Greg's 2001 Level III "Most Probable Exam Topics"

Morning Session – Essay Format (50 percent)

Investment Policy and Asset Allocation (40 percent)

- **The Big Questions:** You can be almost guaranteed of seeing *at least* one investment policy/asset allocation question on the test. These are relatively easy points. Don't miss them!! Review the old exam questions in Book 5, pages 77-152. Study them carefully. Getting these questions right is your key to success on the level 3 test. They add up to a lot of points (40 percent including Economics). Your ability to write a clear, concise answer that addresses the question is critical. Each year you can expect to see one series of questions that relate to individual clients, and another set(s) of questions that relate to institutions. Be sure to study the old questions that relate to life companies and be ready to address the institutional demands of life companies in 2001 (in addition to the standard questions on pensions and endowments).

  Other Potential Topics:
  - ***Calculation of Trading costs****:* Wagner and Edwards appeared on the exam last year with a calculation related to the various types of trading costs. In 1996 and 1998, questions related to the components of trading costs appeared. AIMR loves this topic.
  - ***Behavioral Finance****:* Make sure that you memorize the buzzwords in this section: *value functions, reference dependence, rational expectation, mental accounting, agency friction,* etc. The new Statman article also focuses on the introduction of a Behavioral Asset Pricing Model. Be able to distinguish it from CAPM.
  - ***Investor "Style"*****:** Christopherson & Williams and Wagner & Edwards address the concept of investor style in SS #14. It also appears in the performance measurement sections with Sharpe and Maginn and Tuttle. An excellent cross-topical question possibility.
  - ***Asset Allocation:*** The hardest reading of Book 4 is the Perold and Sharpe article on asset allocation strategies. Unfortunately, it usually shows up in some form on most Level 3 exams. You should at least be able to discuss the differences between Buy and Hold, CM, and CPPI strategies.

Performance Presentation & Measurement (part of investment policy and asset allocation):

- **GIPS/AIMR- PPS™:** It's almost a given that you'll see a question on the GIPS reading again this year. Every year AIMR has had at least one question related to performance presentation. Be sure to focus on old exam questions as an indicator of what you will see in this area on the exam, most likely in the global context. Typically, you are required to work with the requirements and recommendations of composite construction and performance reporting. Another highly probable issue that I would concentrate on is **Elton & Gruber's** material on the Sharpe and Treynor measures and Jensen's alpha. The Sharpe measure has been on almost every level 3 exam in recent history.

  Other Potential Topics:
  - ***Equity and Bond Performance Attribution****:* Know how to apply the basic performance attribution framework. I would be ready to actually compute the two effects – asset allocation and security selection. This material shows up in three places in your curriculum: Lieblich, Reilly & Brown, and Maginn & Tuttle, Ch. 14. Take note that in the calculation of security

selection effects, Reilly & Brown and Maginn & Tuttle use the active portfolio weights, while Lieblich uses passive portfolio weights. In addition, the Reilly & Brown reading and the new Fabozzi reading go through different methods to conduct bond attribution analysis. Perhaps a focused question on this topic will surface in 2001.

- ***Benchmarking**:* Know the Bailey et al article and the Bailey article. The characteristics of useful benchmarks show up repeatedly at level 3.

Economics (part of investment policy and asset allocation):

✷ **Forecasting – Techniques and Problems:** The differences (and benefits/weaknesses) between consensus and multiple scenario forecasting should be addressed. Bostain offers three different approaches to economic forecasting; Shenfeld offers five. Both Bostain and Shenfeld discuss the downsides of economic forecasting models. Shenfeld's list includes 10 problems. Be able to synthesize this material. This is an AIMR favorite appearing in 1996, 1998, and 2000.

Other Potential Topic:

- ***Cohen***: This reading discusses with lots of timely topics ripe for question picking. You should have a thorough understanding how the market dynamics of the 1990s have altered fundamental valuation techniques with respect to the underlying input variables (dividends and earnings). Second, be able to discuss how structural changes in the economy have impacted industry and overall performance records of this past decade. Third, be able to discuss how structural changes impact global investing patterns.

