

# 2013 Stock Screens Review: The Year of the Bulls

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## Article Highlights

- AAll's Stock Screens realized a median return of 29.4% for the year, with 43 out of 65 screens beating the S&P 500.
- The value-oriented Piotroski High F-Score screen remained the best performer, with a 142.3% gain for 2013.
- Two new risk measures are now tracked: the Ulcer Index and the Martin Ratio.

**A**s we approach another calendar year end, I can't help but reflect on what an incredible year it's been for the stock market.

Coming into this year, analysts were hoping for a positive 2013, but did not really know what to expect. Unemployment was still stubbornly high and, in addition, our economy was facing the possibility of across-the-board tax hikes in conjunction with automatic spending cuts, or sequestration. If you asked me then what the chances of the S&P 500 index gaining more than 25% for the year were, I would have said slim to none, leaning more toward none.

Now, as I am writing this, the major U.S. market indexes have all gained more than 25%, and we are merely a few weeks away from the end of the 2013 calendar year. The market has been in an upward trend for the entire year, with just some minor pullbacks. Market pullbacks during the year were almost always due to two specific reasons: weakness in the global economy, especially from a slowdown in emerging markets; and worries over the potential tapering of U.S. government stimulus measures. These concerns were at the forefront when the market dipped in mid-May. However, after concerns over tapering were alleviated, stocks began rallying again. In October, the market took another breather as the government "shut down" for 17 days due to our politicians' inability to hammer out a nonpartisan budget deal. However, stocks were able to rebound once again shortly after the crisis was resolved.

Looking forward, one cannot help but wonder what is in store. The S&P 500 and Dow Jones industrial average have both rallied to all-time high levels, while the NASDAQ has



once again broken 4,000 (the NASDAQ is still significantly lower than it was during the dot-com boom, showing how incredibly rich tech firms were during that time). While I will not make any specific predictions, it is prudent to keep in mind that our economy has been growing with an extended period of unprecedented economic stimulus. It will be telling to see how the economy

responds to the tapering of the bond-buying program and, eventually, the raising of interest rates. Federal Reserve Chairman Ben Bernanke has stated that the Fed is not looking to raise interest rates until unemployment drops to 6.5%, but I would be shocked to see the current near-zero interest rate maintained if inflation starts to take off before unemployment hits that level.

In addition, a quick look at some very simple valuation factors provides a small glimpse to the current overall valuation of the market. As of the end of November, the stocks in the S&P 500 were trading with a median price-earnings ratio of 20.7 and a median forward price-earnings ratio of 17.6. Over the past seven years, the average median price-earnings ratio for the large-cap stocks has been 17.0. The S&P MidCap 400 index is trading at a median price-earnings ratio of 21.8, with a forward price-earnings ratio of 19.2 as of November 30, 2013. Over the last seven years, the average median price-earnings ratio of mid-cap companies has been 18.9. Finally, as of November 30, the median price-earnings ratio of the S&P SmallCap 600 index is 23.9, while its median forward price-earnings ratio is 21.3. Over the past seven years, small-cap stocks have traded with an average median price-earnings ratio of 20.7. According to these figures, the current market is trading at a slight premium compared to

