

## Andrew's 2002 Level 2 "Most Probable Exam Topics"

### MORNING SESSION – ESSAY (50%) ASSET VALUATION AND PORTFOLIO MANAGEMENT

**Comments:** The trend toward template answers is likely to continue. Hence, while the essay questions will be broader than the multiple-choice questions, their scope will be manageable. Look for essay questions with several small, interrelated parts. Don't forget to look for the templates (nothings worse than answering the question only to turn the page and see the answer template). Above all, keep your cool and give a well-organized, legible answer.

#### Equity Securities (60 points)

- **Industry Analysis:** Questions usually show up here and have been gaining in importance. Be ready to analyze an industry via Porter's five forces and to analyze the competitive strategy of an individual firm. These are easy points – don't miss them.
- **Valuation:** This is the heart of the Level 2 curriculum. You will certainly see a valuation question on the exam. The key to this material is the Damodaran readings. Make sure you can use a constant growth and two-stage growth approach for dividends, FCFE, and FCFF. Since last year's exam focused on the DDM and FCFE models, it may be time for a FCFF question. You should also be prepared to talk about relative valuation (P/E, P/B and P/S). Numerical relative valuation questions will probably be simple. For both discounted cash flow and relative valuation approaches, be prepared to offer a brief discussion of the advantages of each variation (e.g., DDM vs. FCFE or P/E vs. P/B).
- **Sustainable growth:** An AIMR<sup>®</sup> favorite. Memorize the relationship and be prepared to discuss what happens when actual growth diverges from sustainable growth.
- **Ratio Analysis:** Lots of emphasis on ratios in this year's curriculum. You should be ready to calculate some of the more common ratios and interpret them in the context of the firm's environment. Where the ratios will appear is anyone's guess (equity, credit analysis, financial statements...?). When you come to them, look for broad trends/differences and don't get caught up in small changes (a current ratio changing from 1.22 to 1.25 is not significant). Also, don't forget to memorize the three ROE decompositions (standard three-component, the Billingsley five-component, and the Reilly five-component).
- **Pro Forma Statements:** Percent of sales forecasting is a frequently tested topic that did not significantly impact last year's exam. Be ready for it.
- **Other Equity Topics:**
  - The intrinsic P/E, P/B, and P/S ratios. Focus on the basic formulations and don't worry about the ugly stuff.
  - Control and marketability discounts. Be prepared to briefly discuss the factors that determine the magnitude of the discount and memorize point estimates for each discount (e.g., minority discounts are typically about 45%).
  - EVA/MVA analysis. Any numerical stuff will probably be straightforward. Be able to calculate each type of value-added measure and discuss their strengths. As an outside shot, be ready to summarize the value of EVA/MVA in the stock selection process (i.e., they're not useful).
  - Stock Selection. Rely on Reilly here. P/E analysis and/or SML are likely.

## Derivatives (40 points)

- My top pick is for a major question on **option strategy and pricing**. Be prepared for Black-Scholes or binomial for the pricing component, although I think the Black-Scholes is more likely this year (you'll be given the formulas). The LOS from Kolb Ch. 11 (option payoffs and option strategies) received a complete re-work, which sometimes serves as a leading indicator of exam treatment. Focus on option combinations and protective puts.
- My second "most likely" is significant treatment of **hedging with futures**, probably in an equity portfolio context. The main thrust of questions here will likely be the risk minimizing hedge and the calculation of cash flows from the hedged vs. unhedged portfolios.
- **Swaps** are a frequently tested topic. Even though they received significant treatment for the last couple of years, you should still be prepared for this topic. Good bets are swaps as overlay positions, cash flow diagrams, and extendable/cancelable swaps.
- **Other potential topics:**
  - **Put-call parity**. Make sure you can use the put-call parity relationship to create synthetic positions (especially to price puts).
  - **Cash and carry arbitrage**. Understand C&C arbitrage and how to structure it to take advantage of any mispricing.
  - **T-bond futures**. Know the pricing relationships from Fabozzi (Ch. 8).
  - **Caps and floors**. Be ready to analyze cash flows and interpret these instruments in combination with other positions.

## Debt Securities (40 points)

- This is the most difficult area to predict. Given the concentration of LOS in this material, you need to be careful not to lose sight of the big picture. The questions on the exam will probably cross over several LOS and perhaps cross over several readings.
- **Credit analysis** is a frequently tested area that has not shown up on the last two exams. Typically, these questions ask you to compare two bonds or to compare one bond to market averages. Be ready to give a brief explanation of credit worth (perhaps supported by ratios).
- **Embedded options** in fixed-income securities is a very good bet. Price performance, the value of the option, and the OAS are likely areas. Be able to compute effective duration and use it to estimate price changes for a given interest rate forecast. In the same vein, be able to use duration and convexity to compute approximate price changes. In addition, the OAS and static spread are likely this year. Be able to discuss the calculation of each and what they mean. If you know nothing else about the OAS, know that (1) the OAS will likely decline as interest rate volatility increases, (2) the OAS is the static spread without the option, (3) that you use the OAS to compare bonds of similar credit quality but with different embedded option features (you want big OAS), and (4) that the OAS contains model risk because you need a pricing model to compute it.
- It's time for a significant question on **MBS/ABS**. The most likely topic is CMOs and the redistribution of contraction and extension risk. Also, be ready to discuss the relationship between PACs and support tranches in terms of risk protection. Other topics include prepayment models/conventions (PSA, CPR) and credit enhancements for ABS, such as automobile and credit card-backed securities.
- As an outside chance, you should be ready to deal with the **binomial model** to value a bond with an embedded option. You will be given the interest rate tree, so all you will have to do

is use the backwards induction process to calculate the value of the bond. Make sure that you carefully read the call rule information.

