AAII Stock Screens 2015 Review: Small-Cap Wins During a Large-Cap Year

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Article Highlights

- 26 AAII screens beat the S&P 500 during a year that favored large-cap growth.
- Foolish Small Cap 8 was the best-performing screen in 2015, after having been one of the worst performers in 2014.
- Estimate Revisions Up 5% moved into the top spot for both best historical and risk-adjusted return.

Unless there is a major Santa Claus rally, December 2015 will go down as the month where the Grinch (aka Janet Yellen) stole Christmas, at least for investors.

As I am writing this in mid-December, the first two weeks of this month have sapped what little momentum U.S. stocks had to this point in the year, with the S&P 500 index on track for its first annual decline since 2008. Much of this is attributable to the near certainty that the Federal Reserve will increase interest rates for the first time in nine years, a move that may have already taken place by the time you read this article. However, even before this late-year swoon, 2015 was a disappointing year for the typical stock.

Before I delve in to the performance data of the AAII stock screens, however, let's take a look back on the year that was 2015. The U.S. economy continued its slow and steady expansion, while the unemployment rate fell. The U.S. unemployment rate stood at 5.0% in November, compared to 5.8% a year ago. Positive economic data continually fueled speculation as to when Fed chair Janet Yellen and the Federal Open Market Committee would finally start the "liftoff" of short-term interest rates.

Overseas, the year began with a political crisis in Greece. A snap election elevated the left-wing Syriza party to power, which rejected the austerity measures imposed by foreign lenders during its last financial bailout. Eventually, an agreement was reached for a third bailout for the country, preventing a Greek default and its exit from the European Union. China's weakening economy had global markets on edge for much of the year as well. Chinese officials repeatedly cut interest rates and pumped liquidity into the world's second-largest economy in the hopes of giving it a boost.

At home, while data seems to point to an improving U.S. economy, corporate earnings have hit their weakest patch since 2009. According to FactSet, companies in the S&P 500 are expected to see earnings decline 4.4% in the fourth quarter of 2015. If this forecast proves correct, it would mark the first time the index has seen three consecutive quarters of year-over-year declines in earnings since the first quarter through third quarter of 2009.

Stir all of this together and you have a recipe for a lackluster 2015 for U.S. equities, especially compared to last year. In 2014, the Dow Jones industrial average notched 38 record high closes. This year has only seen six as of the end of November, the last of which came on May 19. On April 23, the Nasdaq composite reached levels it had not seen in 15 years at the peak of the dot-com stock bubble. For a few months after, U.S. indexes moved mainly sideways, until late August.

On Monday, August 24, U.S. stocks tumbled right out of the gate, with the Dow Jones industrial average plunging more than 1,000 points in the opening minutes of trading. The Dow ended down 588.40 points, or down 3.6%, to close at its lowest level in 18 months. That Monday marked the largest one-day point decline ever on an intraday basis, according to The Wall Street Journal. The S&P 500 dropped 3.9%, officially entering correction territory (as defined as a decline of 10% from a recent peak). This ended the fifth-longest correction-free streak for the S&P 500, at 1,421 days. That

