Modeling the Strategies of Buffett, Graham and Other Investing Greats

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Goal of today's presentation

Share with you the fundamental stock selection strategies of two legendary value investors — Ben Graham and Warren Buffett. In total, we run 22 unique models based on great investors and other strategies that have shown long term market outperformance.

Share with you some of the current top rated stocks passing the fundamental screens of Graham & Buffett.

Look at some of the tools on Validea.com, our research site that utilizes these models in real-time stock analysis, model portfolios, screeners and more.



My Story...



John Reese

MIT/Harvard Business School— Experience at MIT's Artificial Intelligence Lab set the stage.

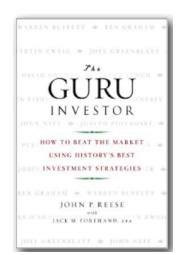
Built a successful technology business and sold to GE Capital. Looking for ways to invest and began an extensive research project (mid 90s)

Founded Validea.com in late 90s. Granted two patents in the area of automated stock analysis.

Breakthrough was the model portfolios that were developed in 2003.

Has written two books on guru strategies and systematic based investing – The Guru Investor (2009) & The Market Gurus (2001).

Validea's investment products are used by investors all over the world.





At Validea we follow numerous guru strategies, including:

- Peter Lynch
- Ben Graham
- Warren Buffett
- Ken Fisher
- David Dreman
- Martin Zweig
- James O'Shaughnessy
- John Neff
- Joel Greenblatt
- Joseph Piotroski
- Bill O'Neil/CANSLIM

















And we've continued to add strategies

- Other models include approaches from books or academic papers from the following researchers and experts ...
 - Partha Mohanram growth stock model
 - Pim van Vliet low vol & multi-factor
 - Wesley Gray quantitative momentum
 - Tobias Carlisle acquirer's multiple
 - ➤ Wayne Thorp earnings estimates & revisions
 - Patrick O'Shaughnessy value, price and quality
 - Dashan Huang twin momentum
 - Meb Faber shareholder yield
 - James O'Shaughnessy based on value composite



Why these "Gurus"? Three Key Reasons

- 1) Each has a long term record of outperforming the market
- 2) Publicly disclosed these techniques either in books, academic papers or other sources
- 3) Created a quantitative methodology that can be leveraged using a computer program

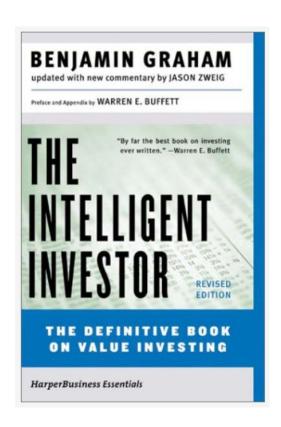


Let's look at the quantitative strategy of:

BEN GRAHAM

Source

Validea used the investment strategy outlined in the book The Intelligent Investor written by Benjamin Graham to create its Graham Model.





Ben Graham – The "Granddaddy" of the Gurus

STEP 1 - Sector & Sales Limits

- 1. All stocks (including public utilities) besides technology firms Pass.
- $2. \ge 340 million revenue Pass
- 3. < \$340 million revenue Fail

STEP 2 - Current Ratio

- 1. Current ratio ≥ 2 Pass
- 2. Current ratio < 2, and company is a utility or telecom Pass
- 3. Current ratio < 2, and company is not utility or telecom

Fail



Methodology Example, Ben Graham

STEP 3 – LT Debt in rel. to Net Cur. Assets

- 1. Long-term debt ≤ Net current assets Pass
- 2. Long-term debt > Net current assets Fail

STEP 4 – Long Term EPS Growth

1. \geq 30%, and no negative annual EPS in last five years

Pass

- 2. < 30% Fail
- $3. \geq 30\%$, with negative annual EPS in any of last five years

Fail



Methodology Example, Ben Graham

STEP 5 – Price-Earnings Ratio

- 1. $P/E \le 15$ Pass
- 2. P/E > 15 Fail

STEP 6 - Price-Book Ratio

- 1. $P/B \times P/E \le 22$ Pass
- 2. $P/B \times P/E > 22$ Fail



Methodology Example, Ben Graham

STEP 7 – Total Debt-Equity Ratio

- 1. Industrial companies— $D/E \le 100\%$ Pass
- 2. Utilities, phone companies, railroads—LTD/E ≤ 230%

