

A Pedagogical Method Of Dealing With Students' Risk Anxiety Of Investing In The Stock Market

Michael Cohn, (Email: CohnM@usmma.org), United States Merchant Marine Academy

*M*any students view investing in the stock market as gambling; to them, placing money on a stock is comparable to placing a bet on a horse at the races. In order to teach students the reality of stock market investing, and contain their risk anxiety, the program described below was developed and successfully implemented in the classroom. The program is a systematic way of choosing stocks based on several criteria, and following the movement of some of them over time.

When teaching students, the professor should be conscious of the common fears of investors/students. The first fear is the risk of the volatility of the market. It is not uncommon for a news commentator to announce a large rise or fall in the market on a particular day. Sometimes these fluctuations correspond to a particular news event, other times their cause can not be identified.

The second fear is the economic risk of any business. One who is investing in a market stock realizes that the stock is only as good as the company it represents. Any business can go sour, which would cause the stock price to plummet.

The third fear is the risk of the future returns. If a stock pays dividends, offering a good return now, for how long into the future can such returns be expected to continue?

The fourth fear is the risk of interest rate sensitivity. Most substantial businesses have borrowed funds, both long term debt as bonds, and short term debt as bank loans, to conduct business and invest in plant and equipment. As interest rates rise, the expense borrower's face can loom larger and larger.

The fifth fear is the risk of inflation. In periods of inflation, the distribution of wealth is affected. People on fixed income, such as retirees, are forced to pay inflated prices, without a concurrent rise in their income. Those who have borrowed heavily, pay back loans with cheapened dollars, while lenders at fixed rates suffer when they can only receive smaller returns, diminished by inflation. Students, as other investors, wish to know if their stock is positioned well for periods of inflation.

The sixth fear is the risk of permanency. The members of the management of a company can be removed, either voluntarily, as when a president reaches retirement age, or forcibly, as when there is a hostile takeover, or legal action taken against the management of a company for criminal activity. The issue of permanency is peculiar to investors in mutual funds. A mutual fund's performance is affected by the management's tenure; generally managers with longer tenures are more successful at achieving higher risk adjusted returns than those with shorter tenures. Of course, the fund's non-stock holdings, and costs reduce the net return, but the tenure of the manager is also an issue.¹

The seventh fear is the risk of mispricing. In Economics, it is often assumed that the price represents the interaction between supply and demand, incorporating available information, with the exception of transaction costs, associated with gathering information and mobility, so that price tends to be a fair reflection of value. However, when investing their own hard-earned dollars, students tend to question if the price of a security is truly an accurate measure of its value.²

The last fear is the risk of whether to believe in the instructor. In various classroom environments there are varying degrees of trust and cordiality between the faculty and student body. Instructors are supposed to be the

experts in their fields; imparting knowledge to students implies a level of trust and respect. However, at times, instructors must lower the grades of those students who do not perform adequately. By human nature, students who do not receive the grade they deserve, or feel they deserve, blame the instructor. Often, distance and mistrust arises from the generation gap between students and their teachers. In institutions where there is a very cohesive nature to the student body, a “them versus us” attitude can exist, regardless how good the instructor is.

Investors generally try to avoid risk; it is difficult to work hard and set aside money, and then observe those hard-earned funds lose value. But when selecting low risk investments, the financial goals that investors wish to achieve can be unobtainable.³

One of the standard methods of defining risk is to divide between risk factors which affect the market in its totality, as the state of the economy, political events, military campaigns, interest rates, and so forth, and the risk associated with one particular security. The former, which affects the entire market, is called systematic risk; the latter which only affects that particular security is called unsystematic risk.⁴ The common way to avoid systematic risk is to diversify. Merely purchasing a portfolio of twenty randomly selected stocks will tend to mirror the entire market’s level of risk.⁵

The systematic risk can not be reduced by diversification, and is popularly measured by beta. Beta is the index number measuring the volatility of a particular stock relative to the volatility of the entire market. One of the problems in using beta is that for the same security, the beta can vary when observed over different time intervals. Thus, when purchasing a security, the respective betas should be viewed to be constant with the purchaser’s anticipated holding period.⁶ Over long periods of time, the stocks with higher levels of systematic risk should have higher rates of return.⁷

To deal with these various risk factors, a two-part introduction to a sensible approach to stock market investing has been developed. They are (1) Three Rules for Investing and (2) Acronym for Stock Selection.