Table 1. Performance of Stock Screens on AAII.com

	Price Gain (%)					Average Annual Price Gain (%)				Price Gain (%)		Monthly Variability		Risk Measures		Holdings	
						5	10	Since	Risk	Bull	Bear	Largest		Risk Index	Ulcer Index	Avg	Turn-over
Value	YTD	2014	2013	2012	2011	Yr	Yr	Incep	Adj	Mkt*	Mkt*	Gain	Loss	(X)	(%)	#	(%)
Graham—Enterprising Investor	19.7	(20.6)	9.6	1.1	(1.1)	0.8	11.2	15.3	11.4	177.1	(50.3)	33.1	(23.4)	1.80	15.0	4	43.0
Dogs of the Dow: Low Priced 5	12.3	3.0	34.5	15.7	13.1	16.6	1.8	2.9	0.8	316.0	(82.9)	27.6	(34.8)	1.56	34.9	5	15.6
Price-to-Free-Cash-Flow	7.7	12.4	97.8	1.1	(7.0)	20.6	16.4	20.0	14.1	957.8	(62.8)	51.2	(31.7)	1.77	15.2	30	21.8
Fundamental Rule of Thumb	0.3	(11.6)	46.1	(6.9)	(35.2)	(3.5)	3.5	12.2	9.9	149.3	(57.0)	33.8	(19.2)	1.69	18.1	50	21.2
Graham—Enterprising Investor Revised	0.0	41.9	2.1	(4.9)	(4.1)	5.7	20.4	20.9	14.8	556.0	(49.9)	36.4	(22.4)	1.74	13.9	9	26.3
Cash Rich Firms	(1.1)	2.5	36.6	10.5	(32.8)	1.0	4.1	10.0	9.1	125.8	(45.6)	17.6	(20.7)	1.37	14.9	29	24.3
Dogs of the Dow	(1.4)	6.8	27.9	9.6	10.7	11.6	3.7	2.8	2.1	231.4	(69.0)	17.1	(23.4)	1.21	22.4	10	7.6
Graham—Defensive Investor (Non-Util)	(1.5)	(13.1)	33.9	18.9	7.0	9.1	12.3	15.1	12.7	309.4	(52.1)	25.8	(17.3)	1.38	11.7	21	19.4
Magic Formula	(5.4)	(16.5)	27.9	7.9	(30.6)	(2.9)	4.0	8.6	7.8	134.0	(51.6)	30.7	(22.4)	1.63	15.7	30	23.2
Weiss Blue Chip Div Yield	(5.7)	5.4	21.3	19.2	7.6	10.8	8.0	10.0	9.3	202.6	(43.1)	16.0	(16.8)	1.22	11.2	12	24.6
O'Shaughnessy Value	(8.8)	(5.8)	29.6	20.3	(11.2)	5.0	0.3	4.7	4.0	163.5	(69.1)	22.0	(23.8)	1.34	15.7	50	22.3
Graham—Defensive Investor (Utility)	(15.0)	16.0	10.0	1.2	8.6	4.2	3.9	6.8	6.8	40.4	(31.4)	12.0	(13.7)	0.97	9.4	18	14.5
Schloss	(20.0)	(5.9)	16.7	13.1	(35.1)	(4.6)	1.8	8.5	7.6	43.7	(37.6)	27.1	(40.4)	1.93	20.6	12	54.4
Piotroski: High F-Score (8)	(37.4)	(0.3)	137.6	91.7	(36.4)	14.7	15.3	24.3	15.1	933.2	(53.6)	43.1	(42.0)	2.07	14.0	20	23.2
Value With Price Momentum																	
O'Shaughnessy: Small Cap Gr & Val	5.7	2.4	46.8	30.3	(0.3)	17.6	11.5	18.1	14.2	194.9	(50.6)	18.5	(18.2)	1.51	17.0	25	49.3
Lakonishok	2.9	13.0	26.8	7.5	(0.6)	11.8	13.0	14.0	12.8	276.9	(32.5)	16.6	(17.9)	1.19	9.5	31	90.2
O'Shaughnessy: Growth	0.9	1.7	38.7	28.8	(7.5)	12.6	7.5	15.7	12.6	217.6	(57.2)	18.6	(17.9)	1.50	17.4	50	37.5
O'Shaughnessy: Growth Market Leaders	(3.2)	(4.2)	48.5	15.8	(1.2)	12.2	4.3	6.7	6.7	147.5	(50.5)	13.6	(18.6)	1.23	18.8	10	42.8
O'Shaughnessy: Tiny Titans	(7.3)	25.7	54.4	20.0	(22.9)	12.4	8.3	23.8	15.6	317.8	(67.3)	37.4	(21.0)	1.91	20.7	25	41.1
O'Shaughnessy: All Cap	(16.8)	(1.4)	18.4	12.4	(5.0)	3.1	3.3	9.2	8.4	147.6	(52.1)	18.4	(21.5)	1.42	16.7	21	33.9
Growth																	
Return on Equity	5.3	(8.8)	34.2	10.1	(5.7)	6.8	6.7	11.7	10.6	199.8	(47.2)	14.6	(22.2)	1.27	11.1	32	20.5
Inve$tWare Quality Growth	2.7	21.6	30.4	19.7	(9.4)	13.6	6.9	7.7	7.5	261.1	(44.7)	18.2	(22.0)	1.27	12.6	19	11.8
Dual Cash Flow	(8.9)	(3.2)	48.9	5.1	(21.6)	2.7	4.1	12.6	10.5	226.2	(61.0)	34.7	(23.6)	1.53	16.2	66	31.1
Growth With Price Momentum																	
Foolish Small Cap 8	49.5	(19.9)	32.9	16.9	(14.9)	10.5	3.6	12.3	9.0	302.4	(67.7)	38.8	(25.9)	2.30	23.7	15	42.3
O'Neil's CAN SLIM Rev 3rd Ed	36.6	37.3	55.2	7.3	(30.1)	17.5	12.9	19.0	13.2	250.0	(27.8)	52.7	(26.7)	1.86	14.6	7	64.4
Driehaus	15.7	(0.7)	47.7	16.7	(14.1)	12.6	19.4	13.4	9.6	509.0	(53.4)	51.3	(25.7)	2.23	37.3	14	63.9
O'Neil's CAN SLIM No Float	15.2	2.0	30.8	8.9	(3.9)	11.4	7.3	16.0	13.3	224.9	(61.6)	23.5	(35.5)	1.38	17.7	16	48.9
Kirkpatrick Growth	1.0	(1.2)	18.1	(9.8)	(11.6)	(0.3)	11.2	15.6	10.8	111.1	(38.7)	64.1	(23.1)	2.11	26.2	12	61.3
O'Neil's CAN SLIM	(8.3)	44.1	13.1	18.0	(10.2)	9.6	15.3	23.0	15.1	229.5	(10.1)	69.6	(23.1)	1.92	11.6	6	56.7
Growth & Value																	
Foolish Small Cap 8 Revised	30.6	(2.1)	0.4	41.8	(49.2)	(0.1)	7.2	15.1	10.3	273.9	(64.0)	42.9	(31.1)	2.23	21.7	5	41.9
T. Rowe Price	17.4	4.4	28.5	(15.0)	117.4	24.8	7.7	10.4	8.9	418.1	(62.5)	33.5	(20.0)	1.65	22.1	7	48.4
Fisher (Philip)	9.4	(1.3)	39.5	(0.6)	(50.9)	(5.2)	(0.1)	4.3	1.6	132.9	(58.2)	32.8	(27.9)	2.20	27.4	18	32.7
Zweig	6.1	(14.6)	26.2	6.4	(18.3)	0.0	(0.6)	16.8	12.0	48.3	(54.4)	32.7	(24.2)	1.89	24.4	11	42.0
Buffettology: Sustainable Growth	6.0	3.2	35.8	8.8	0.7	11.2	10.1	11.2	10.2	241.6	(41.9)	16.5	(20.4)	1.27	9.7	32	13.4
Buffettology: EPS Growth	5.9	4.4	38.4	17.4	3.8	14.0	9.9	10.8	10.1	289.7	(48.4)	15.1	(20.8)	1.21	10.8	45	11.9
Wanger (Revised)	1.9	1.3	51.1	23.5	(5.2)	14.1	8.0	9.2	8.4	209.7	(51.3)	22.8	(19.8)	1.43	15.5	30	26.7
Buffett: Hagstrom	0.8	9.6	35.4	13.0	8.2	13.7	10.9	14.1	13.4	264.4	(39.8)	13.2	(19.0)	1.11	9.1	30	19.5
Price-to-Sales	(1.1)	(5.1)	36.3	11.3	(2.6)	8.3	6.9	14.0	12.2	251.4	(55.1)	18.3	(20.6)	1.32	12.6	53	39.2
Kirkpatrick Value	(1.4)	(15.1)	21.9	19.4	(15.1)	0.7	3.0	10.3	8.2	(17.0)	(23.3)	49.0	(25.3)	2.19	25.6	3	72.7
Dreman	(2.6)	7.7	27.6	20.6	(11.7)	9.0	4.4	10.1	9.4	205.1	(55.0)	23.9	(22.2)	1.24	16.8	21	31.4
Kirkpatrick Bargain	(3.1)	5.9	7.3	14.9	3.6	6.4	9.1	8.1	7.7	125.2	(43.2)	21.1	(21.7)	1.36	15.2	17	63.7
Lynch	(6.1)	(7.2)	24.3	0.7	(27.9)	(3.8)	4.0	10.4	9.6	136.8	(47.5)	18.9	(21.3)	1.26	13.9	25	21.0
Dividend (High Relative Yield)	(9.4)	2.0	40.6	9.8	3.0	9.4	5.2	8.1	8.1	170.8	(40.4)	12.5	(14.2)	0.98	11.6	38	20.1
Templeton	(10.2)	13.0	29.4	31.0	3.2	12.8	8.7	10.0	9.3	260.0	(40.0)	14.5	(23.1)	1.25	12.8	20	28.4
Neff	(14.0)	5.1	39.5	15.0	(4.2)	8.1	7.4	16.8	12.8	378.0	(52.8)	32.6	(21.7)	1.62	14.2	22	32.5
Murphy Technology	(18.2)	(1.3)	39.7	42.3	(29.8)	3.7	(0.9)	(2.8)	(19.1)	133.0	(58.3)	58.5	(44.9)	2.75	70.2	10	20.5
Rule #1 Investing	(47.1)	50.3	47.1	11.3	(1.0)	5.9	6.3	9.4	8.0	658.8	(54.0)	27.0	(28.5)	1.88	17.9	13	28.4

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Table 1. Performance of Stock Screens on AAII.com (Cont.)

