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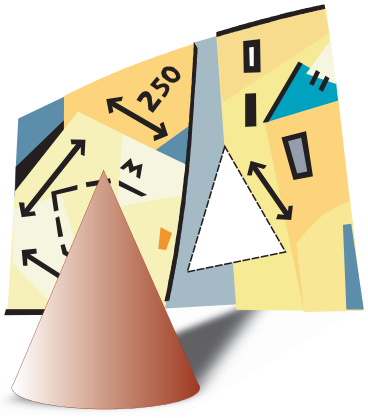
Model Shadow Stock Portfolio: Insights and a New Stock

By John Bajkowski



Investing is not always easy.

A great deal of research supports the notion that over the long term, stocks of smaller companies have had greater returns than those of larger companies. The research also shows that low price-to-book-value ratio stocks have had higher returns over the long term than glamour (high price-to-book-value) stocks—and this was in addition to any smallness effect. The Model Shadow Stock Portfolio was designed to capture the benefit of these observations.

To realize those higher long-term gains, however, you have to be willing to expect some periods of underperformance. You also have to be able to accept greater short-term volatility from small-cap stocks, with the understanding that your long-term wealth accumulation should benefit from your patience.

So far, 2018 is certainly testing the patience of small-cap value investors. As of February 28, 2018, the Model Shadow Stock Portfolio was down 9.3% year to date, compared to a 1.8% gain for the S&P 500 index as measured by the Vanguard 500 Index fund (VFINX). The Vanguard Small Cap Index fund (NAESX) is down 1.3% year-to-date. Figure 1 provides a chart of long-term performance along with compound annual returns, while Table 3 provides a year-by-year history of the performance of the Model Shadow Stock Portfolio.

The portfolio's performance this year has been influenced by significant declines of a handful of holdings, most

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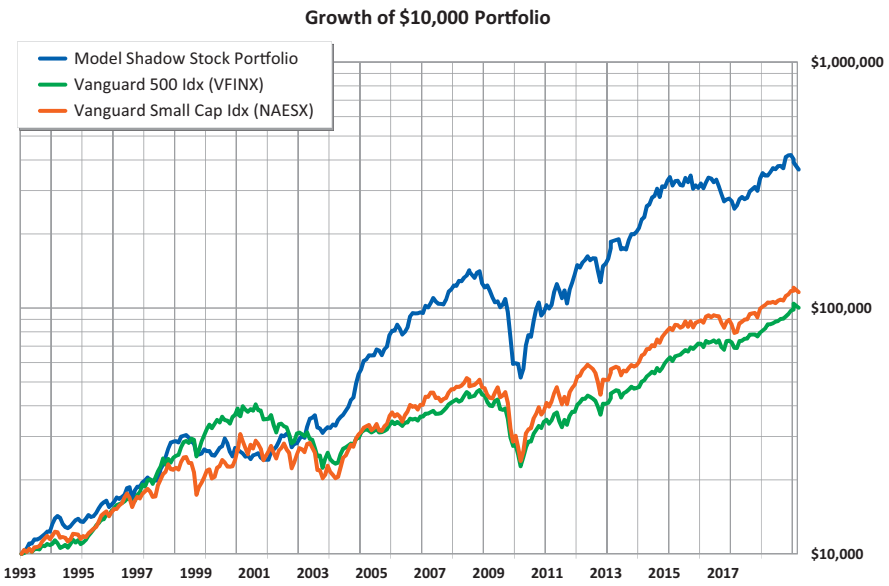
Figure 1. Model Shadow Stock Portfolio vs. Benchmarks (Through 2/28/2018)



Portfolio	Year-to-Date Return (%)	Annual Return (%) 1-Year	3-Year	10-Year	Since Inception	Ann'l Std Dev (%)
Model Shadow Stock Portfolio	(9.3)	5.8	4.1	12.0	15.4	15.7
Vanguard 500 Index (VFINX)	1.8	16.9	11.0	9.6	9.6	10.0
Vanguard Small Cap Index (NAESX)	(1.3)	10.2	7.9	10.4	9.6	12.0

Data as of 2/28/2018.