Global Equity/Alternative Investments (10 percent)

✷ AIMR has combined these two sections this year. I can think of several highly probable questions that could come from the international readings in your curriculum. In the **Barry, Peavy, & Rodriguez** article, focus your attention on the risks of investing in emerging markets (currency, correlation, & political); the time variability of the correlation coefficient and its impact on asset allocation decisions; and the performance differential between "investable" and all other emerging markets. **Controlled Risk Strategies:** Two of these readings focus on the long-short strategy. You need to know how to construct this strategy (both on a market neutral and an equitized basis), why it is a viable alternative to long-only investing, and the risk associated with the strategy. You should also understand how this strategy can be implemented on an international level. You should be able to discuss how trading costs can be minimized with long-short investing. **REITs:** Always an AIMR favorite. Understand the difference between a REIT and a CREF. Be ready to discuss the computational/behavioral differences between the FRC Property Index and an index composed of equity REITs. Liquidity, correlation, and risk/return differentials are important elements of the discussion.

Other Potential Topics:

- ***Correlation and Diversification Benefits**:* There are many little "nuggets" of information in the curriculum regarding correlations. Stick with the major points or you will drive yourself crazy trying to keep them all straight. Michaud finds that when the US market is moving down, that the average correlation falls. There is conflicting evidence regarding the benefits of international diversification [Michaud versus Bookstaber (Risk Management material)]. Michaud finds that diversification in developed markets results in more risk reduction than return enhancement, but that international diversification is still effective. Barry, Peavy & Rodriguez also want you to use conditional correlation estimates for more effective asset allocations in emerging markets because of the fact that these correlations vary over time. Be able to contrast findings in the emerging markets with that of the developing markets.

- ***Hedging Currency Risk:*** Know that the decision to hedge currency risk depends on the objectives and constraints of the client. Also, understand that the decision to hedge depends on the relative size of the foreign position in your overall portfolio. For small exposures, currency risk can actually enhance the risk/return profile of your portfolio.
- ***Hedge Funds***: The final reading in this topic area produces many, many lists related to current movements in hedge fund construction and the risks associated with them.
- ***International Real Estate:*** The key market variables that can be used to evaluate international real estate; the pitfalls of using multinational data, and the decision process for including real estate in a portfolio.

Afternoon Session – Multiple-Choice Format (50 percent): Please note that only Ethics was multiple choice last year. You should brace yourself for the fact that the afternoon session will look much different this year and will likely be much more difficult than the morning session due to change in format, types of material covered, and lack of precedent for this format. You should note that although AIMR has stated an absolute percentage that each section will constitute, you should not be surprised if material from debt, derivatives, or risk management sections cross-over into applications on other sections of the exam (effectively making them worth more than originally stated).

Ethics (10 percent)

- **Multiple Choice Questions**! The ethics section will once again be tested using multiple-choice questions this year. In Book 5, we have revamped all previous exam questions to reflect the new format. Be prepared to respond to ethics questions in this format. Attempt to link readings to the Standards of Practice (e.g., for your fiduciary duties readings, understand all of the Standards that apply to fiduciary duties). The Standards include two additional topical studies (corporate governance and soft dollars) as well as an addition to Standard IIB2 (Professional Misconduct) concerning responsibilities related to the CFA designation. Remember that your success will depend on your ethics scores.

Quantitative Analysis (10 percent)

- **New Section on the 2001 exam**! However, there are only three readings in this topical area. Expect a question related to analysis of a factor model and how "tilting" can take place (from the **Fabozzi** reading). The **Ma and Mallet** reading should generate a couple of multiple-choice questions related to topics related to data snooping and survivor bias (either here or as a part of a portfolio management question). You should be able to distinguish between predicting expected returns and explaining average returns. Understand the risk control procedure presented in Ma and Mallet.