	Price Gain (%)					Average Annual Price Gain (%)				Price Gain (%)		Monthly Variability		Risk Measures		Holdings	
												Largest		Risk	Ulcer		Turn-
Growth & Value With Price Momentum	YTD	2014	2013	2012	2011	5 Yr	10 Yr	Since Incep	Risk Adj	Bull Mkt*	Bear Mkt*	Gain	Loss	Index (X)	Index (%)	Avg #	over (%)
Stock Market Winners	19.1	9.7	34.8	13.6	21.2	19.8	13.0	20.5	16.3	537.1	(51.3)	22.0	(23.4)	1.43	16.0	12	58.4
Muhlenkamp	18.3	(48.5)	(14.3)	(3.0)	(45.9)	(21.9)	(12.5)	0.6	(2.7)	(46.6)	(49.0)	21.0	(26.2)	1.57	25.6	17	23.6
Value on the Move—PEG With Hist Gr	8.2	3.5	49.2	4.3	1.0	12.7	8.9	14.1	13.8	238.6	(50.1)	12.7	(19.1)	1.05	12.7	78	35.7
Value on the Move—PEG With Est Gr	5.8	8.9	59.5	9.0	(0.3)	16.2	12.2	18.9	15.8	342.6	(50.2)	15.7	(23.1)	1.34	12.9	38	43.9
MAGNET Complex Rev	4.4	(38.4)	(5.7)	(6.8)	(32.5)	(17.5)	(2.9)	2.2	(3.0)	(64.8)	(21.0)	46.3	(25.1)	2.22	36.9	2	72.6
MAGNET Simple	(3.1)	(15.2)	(31.1)	(12.4)	19.5	(8.3)	7.4	14.3	9.1	317.9	(75.9)	52.1	(34.0)	2.97	26.3	3	68.2
ADR Screen	(7.0)	27.3	33.2	1.4	(25.9)	5.0	5.5	8.1	7.6	196.5	(68.7)	31.1	(29.7)	1.47	26.0	24	43.9
MAGNET Simple Rev	(7.6)	(13.7)	45.7	(25.0)	(45.7)	(12.5)	1.3	1.5	(4.7)	(8.4)	(31.0)	38.9	(27.1)	2.24	38.8	4	63.5
Oberweis Octagon	(17.5)	(5.9)	38.9	32.6	(14.7)	6.0	4.3	11.4	9.1	232.2	(70.6)	24.6	(23.2)	1.92	25.3	15	41.4
MAGNET Complex	(23.6)	7.4	32.9	(19.6)	6.9	0.4	(8.8)	10.4	7.9	(16.2)	(55.9)	63.0	(28.2)	2.72	40.4	2	74.0
Earnings Estimates																	
Dreman With Est Revisions	10.7	14.2	35.8	13.0	21.6	20.0	16.2	16.3	13.7	334.9	(39.9)	21.4	(26.2)	1.35	14.2	12	84.0
Est Rev: Top 30 Up	10.6	8.3	42.1	21.9	(2.3)	17.2	20.9	24.7	16.5	601.9	(37.8)	36.4	(26.7)	1.82	19.2	178	81.3
Est Rev: Up 5%	7.8	1.1	27.7	28.8	6.1	15.4	21.3	25.7	17.5	444.0	(23.4)	30.8	(21.7)	1.75	14.8	40	92.7
Est Rev: Down 5%	(5.8)	(13.5)	28.2	9.2	(31.1)	(2.1)	(0.9)	(0.1)	(6.3)	161.9	(63.8)	33.5	(30.5)	1.94	31.1	75	89.3
P/E Relative	(9.7)	5.3	29.5	14.3	(1.9)	8.0	11.3	14.7	13.8	236.8	(27.6)	18.4	(18.3)	1.13	7.6	31	77.2
Est Rev: Lowest 30 Down	(10.3)	(20.4)	29.7	9.3	(34.1)	(4.5)	(2.8)	(0.8)	(10.5)	191.3	(71.0)	43.0	(29.9)	2.32	32.4	223	79.4
Specialty																	
Insider Net Purchases	(15.5)	(11.9)	21.5	11.5	(31.4)	(5.4)	(6.4)	(1.9)	(9.2)	93.5	(65.5)	27.8	(27.2)	1.88	34.1	29	30

	Price Gain (%)					Average Annual Price Gain (%)				Price Gain (%)		Monthly Variability		Risk Measures	
												Largest		Risk	Ulcer
Indexes	YTD	2014	2013	2012	2011	5 Yr	10 Yr	Since Incep	Risk Adj	Bull Mkt*	Bear Mkt*	Gain	Loss	Index (X)	Index (%)
S&P 500	1.0	11.4	29.6	13.4	(0.0)	12.0	5.2	4.3	4.3	180.7	(52.6)	10.8	(16.8)	1.00	20.8
S&P 500 Growth (w/divs)	7.0	14.9	35.5	14.6	4.7	15.6	9.0	6.5	6.5	227.2	(44.4)	10.8	(16.5)	1.10	29.8
S&P 500 Value (w/divs)	(2.0)	12.5	33.7	17.7	(0.5)	13.0	6.1	5.7	5.7	216.3	(56.0)	11.3	(17.1)	1.00	16.5
S&P MidCap 400	0.6	8.2	31.6	16.1	(3.1)	11.4	7.1	8.6	8.3	234.2	(50.5)	14.8	(21.8)	1.19	12.9
S&P MidCap 400 Growth (w/divs)	4.3	7.6	32.8	15.8	(0.9)	13.7	9.2	11.6	10.5	276.3	(47.7)	19.0	(22.2)	1.30	13.1
S&P MidCap 400 Value (w/divs)	(3.1)	12.1	34.3	20.1	(2.4)	13.0	8.2	8.3	8.1	262.8	(49.4)	15.7	(21.8)	1.11	12.4
S&P SmallCap 600	1.7	4.4	39.7	14.8	(0.2)	12.8	7.1	7.9	7.6	249.2	(52.2)	17.3	(20.2)	1.26	14.2
S&P SmallCap 600 Growth (w/divs)	4.7	3.9	42.6	14.9	4.1	14.6	9.3	9.4	8.7	304.9	(51.1)	17.0	(21.7)	1.31	13.1
S&P SmallCap 600 Value (w/divs)	(4.2)	7.5	35.6	17.8	(1.2)	12.1	6.9	8.1	7.8	243.3	(51.0)	18.4	(19.6)	1.22	14.3
Dow Jones 30	(0.6)	7.5	26.5	7.3	5.5	10.0	5.1	4.6	4.7	149.5	(49.3)	11.8	(15.1)	0.97	15.1
Nasdaq 100	10.1	17.9	35.0	16.8	2.7	17.1	10.8	9.0	7.9	214.1	(50.1)	25.0	(27.5)	1.79	51.0
All Exchange-Listed Stocks	(5.9)	5.0	38.1	14.8	(12.3)	8.1	5.7	9.6	8.8	270.9	(58.6)	23.9	(22.1)	1.37	15.9

Bull market period is March 1, 2009, through June 30, 2015. Bear market period is November 1, 2007, through February 28, 2009.
Unless otherwise stated, figures do not include dividends or transaction costs.
Source: AAII's Stock Investor Pro/Thomson Reuters. Data as of 11/30/2015.

