bond Portfolio
- 10 pts: Hedged and Enhanced Bond Portfolio
- 10 pts: Alternative-Investment Portfolios

**Rubric**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Points</th>
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<tbody>
<tr>
<td>Portfolio composition and inclusion of Bloomberg information</td>
<td>25 pts</td>
</tr>
<tr>
<td>Analysis of the portfolio with Bloomberg information</td>
<td>25 pts</td>
</tr>
<tr>
<td>Presentation of material: Organization, explanations, writing quality, and grammar</td>
<td>25 pts</td>
</tr>
<tr>
<td>Synthesis of financial and economic concepts with the portfolio</td>
<td>25 pts</td>
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</tbody>
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**Grading Scale:**
- 93-100: A
- 89-92: A-
- 85-88: B+
- 80-84: B
- 77-79: B-
- 74-76: C+
- 65-73: C
- 50-64: C-
- 0-49: F

**Modifications:** The course is subject to modification during the semester.
Portfolio Construction Projects

• Construct 10 portfolios with a minimum size of $10 million

• The portfolios are to be for an investment fund, ETF, or investment fund portfolio for a trust or endowment

• Work the Bloomberg exercises related to the portfolio (you may want to copy your Bloomberg graphs and tables to a folder)

• After working the Bloomberg exercises, analyze the portfolio

• Submit a detailed report of the portfolio with Bloomberg information (slides and tables embedded) in your report. When possible, use Bloomberg graphs and tables that can be downloaded into Excel or a clipboard.

• The report should include
  • Policy Statement
  • Portfolio composition, characteristics, performance, and exposure
  • Other features brought out from the Bloomberg exercises

• The report needs to include a narrative (not just tables and graphs) and when applicable explanations of the investment concepts behind the relation

See XSBIF and XSEIF investment fund reports in Canvas Assignments for examples.

Rubric

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1. Equity Portfolio Benchmarked Against a Broad-Based Index

Construct an equity portfolio benchmarked to a broad-based index and then analyze it using PORT and as an index created from CIXB.

Guidelines:
- In constructing your portfolio, use SECF, EQS, or FMAP to identify stocks
- Include stocks from each GIC sectors
- Create historical data for your portfolio
- Import your portfolio into CIXB and create historical data.
- Evaluate your portfolio in PORT (make sure the “View” is set for equity) using some of the following tabs:
  - Holdings tab, “by none”
  - Holdings tab, “by GIC Sectors”
  - Holdings tab, “by Market Cap”
  - Characteristics tab, “Main View,” “Portfolio vs Index (e.g., INDU), “by GIC Sectors”
  - Characteristics tab, “Main View,” “Portfolio vs Index” (e.g., INDU), “by GIC Sectors”
  - Performance tab, “Main View,” “Portfolio vs None”
  - Performance tab, “Total Return,” “Portfolio vs Index” (e.g., INDU), Time = MTD, YTD, and Custom (for Custom, the select time period must match the period history of the portfolio created in PRTU).
  - Performance tab, “Statistical Summary,” “Portfolio vs Index” (e.g., INDU)
  - Performance tab, “Seasonal Analysis”
  - Performance tab, “Period Analysis”
  - Attribution tab, “Main View,” “Portfolio vs None,” Time = MTD, YTD, and Custom
  - Attribution tab, “Main View,” “Portfolio vs None,” Time = MTD, YTD, and Custom
  - Attribution tab, “Attribution Summary,” “Portfolio vs None,” Time = MTD, YTD, and Custom
  - Attribution tab, “Attribution Summary,” “Portfolio vs Index” (e.g., INDU), Time = MTD, YTD, and Custom
- Examine the portfolio as a basket created in CIXB: Upload the portfolio as an index (.Ticker <Index> <Enter>) and examine its historical values (GP), regression relation with a market index (SPX), and cumulative return (COMP).
- Use the “Chart” screen (Chart <Enter>) to create multigraphs for the historical values of your portfolio (.Ticker of Portfolio you created in CIXB) and an appropriate index. On the Chart Menu Screen, select the Standard G chart; once you have loaded your securities, go to “Edit” to put your graphs in separate panels
- Analyze the stocks in your portfolio in terms of their systematic and unsystematic risk, alphas, and betas. Use Bloomberg’s Beta and PC screen
- Analyze your portfolio with other Bloomberg screens (import your portfolio into the screen): MOST, FMAP, MRR, CACT, and other screen identified in class
- Conduct a relative analysis of the companies in your portfolio by customizing an RV screen showing the stocks’ DDM values, market prices, and economic value added (EVA). Bring up the RV screen for one of the stock’s in your group; on the RV screen, pull the other stocks from the Comp source dropdown (portfolio, index, or EQS search); customizes the screen creating columns for DDM value, EVA, and price.
- Identify the stocks that are underpriced and have positive EVAs that would merit buy recommendations
- Compare each stock you have identified as buy recommendation with an analysts’ recommendation for that stock found on the stock’s EE and ANR screens.
- Conduct a SWOT analysis of some of your buy stocks. Possible screens you may want to use to obtain information to conduct your SWOT analysis:
- CF: Company’s 10-K reports (CF screen found on the stock’s screen)
- SPLC: Supply chain
- RSKC: Risk
- DRSK: credit risk
- LITI: litigation
- CN: company news

