Assignment 5

Description about screening tutorial by Seeker Securities – Group 3

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Investment is something that many people do nowadays. There are several steps on making an investment and it starts with selecting stocks for our portfolio. There are so many stocks and there are also several ways to choose the stock, using fundamental, technical or mixed, so that it suited to our purpose. Stock screening process is a way to filter the stock based on our preferences. We can use several rules to filter the stocks but we only use 3 rules to screen the stock in this example that suited our purpose. Since our philosophy is to seek for high return we will have value investing strategy.

Using *stockbit.com* there is screener tab and can choose some rules to screen the stock.

Stockbit.com → Screener tab → Guru Screener → Value Screener → Piotroski F-Score Price to Earnings Ratio.

There are two rules embedded in Piotroski F-Score Price to Earnings namely:

1. Piotroski F-Score
2. Rank (Current PE ratio TTM)

We added one more rule to make it better screener which is basic ratio, namely rank P/B %

Table 1. Screening Rules	
Rules	Criteria
Piotroski F-score	> 7
Rank (Current PE Ratio TTM)	> 80
Rank (P/B %)	> 50

We choose those three rules so that we can find a mispricing in price but with a good quality. **FSCORE Screener is based on stocks that be filtered by 20% stocks that has the lowest P/E. So, we can know which stocks that have higher FSCORE with lower P/E and show their best fundamental.** Combining the F-score, current P/E ratio and rank of P/B as filters might be able gives excess return in our investing strategy.

Here are the explanations of the three rules of that screener:

- FSCORE
  Piotroski (2000) had already researched that simple fundamental analysis, which is constructed by nine binary signals, can gives increase the return of investor. He made FSCORE as fundamental tools to sort the stock. FSCORE is used to calculate financial strength as fundamental analysis of some investment such as stocks. The range is [0, 9]. It is constructed of three groups of financial strength indicator that consist of nine financial variables. The three groups are profitability, operating efficiency and solvency or liquidity. Look at table 2 to be more detail.

Table 2. FSCORE

No	Category	Variable	Equation	Explanation
1	Profitability	ROA	$ROA = \frac{Net\ Income}{Total\ Asset}$	if ROA > 0 then 1, 0 otherwise
2		ΔROA	$\Delta ROA = ROA_t - ROA_{t-1}$	if ΔROA > 0 then 1, 0 otherwise
3		CFO	$CFO = \frac{CF\ from\ operation}{Total\ Asset}$	If CFO > 0 then 1, 0 otherwise
4		Accrual	$Accrual = \frac{Net\ Income - CFO}{Total\ Asset}$	if CFO > ROA, ACCRUAL is 0. 0 otherwise
5	Operating Efficiency	ΔMargin	$\Delta Margin = \frac{Gross\ Margin}{Total\ Asset}$	ΔMargin > 0 then 1, 0 otherwise
6		ΔTurn	$\Delta Turn = \frac{Total\ Sales}{Total\ Asset}$	if ΔTurnover > 0 then 1, 0 otherwise
7	Solvency / Liquidity	ΔLEVER	$\Delta Lever = \frac{Long - Term\ Debt}{Total\ Asset}$	if Δlever is decreasing from previous year then 1, 0 otherwise
8		ΔLIQUID	$\Delta Liquid = \frac{Current\ Asset}{Current\ Liabilities}$	ΔLIQUID > 0, then 1, 0 otherwise
9		ΔEQ_OFFER	(just look at equity issue)	if the firm did not issue the common equity in the year previous portfolio formation, the ΔEQ_OFFER is 1 and 0 otherwise
F-score		FSCORE = F_ROA + F_DROA + F_CFO + F_ACCRUAL + F_DMARGIN + F_DTURN + F_DLEVER + F_DLIQUID + EQ_OFFER		

If the result of FSCORE is more than or equal to 7, it means that the firm has high FSCORE which indicates that the stock is healthy and have a good performance. There is relationship between the FSCORE of the stock and subsequent stock return for portfolio by book to market. High FSCORE is related with high stock return in the future.

- Rank (Current PE ratio TTM)
  PE ratio tells investor of how much they pay for each dollar of earnings per share. It helps investor to assess the valuation of a firm based on the current earnings or estimated future earnings. Using Current PE ratio TTM we valued the firm based on current earnings the

stock is trading at (Trailing 12-Month). The value itself, high or low, does not gives signal to buy or sell but it shows investor perception of the prospect of the firm.

$$PE\ Ratio\ TTM = \frac{Current\ Price}{Trailing\ 12 - Month\ EPS}$$

- Rank P/B %

  Price to book is comparing the intrinsic value and the market value. It will show characteristic and how volatile the stocks. Low price to book ratio also signalling that the firm is undervalued, which means it is a good thing to buy the stocks, or something wrong with the fundamental of the firm.

$$Price - to - book = \frac{Price\ per\ share}{Book\ Value\ of\ Euity}$$

Since every rules have their limitations, using more than one rule is better so that they can overcome each other limitation and hence can gives us better stock to be used in our portfolio.