Table 1. Model Shadow Stock Portfolio

Company (Ticker)	Current Price ($)	52-Week High ($)	52-Week Low ($)	Market Cap ($ Mil)	P/E Ratio (X)	P/B Ratio (X)	Div Yield (%)	Notes
Aceto Corp. (ACET)	7.17	17.10	6.99	228.3	31.3	0.64	3.6	qualifies as of 2/28/2018
Amira Nature Foods (ANFI)	4.04	7.05	3.85	165.6	4.7	0.77	0.0	qualifies as of 2/28/2018
Autoweb Inc. (AUTO)	7.06	14.79	6.63	92.9	42.5	0.70	0.0	qualifies as of 2/28/2018
AV Homes Inc. (AVHI)	16.80	20.50	14.65	380.6	nmf**	0.88	0.0	
Beazer Homes USA (BZH)	15.72	23.24	11.18	551.0	37.5	0.91	0.0	
Big 5 Sporting Goods (BGFV)	6.15	17.10	5.05	127.5	20.9	0.64	9.8	
Container Store Group (TCS)*	5.05	6.37	3.53	242.0	61.6	0.96	0.0	qualifies as of 2/28/2018
CPI Aerostructures (CVU)	8.20	10.05	5.55	74.0	12.4	1.01	0.0	
CSS Industries Inc. (CSS)	18.41	30.29	18.41	173.4	nmf**	0.57	4.3	
Delta Apparel, Inc. (DLA)	18.05	23.47	15.55	140.0	12.0	0.92	0.0	qualifies as of 2/28/2018
Ducommun Incorporated (DCO)	28.14	35.58	25.06	322.7	24.0	1.41	0.0	
Ennis, Inc. (EBF)	19.50	21.50	15.20	512.2	15.6	1.90	4.1	
Flexsteel Industries (FLXS)	38.86	57.79	37.52	297.5	11.3	1.27	2.3	
Hallador Energy Co. (HNRG)	6.60	8.99	4.79	192.3	26.1	0.86	2.4	qualifies as of 2/28/2018
Hooker Furniture Corp. (HOFT)	37.35	52.75	29.75	445.2	14.2	1.96	1.5	
Kimball Electronics (KE)	17.35	22.45	15.05	473.7	14.3	1.36	0.0	
New Home Co. (NWHM)	11.24	13.55	9.75	243.2	13.8	0.89	0.0	
Olympic Steel, Inc. (ZEUS)	22.53	27.16	15.83	258.3	20.3	0.96	0.4	qualifies as of 2/28/2018
PC Connection, Inc. (CNXN)	24.83	30.48	22.66	684.6	14.2	1.42	0.0	
PCM Inc. (PCMI)	7.10	31.20	7.05	88.9	9.1	0.67	0.0	
RCM Technologies (RCMT)	6.36	6.55	3.89	77.6	49.9	2.25	0.0	
RCI Hospitality Holdings (RICK)	27.01	33.78	16.02	270.1	31.9	1.98	0.4	
Renewable Energy Group (REGI)	11.10	13.55	8.85	427.2	nmf	0.78	0.0	earnings probation as of 2017Q3
REX American Resources (REX)	80.72	107.87	72.71	544.7	16.1	1.47	0.0	
Roadrunner Transportation (RRTS)	3.83	9.75	3.52	154.1	nmf**	0.74	0.0	
Rocky Brands Inc. (RCKY)	18.40	20.95	10.25	136.9	21.5	1.00	2.4	qualifies as of 2/28/2018
Seneca Foods Corp. (SENEA)	29.10	39.45	27.75	296.4	40.1	0.65	0.0	qualifies as of 2/28/2018
SigmaTron International (SGMA)	7.10	11.61	4.01	31.1	12.9	0.47	0.0	qualifies as of 2/28/2018
Strattec Security Corp. (STRT)	34.20	49.20	23.00	133.7	12.5	0.80	1.6	qualifies as of 2/28/2018
Townsquare Media Inc. (TSQ)	6.96	13.01	6.28	129.5	10.9	0.32	0.0	qualifies as of 2/28/2018
Vishay Precision Group (VPG)	29.95	31.80	15.10	409.4	25.5	2.10	0.0	

na = not available
nmf = no meaningful figure
**new addition as of 3/9/2018.*
***Trailing four-quarter GAAP earnings negative, but adjusted earnings positive.*
Source: AAII's Stock Investor Pro*/Thomson Reuters. Data as of 2/28/2018.*

