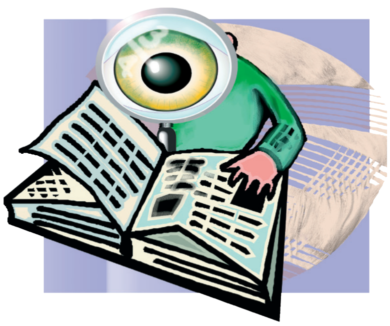
Revisiting the Lakonishok Approach to Patient Value Investing

By AAII Staff

Article Highlights

- Josef Lakonishok believes value outperforms growth because investors don't expect much from value stocks.
- His approach uses a unique filter to seek stocks trading at just one price multiple—price-earnings, price-to-book, price-to-sales or price-to-cash-flow ratio—below the norm for their respective industry.
- Since buying an out-of-favor stock involves the risk of the stock never rebounding, Lakonishok seeks out value stocks that appear to be making a resurgence in terms of price.



Josef Lakonishok and his colleagues have been quietly dispelling the adage "those who can't do, teach."

This professor-turned-money manager is the chief executive officer and chief investment officer of LSV Asset Management, which manages over $118 billion in value equity portfolios. LSV has academic roots and was named after its founding partners: Josef Lakonishok, Ph.D., (former William G. Karnes Professor of Finance at the University of Illinois at Urbana-Champaign), Andrei Shleifer, Ph.D. (professor of economics at Harvard University) and Robert Vishny, Ph.D. (Myron S. Scholes Distinguished Service Professor of Finance at the University of Chicago, Booth School of Business). The firm's philosophy is to buy out-of-favor companies that are beginning to show signs of awakening.

Lakonishok is a contrarian who believes that investors with patience can profit from a value-oriented investment approach.

Over the long run, according to Lakonishok, value outperforms growth because investors don't expect much from it. When a value stock does better than expected, investors are pleasantly surprised and are more apt to reward the company by bidding up the stock.

Lakonishok also believes that investors expect too much from growth stocks. It is unrealistic to believe that strong growth lasts forever. Eventually, the company will miss an earnings target or lower their earnings guidance, and the market will punish the stock price.

In the book "Investment Titans: Investment Insights From the Minds That Move Wall Street" (McGraw-Hill, 2001), Jonathan Burton talks with Lakonishok about his approach. The Lakonishok screen in AAII's *Stock Investor Pro* fundamental stock screening and research program is AAII's interpretation of Lakonishok's methodology as outlined in this book. The screen seeks mid- and large-cap firms that have:

- Price multiples lower than the respective industry norm,
- Strong and improving price momentum and
- Upward estimate revisions.

Performance

The AAII Lakonishok screen is built into AAII's *Stock Investor Pro*. In addition, the companies meeting the criteria of this strategy are posted each month on AAII.com in the Stock Ideas section, where the performance of the stocks in hypothetical portfolios is tracked online.

The Lakonishok approach has outperformed the large-cap S&P 500 index and other broad market indexes since the beginning of 1998.

Figure 1 shows that the Lakonishok approach has generated a compound annual price gain of 14.2% over the period from January 1998 through February 2018, while the S&P 500 is up only 5.2% annually over the same period. Overall, growth approaches have outperformed value approaches over the last 10 years, yet our interpretation of the Lakonishok strategy has outpaced the growth indexes across all market-cap segments during the last decade.

The strategy held up well during the last bear market (November 2007 through February 2009), down 32.5% versus a loss of 52.6% for the S&P 500, and has shined during the subsequent bull market (March 2009 through February 2018) gaining 408.2% compared to cumulative price gain of 269.2% for the S&P 500.

Profile of Passing Companies

The Lakonishok approach is a unique filter that looks for any one of the primary price multiples—price-earnings ratio, price-to-book-value ratio, price-to-sales ratio or price-to-cash-flow ratio—to be below the norm for their industry. As revealed in the characteristics of the stocks currently matching the Lakonishok approach (presented in Table 1), the median values of these price multiples are generally low but not extremely low. Only the price-to-sales ratio median value of 1.79 for the stocks passing the Lakonishok screen is below the 2.23 median value of all exchange-listed stocks.

While there are no elements of growth in the AAII Lakonishok screening strategy, those companies currently meeting the criteria have a higher median historical earnings growth rate (6.6%) than that of the typical exchange-listed stock (5.8%). Interestingly, the median estimated earnings growth rate of the out-of-favor passing companies is 12.8%, while for all exchange-listed stocks the median is 12.0%.