The beginning of an investment decision is to follow the three rules which will limit stock selection from thousands of stocks to a more manageable universe. Those three rules are: (1) Limit stock selection to only Value Line stocks, (2) Divide funds between high beta and high yielding stocks, and (3) Diversify within each category.

Rule number 1 is to limit stock selection to only Value Line stocks. Value Line is a compilation of 1700 widely traded stocks in 98 industries, each stock with its own one page report. By using Value Line, fly-by-night stocks can be avoided; the stock selection has already been reduced to 1700 stocks.

Rule number 2 is to divide funds between high beta and high yielding stocks. There are basically two ways to make money in the stock market. One is to buy stocks at a low price and then sell them at a high price, the difference being the capital gains. The other way is to buy a stock and receive a dividend which is the yield on the investment. Students should initially decide what portion of their funds will be allocated to a high beta stock, and what portion will be allocated to a high yielding stock. Since a rising market tends to lift the price of all stocks, those stocks which are more volatile than the market should be chosen when one is investing for capital gains. Beta is a number measuring the volatility of a particular stock relative to the volatility of the entire market. A beta of one means a stock fluctuates in the same proportion to the market; a beta greater than one means the stock fluctuates more than the market; a beta of less than one means the stock fluctuates less than the market. In order to capitalize on the market risk premium, the students should ideally seek betas greater than 1.2, meaning the stock is twenty percent more volatile than the market.⁸

If one is buying stocks for dividends, a high yielding stock, which generally has a low beta, should be selected. Such a stock pays a high yield and has little price movement. Students tend to perk up in class when they are shown a stock paying a steady 8% return, while the savings bank only pays 1 plus a fraction of a percent return.

Rule number three is to diversify within each category. No one really knows for sure what is going to happen to any security. There have been a number of solid companies that have fallen on hard times, leaving shareholders with worthless pieces of paper for certificates. Since no one knows for sure what will happen to any stock, it is

always wise to diversify; if a stock does deteriorate, the other stocks in the portfolio act as a buffer to cushion losses.

Once students have chosen their desired portions of high beta and high yielding stocks, there are several other statistics to be examined, all of which are published in Value Line, which will further narrow their choices. The acronym for these other statistics is PTA VESSels. Each will be defined briefly.

P – is for the price earnings ratio, or P/E ratio. Ideally one should try to buy a stock when the P/E is low and sell a stock when the P/E is high; a ratio of less than ten is considered low; when the ratio for some internet stocks passed two hundred, it was very high. Earnings are calculated for a twelve month period. The earnings are estimated for the next six months by Value Line; the earnings for the past six months are reported fact. Thus, the price earnings ratio is a somewhat subjective measure; it includes forecasted earnings.

T- is for trailing price earnings ratio. This is similar to the P/E ratio, but in the case of the trailing ratio, earnings are all factual; they have been reported for the past twelve months.

A – is for the annual rates. For most stocks, Value Line lists five of the changes in the rates per share. They are sales, cash flow, earnings, dividends and book value. It is considered propitious if all the rates rise at approximately the same rate, for example, if all five values are between 13 and 19 percent.

V – is for value line. Each of the 1700 Value line stocks has a one page report which includes a graph with the historical price of a stock and an accompanying solid line known as the value line or the cash flow line. This line represents the reported earnings plus depreciation, which is the cash flow, multiplied by a number selected to correlate the stock's three to five year projected target price, with its projected cash flow. If there is a close correlation, which becomes obvious by observing the graph, then when the solid line is above the stock price line, it is a time to buy the stock; when the reverse is true, it is a time to sell the stock.