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

day also marked the first time since 2002 that the S&P 500 fell by at least 2% for three trading sessions in a row, according to Schaeffer's Investment Research. In addition, the CBOE Volatility Index (VIX) jumped to a six-year high before settling for a 45.3% gain to its highest close in nearly three years.

Fortunately, the correction did not turn into a full-blown bear market. After re-testing the August 24 lows in late September, the U.S. indexes rallied in October, nearing their highs for the year.

As was the case last year, large-cap growth stocks were the clear "winner" this year. The S&P 500 Growth index experienced a total return—including dividends—of 7.0% through the end of November, compared to a 2.0% total *loss* for the S&P 500 Value index. The S&P 500 index had a price gain of 1.0% through the end of November, while the S&P MidCap 400 index had risen 0.6% and the S&P 600 SmallCap index was up 1.7%. The Nasdaq 100, the index of the 100 largest stocks traded on the Nasdaq market, had risen 10.1% year-to-date.

Given the performance of U.S. stocks through the first 11 months of 2015, valuations are relatively unchanged compared to the same point last year. The S&P 500 stocks tracked by AAII's *Stock Investor Pro* fundamental stock screening and research database program were trading with a median price-earnings ratio (P/E)—based on trailing 12-month earnings per share—of 21.2.

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What It Takes: The Fundamental Characteristics of the Top AAII

Table 2 presents the current characteristics of the top- and bottom-performing screening strategies for 2015, as well as the risk-adjusted winners and losers since the start of 1998.

More stock screens posted losses in 2015 than those that generated gains—33 of the 64 screens are down year-to-date as of the end of November. The median loss for the screening methodologies we track is 1.1% year-to-date. By comparison, the S&P 500 large-cap index is up 1.0% through November 30, 2015.

None of the methodologies achieved an all-time high single-year gain and only 10 outperformed their historical average annual returns.

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, $18.0 billion;
- S&P MidCap 400 index, $3.6 billion; and
- S&P SmallCap 600 index: $1.0 billion.

Among the top 2015 performers, two currently have passing companies with median market capitalizations that fall squarely into the small-cap category: Foolish Small Cap 8 ($929.5 million) and Foolish Small Cap 8 Revised ($592.3 million). The Stock Market Winners' passing companies

Table 2. Characteristics of Winning and Losing Stock Screens

	Price Change (%)									
	YTD	Ann'l Risk-Adj	P/E Ratio (X)	Price-to-Book-Value Ratio (X)	Div Yield (%)	P/E to Est EPS Grth (PEG) (X)	5-Yr Hist EPS Grth (%)	EPS Est Ann'l Grth 3-5 yrs (%)	Market Cap ($ Mil)	52-Wk Rel Str (%)
Top Performers: 2015										
Foolish Small Cap 8 (Growth With Price Mom)	49.5	9.0	16.7	7.7	0.6	1.7	22.7	10.0	929.5	192.5
O'Neil's CAN SLIM Revised 3rd Edition (Grwth w/Price Mom)	36.6	13.2	21.4	2.3	0.0	2.3	21.4	9.0	2,155.3	60.2
Foolish Small Cap 8 Revised (Growth & Value)	30.6	10.3	15.4	12.1	0.4	na	35.4	na	592.3	254.9
Graham—Enterprising Investor (Value)	19.7	11.4	7.5	1.2	3.4	na	9.7	na	10,741.6	(5.2)
Stock Market Winners (Gr & Val w/Price Mom)	19.1	16.3	14.6	1.1	0.7	na	24.1	na	82.9	20.9
Bottom Performers: 2015										
Rule #1 (Growth & Value)	(47.1)	8.0	9.5	5.8	0.8	0.6	53.1	15.2	77,028.8	(10.1)
Piotroski: High F-Score (8) (Value)	(37.4)	15.1	14.1	0.6	0.0	0.2	18.3	34.9	212.2	(27.3)
MAGNET Complex (Growth & Value With Price Mom)	(23.6)	7.9	25.0	8.3	1.5	na	9.9	na	324.2	240.3
Schloss (Value)	(20.0)	7.6	7.5	0.8	0.0	1.3	(12.9)	(3.6)	59.7	(48.7)
Murphy Technology (Growth & Value)	(18.2)	(19.1)	10.1	1.4	0.0	1.1	6.4	0.4	5,581.9	(6.0)
Top Performers: Total History, Risk-Adjusted										
Est Rev: Up 5% (Earnings Estimates)	7.8	17.5	40.0	4.5	0.0	1.5	17.3	22.2	1,325.0	13.4
Est Rev: Top 30 Up (Earnings Estimates)	10.6	16.5	35.9	3.4	0.0	1.5	16.0	20.0	1,347.7	12.7
Stock Market Winners (Gr & Val w/Price Mom)	19.1	16.3	14.6	1.1	0.7	na	24.1	na	82.9	20.9
Value on Move—PEG w/Est Gr (Gr & Val w/Price Mom)	5.8	15.8	21.4	4.3	0.6	0.7	29.9	22.5	4,333.6	35.2
O'Shaughnessy Tiny Titans (Value With Price Mom)	(7.3)	15.6	16.6	1.5	0.0	3.9	3.4	(3.5)	62.2	39.4
Bottom Performers: Total History, Risk-Adjusted										
Murphy Technology (Growth & Value)	(18.2)	(19.1)	10.1	1.4	0.0	1.1	6.4	0.4	5,581.9	(6.0)
Est Rev: Lowest 30 Down (Earnings Estimates)	(10.3)	(10.5)	23.5	1.5	0.0	3.4	7.9	16.0	180.8	(41.7)
Insider Net Purchases (Specialty)	(15.5)	(9.2)	na	3.0	0.0	3.9	13.9	20.0	387.1	(0.6)
Est Rev: Down 5% (Earnings Estimates)	(5.8)	(6.3)	16.7	1.9	0.0	1.6	10.7	12.0	923.8	(27.5)
MAGNET Simple Revised (Gr & Val w/Price Mom)	(7.6)	(4.7)	11.4	1.2	1.6	1.0	9.5	4.8	3,135.5	25.4
Indexes										
S&P 500	1.0	4.3	21.2	3.0	2.0	1.9	13.0	9.0	18,015.7	(0.6)
All Exchange-Listed Stocks	(5.9)	8.8	20.1	1.9	0.0	1.7	11.6	11.7	742.3	(3.3)

Performance figures do not include dividends or transaction costs.
Source: AAII's Stock Investor Pro/Thomson Reuters. Data as of November 30, 2015.