- Other possible topics include:
  - **Term structure.** The most likely questions here will deal with the pure expectations hypothesis (PEH). Make sure you can calculate spot rates and forward rates and interpret them in the context of the PEH.
  - **Sovereign debt.** Understand the approach that the rating agencies use to rate sovereign debt and be able to discuss why sovereign issuers receive two ratings.

### **Alternative Investments (10 + points)**

- There are basically two things you can see here. The first is **venture capital**. The likely scenario is a question from the viewpoint of a pension fund portfolio manager. The second possible topic is **real estate**. In real estate, you will see either a numerical real estate valuation problem or discussion problem of the value of real estate as a diversification tool for an equity portfolio. Be ready for either.

### **Portfolio Theory (10 + points)**

- This is only 5% of the material, but will likely be 10% of the exam. Know this material. The most likely questions here will involve the use of the **CAPM/SML** to evaluate securities. Other important topics include: the use of correlation to assess potential diversification benefits, the use of indifference curves to choose the optimal portfolio, the Markowitz efficient frontier and the CML, the difference between the CAPM and the APT, and Roll's critique of the CAPM and its impact on the usefulness of the CAPM as a performance measurement tool.

## **AFTERNOON SESSION – MULTIPLE CHOICE (50%)**

**Comments:** Since AIMR doesn't release old item sets, it's very difficult to predict what you'll see in the afternoon. However, you shouldn't assume that because the questions are multiple choice that this will make them easy. The item set format (introductory material followed by 6 MC questions) can be every bit as difficult as the essay portion of the exam. What you are likely to see is 2 item sets on ethics, 2 on quantitative methods, 2 on economics, and 4 on accounting.

### **Quantitative Methods (36 points)**

- This is the wild card this year. With the new quant book, there are a number of things that could diverge from previous years. As for difficulty, I think that the quant questions will be slightly harder than in the past.
- **Regression** is still the most likely topic. You will have to interpret a regression equation given forecasts of the independent variables. Be ready to assess the significance of an individual regression coefficient and evaluate the goodness of fit of an equation using the F-stat and  $R^2$ .
- The likelihood of seeing an **ANOVA table** is high. The analysis from the table will be straightforward; so don't let the table scare you.
- **Assumption violation** questions are more likely than in years past. Be ready to define and discuss the potential impact of multicollinearity, heteroskedasticity, and autocorrelation. There could also be a small question on techniques for dealing with these problems.

- The question on many candidates' minds is whether the **time-series** material from chapter 10 will show up. If time series shows up it will almost certainly center around the autoregressive model (AR1 or AR2) and possibly the analysis of the autocorrelations.

### **Economics (36 points)**

- Shapiro chapters 5 and 7 will almost certainly be represented. Know the international parity relationships. Be able to discuss forward premiums and discounts and their relationship to the nominal interest rate differential between two countries. Remember, interest rate parity is enforced by arbitrage – it must hold. Covered interest arbitrage could show up in this area. Understand PPP, the Fisher effect, the international Fisher effect, and the real exchange rate.

### **Financial Statement Analysis (72 points)**

- **Cost vs. Equity vs. Consolidation.** Concentrate on the differential effects on the balance sheet, income statement, and the resulting ratios. Likely scenarios include questions that compare the cost method with the equity method or the equity method with consolidation. Don't ignore the equity vs. proportionate consolidation material.
- **Foreign Currency Translation.** Be ready for one item set in this area. The most likely topic will be the current method with one or two questions about the temporal method. Also, be ready for questions about when each method should be used. Finally, an item set that compares current and temporal (and their impact on ratios) is possible.
- **Pensions.** Given that a new (and streamlined) reading on pension accounting has been added this year, I see this as a very likely topic for an item set. I'd stick to the basics of accounting for the pension plan (e.g., impact of changes in assumptions on pension expense) and the balance sheet adjustment necessary to make the accounts reflect economic reality.
- **Purchase vs. Pooling?** Given the changes in U.S. GAAP, a full-blown question comparing these methods of accounting for acquisitions seems less likely. However, it could still show up. Concentrate on the calculations for the purchase method and the conceptual differences between the two methods.
- **Goodwill.** There are a number of new LOS that discuss the treatment of goodwill. Make sure you understand where goodwill comes from, how it is treated, and the difference in treatment between the U.S. and other countries (i.e., the U.S. has a much longer amortization period).
- Other potential topics
  - **Basic accounting.** LIFO/FIFO, leasing, off-balance sheet financing, statement of cash flows, and depreciation are all topics that could show up (probably in the context of a broader question).
  - **Earnings quality.** The Hawkins article on earnings quality provides a good discussion of earnings quality. Make sure you know a few of the areas where firms can "play games" with the numbers and some indicators of high quality earnings.

### **Ethics (36 points)**

The most important topics are (1) soft dollars arrangements, (2) fiduciary duties (including the prudent man vs. prudent investor rules), and (3) insider trading. However, in one item set you can see 6 different topics covered. Hence, you must be well acquainted with the Standards of Professional Conduct. Be ready for a random sampling of topics.

**GOOD LUCK!!!**