**Table 1. Performance of Stock Screens on AAll.com**

| Value Screens                           | Average Annual Price Gain (%) |        |        |             |        |       |       | Price Gain (%) |           | Monthly Variability |        | Risk Measures  |                     |                 |                  | Holdings |               |
|-----------------------------------------|-------------------------------|--------|--------|-------------|--------|-------|-------|----------------|-----------|---------------------|--------|----------------|---------------------|-----------------|------------------|----------|---------------|
|                                         | Price Gain (%)                |        |        | Since Incep | 3 Yr   | 5 Yr  | 10 Yr | Bull Mkt*      | Bear Mkt* | Largest Gain        | Loss   | Risk Index (X) | Risk-Adj Return (%) | Ulcer Index (%) | Martin Ratio (X) | Avg #    | Turn-over (%) |
|                                         | YTD                           | 2012   | 2011   |             |        |       |       |                |           |                     |        |                |                     |                 |                  |          |               |
| Piotroski: High F-Score                 | 142.3                         | 91.7   | (36.4) | 31.7        | 47.9   | 61.9  | 30.4  | 984.8          | (53.6)    | 43.1                | (42.0) | 2.06           | 18.7                | 14.9            | 1.97             | 22       | 24            |
| Price-to-Free-Cash-Flow                 | 91.6                          | 1.1    | (7.0)  | 21.1        | 26.8   | 48.3  | 19.2  | 662.8          | (62.8)    | 51.2                | (31.7) | 1.78           | 14.7                | 16.2            | 1.15             | 30       | 22            |
| Fundamental Rule of Thumb               | 45.6                          | (6.9)  | (35.2) | 14.7        | (2.0)  | 17.8  | 9.5   | 108.2          | (57.0)    | 33.8                | (19.2) | 1.70           | 11.3                | 19.1            | 0.64             | 50       | 21            |
| Schloss                                 | 39.3                          | 13.1   | (35.1) | 12.9        | 7.8    | 13.0  | 6.1   | 70.4           | (37.6)    | 27.1                | (40.4) | 1.86           | 9.9                 | 21.4            | 0.49             | 13       | 55            |
| Cash Rich Firms                         | 33.5                          | 10.5   | (32.8) | 11.1        | 0.4    | 13.3  | 5.4   | 79.0           | (45.6)    | 17.6                | (20.7) | 1.37           | 9.8                 | 15.8            | 0.55             | 30       | 25            |
| Graham—Defensive Investor (Non-Utility) | 31.8                          | 18.9   | 7.0    | 18.2        | 21.2   | 30.0  | 18.2  | 286.7          | (52.1)    | 25.8                | (17.3) | 1.37           | 15.0                | 12.4            | 1.27             | 21       | 20            |
| Dogs of the Dow: Low Priced 5           | 30.9                          | 15.7   | 13.1   | 2.1         | 21.9   | 12.0  | 0.3   | 226.2          | (82.9)    | 27.6                | (34.8) | 1.58           | (0.4)               | 36.7            | (0.01)           | 5        | 16            |
| O'Shaughnessy: Value                    | 26.6                          | 20.3   | (11.2) | 6.1         | 13.2   | 15.2  | 4.5   | 148.4          | (69.1)    | 22.0                | (23.8) | 1.34           | 6.0                 | 16.6            | 0.53             | 50       | 21            |
| Dogs of the Dow                         | 25.9                          | 9.6    | 10.7   | 2.8         | 17.3   | 14.4  | 2.8   | 177.3          | (69.0)    | 17.1                | (23.4) | 1.22           | 1.9                 | 23.8            | 0.01             | 10       | 7             |
| Magic Formula                           | 24.9                          | 7.9    | (30.6) | 11.2        | 2.3    | 21.8  | 6.0   | 156.6          | (51.6)    | 30.7                | (22.4) | 1.65           | 9.3                 | 16.6            | 0.53             | 30       | 24            |
| Weiss Blue Chip Div Yield               | 17.6                          | 19.2   | 7.6    | 11.1        | 17.7   | 20.3  | 10.2  | 174.2          | (43.1)    | 16.0                | (16.8) | 1.22           | 10.3                | 11.9            | 0.73             | 12       | 25            |
| Graham—Defensive Investor (Utility)     | 10.9                          | 1.2    | 8.6    | 7.9         | 8.0    | 6.0   | 7.7   | 55.3           | (31.4)    | 12.0                | (13.4) | 0.90           | 8.0                 | 10.0            | 0.54             | 19       | 13            |
| Graham—Enterprising Investor            | 10.5                          | 1.1    | (1.1)  | 17.8        | 3.4    | 21.8  | 16.5  | 159.0          | (50.3)    | 33.1                | (23.4) | 1.75           | 13.0                | 15.8            | 0.98             | 4        | 44            |
| Graham—Enterprising Investor Revised    | 4.1                           | (4.9)  | (4.1)  | 21.3        | (1.7)  | 28.3  | 22.9  | 244.8          | (49.9)    | 36.4                | (22.4) | 1.74           | 15.0                | 14.6            | 1.29             | 9        | 25            |
| Value With Price Momentum Screens       |                               |        |        |             |        |       |       |                |           |                     |        |                |                     |                 |                  |          |               |
| O'Shaughnessy: Tiny Titans              | 47.9                          | 20.0   | (22.9) | 25.7        | 13.9   | 24.6  | 11.6  | 193.5          | (67.3)    | 37.4                | (21.0) | 1.93           | 16.4                | 21.9            | 1.06             | 25       | 42            |
| O'Shaughnessy: Small Cap Growth & Value | 44.7                          | 30.3   | (0.3)  | 19.9        | 27.0   | 18.6  | 15.7  | 175.8          | (50.6)    | 18.5                | (18.2) | 1.51           | 15.4                | 18.0            | 0.97             | 25       | 50            |
| O'Shaughnessy: Growth Market Leaders    | 41.7                          | 15.8   | (1.2)  | 7.8         | 19.6   | 16.0  | 6.4   | 124.4          | (50.5)    | 13.6                | (18.6) | 1.22           | 7.5                 | 19.9            | 0.27             | 10       | 43            |
| O'Shaughnessy: Growth                   | 40.6                          | 28.8   | (7.5)  | 17.7        | 21.3   | 20.8  | 13.5  | 197.0          | (57.2)    | 18.6                | (17.9) | 1.51           | 13.9                | 18.5            | 0.83             | 50       | 38            |
| Lakonishok                              | 23.3                          | 7.5    | (0.6)  | 14.6        | 13.6   | 23.6  | 15.7  | 184.9          | (32.5)    | 16.6                | (17.9) | 1.20           | 13.2                | 10.0            | 1.21             | 31       | 90            |
| O'Shaughnessy: All Cap                  | 14.3                          | 12.4   | (5.0)  | 11.6        | 11.1   | 15.3  | 11.8  | 114.6          | (52.1)    | 18.4                | (21.5) | 1.37           | 10.2                | 17.7            | 0.52             | 22       | 34            |
| Growth Screens                          |                               |        |        |             |        |       |       |                |           |                     |        |                |                     |                 |                  |          |               |
| Dual Cash Flow                          | 43.0                          | 5.1    | (21.6) | 14.9        | 7.5    | 23.1  | 8.8   | 178.7          | (61.0)    | 34.7                | (23.6) | 1.53           | 12.0                | 17.2            | 0.73             | 68       | 31            |
| Return on Equity                        | 33.8                          | 10.1   | (5.7)  | 13.6        | 13.0   | 22.4  | 11.4  | 191.1          | (47.2)    | 14.6                | (22.2) | 1.28           | 12.0                | 11.8            | 0.95             | 33       | 21            |
| IBD Stable 70                           | 33.5                          | 24.6   | 3.7    | 11.7        | 22.3   | 27.2  | 9.9   | 224.9          | (50.6)    | 18.4                | (21.9) | 1.18           | 10.9                | 12.6            | 0.73             | 40       | 12            |