Other Potential Topics:

- ***Jones*** reading: You should be able to identify arguments on either side of the active/passive debate. In addition, the Jones reading ties into behavioral issues. *Factor models:* Be able to distinguish between the different types of factor models.

Debt Securities (10 percent)

✷ **All new readings**! Six readings from the new Fabozzi text populate two study sessions. There will be a temptation for you to spend more time on this material relative to its worth on the exam. Be familiar with **downside risk measures** (which overlaps with the Risk Management material) as applied to bonds (target semivariance, shortfall risk, and value at risk). Know the pros and cons of various **bond management techniques** (focusing on bond indexing and enhanced indexing). Be familiar with techniques related to **spread analysis**. Understand the sources of excess returns for **international bond portfolios** and how alternative types of hedging affects components of returns.

Other Potential Topics:

- ***Level 2:*** You should recall the basic arguments behind duration, convexity, callable bonds, the term structure, and asset-backed securities. See the fixed-income review in Book 2 for the background material.
- ***Immunization:*** Be prepared to discuss the conceptual underpinnings of immunization (the tradeoff between price and reinvestment rate risk). Also, know the rules that underlie simple immunization and contingent immunization (construction, rebalancing, and extensions) procedures. Be ready to contrast immunization with other strategies such as cash matching and dedication.
- ***Risks*** in bond investing: You should understand the impact of tracking error and leverage on bond portfolios.
- Be able to ***calculate and understand*** conceptually spread duration, surplus management (managing the differences between assets and liabilities in pension plans), yield spreads, and breakeven analysis.

Derivatives and Swaps (10 percent)

✷ **Two new Fabozzi readings**! Look for questions related to **controlling interest rate risk** with derivatives. With the addition of Fabozzi, Chapter 7, you now have three readings with slightly different treatments to this subject. Be able to calculate and diagram cash flows associated with an **interest rate swap**. Comparing and contrasting the **cost of cash drag** on a portfolio v. the benefits of cash management using futures and SPDRs (computations possible) is an AIMR favorite. Know how to adjust the duration or asset allocation of a portfolio using T-bond futures or using T-bond futures in a portfolio insurance setting (computations possible).

Other Potential Topics:

- ***Credit derivatives***: Be able to understand the various types of credit derivatives and different types of credit risk.
- ***Futures***: Know how to: (a) create synthetic securities using futures and (b) discuss strip v. stack hedging, and (c) cross hedge.
- ***Futures***: Definitely know how to change the beta of a stock portfolio and understand the risk-minimizing hedge using stock-index futures. Also, be ready for a discussion relating to portfolio insurance techniques (see also Perold and Sharpe – CPPI, Constant Mix, Buy & Hold).

- ***Options***: Concentrate your attention on option sensitivity measures (delta) and portfolio insurance with options (concentrate on the difference between the price distribution of an insured v. uninsured portfolio). Also, be able to use put-call parity to create synthetic securities. Kolb and the new Fabozzi both feature methods related to the subject.

Risk Management (10 percent)

✷ **Expanded section in Clarke**! The different types of and ways to calculate **VAR** is an AIMR favorite. Risk Management will constitute 10 percent of your exam points, yet only consists of three readings (like Quantitative Analysis). I would know these readings inside and out. I would focus on the strengths and weaknesses of each VAR computational methodology, the use of VAR in performance measurement, and a basic computation of VAR using the variance/covariance methodology. In addition, be prepared to calculate and analyze **tracking error** in the expanded material in Clarke.

Other Potential Topics:

- ***Downside Risk****:* Definitely understand the structure and limitations of the standard deviation as a risk measure and be able to discuss the three alternative downside risk measures (the probability of shortfall, expected shortfall, and semivariance). Also, know how risk benchmarks relate to the concept of downside risk.
- ***Bookstaber****:* I think that the Bookstaber article will make a fine short exam question. Know that instead of looking at VAR, the risk manager really should look at the potential impact of outliers and "market event" correlations on potential portfolio performance.