Approaching Size Limit: Stocks are sold if their market capitalization goes above three times the initial maximum criterion and there is a stock to replace it. The current market capitalization maximum for initial screening is $400 million. Stocks are marked "approaching size limit" if their current market cap exceeds 2½ times the initial criterion, or $1 billion.

Approaching Value Limit: Stocks are sold once their price-to-book-value ratio goes above three times the initial criterion and there is a stock to replace it. The current initial price-to-book ceiling is 1.00. Stocks are marked "approaching value limit" if their current price-to-book-value ratio exceeds 2½ times the initial criterion, or 2.50.

Earnings Probation: If last 12 months' earnings are negative, the stock is put on probation; if a subsequent quarter has negative earnings prior to 12-month earnings becoming positive, the stock is sold. When available, adjusted (non-GAAP) earnings are used to put stocks on probation or sell them. Otherwise, earnings from continuing operations are used. The date is the fiscal quarter during which the company first reported negative trailing 12-month earnings.

Qualifies as of: Stock still qualified as a buy when the screen was run with current data. Stocks that don't currently qualify as a buy are held until they meet one of the sell rules.

See the Model Shadow Stock Portfolio area of AAII.com for more information.

Model Shadow Stock Portfolio Rules

Purchase and Sales Rules

Stock purchases must meet these criteria:

- No bulletin board or pink sheet stocks will be purchased.
- Price-to-book-value ratio must be less than or equal to 1.00. (Figure will change gradually with changes in overall market values.)
- Market capitalization must be between $30 million and $400 million. (Figure will change gradually with changes in overall market values.)
- The firm's last quarter and last 12 months' earnings from continuing operations must be positive and, if there are earnings estimates, the estimates must be positive for the current quarter and year.
- No financial stocks, including those in the rental & leasing industry, or limited partnerships will be purchased.
- No utility stocks will be purchased.
- No stocks on foreign exchanges or ADRs will be purchased due to different accounting and/or withholding tax on dividends. Foreign stocks traded primarily on U.S. exchanges are OK with one exception: The stock of any company whose primary business is in China will not be purchased.
- The share price must be greater than $4.
- In order to reduce trading by avoiding stocks that are forever marginal, any stock that was sold within two years will not be rebought.
- Note second item under Stock Order Guidance concerning spreads when buying shares.
- Price-to-sales ratio must be less than 1.2. (Figure may change gradually with changes in overall market values.)
- Eliminate any company that failed to file a 10-Q (quarterly) report in the last six months.
- Relative price strength over the last four weeks will be used as a tie-breaker.

Stocks are sold if any of the following occur:

- If last 12 months' earnings are negative, the stock is put on probation; if a subsequent quarter has negative earnings prior to 12-month earnings becoming positive, the stock is sold. When available, adjusted (non-GAAP) earnings are used to put stocks on probation or sell them. Otherwise, earnings from continuing operations are used.
- The stock's price-to-book-value ratio goes above three times the initial criterion and there is a stock to replace it.
- Market capitalization goes above three times the initial maximum criterion and there is a stock to replace it.
- The stock has been held for four years—unless it currently qualifies, its price is up more than 40% from the purchase price, or there is no qualifying stock to replace it. If a stock has been held for over four years, it needs to be up 10% per year held to avoid being sold (for example, a stock held six years needs to be up 60%). Time and return are based on the initial purchase for the portfolio.