The median market capitalization of the Lakonishok stocks is $3.1 billion, compared to only $943 million for all exchange-listed stocks. Larger stocks tend to be more mature, and older, more mature firms tend to have fewer growth opportunities going forward. The Lakonishok approach looks for a minimum market cap of $500 million.

The AAII Lakonishok strategy requires a stock to have outperformed the S&P 500 over the last 26 weeks and at least maintained that price strength over the last 13 weeks. The companies currently meeting the AAII Lakonishok criteria have outperformed the S&P 500 by a median value of 5.3% over the last 26 weeks. Meanwhile, the typical exchange-listed stock has underperformed the S&P 500 by 4.0% over the same period.

Lastly, Lakonishok looks for stocks with rising earnings estimates. Over the last month, the median consensus earnings estimate for the current fiscal year of the passing Lakonishok companies has increased 1.2%.

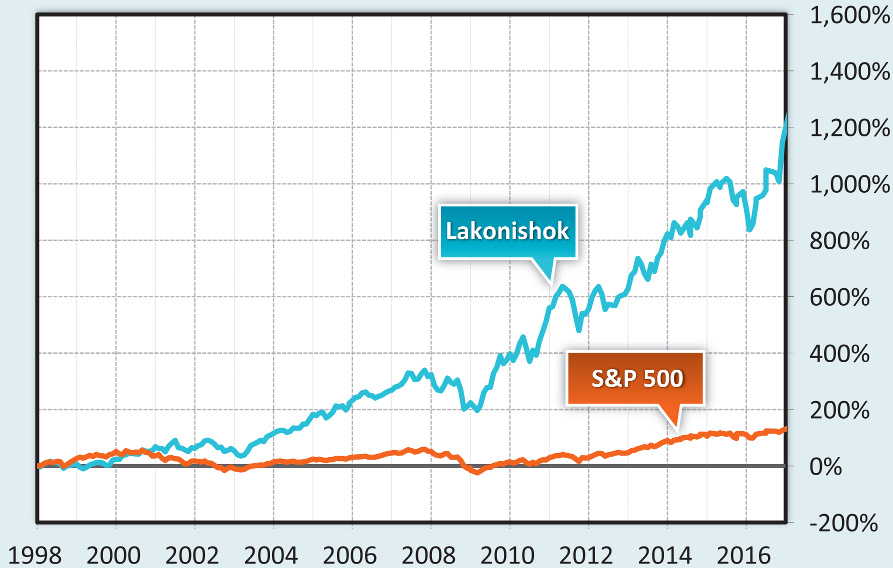
Passing Companies

Fifty-one companies met the Lakonishok criteria as of March 16, 2018. They are listed in Table 2 in alphabetical order.

The current number of passing companies—51—is significantly greater than the historical monthly average of 32.

To meet the criteria and qualify as potentially undervalued, a company's

Figure 1. Performance of Lakonishok Approach



	Price Gain (%)						Annual Price Gain (%)					Price Gain (%)		Std Dev
	YTD	2017	2016	2015	2014	2013	Since 1998	1 Yr	3 Yr	5 Yr	10 Yr	Bull*	Bear*	(%)
Lakonishok**	(2.8)	19.4	28.5	(2.9)	13.0	26.8	14.2	9.6	11.7	13.9	15.1	408.2	(32.5)	18.0
S&P 500	1.5	19.4	9.5	(0.7)	11.4	29.6	5.2	14.8	8.8	12.4	7.4	269.2	(52.6)	14.8
S&P MidCap 400	(1.9)	14.5	18.7	(3.7)	8.2	31.6	8.9	7.8	7.4	11.1	9.0	314.9	(50.5)	17.6
S&P SmallCap 600	(1.6)	11.7	24.7	(3.4)	4.4	39.7	8.4	8.8	9.1	12.5	9.7	347.3	(52.2)	18.9
Exchange-Listed Stocks**	(1.7)	15.6	17.1	(11.6)	5.0	38.1	9.7	9.1	4.4	9.7	7.6	320.9	(58.6)	20.3

**Bull market period is March 1, 2009, through February 2018. Bear market period is November 1, 2007, through February 28, 2009.*
***Price performance of hypothetical portfolio rescreened and rebalanced monthly using month-end prices and no transaction costs.*
Source: AAII's Stock Investor Pro*/Thomson Reuters. Data as of 2/28/2018.*