- Optional: Take the best stocks in your portfolio (no more than 12) and generate an efficiency frontier using Bloomberg’s Asset Allocation Optimizer Template. To download the program, go to DAPI and search for Asset Allocation Optimizer. On the program, set the minimum weight to zero and the maximum to 99%, and use the average risk-free rate for the period.

- Analyze the stocks in your portfolio using the Wells Fargo Stock Selection Approach.
  - Use Bloomberg’s DDM model to estimate each of your stock’s return (IRR). You can use Bloomberg’s default assumptions used in their DDM model or change them.
  - Use the Bloomberg’s Beta screen for each of your stocks to estimate their betas. Select a time period you think is appropriate and use either the raw beta or adjusted beta.
  - Estimate an ex-ante SML relation by running a cross sectional regression of the returns and betas of your stocks. Calculate the excess return of each stock to determine which stock you would include in your portfolio.
  - Alternative Approach: Use the Bloomberg Excel Add-in to run a second-pass test in Excel. S&P, for rates of return, the internal rates of return calculated from Bloomberg’s DDM model, and for betas, the stocks’ adjusted betas.

- Run a cross-sectional regression analysis of the returns of the stock’s in your portfolio explained by their betas and Altman’s Z-scores. To run your regression, use the Bloomberg Excel Add-in to run the second-pass test in Excel. For rates of return use the internal rates of return calculated from Bloomberg’s DDM model, for betas use the stocks’ adjusted betas, and then use Altman’s Z-score.
2. Sector Portfolio

Construct a sector index portfolio and then analyze it using PORT and as an index created from CIXB.

Guidelines:

- In constructing your portfolio, use SECF to identify sector indexes and ETFs to identify the stocks for your portfolio
- Examine several sector ETFs in terms of their policy statement, primary holdings, and performance. On the ETF’s screen examine DES, COMP, fund holdings (MHD), price graph (GP), and PORT
- Construct your portfolio in PRTU
- Create historical data for your portfolio
- Evaluate your portfolio in PORT
- Examine the portfolio as a basket created in CIXB: Upload the portfolio as an index (.Ticker <Index> <Enter>) and examine its historical values (GP), regression relation with a market index (SPX), and cumulative return (COMP).
- Use the “Chart” screen (Chart <Enter>) to create multigraphs for the values of your portfolio (.Ticker of Portfolio you created in CIXB) and an appropriate index. On the Chart Menu Screen, select the Standard G chart; once you have loaded your securities, go to “Edit” to put your graphs in separate panels.
- Analyze the stocks in your portfolio in terms of their systematic and unsystematic risk, alphas, and betas. Use Bloomberg’s Beta and PC screen
- Analyze your portfolio with other Bloomberg screens (import your portfolio into the screen): MOST, FMAP, MRR, and other screen identified in class
- Conduct a relative analysis of the companies in your portfolio by customizing an RV screen. Some custom screens you may want to consider:
  - Stocks’ DDM values, market prices, and economic value added (EVA)
  - Earnings in terms of sales per share and profit margins
  - Multipliers: P/e and P/S
  - Business Risk: margins
  - Financial risk: leverage ratios
  - Liquidity risk
  - Growth: Sustainable growth, payout ratios, and ROE
  - DuPont ratios
- Using the BI screen, analyze your sector: Comp, Drivers, and Analysis
- Analyze the industry sector you selected by examining the sector’s index on the index’s menu screen. Possible screens to examine: DES, MOV, GP, FA, and COMP
- Technical analysis when used in conjunction with fundamental analysis provides a more complete picture of the stock or market. Portfolio managers and security analysts use various technical metrics to identify new stocks and to monitor their existing holdings.
  - Construct a moving average band (type GPO MAENV) for your portfolio to see how your portfolio has been trending
  - Evaluate several of the stocks in your portfolio in terms of their relative strength.
  - Evaluate several of the stocks in your portfolio in terms of the Erlanger Put/call ratio (GPO ERPCR) and the short-interest ratio (SI)
3. Style Portfolio

Construct a style portfolio evaluate it using PORT

Guideline

- Possible styles:
  - Low P/e Portfolio (e.g., P/e less than 15 or 10)
  - Large P/e (e.g. P/e > 25)
  - Small Cap (e.g., market cap between $5 billion and $10 billion)
  - Large Cap (e.g., market cap greater than $100 billion)
  - Low P/B (e.g., price-to-book ratio less than 3)
  - High P/B (e.g., price-to-book ratio greater than 7)
  - Style described in Johnson, Chapter 15 (e.g., Stocks with the potential for consistent earnings and dividend growth without high volatility: Market cap greater than $2 billion, P/e less than 20, eps growth (5-year average) greater than 10%, return on equity greater than 20%, Beta less than 1.25.

- Use SECF to identify possible indexes and ETFs based on style
- Examine several style ETFs in terms of their policy statement, primary holdings, and performance. On the ETF’s screen examine DES, COMP, fund holdings (MHD), price graph (GP), and PORT
- Use EQS to search for stocks to form your portfolio from an index such as S&P 500 stocks or Russell 3000 stocks: EQS <Enter; from the Build/Edit Screen, select Standard and Poor’s 500 or Russell 3000 from the Index tab; in the yellow ribbon box, type P/e or market cap and set your conditions; Save your screen (Actions tab)
- Create a portfolio of the stocks from your search in PRTU: PRTU <Enter>; click red “Create;” from Settings Screen, click “Actions” tab and then import the stocks (on the settings screen, enable history
- Evaluate your portfolio’s past performance relative to an appropriate index using the PORT screen over different times periods: Performance tab, “Total Return,” “Portfolio vs Index” (e.g., INDU), Time = MTD, YTD, and Custom (for Custom, the select time period must match the period history of the portfolio created in PRTU).
- Evaluate the characteristics of your portfolio relative to an index using PORT
- Examine the portfolio as a basket created in CIXB: Upload the portfolio as an index (.Ticker <Index> <Enter>) and examine its historical values (GP), regression relation with the appropriate index, and total returns (COMP)
- Use the “Chart” screen (Chart <Enter>) to create multigraphs for the prices on your portfolio (.Ticker of Portfolio you created in CIXB) and an appropriate index. On the Chart Menu Screen, select the Standard G chart; once you have loaded your securities, go to “Edit” to put your graphs in separate panels.
- Analyze the stocks in your portfolio in terms of their systematic and unsystematic risk, alphas, and betas. Use Bloomberg’s Beta and PC screen
- Analyze your portfolio with other Bloomberg screens (import your portfolio into the screen): MOST, FMAP, MRR and screens identified in class
- Conduct a relative analysis of the companies in your portfolio by customizing an RV screen. Some custom screens you may want to consider:
  - Stocks’ DDM values, market prices, and economic value added (EVA)
  - Earnings in terms of sales per share and profit margins
  - Multipliers: P/e and P/S
  - Business Risk: margins
  - Financial risk: leverage ratios
  - Liquidity risk
  - Growth: Sustainable growth, payout ratios, and ROE
  - DuPont ratios
4. Country or Global Portfolio

Construct an equity portfolio of stocks for a country or global area and analyzed it using Bloomberg’s PORT screen.

