Creating an Investment Recommendation

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November 2016

Overview

- How should you decide which stocks to buy and which to sell?

- There are several schools of thought on this topic
- I will talk about 3 of them, with the goal of helping you sound smart in a job interview

The "Naive" view:

Identify "Good" companies - read 10-K's, analyze industry growth, market share, profit margins, Porter's five forces, etc.

- This is a commonly held view (mostly among uninformed)
- This is a bad way to guide your personal investment decisions
- You might sound naive in a job interview...*but, depends on the type of job*

- A company can be good or bad, but this might be unrelated to whether it is a good or bad *investment*.

Introduction

- Choosing a stock is similar to choosing any other type of product to buy.
  - Sometimes you buy the "good" version (high quality, name brand, handmade)
  - Sometimes you buy the "bad" version (low quality, off brand, sweatshop-made)

- To state the obvious, you choose to buy something when **your perception of its value $>$ the selling price**...you should **recommend purchasing stocks with the biggest wedge between perceived value and price**.

- Reading a 10-k can help you learn if a company is "good" or "bad", but does it tell you about its perceived value relative to the price?
  - ...good companies probably have higher prices...

Slides from SWS

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Is This a Good Business? (cont'd)

- **Financial Statement Analysis**
  - Tie #s to your statements/observations
  - Revenue growth, EPS growth, profit margins
    - From income statement
  - ROE, ROA
    - From balance sheet and income statement
  - FCF generation
    - From statement of cash flows

- **Economic Landscape**
  - What external macroeconomic factors will affect the stock?

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Slides from SWS

Will this be a Good Stock?

- **Opportunities and Risks**
  - Future growth prospects & risks
- **Valuation**
  - Stock price history (if it blew up, figure out why)
  - Valuation tools:
    - P/E vs. growth rate of EPS
    - P/E across different companies
- **Investment Recommendation**
  - What type of investor should invest, time horizon, what the target price is expected to be, etc.

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How to decide which stock to buy

- Buy a stock (or anything else) when:

$$\text{your perception of its value} > \text{price}$$

Unfortunately, this comparison is really difficult to make for stocks

- there is only one correct perception of value (meaning, if I perceive a company to be worth \$30 and you perceive it to be worth \$31, only one of us can be correct)... stocks have *public* values whereas most other goods have *private* values.

- there aren't different selling prices for the same good - each stock has only *one selling price, which equals the aggregation of the world's opinions of its value*

So, buy when: **your perception of value > the world's perception of value**.
Why should your perception ever differ? If you come up with a price that differs from the world's, wouldn't you update your beliefs? Is the world wrong but you've got it all figured out?

Efficient Markets

Efficient Markets view

Market efficiency means that the stock price today already reflects most information. You cannot come up with a better price estimate by reading the 10-K or Porter's Five Forces. You need REALLY good and creative info about a stock to be able to tell if a stock's price is "too low" or "too high".

NOTE: You *can* tell which stocks are expected to give you a higher return relative to others, but this is only because some stocks are riskier than others. You are still indifferent to these stocks - they are all fairly priced.

So... how to recommend stocks?

- You don't recommend one stock over any other, just own a diversified portfolio.

With the following exceptions:

- Does the investor have non-tradeable assets?
  - Suppose the investor works at Google. Her wealth (specifically her human capital) is already tied to the tech industry. It may make sense to recommend that she avoid investing in tech stocks, i.e. she correctly assigns a lower value to tech stocks than the rest of the world. (diversification is valuable)
- Some people prefer more risk than others.
  - Investors with a long horizon might be better able to handle risk. Short horizon investor may want to buy safer stocks.

Are Markets Efficient?

This is a good, difficult-to-answer question and lots of smart people disagree. But, everyone does agree that *a lot* of information is put into prices every day.

- Traders use satellites to count cars in parking lots of major retail chains such as Lowe's and Target (WSJ, Dec 18, 2013)
- "Co-location", traders buy real estate directly next to exchange so their trade gets in first (WSJ, Sep 20, 2012)

You may want to dismiss the notion that you can pick stocks based on reading the 10-K.

With that said, some people have the view that prices may still be wrong even though so much info is already reflected in the price.