Table 1. Lakonishok Portfolio Characteristics

Portfolio Characteristics (Median)	Lakonishok	Exchange-Listed Stocks
Price-earnings ratio (X)	23.8	22.1
Price-to-book-value ratio (X)	2.33	2.11
Price-to-sales ratio (X)	1.79	2.23
Price-to-cash-flow ratio (X)	39.6	37.2
EPS 5-yr. historical growth rate (X)	6.6	5.8
EPS 3-5 yr. estimated growth rate (X)	12.8	12.0
Market cap. ($ million)	3,100	943
26-wk. relative strength vs. S&P 500 (%)	5.3	(4.0)
Current yr. EPS estimate revision over last month (%)	1.2	0.0
Monthly Observations		
Average no. of passing stocks	32	
Highest no. of passing stocks	89	(July 2005)
Lowest no. of passing stocks	0	(Dec. 2008)
Monthly turnover (%)	90	

Source: AAII's Stock Investor Pro*/Thomson Reuters. Data as of 3/16/2018.*

price-to-book, price-to-cash-flow, price-earnings or price-to-sales ratio needs to be below the median for its industry. The key consideration is that a firm can be included if just one of these four ratios is less than that of its industry.

A significant number of passing firms do not have meaningful figures for one of the price multiples. The underling variable must be positive for a firm to have a meaningful price multiple. For example, United Continental Holdings' (UAL) large capital expenditures during 2017 exceeded its positive operating cash flow, resulting in negative overall cash flow for the firm.

Simply buying an out-of-favor stock is a risky endeavor, as there is a chance that the company will never rebound or, worse yet, that it will die altogether. Therefore, Lakonishok looks for value companies that appear to be making a resurgence in terms of stock price.

The AAII Lakonishok approach requires a stock to have outperformed the S&P 500 over the last 26 weeks and have a 13-week relative strength index that is equal to or greater than its 26-week relative strength index. Company performance that is equal to that of the S&P 500 is represented by a relative strength index of 0%; companies outperforming the S&P 500 have positive relative strength figures while those underperforming the S&P 500 have negative relative strength values. Over the last 13 weeks, ChemoCentryx (CCXI), a biopharmaceutical company developing new medications targeted at inflammatory and autoimmune diseases and cancer, has performed the best of the Lakonishok stocks relative to the S&P 500. On January 4, 2018, ChemoCentryx announced that the European Medicines Agency (EMA) validated the company's application for avacopan in the treatment of patients with anti-neutrophil cytoplasmic autoantibody-associated vasculitis. This resulted in the company securing up to $100 million in new capital commitments that ChemoCentryx hopes to use to advance avacopan through topline data from the phase-three Advocate trial as well as potential registration filings in the U.S. and European Union.

Another way Lakonishok gauges whether a company's prospects are improving is by examining analyst sentiment, as measured by consensus estimate revisions.

In order to meet the AAII Lakonishok criteria, a company cannot have any downward revisions to its current fiscal-year earnings estimate over the last month and must have at least one upward revision over the same period. Furthermore, the strategy requires the company's consensus estimate for the current fiscal year to have increased over the last month. Intuitively, you may expect that if there has been at least one upward revision and no downward

(continued on page 36)

What It Takes: Josef Lakonishok Criteria

- Market capitalization is greater than or equal to $500 million;
- Companies that trade on the over-the-counter (OTC) market are excluded;
- Companies that trade as ADRs are excluded;
- Companies in the miscellaneous financial services (normally pooled investment funds) and real estate operations (typically REITs) industries are excluded;
- The price-earnings ratio, price-to-book-value ratio, price-to-cash-flow ratio OR price-to-sales ratio is lower than the respective industry median value (a company only needs to satisfy one of these "value" criteria);
- Relative price strength index over the past 26 weeks is greater than zero;
- Relative price strength index over the past 13 weeks is greater than or equal to the relative price strength index over the past 26 weeks;
- No downward revisions in estimated earnings for the current fiscal year over the last month;
- At least one upward revision in estimated earnings for the current fiscal year over the last month;
- Consensus earnings estimate for the current fiscal year is greater than it was one month ago.