Screens for 2015

would put it in the even smaller micro-cap category, with a median market cap of $82.9 million. These strategies defied the overall trend in the market in 2015, whereby large-cap stocks outperformed mid- and small-cap stocks, as measured by the S&P market-cap indexes.

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 2015, the current Graham—Enterprising Investor Revised stock (only one company passed the screen at the end of November) has a median price-earnings ratio of 7.5. This is roughly one-third that of the median price-earnings ratio of 20.1 for all exchange-listed stocks currently in the *Stock Investor Pro* database. Three of the other top performers for 2015—Stock Market Winners (14.6), Foolish Small Cap 8 Revised (15.4) and Foolish Small Cap 8 (16.7)—all have median price-earnings ratios that are well below that of the typical exchange-listed stock. The Stock Market Winners screen has a valuation requirement, seeking stocks with a price-to-book-value ratio (P/B) no greater than 1.5.

Once again, the O'Neil's CAN SLIM Revised 3rd Edition screen (two companies passed the screen at the end of November) has the highest price-earnings ratio among the top performers of 2015. While it, too, seeks out companies with strong earnings growth and price momentum, its filters are not quite as stringent as those of the "original" CAN SLIM screen.

Both the Graham—Enterprising Investor and Stock Market Winners screens explicitly screen for price-to-book ratio. Specifically, the Graham—Enterprising screen limits passing companies to a ratio of 1.2 or lower, while the Stock Market Winners strategy sets a 1.5 cap. It is for this reason that the companies currently passing these screens have a median price-to-book ratio of 1.2 and 1.1, respectively. By comparison, the median price-to-book ratio for the typical exchange-listed stock is 1.9.

Looking at the valuations of 2015's worst-performing strategies, four have some element of value. The Piotroski High F-Score screen looks for companies that rank in the bottom 20% of the entire stock universe in terms of price-to-book value, which is why the median price-to-book value of the screen's passing companies is only 0.6. The MAGNET Complex approach looks for companies whose price-to-sales ratio is less than its industry median. Yet the median price-earnings and price-to-book ratios for the two companies passing the screen, 25.0 and 8.3, respectively, are the highest among the worst-performing AAII stock screens of 2015. The Schloss strategy looks for stocks trading with a price-to-book value of 1.0 or less. For this reason, the six companies passing this screen at the end of November have a median price-to-book-value ratio of 0.8.

The ratio of price-earnings to earnings per share growth is called the PEG ratio and attempts to balance the trade-off between price-earnings ratios and earnings per share growth rates. Investors are willing to pay more for current earnings when there are reasonable expectations of growth and higher earnings in the future.

One way to compute the PEG ratio is to divide the trailing price-earnings ratio (price divided by earnings per share for the trailing 12 months, or last four fiscal quarters) by the estimated earnings per share growth rate for the next three to five years. Normally, companies with PEG ratios near 1.0 are considered fairly valued. Ratios above 1.5 may indicate overvalued stocks, and ratios below 0.5 potentially indicate attractively priced (undervalued) stocks.

Looking at 2015's top-performing methodologies, only two have valid PEG ratios, because the other three do not have estimated earnings per share growth rates. Foolish Small Cap 8 and O'Neil's CAN SLIM Revised 3rd Edition have PEG ratios that are at or above that of the typical exchange-listed stock. Of the four worst-performing screens with valid PEG ratios, all are below the median value of the typical exchange-traded stock.

Relative Strength

The relative strength figure in Table 2 is calculated against the performance of the iShares 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 10% indicates that the stock outperformed the S&P 500 by 10%. Negative numbers indicate underperformance relative to the index, such that a relative strength reading of –5% means the stock has underperformed the S&P 500 by 5%.

The Foolish Small Cap 8 strategy, with two passing companies at the end of November, has a relative strength of 192.5% over the 52 weeks ending November 30, 2015. This means the typical stock held in this portfolio has outperformed the S&P 500 by 192.5% over this period. Both of the stocks in the portfolio have outperformed the S&P 500 over the last 52 weeks. Natural Health Trends Corp. (NHTC) has outperformed the S&P 500 by nearly 255% over the last 52-weeks.

The one stock currently passing the Graham—Enterprising Investor screen has underperformed the S&P 500 by 5.2% over the last 52 weeks. Ironically, the two stocks passing the third-worst-performing AAII stock screen for 2015—MAGNET Complex—have each outperformed

(continued on page 17)

The Passing Companies Behind the Top Strategy of 2015

The Foolish Small Cap 8 screen's 2015 performance was no laughing matter, with a 49.5% gain year to date through November 30, 2015. In a year where the typical stock screen lost 1.1%, this strategy's performance was even more impressive. However, when evaluating the performance of a given stock-picking approach, it is useful to look beyond the simple gain/loss data and examine the individual stocks that contributed to the overall return.

Unlike last year's top AAII screen, the Foolish Small Cap 8 screen was fully invested throughout the entire year. However, the screen, on average, only generated two passing companies each month. For the year, eight unique companies were uncovered by the screen.

The Foolish Small Cap 8 methodology for screening for small stocks was developed by David and Tom Gardner, founders of the Motley Fool (www.fool.com). Their strategy uses eight criteria to look for profitable and rapidly growing small companies with strong price momentum. It's partly based upon the premise that the lack of coverage and interest in small-cap companies presents a better opportunity to locate undiscovered, attractive investment candidates.