E – is for earnings. The actual earnings per share are listed for the past sixteen years, if the data is available. It is a good sign if the company has had constant increases in its earnings for the past five years.

S- is for stock price stability. It is calculated by taking the standard deviation of the weekly changes in the stock's price over five years. The maximum level of stability is 100, which would be ideal for one seeking a high yielding security.

Sels – is for selling. When buying a stock, particularly a high beta stock, it is important to know at what price one feels comfortable selling the stock. Students are encouraged not to buy a high beta stock and just hold on to it.

All of the criteria listed are flexible. Instructors can vary the criteria to suit their personal preferences, or leave the decision making process up to students. Allowing students to manipulate the values they feel best suit their likes and dislikes of stock selection can give them a sense of independence and self-importance. It can also help them relieve some of the risk anxiety mentioned at the beginning of this paper.

Michael Cohn teaches at the United States Merchant Marine Academy. The views expressed in this paper do not necessarily reflect those of the Academy or any other government agency.

ENDNOTES

1. Greg Filbeck and Daniel L. Tompkins, "Management Tenure and Risk –Adjusted Performance of Mutual Funds", *The Journal of Investing*, Summer, 2004, 72-80.
2. Robert Bloomfield and Roni Michaely, "Risk or Mispricing? From the Mouths of Professionals", *Financial Management*, Autumn, 2004, 61-81.
3. Jeffrey R. Kosnett, "Taking on Risk to Achieve Extra Growth", *Kiplinger's Personal Finance Magazine*, Sept., 2004, v.58, i9, 28.

4. Moshe Ben-Horim and Haim Levy, “Total Risk, Diversifiable Risk and Nondiversifiable Risk: A Pedagogic Note”, *Journal of Financial and Quantitative Analysis*, XV, June, 1980, 289-297.
5. Jack Evens and Stephen H. Archer, “Diversification and the Reduction of Dispersion: An Empirical Analysis”, *Journal of Finance*, December, 1968, 761-767.
6. Haim Levy, Deborah Gunthorpe and John Wachowicz, Jr., “Beta and an Investor’s Holding Period”, *Review of Business*, Spring, 1994, 32-35.
7. Franco Modigliani and Gerald A. Pogue, “An Introduction to Risk and Return, Concepts and Evidence”, *Financial Analysts Journal*, May-June, 1974, 69-85.
8. E. Scott Mayfield, Estimating the Market Risk Premium”, *Journal of Financial Economics*, v.73, 2004, 465-496.

NOTES

¹ Greg Filbeck and Daniel L. Tompkins, “Management Tenure and Risk –Adjusted Performance of Mutual Funds,” *The Journal of Investing*, Summer, 2004, 72-80.

² Robert Bloomfield and Roni Michaely, “Risk or Mispricing? From the Mouths of Professionals,” *Financial Management*, Autumn, 2004, 61-81.

³ Jeffrey R. Kosnett, “Taking on Risk to Achieve Extra Growth,” *Kiplinger’s Personal Finance Magazine*, Sept., 2004, v.58, i9, 28.

⁴ Moshe Ben-Horim and Haim Levy, “Total Risk, Diversifiable Risk and Nondiversifiable Risk: A Pedagogic Note,” *Journal of Financial and Quantitative Analysis*, XV, June, 1980, 289-297.

⁵ Jack Evens and Stephen H. Archer, “Diversification and the Reduction of Dispersion: An Empirical Analysis,” *Journal of Finance*, December, 1968, 761-767.

⁶ Haim Levy, Deborah Gunthorpe and John Wachowicz, Jr., “Beta and an Investor’s Holding Period,” *Review of Business*, Spring, 1994, 32-35.

⁷ Franco Modigliani and Gerald A. Pogue, “An Introduction to Risk and Return, Concepts and Evidence,” *Financial Analysts Journal*, May-June, 1974, 69-85.

⁸ E. Scott Mayfield, Estimating the Market Risk Premium,” *Journal of Financial Economics*, v.73, 2004, 465-496.