| InvestWare Quality Growth               | 30.4                          | 19.7   | (9.4)  | 7.3         | 14.8   | 19.3  | 7.8   | 151.4          | (44.7)    | 18.2                | (22.0) | 1.25           | 7.1                 | 13.4            | 0.36             | 21       | 11            |
| Growth With Price Momentum Screens      |                               |        |        |             |        |       |       |                |           |                     |        |                |                     |                 |                  |          |               |
| O'Neil's CAN SLIM Revised 3rd Edition   | 50.1                          | 7.3    | (30.1) | 16.7        | 4.9    | 13.0  | 5.3   | 87.5           | (27.8)    | 52.7                | (26.7) | 1.86           | 12.0                | 15.5            | 0.92             | 8        | 65            |
| Driehaus                                | 38.5                          | 16.7   | (14.1) | 13.8        | 13.9   | 37.4  | 16.8  | 386.3          | (53.4)    | 51.3                | (25.7) | 2.24           | 9.7                 | 39.7            | 0.29             | 15       | 64            |
| O'Neil's CAN SLIM No Float              | 27.7                          | 8.9    | (3.9)  | 16.8        | 12.5   | 18.4  | 7.3   | 181.9          | (61.6)    | 23.5                | (35.5) | 1.39           | 13.9                | 18.8            | 0.76             | 16       | 50            |
| Foolish Small Cap 8                     | 23.7                          | 16.9   | (14.9) | 12.1        | 8.6    | 18.5  | 4.2   | 180.5          | (67.7)    | 38.8                | (22.5) | 2.23           | 9.0                 | 25.2            | 0.38             | 17       | 40            |
| Kirkpatrick Growth                      | 19.3                          | (9.8)  | (11.6) | 16.7        | (0.0)  | 15.6  | 13.5  | 103.3          | (38.7)    | 64.1                | (23.1) | 2.15           | 11.3                | 27.7            | 0.52             | 12       | 62            |
| O'Neil's CAN SLIM                       | 15.3                          | 18.0   | (10.2) | 24.2        | 6.9    | 16.9  | 15.0  | 118.0          | (10.1)    | 69.6                | (23.1) | 1.90           | 15.8                | 12.2            | 1.78             | 6        | 57            |
| Growth & Value Screens                  |                               |        |        |             |        |       |       |                |           |                     |        |                |                     |                 |                  |          |               |
| Rule #1 Investing                       | 48.6                          | 11.3   | (1.0)  | 12.3        | 19.2   | 37.0  | 10.3  | 353.5          | (54.0)    | 27.0                | (26.8) | 1.77           | 9.8                 | 19.0            | 0.52             | 14       | 25            |
| Wanger (Revised)                        | 46.9                          | 23.5   | (5.2)  | 10.1        | 22.0   | 19.8  | 11.6  | 168.0          | (51.3)    | 22.8                | (19.8) | 1.43           | 9.0                 | 16.4            | 0.46             | 31       | 27            |
| Neff                                    | 42.8                          | 15.0   | (4.2)  | 20.0        | 18.7   | 31.7  | 12.7  | 303.3          | (52.8)    | 32.6                | (21.7) | 1.63           | 14.8                | 15.0            | 1.17             | 22       | 33            |
| Buffettology: EPS Growth                | 36.7                          | 17.4   | 3.8    | 11.5        | 19.9   | 26.2  | 11.4  | 240.4          | (48.4)    | 15.1                | (20.8) | 1.22           | 10.6                | 11.4            | 0.79             | 47       | 12            |
| Dividend (High Relative Yield)          | 36.6                          | 9.8    | 3.0    | 9.5         | 18.0   | 17.1  | 7.9   | 145.4          | (40.4)    | 12.5                | (14.2) | 0.96           | 9.6                 | 12.3            | 0.57             | 40       | 20            |
| Murphy Technology                       | 36.2                          | 42.3   | (29.8) | (2.0)       | 13.1   | 23.6  | 11.7  | 168.8          | (58.3)    | 58.5                | (44.9) | 2.77           | (17.1)              | 73.8            | (0.06)           | 11       | 21            |
| Fisher (Philip)                         | 34.3                          | (0.6)  | (50.9) | 4.0         | (12.0) | 10.0  | (2.6) | 49.7           | (58.2)    | 32.8                | (27.9) | 2.18           | 1.1                 | 28.5            | 0.06             | 20       | 33            |
| Buffettology: Sustainable Growth        | 32.7                          | 8.8    | 0.7    | 11.9        | 14.9   | 24.3  | 11.6  | 206.9          | (41.9)    | 16.5                | (20.4) | 1.28           | 10.7                | 10.2            | 0.92             | 33       | 13            |
| Buffett: Hagstrom                       | 32.4                          | 13.0   | 8.2    | 15.2        | 18.9   | 22.5  | 13.8  | 194.9          | (39.8)    | 13.2                | (19.0) | 1.11           | 14.3                | 9.6             | 1.33             | 30       | 20            |
| Price-to-Sales                          | 32.3                          | 11.3   | (2.6)  | 16.2        | 15.6   | 23.9  | 10.7  | 211.7          | (55.1)    | 18.3                | (20.6) | 1.32           | 13.8                | 13.4            | 1.03             | 56       | 39            |
| Lynch                                   | 29.4                          | 0.7    | (27.9) | 13.0        | (0.5)  | 17.6  | 12.2  | 128.1          | (47.5)    | 18.9                | (21.3) | 1.22           | 11.8                | 14.7            | 0.72             | 26       | 21            |
| T. Rowe Price                           | 28.5                          | (15.0) | 117.4  | 10.4        | 35.2   | 32.3  | 11.5  | 330.5          | (62.5)    | 33.5                | (20.0) | 1.68           | 8.8                 | 23.4            | 0.34             | 8        | 42            |
| Kirkpatrick Value                       | 27.2                          | 19.4   | (15.1) | 12.3        | 8.8    | (2.4) | 15.7  | 1.1            | (23.3)    | 49.0                | (25.3) | 2.21           | 9.1                 | 26.9            | 0.36             | 2        | 74            |
| Dreman                                  | 26.2                          | 20.6   | (11.7) | 11.1        | 13.2   | 19.7  | 8.4   | 123.2          | (55.0)    | 23.9                | (22.2) | 1.25           | 10.2                | 17.8            | 0.49             | 21       | 32            |
| Templeton                               | 25.9                          | 31.0   | 3.2    | 11.0        | 20.6   | 27.2  | 11.3  | 185.6          | (40.0)    | 14.5                | (23.1) | 1.23           | 10.1                | 13.6            | 0.63             | 22       | 28            |
| Zweig                                   | 24.1                          | 6.4    | (18.3) | 19.7        | 2.8    | 4.2   | 6.6   | 52.0           | (54.4)    | 32.7                | (24.2) | 1.79           | 13.9                | 25.5            | 0.68             | 11       | 42            |
| Dividend Screen: DRPs                   | 22.9                          | 10.9   | 1.9    | 8.8         | 13.7   | 18.2  | 6.4   | 157.2          | (50.4)    | 20.5                | (18.2) | 1.10           | 8.6                 | 15.4            | 0.41             | 30       | 26            |
| Dividend Screen: Non-DRPs               | 20.4                          | 18.1   | 4.3    | 13.2        | 15.7   | 18.9  | 8.9   | 175.0          | (48.1)    | 17.6                | (15.3) | 0.91           | 13.8                | 12.8            | 0.84             | 30       | 28            |
| Kirkpatrick Bargain                     | 4.8                           | 14.9   | 3.6    | 8.3         | 9.1    | 10.8  | 14.9  | 102.6          | (43.2)    | 21.1                | (21.7) | 1.37           | 7.8                 | 16.2            | 0.36             | 15       | 65            |
| Foolish Small Cap 8 Revised             | 0.4                           | 41.8   | (49.2) | 15.3        | (10.2) | 15.5  | 4.3   | 105.1          | (64.0)    | 28.1                | (31.1) | 2.15           | 10.6                | 22.7            | 0.57             | 6        | 36            |
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Table 1. Performance of Stock Screens on AII.com (Cont.)