The Foolish Small Cap 8 screen was designed to flag potential growth companies based upon a combination of market- and business-related factors. The filters used to identify good businesses are as follows:

- Recent earnings and sales growth of at least 25%;

Table 3. Stocks Passing the Foolish Small-Cap 8 Screen During 2015

Company (Ticker)	Price Gain While in Port (%)	Mos in Port During 2014	P/E Ratio (X)	Price-to-Book Ratio (X)	Div Yield (%)	P/E to EPS Est Grth (%)	5-Yr Hist EPS Grth (%)	EPS Est Ann'l Grth 3-5 Yrs (%)	Market Cap ($ Mil)	52-Wk Rel Strgth (%)
Natural Health Trends Corp. (NHTC)	37.2	3	15.4	12.13	0.4	na	35.4	na	592.3	254.9
Sucampo Pharmaceuticals, Inc. (SCMP)	27.7	6	24.5	6.52	0.0	na	21.4	na	777.2	45.4
Supernus Pharmaceuticals Inc. (SUPN)	11.2	4	70.3	7.18	0.0	1.20	67.0	70.0	790.6	81.3
Paycom Software Inc. (PAYC)	5.9	1	136.3	27.08	0.0	2.10	67.0	53.9	2,577.0	50.7
United Insurance Holdings Corp. (UIHC)	2.5	3	16.1	1.78	1.1	0.90	40.1	20.0	407.7	0.4
Diamond Hill Investment Group (DHIL)	(3.6)	1	19.3	6.72	0.0	na	17.1	na	750.3	66.1
Healthequity Inc. (HQY)	(12.2)	2	126.9	9.79	0.0	3.10	na	35.0	1,888.3	32.1
POZEN Inc. (POZN)	(24.7)	1	na	8.53	0.0	na	35.7	na	248.8	(15.2)

Performance figures do not include dividends or transaction costs.
Source: AAII's Stock Investor Pro/Thomson Reuters. Data as of 11/30/2015.

(continued from page 9)

The price-earnings ratio for the index was 21.3 at the end of November 2014 and 21.1 for the same period in 2013. The five-year average price-earnings ratio for these large-cap stocks was 18.1 and the forward price-earnings ratio based on 2016 earnings was 16.7. As of November 30, 2015, the S&P MidCap 400 stocks were trading with a median price-earnings ratio of 21.6. In comparison, the five-year average for the mid-cap index was 19.1 and the forward price-earnings ratio, based on 2016 earnings, was 16.7. The S&P SmallCap 600 index stocks had a median price-earnings ratio of 22.0 at the end of November. By means of comparison, the five-year average median price-earnings ratio was 19.5 and the forward price-earnings ratio was 17.0.

Screen Performance

Last year, the AAII stock screens reflected the overall weakness in U.S. stocks. Of the 64 different screening methodologies tracked on AAII.com—the MAGNET Simple Revised and MAGNET Complex Revised screens were added in 2015—31 were up for the year through the end of November while 33 were down. Of the 31 that posted gains year-to-date, however, 26 outperformed the S&P 500's 1.0% gain through November 30. The median price change of all AAII stock screens, again through November 30, 2015, was a 1.1% decline, compared to a price gain of 3.1% last year through the end of November 2014. In 2015, none of the screens turned in their best annual returns.

Table 1 provides summary performance, risk and volatility statistics for the stock screening strategies we track at AAII.com. The strategies represent our quantitative interpretations of a wide array of investment approaches. (See the box "The AAII Stock Screens" on page 14 for more information about them.)

All of these screens have been created and backtested using *Stock Investor Pro* and all but two—the Dogs of the

- Net profit margin of at least 7%;
- Positive operating cash flow; and
- Insider ownership of at least 10%.

The next three Foolish 8 screens narrow the universe of stocks from which the top companies may be located. These market-related factors are:

- Daily dollar trading volume between $1 million and $25 million;
- Share price of at least $7; and
- Relative strength greater than 90%.

Lastly, the Foolish 8 screen caps a company's annual sales at $500 million, which is used to identify smaller companies.

Historically, the strategy has averaged 15 stocks per month, whereas the typical AAII stock screen has averaged roughly 20 passing companies a month since the start of 1998.

When following a given strategy, spreading your investment around into more stocks will lower your volatility, as investing in a small number of companies makes a portfolio more susceptible to individual stock price movements. The 10 AAII stocks screens that average the lowest number of passing companies each month are at least 80% more volatile than the S&P 500 index. Six of the 10 are more than twice as volatile as the large-cap index. However, having a good number of passing companies does not guarantee low volatility. The Piotroski High F-Score screen has a risk index of 2.07, meaning it is 107% more volatile than the S&P 500. This places it in 13th place among all AAII screens in terms of volatility. However, looking at its historical performance, much of that volatility has been to the upside.

Table 3 presents the eight stocks that passed the Foolish Small Cap 8 screen in 2015, as well as their performance while they were held in the hypothetical portfolio, the number of months each stock was held this year and select current financial data.

Natural Health Trends Corp. (NHTC) was the best-performing stock that passed the Foolish Small Cap 8 screen in 2015. It was held in the portfolio for only three months—May, June and July—but it generated a cumulative price gain of 37.2% over that period. Natural Health Trends Corp. is a direct-selling and e-commerce company that offers a line of NHT Global–branded products, including wellness, skin care and lifestyle. The company sells its products to a network of consumers or business builders that either use the products themselves or resell them to consumers. Its wholly owned subsidiaries have presence in the global markets, including North America; Greater China, which consists of Hong Kong, Taiwan and China; Russia; South Korea; Japan; and Europe, which consists of Italy and Slovenia.

Three of the companies that passed the Foolish Small Cap 8 screen in 2015 lost money while held in the hypothetical portfolio. The worst-performing stock from this group was POZEN Inc. (POZN), which fell 24.7% in August, the only month it was held in the portfolio.

The 2015 results for the Foolish Small Cap 8 screen are a departure from its average performance since the start of 1998. Its annual average price gain of 12.3% since the beginning of 1998 places it 29th among the 64 AAII stock screens. On a risk-adjusted basis, it slips to 39th place, with an average annual return of 9.0%.

Dow and Dogs of the Dow—Low-Priced 5 screens—are prebuilt into the software. Table 1 presents the price change performance (excluding dividends and transactions costs, such as commissions, bid-ask spreads, time and price slippage, etc.) over various time periods for each stock screening strategy.

The screens are grouped in Table 1 by style to identify their underlying premise. These style groupings are: value, value with price momentum, growth, growth with price momentum, growth & value, growth & value with price momentum, earnings estimates and specialty. Within each group, the screens are ranked in descending order by year-to-date price performance through November 30, 2015. The end of the table shows performance data for several market indexes and stock groups.

Impact of Dividends

The Price Gain and Average Annual Price Gain columns in Table 1 represent the annualized percentage price gain or loss realized by a hypothetical portfolio invested in the stocks passing a given screen over varying periods from January 1, 1998, through November 30, 2015.

Keep in mind, however, that these figures represent price change only, and do not include dividend payments or dividend reinvestment. Therefore, the results of screens that tend to isolate large, dividend-paying stocks—such as the Dogs of the Dow (in the value category)—do not receive a boost from dividend payments or reinvestment.

The 10 stocks passing the Dogs of the Dow screen at the end of November were yielding 3.8%, compared to 3.3% at the end of November 2014; investors holding shares in these stocks, therefore, would have a higher annual return by approximately this amount for the coming year.