Pass

- 3. Industrial companies—D/E > 100% Fail
- 4. Utilities, phone companies, railroads—LTD/E > 230% Fail



Graham / Value Investor Top Scoring Stocks

Current Top Rated Stocks

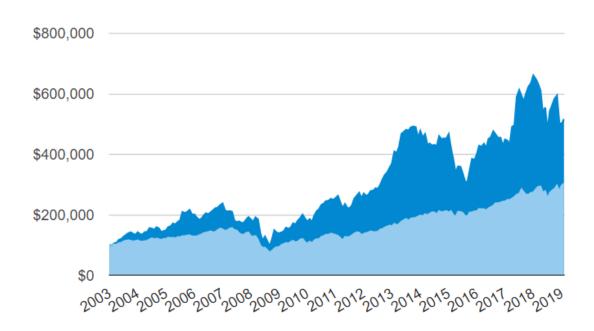
The stocks that would be in this portfolio if it were rebalanced today.

TICKER	COMPANY	CURRENT SCORE	LATEST CLOSE	MARKET CAP (\$MIL)	PE RATIO	EPS GROWTH	YIELD	RELATIVE STRENGTH	SHAREHOLDER YIELD
FL	FOOT LOCKER, INC.	100%	\$42.02	\$4,610	9.2	6.5%	3.6%	45	9.0%
SCVL	SHOE CARNIVAL, INC.	100%	\$25.54	\$375	10.2	16.5%	1.3%	39	8.0%
UTHR	UNITED THERAPEUTICS CORPORATI	100%	\$79.53	\$3,484	N/A	18.3%	N/A	25	1.9%
NUE	NUCOR CORPORATION	100%	\$56.25	\$17,144	N/A	93.6%	2.8%	41	1.0%
HOFT	HOOKER FURNITURE CORPORATION	86%	\$20.76	\$245	7.1	32.5%	2.9%	15	7.9%
CRTO	CRITEO SA (ADR)	86%	\$18.50	\$1,224	14.1	47.1%	N/A	19	-1.3%
MD	MEDNAX INC	86%	\$24.58	\$2,160	9.0	-2.2%	N/A	20	2.2%
URBN	URBAN OUTFITTERS, INC.	86%	\$23.55	\$2,307	8.9	11.9%	N/A	18	5.1%
JHG	JANUS HENDERSON GROUP PLC	86%	\$22.18	\$4,329	9.8	10.6%	6.5%	28	-8.1%
WLK	WESTLAKE CHEMICAL CORPORATION	86%	\$67.67	\$8,702	11.3	12.5%	1.5%	24	15.8%



Graham / Value Investor Model Portfolio

Since 2003, this portfolio has returned **414.7**%, outperforming the market by **211.5**% using its optimal annual rebalancing period and 10 stock portfolio size.



Taking a Look in Real-Time on Validea

This deep value methodology screens for stocks that have low P/B and P/E ratios, along with low debt and solid long-term earnings growth.

Access the Graham Model on Validea

(all webinar attendees will have FULL Access to Validea Pro)



My Observations on the Graham Model

- 1) Graham model works best with annual rebalancing
- 2) Concentrated value models are very volatile
- 3) The model will bring us into beaten down areas think retailers in mid-2017. This can work both ways, but has been a net positive over time.

TICKER	DATE ADDED	DATE REMOVED	END PRICE	RETURN
URBN	6/30/2017	6/29/2018	\$44.55	^ 140.29%
ZUMZ	6/30/2017	6/29/2018	\$25.05	^ 102.83%
CPRI	6/30/2017	6/29/2018	\$66.60	^ 83.72%
BKE	6/30/2017	6/29/2018	\$26.90	^ 51.12%



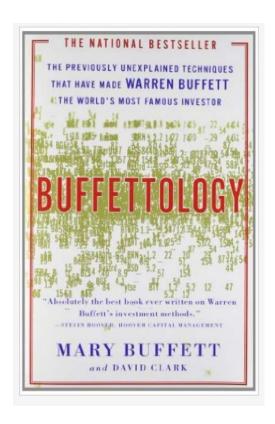
Let's look at the quantitative strategy of:

WARREN BUFFETT



Source

Validea used the investment strategy outlined in the book *Buffettology* written about Warren Buffett to create its Buffett Model.