| Growth & Value With<br>Price Momentum Screens | Price Gain (%) |        |        | Average Annual<br>Price Gain (%) |        |        |       | Price<br>Gain (%) |              | Monthly<br>Variability |        | Risk Measures        |                           |                       |                        | Holdings |                      |
|-----------------------------------------------|----------------|--------|--------|----------------------------------|--------|--------|-------|-------------------|--------------|------------------------|--------|----------------------|---------------------------|-----------------------|------------------------|----------|----------------------|
|                                               | YTD 2012 2011  |        |        | Since<br>Incep                   | 3 5 10 |        |       | Bull<br>Mkt*      | Bear<br>Mkt* | Largest                |        | Risk<br>Index<br>(X) | Risk-Adj<br>Return<br>(%) | Ulcer<br>Index<br>(%) | Martin<br>Ratio<br>(X) | Avg<br># | Turn-<br>over<br>(%) |
|                                               | YTD            | 2012   | 2011   |                                  | Yr     | Yr     | Yr    |                   |              | Gain                   | Loss   |                      |                           |                       |                        |          |                      |
| Value on the Move—PEG With Est Growth         | 52.9           | 9.0    | (0.3)  | 20.1                             | 20.7   | 23.2   | 17.2  | 210.6             | (50.2)       | 15.7                   | (23.1) | 1.32                 | 16.8                      | 13.7                  | 1.29                   | 41       | 44                   |
| Value on the Move—PEG With Hist Growth        | 45.8           | 4.3    | 1.0    | 15.0                             | 16.7   | 21.3   | 12.3  | 183.2             | (50.1)       | 12.7                   | (19.1) | 1.04                 | 14.7                      | 13.5                  | 0.93                   | 81       | 36                   |
| Oberweis Octagon                              | 40.6           | 32.6   | (14.7) | 14.8                             | 20.4   | 23.1   | 12.3  | 244.0             | (70.6)       | 24.6                   | (23.2) | 1.92                 | 10.8                      | 26.9                  | 0.46                   | 16       | 42                   |
| ADR Screen                                    | 32.2           | 1.4    | (25.9) | 8.0                              | 2.3    | 14.3   | 6.4   | 105.1             | (68.7)       | 31.1                   | (29.7) | 1.47                 | 7.5                       | 27.4                  | 0.20                   | 25       | 44                   |
| Stock Market Winners                          | 29.4           | 13.6   | 21.2   | 21.0                             | 22.0   | 29.5   | 13.1  | 354.6             | (51.3)       | 22.0                   | (23.4) | 1.47                 | 16.4                      | 17.0                  | 1.09                   | 12       | 59                   |
| MAGNET Complex                                | 20.3           | (19.6) | 6.9    | 12.5                             | 4.1    | (10.7) | (4.7) | (30.4)            | (55.9)       | 63.0                   | (28.2) | 2.72                 | 8.7                       | 42.1                  | 0.24                   | 2        | 74                   |
| Muhlenkamp                                    | (11.6)         | (3.0)  | (45.9) | 4.1                              | (21.1) | (5.7)  | (3.4) | (20.7)            | (49.0)       | 21.0                   | (17.6) | 1.40                 | 3.1                       | 26.1                  | 0.06                   | 18       | 24                   |
| MAGNET Simple                                 | (31.1)         | (12.4) | 19.5   | 17.7                             | (7.5)  | 37.2   | 15.7  | 339.7             | (75.9)       | 52.1                   | (34.0) | 2.99                 | 10.2                      | 27.2                  | 0.56                   | 3        | 68                   |
| Earnings Estimates Screens                    |                |        |        |                                  |        |        |       |                   |              |                        |        |                      |                           |                       |                        |          |                      |
| Est Rev: Top 30 Up                            | 35.3           | 21.9   | (2.3)  | 26.4                             | 20.7   | 40.9   | 25.2  | 366.7             | (37.8)       | 36.4                   | (26.7) | 1.83                 | 17.4                      | 20.3                  | 1.18                   | 30       | 93                   |
| P/E Relative                                  | 28.2           | 14.3   | (1.9)  | 17.0                             | 15.2   | 26.1   | 16.5  | 177.7             | (27.6)       | 18.4                   | (18.3) | 1.13                 | 15.8                      | 8.0                   | 1.82                   | 32       | 77                   |
| Dreman With Est Revisions                     | 27.2           | 13.0   | 21.6   | 16.3                             | 22.7   | 29.2   | 17.6  | 231.7             | (39.9)       | 21.4                   | (26.2) | 1.36                 | 13.7                      | 15.0                  | 0.92                   | 13       | 83                   |
| Est Rev: Up 5%                                | 25.3           | 28.8   | 6.1    | 28.6                             | 22.6   | 36.7   | 25.9  | 299.1             | (23.4)       | 30.8                   | (21.7) | 1.75                 | 19.1                      | 15.7                  | 1.66                   | 42       | 92                   |
| Est Rev: Down 5%                              | 25.0           | 9.2    | (31.1) | 1.0                              | 2.4    | 18.4   | 2.3   | 145.2             | (63.8)       | 33.5                   | (30.5) | 1.95                 | (4.2)                     | 32.9                  | (0.04)                 | 76       | 89                   |
| Est Rev: Lowest 30 Down                       | 24.8           | 9.3    | (34.1) | 0.9                              | 2.4    | 22.3   | 1.6   | 182.5             | (71.0)       | 43.0                   | (29.9) | 2.33                 | (6.4)                     | 34.3                  | (0.04)                 | 30       | 91                   |
| Specialty Screens                             |                |        |        |                                  |        |        |       |                   |              |                        |        |                      |                           |                       |                        |          |                      |
| Insider Net Purchases                         | 8.8            | 11.5   | (31.4) | (0.9)                            | (3.1)  | 7.7    | (2.7) | 75.5              | (65.5)       | 27.8                   | (27.2) | 1.81                 | (7.0)                     | 36.0                  | (0.09)                 | 28       | 30                   |
| Indexes                                       |                |        |        |                                  |        |        |       |                   |              |                        |        |                      |                           |                       |                        |          |                      |
| S&P 500                                       | 25.5           | 13.4   | (0.0)  | 3.9                              | 14.9   | 14.8   | 5.4   | 124.3             | (52.6)       | 10.8                   | (16.8) | 1.00                 | 3.9                       | 22.1                  | 0.07                   |          |                      |
| S&P 500 Growth (w/divs)                       | 32.0           | 14.6   | 4.7    | 5.8                              | 17.7   | 18.9   | 7.8   | 150.1             | (44.4)       | 10.8                   | (16.5) | 1.10                 | 5.6                       | 31.7                  | 0.11                   |          |                      |
| S&P 500 Value (w/divs)                        | 30.6           | 17.7   | (0.5)  | 5.6                              | 17.8   | 16.3   | 7.8   | 151.1             | (56.0)       | 11.3                   | (17.1) | 1.00                 | 5.6                       | 17.5                  | 0.18                   |          |                      |
| S&P MidCap 400                                | 29.1           | 16.1   | (3.1)  | 9.0                              | 15.6   | 20.7   | 8.8   | 169.3             | (50.5)       | 14.8                   | (21.8) | 1.20                 | 8.2                       | 13.6                  | 0.48                   |          |                      |
| S&P MidCap 400 Growth (w/divs)                | 28.5           | 15.8   | (0.9)  | 12.2                             | 20.8   | 25.0   | 11.3  | 206.2             | (47.7)       | 19.0                   | (22.2) | 1.31                 | 10.3                      | 13.9                  | 0.70                   |          |                      |
| S&P MidCap 400 Value (w/divs)                 | 30.5           | 20.1   | (2.4)  | 8.7                              | 18.0   | 21.4   | 10.2  | 185.7             | (49.4)       | 15.7                   | (21.8) | 1.11                 | 8.2                       | 13.2                  | 0.47                   |          |                      |
| S&P SmallCap 600                              | 39.1           | 14.8   | (0.2)  | 8.5                              | 19.7   | 21.2   | 9.6   | 198.0             | (52.2)       | 17.3                   | (20.2) | 1.27                 | 7.5                       | 15.0                  | 0.40                   |          |                      |
| S&P SmallCap 600 Growth (w/divs)              | 40.7           | 14.9   | 4.1    | 10.0                             | 21.4   | 24.3   | 11.6  | 231.0             | (51.1)       | 17.0                   | (21.7) | 1.31                 | 8.6                       | 13.9                  | 0.54                   |          |                      |
| S&P SmallCap 600 Value (w/divs)               | 33.5           | 17.8   | (1.2)  | 8.9                              | 19.1   | 20.1   | 9.8   | 187.8             | (51.0)       | 18.4                   | (19.6) | 1.22                 | 8.0                       | 15.2                  | 0.42                   |          |                      |
| Dow Jones 30                                  | 23.0           | 7.3    | 5.5    | 4.6                              | 13.6   | 12.8   | 5.1   | 111.9             | (49.3)       | 11.8                   | (15.1) | 0.97                 | 4.6                       | 16.0                  | 0.13                   |          |                      |
| NASDAQ 100                                    | 32.7           | 16.8   | 2.7    | 8.3                              | 18.6   | 24.4   | 9.5   | 152.3             | (50.1)       | 25.0                   | (27.5) | 1.81                 | 6.4                       | 54.0                  | 0.11                   |          |                      |
| All Exchange-Listed Stocks                    | 34.3           | 14.8   | (12.3) | 10.8                             | 13.3   | 24.0   | 8.5   | 196.9             | (58.6)       | 23.9                   | (22.1) | 1.38                 | 8.9                       | 16.8                  | 0.50                   |          |                      |

