**FIN2 - Mid-Term Assignment**

**Objective**: Utilize the provided investor profiles to develop a comprehensive investment strategy tailored to each investor’s goals, risk tolerance, and investment horizon. Demonstrate the application of portfolio management theories and analytical tools to create suitable asset allocations.

**Instructions**:

1. **Investment Policy Statement**:
   * Select one investor profile from the provided options (Investor 1 to Investor 6).
   * Conduct a detailed analysis of the chosen investor’s financial background, risk tolerance, investment goals, and time horizon.
2. **Asset Allocation** 
   * Explain the rationale behind the choice of asset classes, individual investments (e.g., stocks, bonds, ETFs), and allocation percentages.
   * Include the risk-return trade-off considerations in your selection process.
3. **Portfolio Construction**: Assume you were at the beginning of the year 2024
   * Design a diversified portfolio based on the selected investor’s profile.
   * Apply relevant portfolio management theories (e.g., Modern Portfolio Theory, Capital Asset Pricing Model, Factor Models….) to justify your portfolio design.
   * Estimate expected risk for your portfolio using relevant risk measures
   * Discuss the expected performance and potential risks associated with the proposed portfolio.
4. **Scenario Analysis**:
   * Perform a basic scenario analysis on your portfolio. How would it respond to different market conditions (e.g., economic downturn, bull market)?
   * Suggest adjustments or hedging strategies that could be implemented to protect the portfolio in adverse conditions.
5. **Portfolio Evaluation**: Evaluation of the portfolio as of 25 November 2024
   * Identify appropriate performance metrics (e.g., Sharpe ratio, Jensen alpha…) to assess the proposed portfolio.
   * Perform attribution analysis

**Deliverables**:

* A written report outlining the analysis, portfolio construction, and conclusions.
* A python notebook including all the analysis in the assignment.
* A presentation summarizing your portfolio and findings.

**Evaluation Criteria**:

* Depth and accuracy of investor analysis
* Creativity and rationale in portfolio construction
* Use of financial theories and data
* Clarity in explaining potential risks and performance metrics
* Overall coherence and professionalism in the report

**Deadline**: Section 13 + 14

**Note**: Use Python and relevant financial libraries (e.g., Pandas, NumPy, Matplotlib) for any data analysis or visualization included in the assignment.

**Total Marks: 100 (Report: 70%, Presentation: 30%)**

**Report (70 Marks)**

1. **Investment Policy Statement (15 Marks)**
   * Comprehensive understanding of the chosen investor profile: 5 marks
   * Accurate assessment of risk tolerance and financial goals: 5 marks
   * Clear description of the investment horizon and background: 5 marks
2. **Asset Allocation (20 Marks)**
   * Logical asset allocation aligned with investor profile: 7 marks
   * Justification and rationale for chosen asset classes and percentages: 7 marks
   * Consideration of risk-return tradeoff in the portfolio: 6 marks
3. **Portfolio Construction (20 Marks)**
   * Appropriate use of portfolio management theories (e.g., Modern Portfolio Theory, CAPM…): 8 marks
   * Relevance and accuracy in linking theory to portfolio construction: 7 marks
   * Good estimate of portfolio risk: 5 marks **(simulation, MT)**
4. **Scenario Analysis (10 Marks)**
   * Detailed scenario analysis covering diverse market conditions: 5 marks
   * Effective recommendations for portfolio adjustments or hedging strategies: 5 marks
5. **Portfolio Evaluation** **(10 Marks)**
   * Identification and explanation of relevant performance metrics (e.g., Sharpe ratio, alpha…): 5 marks
   * Good portfolio attribution analysis: 5 marks

**Bonus Points (up to 5 Marks)**

* Creativity in the presentation of data, use of innovative tools, or advanced analysis.

**Presentation (30 Marks)**

1. **Clarity and Organization (10 Marks)**
   * Logical flow of content and clear structure: 5 marks
   * Effective use of visuals (charts, graphs, etc.) to support key points: 5 marks
2. **Communication Skills (10 Marks)**
   * Articulate and confident delivery: 5 marks
   * Engagement with the audience and use of concise language: 5 marks
3. **Summary and Key Insights (10 Marks)**
   * Clear summary of the portfolio’s structure and rationale: 5 marks
   * Highlighting potential risks and performance expectations: 5 marks

**Investor Profiles for Portfolio Management Capstone Project**

**Note:** These are basic information. You can make further assumptions

**Investor 1: The Conservative Retiree**

* **Name**: John Anderson
* **Age**: 67
* **Background**: Retired civil engineer with 40+ years in the industry.
* **Assets**: Pension plan ($500,000), savings in CDs and government bonds ($350,000), primary home (valued at $400,000), rental property generating passive income ($250,000).
* **Liabilities**: Mortgage on rental property ($50,000 remaining).
* **Dependents**: None (children are financially independent).
* **Value of Investment**: $850,000 (combined pension, savings, and investments).
* **Investment Goals**: Capital preservation and steady income.
* **Risk Tolerance**: Low. Prefers fixed-income securities, dividend stocks, and government bonds.
* **Investment Horizon**: 10-15 years for retirement and legacy.
* **Preferences**: Mutual funds or ETFs focused on income stability.

**Note:** These are basic details. You can make further assumptions, such as the client’s health, potential for additional savings, or any expected healthcare-related expenses.

