Investment and Portfolio Management: Common Stock Valuation: The Variable Growth Model

It seems the whole world is going wireless. On the shuttle bus from SFO airport to my hotel downtown, I couldn't help but overhear an attorney discuss his legal strategy. First he called his office on his cell phone to see if a settlement offer had been reached. Then he pulled out his Palm Pilot to log the next sequence of motions to be filed.

Not wanting to seem nosey, I busied myself by tracking the latest stock performance within my portfolio via PocketBroker, a hand-held wireless investment service through Charles Schwab. With my RIM (Research in Motion) 950, I can access my account, download the latest quotes and even execute trades all while being driven on Highway 101. With my TradeStation 2000 technical analysis based automated software package, I was able to identify several sell signals and lock in a hefty profit all before arriving at my hotel. The shuttle
driver used his antenna to obtain my credit card approval and I was off to my meeting.

If you think only business people use wireless technology to this extent, think again. On board the USS McFaul, one of the Navy's newest vessels, crew members are now able to move freely throughout the ship while sending vital information back and forth over their wireless Palm handheld devices. Note only does the mobility directly translate into greater efficiency, but the need to keep extensive paper records and hold clipboards is a way of the past.

The Wake Forest University School of Medicine uses wireless handheld devices not only to track patient records, but update them as well. Updated records are automatically sent back to the central computer via the system's intranet. Aether Systems, Inc., is the firm responsible for many of these advancements. Their commitment to increasing mobility, productivity, and efficiency has allowed them to grow at an exponential rate.

Your task is to determine, using the discounted cash flow method, whether or not Aether is fairly, over-, or under-valued. To complicate matters, since the firm only came into existence in 1998 and because they are growth oriented, they have yet to pay a dividend and do not plan to do so in the short to intermediate run. Instead, Aether will only begin to pay a dividend 10 years from now. The expected annualized dividend at the end of year 10 will be $2.50 per share. This dividend is expected to grow at a rate of 9% over the next 5 years and will then taper off to a steady 4%, a rate at which it is assumed to grow forever. Answer the following questions using a discount rate of 13%.

Questions

1. Calculate the dividends over the first growth stage.

2. Using the Gordon Growth Model, calculate the value of all remaining dividends at time 15.

3. Calculate the present value (at time 0) of ALL future dividends.

Assuming Aether was currently trading at $10 per share, what would be your longterm recommendation for this stock: buy, sell, or hold?