EQUITY RISK SCIENCES, INC

Investing in Stocks: A Tutorial

By Raymond Mullaney using ChatGPT – June 21, 2024

Introduction

Hello everyone! Today, we're going to review how math can help us make smart decisions when investing in stocks. We'll explore how we can predict the future price of a stock using simple math formulas. By understanding and using these formulas, you can become a more successful investor and avoid significant losses.

Why Use Math in Investing?

- **Predict Future Prices**: Math helps us estimate how much a stock might be worth in the future.

- **Make Informed Decisions**: Using formulas can guide us to buy, hold, or sell stocks.

- **Intelligence:** Without math, investment results can be no better than random.

- **Avoid Losses**: The intelligent and thorough use of mathematics and data science will allow advisors to systematically reduce, avoid and prevent significant losses.

- **Capture More and Greater Gains**: Successful investing requires a deep understanding of the causes of gains and losses. Valuation metrics are vital predictors of stock price gains and losses.

Key Concepts

1. **Price-to-Sales (P/S) Ratio**: The cost an investor must pay for a dollar of a company's revenue.
2. **Revenue Growth**: The rate at which a company's sales are increasing over time.

Example 1:

Assumptions

- **Current Revenue**: $100 billion

- **Annual Revenue Growth**: 8%

- **Current P/S Ratio**: 8

- **P/S Ratio in 5 Years**: 4

Steps

1. **Calculate Future Revenue**:
   Future Revenue = Current Revenue $\times$ (1 + Growth Rate)^5
   Future Revenue = $100 \times (1 + 0.08)^5 = 100 \times 1.4693 = 146.93$ billion

2. **Determine Future Market Cap**:
   Future Market Cap = Future Revenue $\times$ Future P/S Ratio
   Future Market Cap = $146.93 \times 4 = 587.72$ billion

3. **Calculate Current Market Cap**:
   Current Market Cap = Current Revenue × Current P/S Ratio
   Current Market Cap = 100 × 8 = 800 billion

4. **Find Percentage Change**:
   Percentage Change = $\frac{\text{Future Market Cap} - \text{Current Market Cap}}{\text{Current Market Cap}}$ × 100%

   Percentage Change = $\frac{587.72 - 800}{800}$ × 100% = −26.54%

Conclusion: The stock price would decrease by 26.54%.

Example 2:

Assumptions

- **Current Revenue**: $100 billion
- **Annual Revenue Growth**: 8%
- **Current P/S Ratio**: 3
- **P/S Ratio in 5 Years**: 4

Steps

1. **Calculate Future Revenue**:
   Future Revenue = 100 × (1 + 0.08)^5 = 100 × 1.4693 = 146.93 billion

2. **Determine Future Market Cap**:
   Future Market Cap = 146.93 × 4 = 587.72 billion

4. **Calculate Current Market Cap**:
   Current Market Cap = 100 × 3 = 300 billion

5. **Find Percentage Change**:
   Percentage Change = $\frac{587.72 - 300}{300}$ × 100% = −95.91%

Conclusion: The stock price would increase by 95.91%.

Why This Matters

1. **Informed Decisions**: Your investment decisions should be guided by your calculation of the stock's future price. Your calculations should be based on big data analysis.

2. **Avoiding Losses**: The systematic use of mathematics and big data will allow you to avoid, reduce and prevent significant losses.

3. **Financial Success**: Using data science will produce greater financial success and growth.

Compelling Logic

- **Logical and Prudent**: It is logical and prudent to use math and big data science to predict future stock prices because it provides realistic estimates of potential gains or losses.

- **Avoiding Serious Mistakes**: Failing to use these formulas is like driving blindfolded—you wouldn't know where you're going and might crash.

Summary Table

Example	Current Revenue ($ bil.)	Revenue Growth Rate	P/S Ratio (Current)	Future P/S Ratio (5 Yrs)	Future Revenue ($ bil.)	Future Market Cap ($ bil.)	Current Market Cap ($ bil.)	Change in Stock Price
Initial P/S of 8	$100	8%	8	4	$146.93	$587.72	$800	-26.54%
Initial P/S of 3	$100	8%	3	4	$146.93	$587.72	$300	95.91%

NVIDIA Table

NVIDIA	Current Revenue ($ bil.)	5-Year Revenue Growth Rate	P/S Ratio (Current)	Future P/S Ratio (5 Yrs)	Future Revenue ($ bil.)	Future Market Cap ($ bil.)	Current Market Cap ($ bil.)	Change in Stock Price
Future P/S of 6	$79.8	49.4%	40	6	$594	$3,563	$3,220	10.6%
Future P/S of 4	$79.8	49.4%	40	4	$594	$2,375	$3,220	-26.2%
Revenue Growth 40%, P/S of 3	$79.8	40%	40	3	$429	$1,287	$3,220	-60.0%

The data analysis on NVIDIA reveals a significant statistical likelihood of a notable price decline within the next three years. Investment advisors require dependable techniques to forecast revenue growth and future P/S ratios—key determinants of successful investing. To support this, ERS provides advisors with advanced data science technology tailored for investment analysis.

Equity Risk Sciences is a big data investment analytics technology company. ERS calculates the statistical probability, magnitude and timing of future price changes of US and Canadian stocks.

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Equity Risk Sciences provides advanced technology at www.InvestLabs.ai.

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