*Bull market period is March 1, 2009, through November 30, 2013. Bear market period is November 1, 2007, through February 28, 2009. Unless otherwise stated, figures do not include dividends or transaction costs.*

*Source: AII's Stock Investor Pro/Thomson Reuters. Data as of November 30, 2013.*

**See the AII Stock Screens area on AII.com for details on each approach.**

its seven-year historical averages.

## The Rankings

With the market so strong, it is no surprise that AII's stock screens have also fared extremely well. In fact, out of the 65 stock screens that AII tracks, only two screens had a losing year—the MAGNET Simple and Muhlenkamp screens. Conversely, 43 out of the 65 stock screens outperformed the 25.5% return that the S&P 500 index was able to achieve for the year as of the end

of November. The stock screens also returned a median of 29.4% year-to-date. In addition, three of our stock screens managed to have their best years ever—Piotroski: High F-Score, O'Shaughnessy: Growth Market Leaders and Dividend—High Relative Yield.

Table 1 provides summary performance and volatility statistics for the stock screens we track on AII.com. All of these screens have been created using AII's fundamental stock screening and research database program, *Stock Investor Pro*, and most of them are pre-built

into the software (the exceptions are the Dogs of the Dow and Dogs of the Dow—Low-Priced 5 screens).

Table 1 also presents the price change performance (excluding dividends and transactions costs, time and price slippage, etc.) over various time periods for each stock selection strategy. The screens are grouped by style to identify their underlying premise. These style groups are: value, value with price momentum, growth, growth with price momentum, growth and value, growth and value with price momentum, earn-

# What It Takes: The Investment Characteristics of the 2013 Winners

Table 2 presents the characteristics of the top- and bottom-performing screening strategies for 2013, as well as the top and bottom performers based on risk-adjusted return.

This year was an even better year than the last, with all but two of AAI's screens in positive territory as of the end of November, with a median gain of 29.4%. By comparison, the S&P 500 large-cap index is up 25.5%.

## Market Capitalization

The median market capitalization (share price times number of shares outstanding) of the stocks that make up the major S&P indexes are:

- S&P 500 index, \$16.2 billion;
- S&P MidCap 400 index, \$3.6 billion; and
- S&P SmallCap 600 index: \$1.1 billion.

In a year when smaller caps fared much better than larger-cap stocks, all five of the top-performing screens fall into the small- and mid-cap category, with the Piotroski screen having the smallest median market capitalization of \$865.7 million. However, smaller-cap stocks were not completely immune and tend to have higher volatility as evidenced by smaller-cap screens dominating the bottom-performing screens for 2013 as well.

**Table 2. Characteristics of Winning and Losing Stock Screens**

|                                                                                 | Price Change (%) |          | P/E Ratio (X)                                 | Price-to-Book-Value Ratio (X) | Div Yield (%) | P/E to EPS Grth (PEG) (%) | 5-Yr Hist EPS Grth (%) | Market Cap (\$ Mil) | 52-Wk Rel Str (%) |
|---------------------------------------------------------------------------------|------------------|----------|-----------------------------------------------|-------------------------------|---------------|---------------------------|------------------------|---------------------|-------------------|
|                                                                                 | YTD              | Risk-Adj |                                               |                               |               |                           |                        |                     |                   |
| <b>Top Performers: 2013</b>                                                     |                  |          |                                               |                               |               |                           |                        |                     |                   |
| Piotroski: High F-Score (Value)                                                 | 142.3            | 18.7     | 14.3                                          | 0.84                          | 0.9           | 0.6                       | 12.4                   | 865.7               | (10)              |
| Price-to-Free-Cash-Flow (Value)                                                 | 91.6             | 14.7     | 19.8                                          | 2.27                          | 0.0           | 1.6                       | 7.3                    | 1,880.3             | 0                 |
| Value on Move--PEG W/Est Gr (Gr & Val w/ Price Mom)                             | 52.9             | 16.8     | 16.4                                          | 7.30                          | 1.5           | 0.7                       | 24.5                   | 3,702.5             | 38                |
| O'Neil's CAN SLIM Revised 3rd Ed (Gr w/Price Mom)                               | 50.1             | 12.0     | 21.0                                          | 5.30                          | 0.0           | 1.3                       | 19.4                   | 4,831.1             | 55                |
| Rule #1 Investing (Growth & Value)                                              | 48.6             | 9.8      | 13.5                                          | 8.90                          | 2.1           | 0.3                       | 44.0                   | 3,525.2             | 22                |
| <b>Bottom Performers: 2013</b>                                                  |                  |          |                                               |                               |               |                           |                        |                     |                   |
| MAGNET Simple (Gr & Val w/Price Mom)                                            | (31.1)           | 10.2     | No companies are currently passing the screen |                               |               |                           |                        |                     |                   |
| Muhlenkamp (Gr & Val w/Price Mom)                                               | (11.6)           | 3.1      | 9.7                                           | 2.60                          | 0.0           | 0.4                       | 31.1                   | 888.4               | (3)               |
| Foolish Small Cap 8 Revised                                                     | 0.4              | 10.6     | No companies are currently passing the screen |                               |               |                           |                        |                     |                   |
| Graham--Enterprising Investor Revised (Value)                                   | 4.1              | 15.0     | 9.4                                           | 1.00                          | 1.8           | 0.9                       | 8.2                    | 585.8               | (15)              |
| Kirkpatrick Bargain (Growth & Value)                                            | 4.8              | 7.8      | 21.4                                          | 2.40                          | 0.5           | 1.5                       | (13.2)                 | 1,978.9             | 59                |
| <b>Top Performers: Total History, Risk-Adjusted</b>                             |                  |          |                                               |                               |               |                           |                        |                     |                   |
| Est Rev: Up 5% (Earnings Estimates)                                             | 25.3             | 19.1     | 31.6                                          | 3.16                          | 0.0           | 1.2                       | 13.2                   | 1,395.5             | 32                |
| Piotroski: High F-Score (Value)                                                 | 142.3            | 18.7     | 14.3                                          | 0.84                          | 0.9           | 0.6                       | 12.4                   | 865.7               | (10)              |
| Est Rev: Top 30 Up (Earnings Estimates)                                         | 35.3             | 17.4     | 32.0                                          | 3.10                          | 0.0           | 1.6                       | 13.2                   | 1,318.2             | 26                |
| Value on Move--PEG W/Est Gr (Gr & Val w/ Price Mom)                             | 52.9             | 16.8     | 16.4                                          | 7.30                          | 1.5           | 0.7                       | 24.5                   | 3,702.5             | 38                |
| Stock Market Winners (Gr & Val w/ Price Mom)                                    | 29.4             | 16.4     | 11.4                                          | 1.30                          | 0.0           | 0.5                       | 22.5                   | 84.0                | 33                |
| <b>Bottom Performers: Total History, Risk-Adjusted</b>                          |                  |          |                                               |                               |               |                           |                        |                     |                   |
| Murphy Technology (Growth & Value)                                              | 36.2             | (17.1)   | 5.0                                           | 1.30                          | 1.9           | 0.2                       | 43.0                   | 1,281.4             | (24)              |
| Insider Net Purchases (Specialty)                                               | 8.8              | (7.0)    | 18.6                                          | 2.40                          | 0.0           | 1.6                       | 5.3                    | 244.4               | (22)              |
| Est Rev: Lowest 30 Down (Earnings Estimates)                                    | 24.8             | (6.4)    | 41.7                                          | 2.38                          | 0.0           | 1.5                       | (3.4)                  | 775.6               | (19)              |
| Est Rev: Down 5% (Earnings Estimates)                                           | 25.0             | (4.2)    | 20.4                                          | 1.90                          | 0.0           | 1.2                       | 6.8                    | 901.3               | (12)              |
| Dogs of the Dow: Low Priced 5 (Value)                                           | 30.9             | (0.4)    | 25.0                                          | 2.18                          | 3.8           | 1.1                       | 6.1                    | 142,000.1           | 12                |
| All Exchange-Listed Stocks                                                      | 34.3             | 8.9      | 20.6                                          | 2.00                          | 0.0           | 1.5                       | 3.9                    | 807.7               | 26                |
| Performance figures do not include dividends or transaction costs.              |                  |          |                                               |                               |               |                           |                        |                     |                   |
| Source: AAI's Stock Investor Pro/Thomson Reuters. Data as of November 30, 2013. |                  |          |                                               |                               |               |                           |                        |                     |                   |



## Multiples

Looking at the price-earnings ratios (price divided by trailing 12-month earnings per share) for the stocks currently passing the top-performing screens for 2013, the Piotroski: High F-Score stocks have a median price-earnings ratio of 14.3, significantly lower than the 20.6 median value for all exchange-listed stocks currently in the *Stock Investor Pro* database. In fact, four of the five top-performing screens have median price-earnings ratios lower than the median for all exchange-traded stocks. O'Neil's CANSLIM approach, a growth methodology, is the only top-performing screen with a median price-earnings ratio slightly above that of the exchange-traded stocks in the database.