Guidelines:
- Search for ETFs of a country’s or region’s (from Bloomberg’s ETF Screen, click Country).
- Examine several country ETFs in terms of their policy statement, primary holdings, and performance. On the ETF’s screen examine DES, COMP, fund holdings (MHD), price graph (GP), and PORT
- Create your portfolio in PRTU
- Analyze your portfolio in PORT
- Import your portfolio to CIXB and create historical data
- Examine the portfolio as a basket created in CIXB: Upload the portfolio as an index (.Ticker <Index> <Enter>) and examine its historical values (GP) and regression relation with a sector index
- Analyze your portfolio with other Bloomberg screens (import your portfolio into the screens): Screens will be identified in class
- On the GP and COMP screens compare prices and returns in USD and local currency
- Analyze the country or region. Bloomberg screens: BIE, COUN, ECT, ECO, BRIE, and N
- Select a CDS on the country or countries. From the SECF screen (SECF <Enter>), click “Fixed Income” in the “Category” dropdown, click the “CDS” tab, and type in the name of the country (e.g., Greece) in the amber CDS Ticker box. Analyze the CDS (CDS Ticker <Corp>) using the following screens: DES, AllQ (Composite Quotes), GP, and CDSW (Valuation)
5. Investment-Grade Bond Portfolio

Construct a portfolio of investment-grade corporate bonds and U.S. Treasuries. You may want to use SECF or the Bloomberg search/screen function, SRCH, to identify the bonds for your portfolio. After constructing the bond fund, evaluate the portfolio.

Guidelines

- Search for ETFs or investment fund of investment-grade portfolios (SECF or ETF)
- Examine several of the ETFs in terms of their policy statement, primary holdings, and performance. On the ETF’s screen examine DES, COMP, fund holdings (MHD), price graph (GP), and PORT
- Construct your portfolio in PRTU
- Evaluate the portfolio’s features relative to an index using the PORT screens (when you are in PORT, make sure you have a fixed-income view): duration, duration distribution, sector allocations (government and corporate), and quality ratings
- Examine the performance of the portfolio over the past year relative to an index, constant maturity Treasury yield (e.g., 5-year yield), and a credit spread you have created. Use Chart screen and create multigraphs.
- Using PORT, conduct an horizon analysis, evaluating the portfolio’s total return for yield curve shifts
- Use the Bloomberg YCRV screen or new yield curve screen, explore the yield curves on U.S. Treasuries (U.S. on/off-the-run sovereign, I111 over the past year.
- Define the different types of yield curve shifts and explain yield curve strategies that you might use to profit from the shifts (e.g., such as trading down the yield curve). Use Bloomberg’s IYC9 total return/yield curve screen to examine the total return for different yield curve shift scenarios
- Analyze your portfolio with other Bloomberg screens (import your portfolio into the screens): Screens will be identified in class
- Examine the economic environment and economic policies affecting rates and credit spreads. Use BIE screen for an analysis of US economy, Federal Reserve sites (FED <Enter>; FOMC <Enter>), and some of the economic indicators from ECST to find information to support your arguments. Possible indicators:
  - U.S. Nominal GDP: GDP CUR$ <Index>
  - U.S. Real GDP: GDP CHWG <Index>
  - U.S. Inflation: CPY YOY <Index>
  - S&P/Case-Schiller: SPCS20 <Index>
  - U.S. Unemployment Rate: USURTOT <Index>
  - U.S. Deficit: FDEBTY <Index>
  - Government Debt: PUBLDEBT <Index>
  - Money Supply (M2): M1NS <Index>
  - Balance of Payments: USCABAL <Ticker>
  - Energy Prices: CPUPENER <Ticker>
6. High-Yield Bond Portfolio

Construct a high-yield bond portfolio and evaluate it using PORT.