Table 2. Companies Passing the AAII Lakonishok Screen

Company (Ticker)	P/E Ratio (X)	Price-to-Book Ratio (X)	Price-to-Cash Flow Ratio (X)	Price-to-Sales Ratio Firm (X)	Price-to-Sales Ratio Indus. (X)	Relative Stgth Index (vs. S&P 500) 13-Wk (%)	Relative Stgth Index (vs. S&P 500) 26-Wk (%)	Current Yr EPS Est Up-ward Revs (No.)	Current Yr EPS Est Rev Last Mo (%)	Stock Price (3/16) ($)	Industry
ACI Worldwide (ACIW)	75.7	4.02	nmf	3.00	4.05	11.8	3.8	4	47.8	25.97	Software & Programming
Alleghany Corp. (Y)	107.2	1.14	39.6	1.50	1.25	6.5	0.6	2	2.7	628.20	Insurance (Prop & Casualty)
Blue Bird Corp. (BLBD)	32.6	nmf	70.6	0.56	0.57	28.8	18.5	1	0.2	24.00	Auto & Truck Mfrs
ChemoCentryx (CCXI)	48.8	8.69	26.4	8.35	11.35	128.6	75.7	2	8.2	14.14	Biotechnology & Drugs
City Holding Co. (CHCO)	18.4	2.23	nmf	7.83	4.57	3.5	2.4	1	0.1	72.29	Regional Banks
Cognizant Tech Sol (CTSH)	23.7	4.68	nmf	3.37	4.05	15.1	7.1	2	0.0	84.60	Software & Programming
CSRA Inc. (CSRA)	24.2	10.65	nmf	1.31	4.05	31.8	16.8	2	1.2	40.65	Software & Programming
Darden Restaurants (DRI)	23.8	5.91	nmf	1.53	0.97	4.5	3.2	2	0.1	94.55	Restaurants
Dillard's, Inc. (DDS)	16.6	1.47	nmf	0.36	0.53	34.7	24.1	5	33.3	80.73	Retail (Dept & Discount)
Diodes Inc. (DIOD)	36.3	1.91	nmf	1.50	2.43	14.1	4.3	1	1.4	32.11	Semiconductors
Douglas Dynamics (PLOW)	13.6	4.09	57.5	2.21	1.58	20.8	18.2	3	9.4	46.45	Misc. Capital Goods
Energizer Holdings (ENR)	19.5	93.85	20.9	1.79	1.41	5.7	3.7	1	0.1	52.54	Electronic Instru & Controls
Everest Re Group Ltd (RE)	23.1	1.27	69.9	1.60	1.25	16.7	3.5	3	1.9	261.40	Insurance (Prop & Casualty)
Fidelity Southern Corp. (LION)	18.5	1.66	2.3	4.08	4.57	8.2	1.9	1	0.3	24.14	Regional Banks
First Bancorp (FBP)	21.8	0.76	3.3	2.35	4.57	26.7	3.1	2	1.2	6.46	Regional Banks
Fiserv Inc (FISV)	33.4	11.31	nmf	5.42	4.05	9.9	9.1	2	0.0	148.44	Software & Programming
Fortive Corp (FTV)	28.3	7.18	173.5	4.09	2.64	4.6	2.7	1	0.2	78.23	Scientific & Technical Instru
Fulton Financial Corp. (FULT)	18.1	1.51	nmf	5.04	4.57	3.6	0.8	1	0.2	19.25	Regional Banks
Gibraltar Industries (ROCK)	22.6	2.11	21.9	1.14	1.01	14.3	13.0	3	13.4	35.45	Construction - Suppl & Fixt
Harsco Corporation (HSC)	255.2	9.79	nmf	1.04	1.90	13.6	5.3	2	17.9	20.70	Metal Mining
Heritage-Crystal Clean (HCCI)	24.9	2.32	104.5	1.49	1.25	16.1	7.8	5	12.7	23.80	Waste Management Servs
Hewlett Packard Entpr (HPE)	51.5	1.25	nmf	1.03	4.05	27.1	26.7	26	19.4	18.79	Software & Programming
IBERIABANK Corp (IBKC)	23.9	1.25	nmf	4.89	4.57	5.2	1.8	1	0.1	83.75	Regional Banks
Ichor Holdings Ltd (ICHR)	14.3	3.28	45.0	1.08	1.01	12.9	1.8	1	0.4	27.64	Misc. Fabricated Prods
Innoviva Inc. (INVA)	14.2	nmf	nmf	7.78	11.35	15.6	3.0	1	5.9	15.94	Biotechnology & Drugs