Warren Buffett – The "Greatest" Guru

STEP 1 – Buffett Type Company?

- 1. Nature of firm's business?
- 2. Ability to pass on costs?
- 3. Complexity of product / business model?

Note: this is qualitative analysis vs. quantitative.





STEP 2 – Earning Predictability

- 1. $Y1 \ge Y2 \ge Y3 \ge Y4 \ge Y5 \ge Y6 \ge Y7 \ge Y8 \ge Y9 \ge Y10$ (No years with a negative EPS.) Pass-Best Case
- 2. Y1 \geq Y2 \geq Y3 \geq Y4 \geq Y5 \geq Y6 \geq Y7 \geq Y8 \geq Y9 \geq Y10 (except for dips from a prior year's earnings, that total no more than 45 percent). No years with a negative EPS. Pass
- 3. All other combinations Fail





STEP 3 – Long Term Debt

- $1. \le 2$ times earnings Pass Best case
- 2. > 2 and ≤ 5 times earnings Pass
- 3. > 5 times earnings Fail

STEP 4 - Return on Equity

- 1. ≥ 15% Pass
- 2. < 15% Fail

STEP 5 - Return on Total Capital

- 1. ≥ 12% Pass
- 2. < 12% Fail



STEP 6 – Free Cash Flow

- 1. > 0 Pass
- $2. \leq 0$ Fail

STEP 7 - Utilization of Retained Earnings

- $1. \ge 15\%$ Pass—Best case
- $2. \ge 12\%$ and < 15% Pass
- 3. < 12% Fail



IS THE PRICE RIGHT?

STEPS 8-15 - Calculate Expected Return

- 1. Calculate expected return w/ROE method.
- 2. Calculate expected return w/EPS method.
- 3. Take the average of the ROE and EPS methods to determine if return is in the acceptable range (likes to see 15%).



Buffett / Patient Investor Top Scoring Stocks

Current Top Rated Stocks

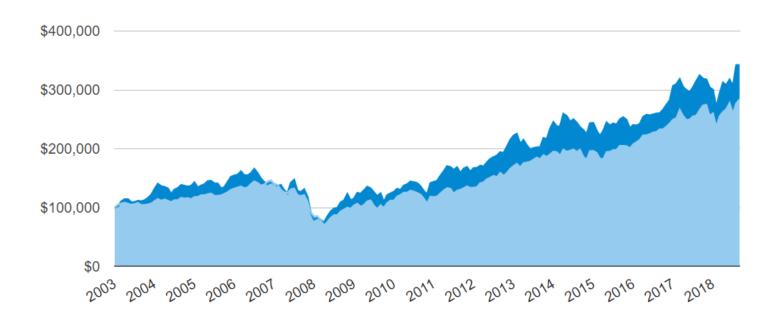
The stocks that would be in this portfolio if it were rebalanced today.

TICKER	COMPANY	CURRENT SCORE	LATEST CLOSE	MARKET CAP (\$MIL)	PE RATIO	EPS GROWTH	YIELD	RELATIVE STRENGTH	SHAREHOLDER YIELD
CACC	CREDIT ACCEPTANCE CORP.	100%	\$486.95	\$9,153	15.3	25.0%	N/A	86	2.0%
MED	MEDIFAST INC	100%	\$112.02	\$1,333	21.1	29.8%	2.7%	25	3.1%
MNST	MONSTER BEVERAGE CORP	100%	\$65.51	\$35,610	35.1	20.7%	N/A	73	-2.0%
ULTA	ULTA BEAUTY INC	100%	\$348.63	\$20,380	30.3	28.9%	N/A	91	2.3%
CHRW	C.H. ROBINSON WORLDWIDE INC	100%	\$84.77	\$11,576	17.3	11.6%	2.4%	53	5.0%
ROST	ROSS STORES, INC.	100%	\$106.34	\$38,782	24.7	18.0%	1.0%	83	4.1%
XLT	TJX COMPANIES INC	100%	\$54.98	\$66,672	22.6	11.8%	1.7%	77	4.5%
MA	MASTERCARD INC	100%	\$278.16	\$280,903	47.0	16.7%	0.5%	90	2.4%
AAPL	APPLE INC.	100%	\$208.78	\$960,612	18.1	14.5%	1.5%	73	6.7%
TTC	TORO CO	96%	\$73.37	\$7,809	27.1	16.4%	1.2%	83	2.8%