Stock Order Guidance

- These rules are for general guidance. Your own experience, market conditions and the size of the position will impact your own decisions. The results in the model portfolio were obtained while sometimes paying more.
- Market orders are not used. Instead, if the quoted bid-ask spread is less than 2% (ask price minus bid price, divided by ask price), place a limit order at the ask price for a buy and at the bid price for a sell. If the bid-ask spread is more than 2%, try to place a limit order between the bid and ask prices to keep transaction costs low. If necessary, build a position gradually. With low commissions, it is often better to place partial orders than to try to establish a large position all at once. Be patient.
- The average daily dollar volume should be at least 10 times the amount needed for your position. This will ensure liquidity to get in and out of the position, even if you need to grow the position gradually and sell gradually. This will result in a varying number of qualifying stocks for each investor.
- If price changes cause a stock to become ineligible (due to changes in price-to-book-value ratio or market capitalization) when only part of the order has been filled, shares already purchased are kept but the balance of the order is canceled.

Management Rules

- Equal dollar amounts are invested in each stock initially.
- Decisions are made only at the end of each quarter. In order to react to the majority of earnings reports as soon as possible, quarterly reviews are made in February, May, August and November.
- Best judgment is used for tenders or mergers, but all criteria must be obeyed.
- At the end of a quarter, if receipts from stocks sold exceed requirements for available new purchases, the excess receipts are kept in cash until the next review. If too much cash is accumulated, the rules will be adjusted.
- Note that if you are managing your own portfolio, it should consist of at least 10 stocks. If you are developing the portfolio gradually, you can do it stock by stock, but don't put more than 10% of your funds in each additional stock. More than 20 stocks is not needed until the portfolio exceeds $1 million.

Table 2. First-Quarter 2018 Transactons

Sell

Company (Ticker)	Reason
Hardinge, Inc. (HDNG)	acquired by affiliate of Privet Fund Mgmt LLC

Buy

Company (Ticker)	Maximum Price to Pay
Container Store Group (TCS)	$5.23 (can be loosened to $5.75)

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of which still qualify under the value and size rules for being added to the portfolio. The Model Shadow Stock Portfolio reflects the philosophy that success comes more from concern for the overall portfolio than for individual stocks. The portfolio rules focus on building a portfolio of stocks possessing the attractive characteristics as highlighted by sound academic research coupled with portfolio management rules aimed at controlling emotional behaviors that normally reduce long-term aftertax returns of managing a portfolio of micro-company stocks.

As noted by AAII founder James Cloonan when he started this model portfolio, for those willing to spend more time managing their portfolios, additional screens and quantitative analysis can be used. Keep in mind that research continually shows that, among individuals and professional investors alike, those with a consistent approach win and those who keep changing strategies lose.

Table 3. Model Shadow Stock Portfolio: Annual Performance

	Average Annual Return (%)			Cumulative Growth of $10,000 ($)		
Year	Model Shadow Stock Portfolio	Vanguard 500 Index (VFINX)	Vanguard Small Cap Index (NAESX)	Model Shadow Stock Portfolio	Vanguard 500 Index (VFINX)	Vanguard Small Cap Index (NAESX)
1993	32.3	9.9	18.7	13,230	10,989	11,870
1994	2.0	1.2	(0.5)	13,492	11,118	11,810
1995	20.7	37.4	28.7	16,291	15,282	15,204
1996	22.3	22.9	18.1	19,927	18,775	17,959
1997	44.3	33.2	24.6	28,756	25,010	22,375
1998	(8.9)	28.6	(2.6)	26,188	32,168	21,790
1999	(0.0)	21.1	23.1	26,187	38,945	26,831
2000	(7.7)	(9.1)	(2.7)	24,163	35,418	26,116
2001	21.4	(12.0)	3.1	29,325	31,160	26,926
2002	10.8	(22.1)	(20.0)	32,506	24,259	21,535
2003	73.1	28.5	45.6	56,268	31,174	31,360
2004	43.7	10.8	19.9	80,843	34,530	37,587
2005	17.9	4.8	7.4	95,353	36,180	40,376
2006	29.4	15.6	15.6	123,363	41,832	46,687
2007	(1.8)	5.4	1.2	121,166	44,083	47,227
2008	(50.8)	(37.0)	(36.0)	59,582	27,764	30,217
2009	72.3	26.5	36.1	102,665	35,120	41,130
2010	45.4	14.9	27.7	149,238	40,358	52,529
2011	6.3	2.0	(2.8)	158,701	41,155	51,067
2012	33.3	15.8	18.0	211,588	47,666	60,274
2013	61.0	32.2	37.6	340,599	63,009	82,966
2014	(5.8)	13.5	7.4	320,844	71,516	89,105
2015	(15.2)	1.3	(3.8)	272,161	72,410	85,693
2016	29.8	11.8	18.2	353,261	80,964	101,248
2017	14.0	21.7	16.1	402,716	98,495	117,542
2018 YTD	(9.3)	1.8	(1.3)	365,431	100,277	115,960
Since Incep	**15.4**	**9.5**	**10.2**	**365,431**	**100,277**	**115,960**