KLA-Tencor Corp (KLAC)	17.3	15.41	141.9	4.97	2.43	12.5	12.4	3	0.1	120.62	Semiconductors
Lear Corporation (LEA)	11.3	3.10	56.7	0.63	0.63	6.2	5.9	2	0.7	190.73	Auto & Truck Parts
Lumentum Holdings (LITE)	25.6	5.03	88.5	3.86	1.53	34.8	11.4	2	1.0	69.95	Communications Equip
Nasdaq Inc. (NDAQ)	22.0	2.38	nmf	3.53	2.68	4.0	2.1	5	0.6	83.97	Investment Services
Ocwen Financial (OCN)	nmf	1.07	156.3	0.49	2.17	39.5	33.8	1	25.0	4.45	Consumer Financial Servs
OFG Bancorp (OFG)	13.9	0.69	nmf	1.53	4.57	24.2	14.6	2	1.9	12.05	Regional Banks
Okta Inc. (OKTA)	nmf	23.85	33.0	15.01	4.05	43.4	20.9	11	16.6	38.57	Software & Programming
PacWest Bancorp (PACW)	18.3	1.35	nmf	6.37	4.57	6.8	6.4	2	0.3	52.96	Regional Banks
Peoples Bancorp Inc. (PEBO)	16.9	1.44	110.0	5.22	4.57	5.7	5.0	1	0.2	36.54	Regional Banks
Perficient, Inc. (PRFT)	58.9	2.14	nmf	1.62	4.05	18.5	18.0	3	7.2	23.71	Software & Programming
RadNet Inc. (RDNT)	43.5	8.88	47.1	0.63	1.14	21.8	1.0	2	3.3	12.45	Healthcare Facilities
SeaWorld Entertain (SEAS)	nmf	4.38	nmf	1.00	2.63	10.5	0.5	12	22.9	14.63	Recreational Activities
Simmons First National (SFNC)	24.8	1.28	7.4	6.75	4.57	6.9	3.1	1	0.2	30.75	Regional Banks
Stone Energy Corp. (SGY)	1.6	2.37	10.0	2.29	1.45	37.5	22.7	1	24.2	36.49	Oil & Gas Operations
Stryker Corp. (SYK)	34.2	6.30	nmf	5.04	3.82	5.8	5.3	2	0.0	167.51	Medical Equip & Supplies
Unisys Corporation (UIS)	nmf	nmf	1.6	0.21	2.50	40.0	28.8	3	306.1	11.35	Computer Services
United Continental Hldgs (UAL)	11.1	2.34	nmf	0.55	0.97	8.9	5.1	10	3.0	70.88	Airline
United Insurance Hldgs (UIHC)	61.4	1.69	7.8	1.30	1.25	17.8	12.3	2	0.8	19.96	Insurance (Prop & Casualty)
United States Cellular (USM)	nmf	0.94	nmf	0.89	1.29	11.0	6.7	4	217.2	40.64	Communications Services
Validus Holdings, Ltd. (VR)	nmf	1.52	8.2	1.90	0.91	39.3	29.6	2	1.2	67.39	Insurance (Life)
Veeva Systems Inc. (VEEV)	92.2	13.15	58.2	17.43	4.05	32.3	22.6	13	29.6	76.39	Software & Programming
Vistra Energy Corp. (VST)	44.4	1.38	13.6	1.61	1.79	13.4	4.2	4	16.7	20.43	Electric Utilities
Walker & Dunlop (WD)	11.2	1.97	21.0	2.24	2.17	8.4	2.8	1	0.1	53.19	Consumer Financial Servs
Waters Corp. (WAT)	30.0	7.58	125.3	7.33	2.64	4.7	2.3	2	0.2	213.18	Scientific & Technical Instru
Wesco Aircraft Hldgs (WAIR)	nmf	1.50	nmf	0.67	1.01	40.3	2.2	4	5.9	9.85	Misc. Fabricated Prods
Western Digital Corp. (WDC)	16.3	2.80	24.2	1.57	1.57	23.3	12.7	6	0.4	106.45	Computer Storage Devices

Source: AAII's Stock Investor Pro*/Thomson Reuters. Data as of 3/16/2018.*

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.

(continued from page 28)

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.