Looking at the valuations of 2013's worst-performing strategies, we find a lot of mixed results. In fact, two of the worse-performing screens—Muhlenkamp and Graham Enterprising Investor Revised—have very low median price-earnings ratios. This highlights the fact that low valuation stocks do not necessarily warrant buys. Often, stocks are trading at extremely low valuations because there is little to no growth potential whatsoever for the company.

## Relative Strength

The relative strength figure (last column) in Table 2 is calculated against the performance of the iShares Core S&P 500 ETF (IVV), which is used as a proxy for the S&P 500 index. Stocks with performance equal to that of the S&P 500 over the last 52 weeks have a relative strength of 0%. A relative strength value of 13% indicates that the stock outperformed the S&P 500 by 13%. Negative numbers

indicate underperformance relative to the index.

The Piotroski screen's negative 52-week relative strength may seem anomalous at first, but it makes perfect sense. Piotroski's methodology seeks out undervalued companies that have strong financial strength. For stocks to be undervalued, they generally fare worse than the overall market, leading to their valuation. The Piotroski screen seeks to find these companies that are trading near their bottom. Alternatively, O'Neil's CANSLIM approach relies on growth and price momentum. Hence, it has one of the highest 52-week relative strength figures of the screens listed in this table.

## Winning Characteristics

When looking at those strategies that have achieved long-term success, several common factors are apparent:

- Low multiples (price-earnings, price-to-book-value, etc.), on a relative rather than an absolute basis;
- An emphasis on consistency of growth in earnings, sales, or dividends;
- Strong financials;
- Price momentum; and
- Upward earnings revisions.

For a more in-depth discussion of the characteristics of successful investment strategies, see the article “Constructing Winning Stock Screens,” found on AAIL.com on the right side of the Stocks Screens page in the Site Highlights box ([www.aail.com/stock-screens/constructingwinningstockscreen](http://www.aail.com/stock-screens/constructingwinningstockscreen)).

—Joe Lan, CFA

ings estimates and specialty.

The AAIL stock screens are ranked in Table 1 in descending order by their year-to-date price performance through November 30, 2013, within each of their style groups. At the bottom of the table, you will also find performance data for several market indexes and averages.

## Impact of Dividends

The Price Gain and Average Annual Price Gain columns in Table 1 represents the annualized percentage gain or loss realized by a hypothetical portfolio invested in the stocks passing a given screen over varying time periods from January 1, 1998, through November 30, 2013.

However, these performance numbers do not include dividend payments or dividend reinvestment. Therefore, the results for large-cap strategies, such as the Dogs of the Dow (in the value category), do not benefit from dividend payments or reinvestment.

Currently, the 10 stocks that make up the Dogs of the Dow have a dividend yield of 3.5%; investors holding shares in these stocks would, therefore, have a higher annual return by approximately this amount.

## The Top Performer for 2013

Following a strong 2012, the Piotroski: High F-Score screen managed to gain an incredible 142.3% in 2013, as

of the end of November. The gain, if maintained in December, would be the highest for any one year since we started tracking the screen, which is really exceptional as it historically has been one of AAIL's best-performing screens. In fact, barring some catastrophic meltdown by the Piotroski screen during December, this year will mark the fifth year since 1998 that the screen has managed to gain over 75%.

The Piotroski screen is based on research by Joseph Piotroski, an accounting professor at Stanford University Graduate School of Business. During his time as a professor of the University of Chicago Booth School of Business, he undertook a study of low price-to-book-value stocks to see if

## Behind the Scenes of the Top 2013 Strategy

The Piotroski: High F-Score screen once again turned in a dominating performance in 2013 with a 142.3% price gain year-to-date through the end of November, its best year yet. In a year where the vast majority of AAI stock screens generated positive gains, no other approach came close. However, when evaluating the performance of a given approach, it is useful to look beyond the simple gain/loss

data and examine the individual stocks that contributed to the overall return.

During the economic downturn, many of the top-performing screens did not show any stocks passing their criteria during several months, leading to a 0% return for the month, which was better than most screens were doing. This year, with the bull market in full swing, the

**Table 3. Stocks Passing the Piotroski High F-Score Screen During 2013**

| Company (Ticker)                  | Price Gain While in Port (%) | Mos in Port During 2013 | P/E Ratio (X) | Price-to-Book Ratio (X) | Div Yield (%) | P/E to EPS Est Grth (%) | 5-Yr Hist EPS Grth (%) | Market Cap (\$ Mil) | 52-Wk Rel Strgth (%) |
|-----------------------------------|------------------------------|-------------------------|---------------|-------------------------|---------------|-------------------------|------------------------|---------------------|----------------------|
| Point.360 (PTSX)                  | 133.8                        | 2                       | na            | 0.88                    | 0.0           | na                      | (5.9)                  | 8.1                 | (26)                 |
| Cache, Inc. (CACH)                | 76.2                         | 1                       | na            | 3.82                    | 0.0           | na                      | (33.1)                 | 130.6               | 116                  |
| Renewable Energy Group (REGI)     | 67.8                         | 4                       | 6.8           | 0.81                    | 0.0           | na                      | 16.6                   | 365.5               | 77                   |
| Global-Tech Advanced Innov. (GAI) | 63.1                         | 7                       | na            | 0.27                    | 0.0           | na                      | 16.0                   | 21.7                | (2)                  |
| P & F Industries, Inc. (PFIN)     | 43.5                         | 3                       | 5.4           | 0.76                    | 0.0           | 0.3                     | 18.3                   | 28.1                | 0                    |
| Covenant Transportation Gp (CVTI) | 31.1                         | 2                       | 29.7          | 1.04                    | 0.0           | 1.6                     | 18.6                   | 97.1                | 13                   |
| Revett Minerals, Inc. (RVM)       | 30.3                         | 1                       | na            | 0.27                    | 0.0           | na                      | 14.9                   | 22.4                | (86)                 |
| SkyWest, Inc. (SKYW)              | 20.7                         | 9                       | 13.4          | 0.55                    | 1.1           | na                      | (17.0)                 | 782.5               | 10                   |
| Leading Brands, Inc. (LBIX)       | 17.2                         | 1                       | 20.9          | 0.97                    | 0.0           | 1.3                     | 16.3                   | 12.3                | (21)                 |
| Delta Apparel, Inc. (DLA)         | 14.1                         | 1                       | 17.3          | 1.08                    | 0.0           | 0.2                     | 83.3                   | 147.6               | (0)                  |
| Fortune Brands Home & Sec (FBHS)  | 13.0                         | 1                       | 39.9          | 2.90                    | 0.9           | na                      | na                     | 7,151.6             | 21                   |
| Griffon Corporation (GFF)         | 12.0                         | 1                       | 104.4         | 1.08                    | 0.8           | na                      | (19.2)                 | 747.4               | (1)                  |
| NASDAQ OMX Group (NDAQ)           | 9.4                          | 3                       | 18.5          | 0.98                    | 1.5           | na                      | (14.1)                 | 5,928.6             | 19                   |
| Natural Grocers by Vit Ctg (NGVC) | 8.4                          | 2                       | 20.8          | 10.96                   | 0.0           | na                      | na                     | 895.1               | 58                   |
| Benchmark Electronics (BHE)       | 8.2                          | 2                       | 20.3          | 1.05                    | 0.0           | na                      | (4.6)                  | 1,235.0             | 23                   |
| Seacor Holdings, Inc. (CKH)       | 4.2                          | 2                       | 80.2          | 1.43                    | 0.0           | na                      | (30.0)                 | 1,988.5             | 15                   |
| Fresh Del Monte Produce (FDP)     | 3.8                          | 8                       | 13.9          | 0.80                    | 1.9           | na                      | (4.3)                  | 1,492.1             | (15)                 |
| CRA International, Inc. (CRAI)    | (2.0)                        | 2                       | na            | 0.89                    | 0.0           | na                      | (61.5)                 | 193.6               | (9)                  |
| Golden Star Resources (GSS)       | (18.2)                       | 3                       | na            | 0.58                    | 0.0           | na                      | 16.7                   | 128.6               | (81)                 |

Source: AAI's Stock Investor Pro/Thomson Reuters. Data as of November 30, 2013.

it was possible to establish some basic financial criteria to help separate the winners from the losers.