Behavioral Finance

Behavioral Finance View

Markets are not efficient. The aggregation of the world's information is likely to be wrong NOT necessarily because of a lack of information, but because humans are irrational. We might over-react to news, or under-react, or exhibit "irrational exuberance", etc... If you understand others' irrationality, than you can pick specific stocks - those where irrationality has affected the price.

So... how to recommend stocks?

- You can pick individual stocks, but do so by learning about human psychology and the types of biases we have when interpreting information.
- There aren't hard rules to follow for stock recommendations. It's up to you to simply make a case that other investors' psychology has influenced the price such that it no longer reflects the stock's fundamental value.

Some Actual Empirical Facts

- Research shows that some stock characteristics relate to future returns.
  - Momentum: Stocks that have had high returns in the past 6-12 months tend to have high returns over the next year, 0.68% per month, relative to stocks with low prior returns.
  - Market-to Book: Stocks with low Market-to-Book ratios ("value" stocks) earn 0.39% per month more than high Market-to-Book ("growth" or "glamour") stocks.
- BF would say that you should buy stocks with positive momentum and low Market-to-Book ratios because these are underpriced
- EM would say that these characteristics just reflect risk, there is nothing wrong with buying these stocks (you are getting a fair deal) but you should recognize that you are just investing in risky stocks.

Summary

Many agree that:

- You should choose stocks based on personal situation such as willingness to bear risk, ownership of non-tradeable assets
- If you actually know more about a stock than the rest of the world, you can make money.
- Humans have biases
  - Researchers followed the performance of individual investors' portfolios. Men underperform women, not because women know more about stocks, but instead because men think they do (they trade a lot, lose money in transactions costs) *Boys Will be Boys: Gender, Overconfidence, and Common Stock Investment*, QJE 2001.
- Certain stock characteristics reliably predict high future returns (value stocks, stocks with positive momentum)

Many disagree about:

- The likelihood that biases affect prices
  - individuals have biases, but for the price to be "wrong", the entire world needs to share the same bias
- The likelihood that you know more than the entire world
- Do value and momentum stocks earn high returns because they are risky, or because the world has irrationally pushed their current prices too low?

To conclude, part 1

So, how to make a stock recommendation? First thing, know your audience.

- Is this a job interview question? What is the job? Sales and marketing? Sell side analyst? If you are selling advisory services it might be bad to say that you can't pick specific stocks because markets are efficient and you don't know more than the world... the "naive" view (or perhaps behavioral view) will have some appeal.
- Is it an interview with a hedge fund? In this case the "naive" view will sound naive. You should acknowledge that lots of smart people are constantly working to uncover profitable information, if markets are efficient you'd need to come up with a creative idea to get info that no one has thought of. If markets are not efficient then you'd create investment recommendations based on psychological biases and the resulting mispricings.
- Can you guess if interviewer agrees with EM or BF? If you know this, it is easier to give them an answer that they would agree with.

To conclude, part 2

An example of an answer that would appeal to an academic (I think):

First I would cater recommendations to the specific client. If she works for an oil firm I may steer her away from energy stocks because she has non-tradeable human capital exposure to that sector, and diversification is good. I would also consider the client's risk preferences, is she willing to bear risk or is she risk averse?

After considering these client characteristics, then I would acknowledge that it is unlikely that I know more about a specific stock than the information that is already reflected in its price. Of course if I uncover some specific piece of private information that no one else knows, then it will be easy to create a recommendation based on this private information. But this is unlikely to happen.

But even in the absence of this private information, we know that stocks with certain characteristics tend to earn high returns (for example value stocks and stocks with upward momentum). There are two possibilities i) the prices of these stocks are "too low" and are the result of investor irrationality, and so I am creating value for the client by recommending these stocks, ii) the prices are correctly low because these stocks have characteristics that people don't like (i.e. risk), and so in the worst case I am getting a fair deal for the client.

So, I would recommend stocks with low market-to-book ratios and recent upward momentum. I may also try to supplement this with any private information about these firms that I have, but generally, acquiring such information requires the resources of Warren Buffet or the connections of Goldman Sachs, or a unique and brilliant idea to acquire information that no one yet has thought of.