Guidelines

- Search for ETFs or investment fund of high-yield portfolio (SECF or ETF)
- Examine several high-yield ETFs in terms of their policy statement, primary holdings, and performance. On the ETF’s screen examine DES, COMP, fund holdings (MHD), price graph (GP), and PORT
- Use SECF or Bloomberg search/screen function, SRCH, to find bonds
- Construct your portfolio
- Evaluate the portfolio’s features relative to an index using the PORT screens (in PORT, make sure you are in the fixed-income view): duration, duration distribution, sector allocations (government and corporate), and quality ratings
- Examine the performance of the portfolio over the past year relative to an index, constant maturity Treasury yield (e.g., 5-year yield), and a credit spread you have created. Use Chart screen and create multigraphs.
- Analyze your portfolio with other Bloomberg screens (import your portfolio into the screens): Screens will be identified in class
- Evaluate the bonds in the portfolio in terms of their characteristics: DES, YAS, and TDH
- Evaluate the CDSs of the bonds in your portfolio (Ticker CDS <Corp>, CDS Ticker <Corp>). Analyze the CDS using the following screens: DES, AllQ (Composite Quotes), GP, and CDSW (Valuation), and GP
- Set up an RV screen for evaluating companies comprising the high-yield portfolio. To set up the screen, you may want to use PRTU to form an equity portfolio of the companies whose credits you hold in your high yield bond portfolio. Once you have constructed the portfolio, bring up the RV screen. Use the equity screen for one on the companies in your portfolio and then import your equity portfolio (select “Portfolio” from the “Comp source” tab and select your equity portfolio from “Name” tab). Customize your columns by selecting financial parameters that will help you evaluate credit risk. Parameters to consider: Debt/EBDIT, EBIT/Interest Expenses, Debt/Equity, liquidity ratios, operating performance measures, Altman Z-Score, and 5-year CDS (items can be inserted by typing in the name in the yellow box on the RV screen).
7. Hedged and Enhanced Equity Portfolios

Hedging or changing the exposure of equity index portfolio with positions in equity index futures and with calls and puts to form a portfolio insurance and range forward position

Hedged Portfolio
- Select one futures contract on the S&P 500 (SPA) to hedge your portfolio. Use the expiration date on the futures contract as the date of your hedge value.
- Use the “Chart” screen (Chart <Enter>) to create multigraphs for the prices on the futures and the portfolio (.Ticker of Portfolio you created in CIXB). On the Chart Menu Screen, select the Standard G chart; once you have loaded your securities, go to “Edit” to put your graphs in separate panels.
- Select a beginning date that you would have implemented your hedge and a closing date near the futures expiration as the date for closing your hedge. Use the price-sensitivity model to determine the number of futures contracts needed to hedge the portfolio.
- Calculate the profit or loss on the futures position from opening and closing at the futures prices at the beginning and ending dates, the value of your portfolio on the closing date, and the hedged value (portfolio value plus futures profit). Compare your hedged value to the unhedged value. In retrospect, was the hedge a good strategy?

Portfolio Insurance and Range Forward
- Construct a portfolio insurance position for your portfolio using a spot or futures index option (e.g., S&P 500 options). Use the Bloomberg OSA screen to import your portfolio and options. Determine the index put positions you would need to create a portfolio insurance strategy (consider the horizon period when you select the maturity of the option). Use OSA to generate a profit graph and/or market value graph of your hedged portfolio. Import a call (with higher X) and set up a range forward position for your portfolio.