The AAI Piotroski screen starts with stocks that have price-to-book-value ratios ranking in the lowest 20% of the entire *Stock Investor Pro* database. There are many studies indicating that a portfolio of low price-to-book-value stocks generally outperforms portfolios of stocks trading with high price-to-book-value ratios. Piotroski found that

most of the low price-to-book stocks were neglected firms or financially troubled firms. He found that either situation can create buying opportunities—after checking on financial strength—especially when studying smaller-cap stocks.

Piotroski developed a nine-point scale to identify stocks with solid and improving financials. Profitability, financial leverage, liquidity and operating efficiency are examined using popular ratios and basic financial elements that

are easy to use and interpret. In order to pass the Piotroski: High F-Score screen, a stock must pass eight of the nine financial tests.

### Performance Over Time

AAI's stock screens have a history going back almost 15 years now, and the amount of performance data that we have collected over these years offers some compelling insights. While the

Piotroski: High F-Score screen was fully invested throughout 2013, meaning that at least one stock passed the screen each month. However, Piotroski has been a very strict screen in recent years, so that each individual passing stock has had a large weight in the overall performance of the screen. In a year where smaller-cap stocks dominated, the Piotroski: High F-Score screen benefited from its tilt toward small stocks.

The Piotroski: High F-Score screen starts by isolating stocks with price-to-book-value ratios that rank in the lowest 20% of the entire stock universe. Then, using a nine-point scale to identify stocks with solid and improving financials, passing companies must satisfy at least eight of the nine tests. Prior to 2011, we had required passing companies to satisfy all nine financial strength tests, but we found that this severely limited the number of passing companies. Relaxing the screening requirements led to more passing companies without hurting performance too severely.

As a result of the relaxed standards, the Piotroski: High F-Score screen held a total of 19 stocks throughout 2013, averaging nearly five holdings per month. Historically, the strategy has averaged 22 stocks per month, which is right at the median for all stock screens. When following a given strategy, spreading your investment to more stocks will lower your volatility, while investing in a small number of companies makes a portfolio more susceptible to individual stock price movements. The 10 AAIL stock screens that average the lowest number of passing companies each month are at least 50% more volatile than the S&P 500 index. That is not to say that the Piotroski: High F-Score screen isn't volatile. With a risk index of 2.06, the screen is 106% more volatile than the S&P 500, making it the 11th most volatile screen. But looking at its historical performance, much of that volatility has been to the upside.

Table 3 presents the 19 stocks that passed the Piotroski: High F-Score screen in 2013, as well as their performance while they were held in the hypothetical portfolio, the

number of months the stock was held this year, and select current financial data.

Point.360 (PTSX) was the best-performing stock that passed the Piotroski screen in 2013, though it only passed the screen in two months—April and September. The stock gained 42.5% during the month of April and 64.1% during the month of September for a total price-change performance of 133.8%. Point.360 is an integrated media management services company providing film, video and audio post-production, archival, duplication, computer graphics and data distribution services to motion picture studios, television networks, independent production companies and multinational companies. The company provides the services necessary to edit, master, reformat and archive its clients' audio, video, and film content, which includes television programming, feature films, and movie trailers. It derives revenues primarily from the entertainment industry, consisting of major and independent motion picture and television studios, cable television program suppliers, television program syndicators, and advertising agencies. Point.360 also maintains video and audio post-production and editing facilities.

Two of the stocks held in the Piotroski: High F-Score portfolio during 2013 suffered losses, with CRA International Inc. (CRAI) losing 2.0% and Golden Star Resources Ltd. (GSS) down 18.2%. CRA passed the screen for two months while GSS passed the screen for a three-month period.

The 2013 results for the Piotroski: High F-Score screen build on its historical record of strong performance. Its annual average price gain of 31.7% since the beginning of 1998 allowed the screen to overtake Estimate Revisions Up 5% this year as the strongest stock screen that AAIL tracks. No matter which risk-adjusted return measure you look at, the Piotroski High F-Score and Estimate Revisions Up 5% are generally always the top two screens.

best-performing screens since inception remain the Piotroski and the Estimate Revisions Up (Est Rev Up) screens, each screen takes its place at the top through very distinct methodologies and with very different returns through various time periods.

The Piotroski: High F-Score screen is a pure value screen and does incredibly well through bull markets. In fact, prior to 2011, the Piotroski Screen's performance trailed that of

the Estimate Revisions Up screens. As the market continued rallying in 2012 and 2013, the Piotroski Screen gained 91.7% and 142.3% (so far), respectively, and is now, convincingly, AAIL's top-performing screen since inception. However, the screen has a bear market return of -53.6%, with -42.0% as its worse monthly return and a maximum drawdown of 59.0%.

Alternatively, the Estimate Revisions Up 5% screen has managed to achieve

its long-term returns through much better protection on the downside. The screen looks for upward revisions in annual earnings estimates; specifically, it identifies companies that have had at least a 5% increase in annual earnings estimates over the last month. The Estimate Revisions Up 5% screen, with an annualized return since inception of 28.6%, has a bull-market return of "only" 299.1%, which is actually lower than that of the Estimate Revisions Top

30 Up screen. However, the screen has a bear-market return of -23.4%, with a largest monthly loss of 21.7% and a maximum drawdown of 46.9%.

Interestingly, two of AAI's worst-performing screens are Estimate Revisions Lowest 30 Down and Estimate Revisions Down 5%, giving credence to the belief that earnings estimates play a huge factor in the short-term performance of stocks. As of the end of November, these two screens have basically been flat since 1998.

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## Average Holdings and Turnover

Stock screens are often used by investors as a method to winnow down a universe of stocks into a more manageable number. For stock screens to be useful, there should ideally be enough stocks passing to provide various alternatives, but not too many that investors are bogged down with options.

The right-most columns of Table 1 present the average number of passing stocks and the turnover percentage for each of our stock screens. For many of the screens, you will notice patterns depending on the market cycle. For example, the Price-to-Sales screen (in the growth & value category), which looks for undervalued companies on a price-to-sales basis showing strong growth and price strength, passes 56 stocks per month on average. However, at the beginning of 2006 through October of 2007, during the peak of the market before the great recession, the screen only passed more than 50 stocks in one single month and often only passed around 30 stocks. Using this screen as a gauge pointed to the possibility that the market was overvalued during that period compared to historical averages. Moving forward, an increasing number of companies passed the price-to-sales screen until the number peaked from April of 2009 through March of 2010 with 11 straight months where more than 90 companies passed the screen per month. As the market continued to recover, the number of passing companies for the price-to-sales screen once again fell back to normal ranges.