The Top Screen of 2015

After being the fifth-worst-performing AAII stock screen in 2014, when it lost 19.9%, the Foolish Small

Cap 8 screen gained 49.5% year-to-date as of November 30, making it the top-performing AAII stock screen of 2015. This methodology for screening for small stocks was developed by David and Tom Gardner, founders of the Motley Fool.

Our screen based on their approach is discussed in greater detail starting on page 12. In 2015, eight stocks passed the screen between the end of 2014 and the end of October 2015. Furthermore, at least one company passed the screen each month. Since 1998, the Foolish Small Cap 8 screen has, on average, generated 15 passing companies a month. The discussion starting on page 12 looks at the companies driving the screen's 2015 performance.

Historical Performance

AAII has performance history for our stock screens dating back to the start of 1998—almost 18 years now. We have seen a shakeup among the top performing methodologies since inception. After turning in the best performance of 2014 with its 50.3% gain, the Rule #1 screen went from first to worst in 2015, losing 47.1%. As a result, it fell out of the top five in terms of since-inception performance among all AAII screens. As a result, the Estimate Revisions Up 5% (Est Rev Up 5%) screen now sits atop the list for long-term performance, with a gain of 25.7% since inception.

The Estimate Revisions Up 5% screen has managed to achieve its long-term gains not only by generating strong annual gains but also by not grossly underperforming in its down years, which have numbered few: the screen has only had two down years since 1998. The screen looks for upward revisions in annual earnings estimates; specifically, it identifies companies that have had their annual earnings estimates raised by at least 5% over the last month. This and our other earnings estimate revisions screens add these stocks in the month following the revisions made to earnings estimates by analysts. The Estimate Revisions Up 5% screen has the eighth-highest bull market gain among all AAII stock screens at 444.0%, which is actually lower than that of the second-best all-time-performing AAII screen, the Estimate Revisions Top 30 Up screen. This screen has a bull market gain of 601.9% and a gain since inception of 24.7%. (For purposes of calculating returns, the current bull market began on March 1, 2009, and came to an end on June 30, 2015.) For 2015, the Estimate Revisions Up 5% screen has generated a year-to-date gain of 7.8% and has a bear market loss of 23.4%.

Rounding out the top three AAII stock screens since inception is the Piotroski High F-Score screen, with an average annual gain of 24.3%. This pure value screen looks for stocks with a very low price-to-book-value ratio and with positive financial characteristics (a high F-score). It has built its performance by doing extraordinarily well in bull mar-

The AAII Stock Screens

AAII has been developing, testing, and refining a wide range of screening strategies over the years. Many of the screens follow the approaches of popular investment professionals, while others are tied to basic principles of investing. These approaches run the full spectrum, from those that are value-based to those that focus primarily on growth, while most fall somewhere in the middle.

Screens following the approach of an investment professional do not represent their actual stock picks. The rules of each screen are defined by our interpretations of their respective investment approaches. The results of the screening strategies, as well as the criteria for each screen, are programmed into the *Stock Investor Pro* program and are also posted in the Stock Screens area of AAII.com.

Each month over 60 separate screens are performed using AAII's *Stock Investor Pro* and the current companies passing each individual screen are reported. *Stock Investor Pro* subscribers can run the screens themselves on a weekly basis, while AAII members can access the screening results by going to the Stock Screens area of AAII.com (www.aaii.com/stock-screens). The results are posted to AAII.com on the 15th of each month (excluding holidays and weekends) using data from the previous month's end. The AAII Stock Screens Update email will you notify you when the strategies have been updated on AAII.com and provide a more in-depth look at a featured screen each month. You can sign up for this complimentary newsletter at www.aaii.com/email/signup.

The performance of the stocks passing each screen is tracked on a monthly basis. The month-to-month closing price is used to calculate the return, with equal investments in each stock at the beginning of each month assumed. The impact of factors such as commissions, bid-ask spreads, cash dividends, time slippage (the time between the initial decision to buy a stock and the actual purchase) and taxes is not considered. This overstates the reported performance, but all approaches are subject to the same conditions and procedures. Higher turnover portfolios typically benefit more from these simplified rules.

Sell rules are the same as the buy rules: The hypothetical portfolios are completely reallocated using each subsequent month's data. Thus, a stock is sold (no longer included in the portfolio) if it ceases to meet the initial criteria, and new stocks are added if they qualify.

Stocks that no longer qualify are dropped even if the strategist behind a particular approach suggests different sell rules versus buy rules. This may shorten the holding period and increase the turnover relative to what the strategist would suggest for an actual portfolio.

kets, with a bull market gain of 933.2%, second among all AAII screens. However, in 2015 it slumped 37.4%, making it the second-worst AAII stock screen for the year to date. Value strategies did not fare very well in 2015, as indicated by the underperformance of the S&P 500 Value index relative to the S&P 500 Growth index, so the performance of this value screen is not overly surprising.

In contrast, two of AAII's worst-performing screens since inception 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 subsequent short-term performance of stocks. As of the end of November, the Lowest 30 Down screen had lost 10.3% while the Down 5% screen had surrendered 5.8%.

The worst-performing AAII stock screen since inception, however, is the Murphy Technology methodology, which, on average, has lost 2.8% a year since the beginning of 1998.

Risk-Adjusted Return

Table 1 also presents the risk-adjusted return for each of the screens. This calculation adjusts the performance of each screen using their volatility as measured through standard deviation of returns, penalizing screens with higher standard deviations (for a more detailed explanation of the risk-adjusted return calculation, see the box on page 16). Using risk-adjusted returns, we still find the two long-term best-performing screens at the top: Estimate Revisions Up 5% and Estimate Revisions Top 30 Up. However, the Piotroski High F-Score screen falls out of the top five, replaced by the Stock Market Winners screen, which ranks third with a risk-adjusted average annual return of 16.3%.

The Stock Market Winners approach is based on research performed by William O'Neil and published in his book "The Greatest Stock Market Winners: 1970-1983." The screen is based on variables from five categories. The first, "smart money," includes the behaviors of professionally managed funds and corporate insiders. The second contains valuation measures such as price-to-book-value and price-earnings ratios. The third grouping includes the technical indicator of relative strength. The fourth consists of accounting earnings and profitability measures. The final group contains miscellaneous variables that did not fit into the other four groups, including the number of common shares outstanding.

Bull & Bear Market Results

The majority of stocks have some positive correlation with the overall market: When the market is going up, so do the values of many stocks. However, the extent of the increases vary.

When investing in individual stocks, you would like to outperform the market, otherwise you are probably better off investing in an index fund. By tracking the performance of our stock screens over the latest bull and bear markets, we are able to see whether a strategy can outperform the market during an uptrend or limit losses during a downtrend.