Beta Enhanced or Reduced Portfolio
- Examine an ex-post portfolio beta enhancement or reduction (market-timing) strategy for your portfolio
  - Select one futures contract on the S&P 500 (SPA) to go long or short. Use the expiration date on the futures contract as the date for closing the strategy.
  - Use the “Chart” screen (Chart <Enter>) to create multigraphs for the prices on the futures and the portfolio (.Ticker of portfolio you created in CIXB). On the Chart Menu screen, select the Standard G chart; once you have loaded your securities, go to “Edit” to put your graphs in separate panels.
  - Select a beginning date that you would have implemented your futures adjusted portfolio and a closing date near the futures expiration as the date for closing your hedge. Use the price-sensitivity model to determine the number of long or short futures contracts needed to move to your target beta.
  - Calculate the profit or loss on the futures position from opening and closing at the futures prices at the beginning and ending dates, the value of your portfolio on the closing date, and the future-adjusted value (portfolio value plus futures profit). Compare your futures-adjusted portfolio value to the unadjusted portfolio value.

Convex Beta Portfolio
- Using the OSA screen, evaluate a call-enhanced strategy for your portfolio. On the OSA screen, input a number of long call contracts to enhanced the portfolio’s value if the market increases. Determine the number of options or futures needed to change your portfolio’s beta. Using OSA, compare your profit, profit percentage, or market value graphs with and without the options or futures.
8. Immunized Bond Portfolio

Using your investment-grade bond portfolio show how a bond portfolio for a life insurance company pension is immunized

Guidelines

- Using Bloomberg’s PORT screen do a horizon analysis with your investment-grade portfolio with the time horizon set equal to your duration.
- In your report, explain bond immunization and comment on the total returns you get for different scenarios and the effectiveness of your bond immunization strategy.

9. Hedged and Enhanced Bond Portfolios

Hedge or change the exposure of your investment-grade portfolio to interest rate changes with positions in T-note futures, T-note futures options

Ex-Post Short Hedging Position for the Investment-Grade Portfolio

- Select a futures contract on a CBT T-bond or T-note contract to hedge the investment-grade portfolio you constructed. Use the expiration date on the futures contract as the date of your hedge value.
- Use the “Chart” Screen (Chart <Enter>) to create multigraphs for the prices on the futures and the portfolio (.Ticker of Portfolio you created in CIXB). On the Chart Menu screen, select the Standard G chart; once you have loaded your securities, go to “Edit” to put your graphs in separate panels.
- Select a beginning date that you would have implemented your hedge and a closing date near the futures expiration as the date for closing your hedge. Use the price-sensitivity model to determine the number of futures contracts needed to hedge the portfolio. Information on your portfolio characteristics can be found from your portfolio’s PORT Screen, “Characteristics” and Summary” tabs. Information on the futures’ cheapest-to-deliver bond can be found on the DES, YAS, and GP screens of the loaded bond (Bond Ticker <Corp>).
- Calculate the profit or loss on the futures position from opening and closing at the futures prices at the beginning and ending dates, the value of your portfolio on the closing date, and the hedged value (portfolio value plus futures profit). Compare your hedged value to the unhedged value. In retrospect, was the hedge a good strategy?
- Use Bloomberg’s MARS Screen to determine the number of futures contracts you would need to hedge your portfolio. See section: “Mars” in “Bloomberg: Bond and Interest Rate Futures and Related Screens.”

Duration Enhancement or reduction for the Investment-Grade Portfolio

- Examine a duration enhancement or reduction strategy for the portfolio you created. Select one futures contract on a T-Bond or T-Note (e.g., TYA) to go long or short. Use the expiration date on the futures contract as the date for closing the strategy. Calculate the profit or loss on the futures position from opening and closing at the futures prices at the beginning and ending dates, the value of your portfolio on the closing date, and the future-adjusted value (portfolio value plus futures profit).
- Using the Bloomberg MARS screen, load the futures, futures put, futures call, and bond portfolio. Use the price sensitivity model to determine the number of futures options contracts you would need to hedge the value of the portfolio. Using MARS, evaluate and compare the following positions on the futures options’ expiration date for interest rate shifts ranging between –50 bps and +50 bps:
  - Unhedged bond portfolio position
  - Bond portfolio position hedged with short futures contract
• Bond portfolio position hedged with long futures put contract
• Bond portfolio position with an enhanced exposure to interest rate with long futures positions
• Bond portfolio position with an enhanced exposure to interest rate with long futures call positions

Swap-Adjusted Portfolio

• On your MARS screen, create a fixed-payer position on a generic swap. Add your swap to your portfolio. From the red “Add Positions” tab, click “Add to Portfolio” and then select the portfolio. Analyze the interest rate risk or exposure of the portfolio with and without the swap using the MARS screen. On the MARS Scenario Chart tab, set scenario periods, interest rate shifts (e.g., −50 basis points to 50 basis points) and y-axis market value. In your report, comment on the relation between the market value and interest rate relation.