**Investor 2: The Ambitious Young Professional**

* **Name**: Emily Chen
* **Age**: 29
* **Background**: Tech startup manager, actively investing for several years.
* **Assets**: Savings and investments in high-growth stocks ($150,000), equity in tech startup stock options ($200,000), retirement account ($50,000).
* **Liabilities**: Student loan ($30,000), car loan ($15,000).
* **Dependents**: None.
* **Value of Investment**: $400,000 (liquid and illiquid assets).
* **Investment Goals**: Aggressive growth and wealth accumulation.
* **Risk Tolerance**: High. Comfortable with volatility; invests in tech stocks and emerging markets.
* **Investment Horizon**: 20-30 years for financial independence.
* **Preferences**: High-growth portfolios and innovative sectors like tech and renewable energy.

**Note:** These are basic details. You can make further assumptions, such as Emily's future income growth, potential salary increases, or her desired lifestyle.

**Investor 3: The Middle-Aged Business Owner**

* **Name**: Carlos Ramirez
* **Age**: 48
* **Background**: Owner of a mid-sized logistics company, experienced in real estate and index funds.
* **Assets**: Business equity ($1.2 million), diversified investment portfolio including REITs and index funds ($600,000), personal savings ($150,000), vacation property ($350,000).
* **Liabilities**: Business loan ($200,000), mortgage on vacation property ($100,000).
* **Dependents**: Two children (ages 16 and 18, college expenses anticipated).
* **Value of Investment**: $750,000 (liquid investments).
* **Investment Goals**: Growth and income for personal goals and business expansion.
* **Risk Tolerance**: Moderate. Seeks balance and avoids highly speculative investments.
* **Investment Horizon**: 10-20 years, shifting to conservative as retirement nears.
* **Preferences**: Equities, corporate bonds, REITs, and index funds.

**Note**: These are basic details. You can make further assumptions, such as Carlos ‘s business growth projections, his family’s future financial needs, or his potential for exit strategies from his company.

**Investor 4: The Young Professional**

**Name**: Sarah Nguyen  
**Age**: 29  
**Background**: Marketing manager at a tech startup, recently graduated with a master's degree in business. Has a strong understanding of digital marketing and emerging technologies.  
**Assets**:

* Salary savings ($120,000)
* Investment portfolio (stocks and ETFs): $80,000
* Employer-sponsored retirement plan: $30,000
* Car (asset value): $25,000

**Liabilities:**

* Student loan ($30,000)
* Credit card debt ($5,000)  
  **Dependents**: None  
  **Value of Investment**: $80,000 (liquid investments)  
  **Investment Goals**: Build wealth and financial independence, prepare for homeownership, and eventually start a family.  
  **Risk Tolerance**: High. Willing to take on higher risk for potential long-term gains as she has a long investment horizon.  
  **Investment Horizon**: 15-20 years.  
  **Preferences**: Growth-focused investments such as individual stocks, ETFs, and high-growth tech companies.

**Note:** These are basic details. You can make further assumptions, such as Sarah's future income growth, potential salary increases, or her desired lifestyle.

**Investor 5: The Retired Couple**

**Name**: John and Maria Edwards  
**Ages**: 65 and 62  
**Background**: John worked as a senior accountant for a large corporation, and Maria was a nurse. Both are now retired and receiving pensions. They want to ensure they maintain a comfortable standard of living throughout retirement.  
**Assets**:

* Retirement accounts (401(k), IRAs): $700,000
* Pension income: $50,000/year
* Home (paid off, market value): $400,000
* Liquid investments (stocks, bonds, annuities): $200,000  
  **Liabilities**: None  
  **Dependents**: No dependents.  
  **Value of Investment**: $200,000 (liquid investments)  
  **Investment Goals**: Preserve capital, generate income for living expenses, and avoid market volatility. Ensure funds last throughout retirement.  
  **Risk Tolerance**: Low to moderate. Prioritize security and income generation over growth.  
  **Investment Horizon**: 10+ years (with a focus on preserving capital for the long term).  
  **Preferences**: Dividend stocks, municipal bonds, annuities, and conservative income-generating investments.

**Note**: These are basic details. You can make further assumptions, such as the couple’s health, potential for additional savings, or any expected healthcare-related expenses.

**Investor 6: The Tech Entrepreneur**

**Name**: Jason Lee  
**Age**: 36  
**Background**: Founder of a software development company, has experienced high levels of success and growth but is looking for more stability. Interested in diversifying wealth while continuing to reinvest in his business.  
**Assets**:

* Business equity ($4 million)
* Liquid investments (stocks, venture capital): $1.2 million
* Commercial property (office space): $500,000
* Personal savings: $250,000  
  **Liabilities**:
* Business loan ($500,000)
* Mortgage on commercial property ($300,000)  
  **Dependents**: One child (age 4).  
  **Value of Investment**: $1.2 million (liquid investments)  
  **Investment Goals**: Diversify wealth, focus on business expansion, and secure the future of his family through investments.  
  **Risk Tolerance**: High. Willing to take on high-risk, high-reward opportunities to grow wealth, but also mindful of ensuring the security of his family and business.  
  **Investment Horizon**: 10-15 years, aiming for continued business growth and eventual financial independence.  
  **Preferences**: Tech stocks, venture capital investments, angel investing, and growth-focused opportunities in emerging industries.

**Note**: These are basic details. You can make further assumptions, such as Jason’s business growth projections, his family’s future financial needs, or his potential for exit strategies from his company.