Data as of 2/28/2018.

Quarterly Portfolio Activity

Table 1 lists the stocks that currently make up the Model Shadow Stock Portfolio, and Table 2 summarizes the changes made during the quarterly update. After conducting our quarterly review of the Model Shadow Stock Portfolio at the end of February, none of the current Shadow Stock holdings met any of the portfolio's sell rules in terms of earnings, price-to-book ratio or market capitalization. However, Hardinge Inc. (HDNG) announced that it had entered into a definitive merger agreement to be acquired by an affiliate of Privet Fund Management LLC for $18.50 per share in cash. Therefore, Hardinge was sold from the portfolio.

With the proceeds from the Hardinge sale and the existing cash position of the Model Shadow Stock Portfolio, there were enough funds to take a position in one company at roughly the average position size for the existing holdings in the tracking portfolio.

Ten stocks passed the screen based on the liquidity requirements at the time of the review, but the portfolio already held all but two stocks. The four-week relative strength price ranking was used to select the Container Store Group (TCS) for the Model Shadow Stock Portfolio.

Looking Ahead

James Cloonan introduced AAII members to the principles and rules of the Model Shadow Stock Portfolio in his January 1993 article that was simply titled "Thinly Traded Stocks: Putting a Practical Approach to the Test." He felt that individual investors could effectively construct and manage a micro-cap port-

folio and profit from the challenges that institutional investors faced competing in that segment of the stock market.

We thank James Cloonan for his contributions, and we pledge to continue in his steps of using curiosity, passion and intellect to "share with you the problems of dealing in thinly traded stocks."

You can follow the Model Shadow Stock Portfolio on AAII.com in the Model Portfolios area. To receive monthly email updates along with alerts to any changes made to the portfolio, please sign in to AAII.com and go to www.aaii.com/email.

John Bajkowski is president of AAII. Wayne A. Thorp, CFA, AAII's senior financial analyst, provided research.

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revisions, the consensus estimate would automatically increase. However, this is not always the case, as analysts may drop coverage, which could lower the consensus estimate without an actual downward revision.

Hewlett Packard Enterprise (HPE) has seen 26 of the 27 analysts tracking the firm raise their fiscal-year estimates this past month. The consensus estimate has jumped from $1.180 to $1.409 for the 2018 fiscal year ending in October and is reflected in the 19.4% estimate revision.

Conclusion

Value investing has proven to be successful over long periods of time. However, don't expect to succeed simply by buying stocks that are undervalued based on one simple value measure. Lakonishok looks for underappreciated companies that look like they may be coming in from the rain. By finding undervalued companies that are beginning to stir, you may be able to get in on the "ground floor" if and when the rest of the market catches on.

No matter how well a stock screening methodology has performed (or how badly it has underperformed) over the long term, stock screening is only the first step in the stock selection process.

You will want to do your homework to see why these companies are at their current levels. Only then will you gain insight into those that will continue to languish and those that may eventually flourish.

The stocks meeting the criteria of the AAII Lakonishok approach do not represent a "recommended" or "buy" list. It is important to perform due diligence to verify the financial strength of the passing companies and to identify those stocks that match your investing tolerances and constraints before committing your investment dollars. Keep in mind that the quantitative screens we have developed are based upon our interpretations of published works tied to the market gurus. ▲

This is an update to an article by Wayne A. Thorp, CFA, that originally appeared in the October 2006* AAII Journal. *For more on the Lakonishok screening strategy and other AAII Stock Ideas, go to www.aaii.com/stockideas.