• On your MARS screen, create a floating-payer position on a generic swap. Add your swap to your portfolio. From the red “Add Positions” tab, click “Add to Portfolio” and then select the portfolio. Analyze the interest or exposure of the portfolio with and without the swap using the MARS screen. On the MARS Scenario Chart tab, set scenario periods, interest rate shifts (e.g., −50 basis points to 50 basis points) and y-axis market value. Analyze your portfolio with and without the swap. In your report, comment on the relation between the market value and interest rate relation.

10. Alternative-Fund Portfolios, Etc.

Construct the asset allocation fund and two other fund portfolios and analyze them in PORT and/or Chart

Guidelines:

• Evaluate several alternative funds in terms of their policy statements and performances. From the ETF screen, click “Alt Funds” from the dropdown. On the Fund’s screen, use DES and COMP

Asset Allocation Fund

• Construct an alternative fund portfolio consisting of different ETF’s: Investment-grade, High-Yield, Emerging market, Stock Index, and style.
• Evaluate the portfolio’s features using the PORT screens
• Examine the performance of the portfolio over the past year relative to a customized index constructed with indexes comprising your index (use SECF). Use Chart

Convertible Bond Fund

• Find descriptions, recent prices, and other information on a convertible bond. Use SECF, SRCH, or CSCH to search for convertible bonds. Upload the convertible’s menu screen (convertible’s Ticker <Corp>). Screen to examine: DES, GP, YAS.
• As an Alt Fund, construct a small portfolio of convertible bonds

Directional Interest Rate Fund

• Construct an alternative fund portfolio short positions in T-note or T-Bond futures contracts. Evaluate the fund over the last year using Chart: Include the futures prices and constant maturity yield on a T-Note.
• Construct a floating-rate payer’s position in SWPM and then evaluate it in MARS
Currency Cocktail Fund
- Construct an Alternative Fund portfolio consisting of currencies
- Include spot rates or futures contracts
- Consider forming a directional currency position formed with futures

Insider Sentiment Fund
- Examine the Sabrient Insider Sentiment Index (SBRIN <Index>) and the Insider’s Sentiment Index
- Construct a portfolio with similar holdings. You may want to search for the stocks in EQS.

Municipal Bond Fund
- Use SECF or FSRC to search for different types of municipal mutual funds and ETFs by state. Funds can be screened by state by going to “Classifications” tab, selecting “Debt” from “Bloomberg Objective” tab, and then selecting state. That is: Fund Type: Hedge Fund; Classification (Bloomberg Objective, Debt): select state. Select some of the funds from your searches and study them using the functions on the fund’s menus screen (Fund Ticker <Equity> <Enter>). Functions to include: DES, historical fund analysis (HFA), relative valuation (RV), and price graph (GP).
- Create a small municipal bond portfolio for a state.

REIT Fund
- Bloomberg’s REIT screen provides a menu for searching for real estate investment trusts by regions: U.S., Europe, Asia, Australia, Canada, and other. Using the screens, search and select some REITs from different regions. Study the REITs using the functions on the REIT’s menus screen (Ticker <Equity> <Enter>). Functions to include: DES, total return (COMP), relative valuation (RV), holders (HDS), and price graph (GP).
- Create a small REIT portfolio.

MBS and ABS Portfolio
- Use SECF to search for different types of MBS and ABS funds and ETS. Select some of the funds from your searches and study them using the functions on the fund’s menus screen (Fund Ticker <Equity> <Enter>). Functions to include: DES, historical fund analysis (HFA), relative valuation (RV), and price graph (GP).
- Create a small municipal bond portfolio