

Using all the rules can be very restrictive and sometimes contradictory. But it							
is hard to argue with screens that try to find neglected stocks on the verge of							
a turnaround.							
Stock Market Winners: Applying the Rules in Today's Environment							
By John Bajkowski							
In September 1989 the AAI Journal published an article by Marc Reinganum,							
titled Investment Characteristics of Stock Market Winners, which examined the							
common traits of a group of winning stocks. These types of examinations can be							
noteworthy if they help to establish financial relationships likely to hold							
true over time.							
The study examined 222 stocks highlighted as winners in a publication by							
William O'Neil & Co. titled The Greatest Stock Market Winners: 1970-1983. The							
goal was to establish the characteristics common to these stocks prior to their							
rise to super stock status. Nine trading rules were developed that helped to							
identify the winners:							
- Price-to-book-value ratio less than 1.00;							
- Accelerating quarterly earnings;							
- Positive five-year growth rate;							
- Positive pretax profit margin;							
- Relative strength rank of at least 70;							
- Relative strength rank of the stock in the current quarter is greater than							
the rank in the previous quarter;							
- O'Neil Datagraph rating of at least 70;							
- Stock selling within 15% of its maximum price during the previous two years;							
- Fewer than 20 million common shares outstanding.							
The use of these rules or screening criteria produced returns significantly							
higher than the market. While the group of stocks passing the filter were							
slightly more risky than the market, the additional risk did not account for							
the extraordinary returns of the winners.							
There can be problems encountered when trying to apply trading rules determined							
during a specific point in time with a specific group of stocks. This article							
discusses some of the difficulties in trying to interpret and apply these rules							
in the real market environment.							
Low Price-to-Book-Value							

When examined independently, the first screen requiring that the price-to-book-							
value ratio be below one produced the highest rate of return. This finding							
coincides with many studies that show that buying into neglected, out of favor							
stocks leads to investment success. While the market does a good job of valuing							
securities in the long-run, in the short-run it can overreact to information							
and push the prices away from their true value. Measures such as price-to-book-							
value ratio, price-earnings ratio, and dividend yield help to identify which							
stocks may be truly undervalued.							
The price-to-book value ratio is determined by dividing market price per share							
by book value per share. Book value is generally determined by subtracting							
total liabilities from total assets and then dividing by the number of shares							
outstanding. It represents the value of the owners' equity based upon the							
historical accounting activities. If accounting truly captured the current							
values of the firm, then one would expect the current stock price to sell near							
this accounting book value. Over the history of a firm, many events occur which							
can distort the book value figure. For example, inflation may leave the							
replacement cost of capital goods within the firm way above their stated book							
value, or the purchase of a firm may lead to the establishment of goodwill,							
which is an intangible asset boosting the level of book value. Some services							
are more conservative in reporting book value and may subtract out the value of							
intangibles such as patents, copyrights, trademarks, or goodwill. Of course it							
makes these values incomparable with services that include intangibles.							
Different accounting policies among industries may also come into play when							
screening for low price-to-book stocks.							
AAII's Stock Investor program was used to screen for the potential stock							
market winners. The first screen specified a price-to-book ratio below 1.5,							
leaving 2,501 companies out of a complete database of 8,145 NYSE, Amex, Nasdaq							
National Market, and Nasdaq Small Cap stocks. The maximum price-to-book ratio							
level is higher than the original study so that a slightly larger group of							
companies would pass the complete set of filters. As a primary screen,							
specifying a price-to-book ratio below 1.0 led to about 14% of the companies							
passing the filter, versus about 30% passing the 1.5 price-to-book-value limit.							
Valuation levels of stocks vary over time, often dramatically from bear market							
bottoms to bull market tops. During the depths of a bear market, many firms can							
be found selling for a price-to-book ratio less than one. In the latter stages							
of a bull market, few companies other than troubled firms sell for less than							
book value per share.							
Earnings Momentum							