Among the AAII stock screens, the Price-to-Free-Cash Flow screen has turned in the best bull market performance, gaining 957.8% between March 1, 2009, and June 30, 2015.

Five screening strategies were not able to capitalize on the market's overall upward momentum during the last bull market and turned in losses: MAGNET Complex Revised (–64.8%), Muhlenkamp (–46.6%), Kirkpatrick Value (–17.0%), MAGNET Complex (–16.2%) and MAGNET Simple Revised (–8.4%). By way of comparison, the S&P 500 gained 180.7% during the last bull market.

Over the last bear market, O'Neil's CAN SLIM screen had the smallest loss at –10.1% from November 1, 2007, through February 28, 2009. The screen benefited from being out of the market for much of that time, as its strict price momentum filters have few, if any, candidates during a prolonged market downturn. When no stocks pass a strategy at the beginning of a calendar month, we consider the hypothetical portfolio to be fully invested in cash and thereby out of the market. The biggest loser over the last bear market was the Dogs of the Dow Low Priced 5, which dropped 82.9%.

Monthly Variability

The monthly variability columns in Table 1 show the best and worst single-month returns of each of the 64 AAII stock screens. O'Neil's CAN SLIM screen, which seeks out stocks with strong price momentum, has the highest single-month gain at 69.6%. On the other end of the spectrum, the Murphy Technology screen has the biggest one-month decline at 44.9%.

Risk Index

The risk index compares the variability of returns, as measured by the standard deviation of return, for a given stock screening strategy to that of a benchmark. Standard deviation is a measure of return volatility computed using monthly returns since the beginning of 1998. The risk index divides the standard deviation of a strategy's return by the standard deviation of return for a benchmark, in this case the S&P 500. The risk index provides a relative measure of risk by comparing the variation in return for a screen since the beginning of 1998 to the typical variation in return for the benchmark index. The risk index of the S&P 500, therefore, is 1.00; methodologies with a risk index below 1.00 are below average in risk.

Almost all of AAII'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 two screens have a risk index lower than 1.00: Graham Defensive Investor—Utility and Dividend—High Relative Yield. These two screens are made up of "safer" stocks, with one focusing on utility stocks and the other seeking out dividend-paying stocks.

Ranking the 64 stock screens according to risk index, we see that the Graham Defensive Investor—Utility screen has the lowest risk index, 0.97. This means the approach is only 97% as volatile as the S&P 500 since the start of 1998. The screen's risk-adjusted return matches that of its average annual return of 6.8%.

Benjamin 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, 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.

The 2.07 risk index value for the Piotroski High F-Score screen indicates that, since the beginning of 1998, the monthly variability of returns for the stocks held in this portfolio has been more than twice that of the S&P 500. This makes the Piotroski High F-Score screen the 13th-riskiest screen among the 64 screens AAII tracks. The screen also has the highest risk index among all value strategies AAII tracks. Among all AAII stock screens, the median risk index value is 1.56. This indicates that the typical stock screen tracked by AAII has 56% more volatility than the S&P 500.

The MAGNET Simple screen has the highest risk index (2.97) and standard deviation of returns (45.8%). Accordingly, its annualized gain of 14.3% since 1998, which is above the median annualized gain for all screens of 9.6%, becomes a lackluster risk-adjusted return of 9.1% since 1998 (the median risk-adjusted return for the screen universe is 9.5%).

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, revenues 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).

Ulcer Index

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 High F-Score screen is a great example, with a risk index of 2.07 and an Ulcer Index of 14.0%, below the median Ulcer Index of all the screens (16.4%).

Average Holdings & Turnover

One benefit of quantitative stock screening is the ability to winnow down a universe of stocks to a more manageable number. For stock screens to be useful, however, there should ideally be enough stocks passing to provide vari-

Calculating Risk-Adjusted Return

The formula for calculating the risk-adjusted return is as follows:

Margin Rate + (Benchmark Std Dev ÷ Portfolio Std Dev) × (Portfolio Return – Margin Rate)

Where:

- Margin Rate = margin rate (the rate at which you borrow funds); we use 6.5% for our calculations
- Benchmark Std Dev = standard deviation of the benchmark, in this case the S&P 500 index
- Portfolio Std Dev = standard deviation of the portfolio of stocks passing a given stock screen
- Portfolio Return = return of the portfolio invested in the stocks passing a given stock screen

This calculation assumes that the portfolio return for a given stock screen is higher than the margin rate. If it isn't, the risk-adjusted return calculation would be as follows:

Margin Rate + (Portfolio Std Dev ÷ Benchmark Std Dev) × (Portfolio Return – Margin Rate)

Following this methodology, we calculate the risk-adjusted returns since inception for all of the AAII stock screens.

ous alternatives, but not too many that investors are overloaded with choices.

The rightmost 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, as we noted previously, the Foolish Small Cap 8 screen has generated, on average, 15 stocks per month since the start of 1998. However, in 2015, as corporate earnings growth came under pressure, only eight stocks passed the screen for the entire year with an average of two companies passing a month.

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 AAII tracks, ranging from 81.3% to 92.7%. From a conceptual standpoint, this characteristic for these screens makes perfect sense. As we stated before, 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 these screens, 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.

The screen with the lowest turnover is the Dogs of the Dow screen, with an average monthly turnover of 7.6%. The median average monthly turnover for AAII's screens is 38.3%.

What It Takes, Continued

(continued from page 11)
the S&P 500 by over 225% over the last year.

Winning Characteristics

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

- Low multiples (price-earnings ratio, price-to-book-value ratio, 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 John Bajkowski's article, "Constructing Winning Stock Screens," in the December 2012 *AAII Journal*; it is also available in the Stock Screens area of AAII.com.

Conclusion

The AAII stock screens are not intended to be buy or recommended lists. Instead, they allow investors to see how different investment strategies perform over varying market conditions. Since market conditions change, it is important to be adequately diversified to weather the ups and downs of the market.

One way to achieve sufficient diversification is by using multiple stock screening methodologies to help you select stocks. However, it is not enough to simply choose those strategies that have the best long-term performance. Instead, it is useful to understand the forces influencing both the overall market and a strategy's performance, and how changing economic conditions can impact both the market and individual stocks. Examining the characteristics of an investment methodology may reveal some practical problems you can face when trying to translate quantitative stock screening in real-world portfolio building.

Something else to keep in mind is that once you decide on which methodologies to follow, you cannot just let the quantitative screens choose your stocks.

Screening is a multi-step process. The first step is to apply the quantitative filters to the stock universe to help you arrive at a set of candidates that all share the same base set of characteristics. This does not necessarily mean they are all good investments. It is important to take your list of passing companies and, at a minimum, perform some cursory qualitative analysis to decide whether or not they are right for your stock portfolio. ➤

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