Seminar 5
Solutions

A. Multiple Choice Questions

A1. Correct answer is “a”. We need the mean geometric return based on the starting and ending cash flows return is which is 4.7%.

A2. Correct answer is “b”. Based on the discrete returns over 2006 and 2007 the geometric average return is -11.68%.

A3. Correct answer is “d”. Based on the amount invested and the total value of the investment at the end of the year, we get 13.64%.

A4. Correct answer is “c”. The rates of return in each state are:-10%, 0% and 30%, respectively. The expected return is 6% and the standard deviation is 16.25%.

A5. Correct answer is “b”. The rates of return in each state are: 30%, 20% and 0%, respectively. The expected return is 17% and the variance 0.0141.

A6. Correct answer is “a”. Global equity markets provided higher returns than government debt securities, but they also have had greater variability of return and, therefore, higher risk.

A7. Correct answer is “a”. Cumulative voting allows minority shareholders to gain representation on the board because they can use all of their votes for specific board members.

A8. Correct answer is “b”. Participating preferred shares can receive extra dividends if firm profits exceed a pre-specified level and a value greater than the par value if the firm is liquidated.

A9. Correct answer is “c”. Private equity has less liquidity because no public market for it exists. The lower liquidity of private equity would increase required returns.

A10. Correct answer is “c”. Global Depository Receipts are not listed on U.S. exchanges and are most often denominated in U.S. dollars. They are not issues in the United States.

A11. Correct answer is “b”. Callable shares are the most risky, because if the market price rises, the firm can call in the shares, limiting the investor’s potential gains. Putable shares are the least risky, because if the market price drops, the investor can put the shares back to the firm at a predetermined price. The risk of non-putable, non-callable shares falls in between.

A12. Correct answer is "a". The primary goal of the firm management is to increase the book value of equity. It *increases* when retained earnings are positive. The *market* value of equity reflects the collective expectations of investors about the firm's future performance.

A13. Correct answer is "b". Net income increasing at a faster rate than book value of equity generally would be a positive sign. If a firm issues debt to repurchase equity, this decreases the book value of equity and increases the ROE. However, now the firm becomes riskier due to the increased debt. Net income decreasing at a slower rate than book value of equity would increase ROE, but decreasing net income is not a positive sign.

B. Short Answer Questions

B1.

a. True. A risk neutral investor would not care about risk.
b. False. A risk averse investor would seek to minimize his/her risk.
c. True. A risk averse investor would seek to minimize his/her risk.
d. False. A risk seeking investor would prefer risk.

B2.

a. It might be difficult to estimate how much of the success of the private firm is due to the owner's special skills and contacts.
b. Since the firm has no history of earnings and cash flow growth and, in fact, no potential for either in the near future, estimating near term cash flows may be impossible.
c. The firm's current earnings and cash flows may be depressed due to the recession. Other measures, such as debt-equity ratios and return on assets may also be affected.
d. Since discounted cash flow valuation requires positive cash flows sometime in the near term, valuing troubled firms, which are likely to have negative cash flows in the foreseeable future, is likely to be difficult.
e. Restructuring alters the asset and liability mix of the firm, making it difficult to use historical data on earnings growth and cash flows on the firm.
f. Unutilized assets do not produce cash flows and hence do not show up in discounted cash flow valuation, unless they are considered separately.

B. Long Answer Questions

C1. Equity securities are ab important asset because of their unique return and risk characteristics in global financial markets. Over time, equities have shown higher returns than bonds and bills, but also higher risk.

C2. ***Common shareholders*** have a residual claim on assets and govern the corporation through voting rights. Common shares have variable dividends which the firm is under no legal obligation to pay.

Callable common shares allow the firm the right to purchase the shares at a pre-specified price.
Putable common shares give the shareholder the right to sell the shares back to the firm at a pre-specified price.
Preferred stock typically does not mature, does not have voting rights, and has dividends that are fixed in amount but are not a contractual obligation of the firm.
Cummulative preferred shares require any dividends that were missed in the past (dividends in arrears) to **be paid before common shareholders receive any dividends.**
Participating preferred shares receive extra dividends if firm profits excedd a pre-specified level and a value greater than the par value if the firm is liquidated.
Convertible preferred stock can be converted to common stock at a pre-specified conversion ratio

C3. Compared to publicly traded firms, private equity firms have lower reporting costs, greater ability to focus on long-term prospects, and potentially greater return for investors once the firm goes public. However, private equity investments are illiquid, firm financial disclosure may be limited, and corporate governance may be weaker.

C4. Some companies' equity shares are divided into different classes, such as Class A and class B shares. Different classes of common equity may have different voting rights and priority in liquidation.

C5. Investors who buy foreign stock directly on a foreign stock exchange receive a return denominated in a foreign currency, must abide by the foreign stock exchange's regulations and procedures, and may be faced with less liquidity and less transparency than is available in the investor's domestic markets. Investors can often avoid these disadvantages by purchasing depository receipts for the foreign stock that trade on their domestic exchange.
Global depository receipts are issued outside the U.S. and outside the issuer's home country.
American depository receipts are denominated in U.S. dollars and traded on U.S. exchanges.
Global registered shares are common shares of a firm that trade in different currencies on stock exchanges throughout the world.
Baskets of listed depository receipts are exchange-traded funds that invest in depository receipts.

C6. Equity investor returns consist of dividends, capital gains or losses from changes in share prices, and any foreign exchange gains or losses on shares traded in a foreign currency. Compounding of reinvested dividends has been important part of an equity investor's long-term return.
Preferred stock is less risky than common stock because preferred stock pays a known fixed dividend to investors; preferred shareholders must receive dividends before common stock dividends can be paid; and preferred stockholders have a claim equal to par value if the firm is liquidated. Putable shares are the least risky and callable shares are the most risky. Cumulative preferred shares are less risky than non-cumulative preferred shares, as any dividends missed must be paid before a common stock dividend can be paid.

C7. Equity securities provide funds to the firm to buy productive assets, to buy other companies, or to offer to employees as compensation. Equity securities provide liquidity that may be important when the firm must raise additional funds.

C8. The book value of equity is the difference between the financial statement value of the firm's assets and liabilities. Positive retained earnings increase the book value of equity. Book values reflect the firm's past operating and financing choices.
The market value of equity is the share price times the number of shares outstanding. Market value reflects investors' expectations about the timing, amount, and risk of the firm's cash flows.

C9. The accounting return on equity (ROE) is calculated as the firm's net income divided by the book value of common equity. ROE measures whether management is generating a return on common equity, but is affected in the market price of the firm's shares.