The low price-to-book screen is very good at identifying neglected firms, but		
secondary, or conditioning, screens are also needed to help identify which		
stocks may be poised for a turnaround. Quarterly earnings per share for winners		
rose on average 46% in the original study and exhibited an increase from the		
previous quarter's growth rate. Accelerating earnings attract attention, and		
may be one of the first signs that a company is poised for an upturn.		
The earnings measure used in the original study was somewhat crude in that it		
did not consider the seasonality of quarterly earnings. A more useful technique		
is to compare one quarter to the same quarter last year i.e., this year's		
second quarter is compared to last year's second quarter. Many firms have		
annual seasonal cycles, either in production or sales. Comparing similar		
quarters is one way of taking these seasonal changes into consideration.		
In our screen, earnings from continuing operations for the most recent two		
quarters were required to be above their respective quarters last year. This		
dropped the number of companies down to 824 from the 2,501 passing the low		
price-to-book-value screen.		
To emphasize momentum or acceleration in quarterly earnings, the next criterion		
specified that the rate of change between the recent quarter and its		
counterpart last year be greater than the increase between the previous quarter		
and its counterpart. This momentum screen dropped the number of passing		
companies down to 383.		
Table 1 presents the quarterly earnings per share figures used for the		
screening. Looking at the raw data can assist in judging the significance of		
any decisions based upon percentage changes. For example, very small earnings		
figures can lead to distorted growth rates. Elmer's Restaurant experienced a		
400% increase in its latest quarter over the same quarter a year ago, but this		
increase was based upon a change in earnings per share from one cent to five		
cents.		
Minimum Fundamentals		
As further proof that a company's fortunes have turned around, the next two		
criteria specified a minimum level of company fundamental performance.		
The first criterion required that the five-year annual growth rate in earnings		
per share be positive. Applying this criterion cut the number of firms down to		
140. In the original study, the five-year growth rate was based upon the most		
recent five years of quarterly data. The growth rates used in the screening are		
based upon the firm's fiscal-year data, which will not show intra-year		

turnaround as quickly as the trailing quarterly data.							
The second criterion required that the pretax profit margin be positive. This is determined by taking sales and subtracting cost of goods sold, operating expenses, interest expenses, and depreciation and amortization, and dividing the result by sales. The gross profit margin was substituted and is calculated by subtracting cost of goods and operating expenses from sales and dividing the result by sales. The gross operating margin is not as stringent as the pretax profit margin used in the original study, but it captures much of the same effect. It represents the type of compromise often necessary when implementing a screening strategy. Requiring a positive gross profit margin brought the number of companies down to 87.							
Requiring a positive five-year earnings growth rate or a positive gross operating profit margin by themselves are not very restrictive criteria. However, they help to screen out some of the very weak firms that have some time to go before turning around, if ever. It is interesting to note that fundamental measures such as profit margins rose substantially during the major price moves. Requiring a high profit margin as a screening criterion would mean missing at least part of this major price advancement.							
Price Momentum							
The next set of criteria help to identify stocks that have already shown upward price movement. Patience is required when selecting stocks using purely contrarian rules. It often takes time for the market to recognize value in the firm. The study indicated that technical measures such as strong and improving relative strength, a current stock price near its high, and a high Datagraphs ranking, point to stocks likely to advance further.							
The weighted relative strength ranking was the primary price momentum indicator used in the study. The weighting required that the most recent quarterly price change be given a weight of 40% and the previous three quarters each weighted 20%. The weighted price changes were then ranked for all the stocks and the relative position indicated via percentage rank. Stocks with a 90% relative strength rank had a weighted price change better than 90% of all the firms.							
The study indicated that the winners had relative strength rank of 70% or better before their main price move. When this criterion was applied it reduced the number of companies to 33. The study also indicated that it is best if relative strength rank also increased from the previous quarter. While this further screen was not applied to narrow the data set, this is the type of variable that could be investigated after the screening process.							

The other price-based screening criterion developed in the study required that the current price be within 15% of the high price for the last two years. This rule reinforces the requirement of price strength. In applying this screen, the 52-week high was used in place of the two-year high. The 52-week high screen is not as strict but the 52-week high is more readily available for most stocks. When applied to our list of stocks it cut the number of firms down to 16, as shown in Table 1.							
The original study was performed using the Datagraph books (published by William O'Neil and sold primarily to institutional investors), which include both fundamental and technical data. It was found that the winners usually had a high Datagraph rating in the buy quarter. The Datagraph rating uses a proprietary weighting mix for reported earnings, capitalization, sponsorship, relative strength, price-volume characteristics, group rank and other factors. Since most individuals will not have access to this charting and data service, it was not used in the screen. It is worth noting, however, that the other rules seem to reflect much of the information contained within the Datagraph rating.							
Limited Float							
This criterion examines the number of shares outstanding, often termed the float. The study found that 90% of the firms had fewer than 20 million shares outstanding before their main price rise. The midpoint or median figure was 5.7 million shares, which doubled during the two years that each winning stock was held. This probably indicates many of the firms split their shares during their big price increase.							
Some investors look for a stock to have a limited float with the belief that the price move on positive information will be magnified by a limited number of shares available. Applying this screening criterion did not cause any firms to drop out. It seems that in today's market the other screening criteria did a good job of filtering out the larger firms that have more shares outstanding.							
The list of stocks passing all the screens is presented in Table 1. They are ranked on the price-to-book-value ratio. The list represents a diverse set of relatively small firms. Like all screens, this list provides a beginning point for further in-depth analysis.							
Conclusion							