Currently, the number of stocks passing the screen is below-average once again, but only slightly, showing that the market is slightly rich compared to historical averages based on this valuation factor.

The rightmost column in Table 1 shows the average monthly turnover percentage for each of the screens. The Estimate Revisions screens have some of the highest monthly turnovers of any of the screens that AAI tracks. From a conceptual standpoint, this characteristic for these screens makes perfect sense. As I stated, the Estimate Revisions screens look for companies that have had upward or downward earnings revisions over the past month. Not many companies will continuously pass this screen since that would suggest that analysts are continuously revising the estimates of a specific company upward or downward month after month. Also, keep in mind that as a general rule, value screens tend to have lower turnover and growth screens tend to have higher turnover.

AAI's Piotroski screen has an average monthly turnover of 24% since the beginning of 1998, meaning that a little under a quarter of any month's passing stocks should be expected to be new (around three quarters of the stocks will remain the same). The screen with the lowest turnover is the Dogs of the Dow screen, with an average monthly turnover of 7%, while the Estimate Revisions Top 30 Up screen has the highest average monthly turnover of 93%. The median average monthly turnover for AAI's screens is 34%.

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## Volatility

Most investors look closely at the performance of a screen when choosing an investment methodology. Perhaps just as important, however, is a comparison of the overall risk, or volatility, of the screens. In Table 1, the risk index is presented for each of our screens (this figure is also available on AAI.com and updated on a monthly basis).

The risk index is calculated by dividing a screen's monthly standard deviation since inception by the monthly

standard deviation of an index—in this case, the S&P 500. In essence, the risk index quantifies how volatile on a price return basis a screen is compared to the S&P 500: A risk index of 2.00 means that the screen is twice as volatile as the S&P 500.

Almost all of AAI's screens have risk indexes above 1.00, which is to be expected. Stock screens, after all, typically pass anywhere from a handful of stocks to around 50, while the S&P 500 is made up of 500 very heavily traded companies. In fact, as of the end of November, only three screens have a risk index lower than 1.00: Graham Defensive Investor—Utility, Dividend—High Relative Yield and Dividend Screen: Non-DRPs. These three screens are all made up of "safer" stocks, with two dividend screens and a screen that focuses on utility stocks. On the opposite end of the spectrum, we have several screens with risk indexes above 2.00. Our top performer for 2013, the Piotroski screen, has a risk index of 2.06, meaning that it is 2.06 times as price-volatile as the S&P 500.

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## Risk-Adjusted Return

Table 1 also presents the risk-adjusted return for each of the screens. This calculation is a bit more convoluted, but essentially it adjusts the performance of each screen using their standard deviations of returns, penalizing screens with higher standard deviations. Using risk-adjusted returns, we still find the usual suspects at the top. However, the Estimate Revisions Up 5% screen is now at the top, with a risk-adjusted return of 19.1% since inception, and the Piotroski High F-Score screen is second with a risk-adjusted return of 18.7%.

Ranking the 65 stock screens according to risk index, we see that the Graham Defensive Investor—Utility screen has the lowest risk index, 0.90. Since its risk index is lower than 1.00, it is less price-volatile than the S&P 500. This means that the screen's risk-adjusted return was actually adjusted upward, going from a return of 7.9% since 1998 to a risk-adjusted return of 8.0%.



Graham's philosophy divides investors into two groups by the amount of time they are able to devote to researching and managing a stock portfolio as well as by their level of market experience. For the defensive or passive investor, his analysis is geared toward avoiding serious mistakes or losses. Graham tries to establish a procedure that provides freedom from great effort and frequent decision-making. Graham feels that the defensive investor should confine his or her holdings to the shares of important companies with a long record of profitable operations and strong financial condition. By "important," he means a company of substantial size with a leading position in the industry, ranking among the first quarter or first third in size within its industry group.

AAII's Graham Defensive Investor—Utility Screen first seeks companies with total assets greater than or equal to \$200 million. The screen then identifies companies with strong financial condition and earnings stability, and those that pay a dividend, exhibit earnings growth and have moderate price-earnings and price-to-assets ratios.

In contrast, AAII's MAGNET Simple screen has had the highest risk index and standard deviation of returns since 1998. Accordingly, its annualized return of 17.7% since 1998, which is on the high end of all screens, becomes a much more pedestrian risk-adjusted return of 10.2% since 1998.

A MAGNET stock, according to Jordan Kimmel, offers a blend of technical and fundamental characteristics. Kimmel believes the MAGNET process "encompasses the best of the momentum aspects of the market, while demanding the downside protection of a value approach and insisting on top-line revenue growth." The MAGNET acronym stands for the following:

- M—Management must be outstanding; momentum must be improving;
- A—Acceleration of earnings, rev-

enues and margins;

G—Growth rate must exceed valuation;

N—New product or management may be the driver;

E—Emerging industry or product creates opportunity; and

T—Timing needs to be right (technically poised for large price increase).

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### Ulcer Index

Two other measures of risk and risk-adjusted return are also presented in Table 1. The Ulcer Index is a measure of downside volatility; it was named as such because downside volatility causes stress and stomach ulcers. Needless to say, a lower number is better, meaning that there is less volatility on the downside.

Stock screens with high overall volatility, as measured by standard deviation, but relatively low downside volatility, as measured by the Ulcer Index, are especially attractive. These stocks' price movements tend to be to the upside instead of to the downside. The Piotroski Screen is a great example, with a risk index over 2.00 and an Ulcer Index of 14.9%, below the median Ulcer Index of all the screens (16.6%).

For a more in-depth description of the Ulcer Index, see the Technically Speaking column in the Third Quarter 2013 issue of AAII's *Computerized Investing*.

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### Martin Ratio

The Martin ratio takes the Ulcer Index one step further. The ratio is calculated by subtracting the risk-free rate from the return and dividing this total by the Ulcer Index. The ratio, much like the Sharpe ratio, measures returns above the risk-free rate per unit of risk, with the unit of risk being the Ulcer Index. The main difference from the Ulcer Index is that the Martin ratio does not penalize investment methodologies

for their upside volatility, only adjusting returns for downside risk. Using this metric, the Piotroski Screen still has the best overall performance, with the P/E Relative screen second. While the P/E Relative screen returned "only" 17.0% on an annualized basis since 1998, its Ulcer Index is a mere 8.0, allowing it to jump various other methodologies in terms of risk-adjusted performance using the Martin ratio.

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### Conclusion

AAII's stock screens have performed very well over the years, and 2013 was no exception. When choosing a stock screen, it is important to understand your personal investment profile before deciding on a screening methodology. It is easier to stay the course if you are investing with a methodology that you believe in. Also, be sure to keep in mind that growth portfolios tend to take a larger time commitment to successfully administer. If you do not have the time and energy to closely monitor an investment portfolio, a value strategy may suit you better.

Furthermore, a stock screen should only be the first step in the investment research process. While it is easy to get enamored with the performance of various screening methodologies, it is prudent to perform additional analysis on each company that passes a screen before buying shares. Try to resist the urge to use screens as simply a buy and sell list.

Finally, the nature of how screens are created leads to certain types of stocks passing certain screens. As you can see from Table 1, there are numerous categories of screening methodologies. From a diversification standpoint, it is beneficial to follow several screens with differing methodologies. This will enable you to diversify your investment portfolio across different sectors, styles and market capitalizations. ▲

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