Examining the characteristics of past stock market winners might prove interesting. But using all of the rules may lead to a very restrictive screen in the present. Screens can also be in some ways contradictory. In this case, there is a strong price-to-book neglect screen tied to look-at-me earnings and stock price movements.							
But it is hard to argue with screens that try to find neglected stocks on the verge of a fundamental and technical turnaround.							
Definitions of Screens and Terms							
The following is a short description of the screens and terms used in the table. Price-to-Book-Value Ratio: Market price per share divided by book value (assets less liabilities) per share. A measure of stock valuation relative to net assets. A high ratio might imply an overvalued situation; a low ratio might indicate an overlooked stock.							
Quarterly Earnings per Share: Net income from continuing operations of a firm divided by the number of common stock shares outstanding. Second Quarter 1994: Earnings per share for the most recent quarter. Second Quarter 1993: Earnings per share four quarters ago. Provides a comparison for the latest quarter's earnings per share. First Quarter 1994: Earnings per share one quarter ago. First Quarter 1993: Earnings per share five quarters ago. Provides a comparison figure for this year's first quarter earnings per share. Comparison of quarterly earnings helps to provide an indication of accelerating earnings.							
Annual EPS Growth Rate: Annual growth in earnings per share from continuing operations over the last five fiscal years. A measure of how successful the firm has been in generating the bottom line, net profit.							
Relative Strength Rank: Relative price change, computed here with the most recent quarterly price change given a weight of 40% and the three previous quarters each weighted 20%. The weighted price change is then compared to other stocks over the same time period.							
Price as % of 52-Wk High: Most recent market price divided by highest market price over the last 52 weeks.							
No. of Shares Outstanding: Total number of shares of stock held by shareholders. Provides an indication of the trading liquidity of the firm.							
The following list of criteria was used to create the Winners screen:							

UDEF04 > 5.1 first use this user defined to select only 30% of the database							
P_BOOK < 1.5							
EPSCON_Q1 >= EPSCON_Q5							
EPSCON_Q2 >= EPSCON_Q6							
UDEF01 > UDEF02							
EPSCON_GR > 0							
GPM_12M > 0							
UDEF3 >= 85							
SHARES_Q1 <= 20							
Udef_1 = (EPSCon_Q1 / EPSCon_Q5 - 1) * 100							
Udef_2 = (EPSCon_Q2 / EPSCon_Q6 - 1) * 100							
Udef_3 = (Price_Last / PriceH_52W) * 100							
Udef_4 = ((Price_Last / Price_Q2 - 1) * 40) +							
((Price_Q2 / Price_Q3 - 1) * 20) + ((Price_Q3 / Price_Q4 - 1) * 20) +							
((Price_Q4 / Price_Q5 - 1) * 20)							
Company	Ticker	Price to Book	EPS Qtr 1	EPS Qtr 5	EPS Qtr 2	EPS Qtr 6	EPS Growth
Watsco B	WSOB	0.4	0.19	0.15	0.54	0.44	5.1
TCI Internatl	TCII	0.73	0.12	0.05	0.07	-0.4	21.6
Aaron Rents A	ARONA	0.76	0.29	0.25	0.25	0.22	29.4
Green A P Ind	APGI	0.78	0.42	0.11	0.66	0.41	172.3
Diagnostic Rt A	DRSA	0.84	0.13	0.05	0.12	0.05	21.8
FoxMeyer Health	FOX	1.04	0.6	0.28	0.14	-0.06	34
Atwood Oceanics	ATWD	1.05	0.26	0.24	0.25	-0.08	43.5
Seaboard Cp	SEB	1.2	7.35	0.83	3.8	1.11	4.1
Utd Stationers	USTR	1.24	0.4	0.21	0.37	0.32	0.6
Atlantis Plastics	AGH	1.29	0.23	0.13	0.16	0.15	68.7
FDP Cp	FDPC	1.3	0.11	0.03	0.06	0.04	7.9
Schultz Sav-O-Str	SAVO	1.3	0.65	0.53	0.5	0.42	8.6
T/SF Commun	TCM	1.31	0.1	0.02	0.3	-1.05	32.9
Salem Corp	SBS	1.37	0.94	0.28	0.54	0.34	1
Guilford Mills	GFD	1.42	0.67	0.28	0.44	0.28	51
NuVision	NUVI	1.42	0.04	-0.61	0.03	-0.03	22.5
Nichols Research	NRES	1.42	0.27	0.26	0.27	0.27	7.4
SPS Technols	ST	1.43	0.32	-5.32	0.39	-1.34	23.3
Badger Meter	BMI	1.49	0.49	0.34	0.47	0.37	6.4
Data Measurement	DMCB	1.49	0.25	0.14	0.12	-0.25	19.8
Varitronic Sys	VRSY	1.49	0.3	0.1	0.25	0.2	12.9
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