Buffett / Patient Investor Model Portfolio in Real-Time

Since 2003, this portfolio has returned **242.0%**, outperforming the market by **58.1%** using its optimal monthly rebalancing period and **10** stock portfolio size.



http://www.validea.com/patient-investor-portfolio/warren-buffett

Taking a Look in Real-Time on Validea

This strategy seeks out firms with long-term, predictable profitability and low debt that trade at reasonable valuations.

Access the Buffett Model on Validea

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My Observations on the Buffett Model

- 1) Is one of the more interesting approaches I have seen to quantifiably identify moats (long-term consistent EPS growth, long-term consistent ROE and ROTC)
- 2) Was scoring Apple 100% two years before Berkshire started buying. Has honed in on other Berkshire buys as well.
- 3) Performance of the model doesn't mirror Berkshire. YTD the 10 stock Buffett Model is up 26%. Berkshire is up 3% so far this year.

Do these Guru Strategies still work today?



YES ...

- Running these guru-models in real-time since 2003
- Ok, let's see the results.



8 Out of 12 Guru Strategies Outperforming

Guru	Portfolio / Style	# of Stocks	Rebalancing	Inception Date	Ann. Return	S&P Ret.	+/- S&P 500	Beta
Motley Fool	Small-Cap Growth	10	Monthly	7/15/2003	12.80%	7.10%	5.70%	1.14
Martin Zweig	Growth	20	Quarterly	7/15/2003	11.20%	7.10%	4.10%	1.09
Validea	<u>Momentum</u>	10	Monthly	7/15/2003	11.10%	7.10%	4.00%	1.01
Peter Lynch	P/E/Growth	20	Monthly	7/15/2003	10.70%	7.10%	3.60%	1.14
Benjamin Graham	<u>Value</u>	10	Annual	7/15/2003	10.60%	7.10%	3.50%	1.12
Kenneth Fisher	Price/Sales	10	Monthly	7/15/2003	9.80%	7.10%	2.70%	1.14
<u>James</u> O'Shaughnessy	Growth/Value	20	Monthly	7/15/2003	8.40%	7.10%	1.30%	0.98
Warren Buffett	<u>Patient</u>	10	Monthly	12/5/2003	8.10%	6.80%	1.30%	1.04
John Neff	Low PE	20	Quarterly	1/2/2004	6.20%	6.60%	-0.40%	1.14
Joseph Piotroski	Book/Market	20	Annual	2/27/2004	5.80%	6.40%	-0.60%	1.07
Joel Greenblatt	Earnings Yield	10	Quarterly	1/27/2006	3.70%	6.40%	-2.70%	1.04
David <u>Dreman</u>	<u>Contrarian</u>	10	Monthly	7/15/2003	4.30%	7.10%	-2.80%	1.18

Model portfolio returns as of 7/31/2019
Based on optimal size & rebalanced portfolios



9 Out of 10 New Guru Strategies Outperforming

Guru	Portfolio / Style	# of	Rebalanc	Inception	Ann.	S&P	+/- S&P	Beta
		Stocks	ing	Date	Return	Ret.	500	
Dashan Huang	Twin Momentum	10	Monthly	12/26/2008	20.20%	12.30%	7.90%	1.16
Partha Mohanram	P/B Growth	10	Monthly	3/24/2006	13.30%	6.40%	6.90%	1.02
Pim van Vliet	Multi-Factor	10	Annual	7/10/2009	17.20%	12.90%	4.30%	0.84
P. O'Shaughnessy	<u>Millennial</u>	10	Quarterly	1/23/2009	17.00%	12.90%	4.10%	1.1
Wayne Thorp	Earnings Revision	10	Monthly	12/26/2008	15.90%	12.30%	3.60%	1.22
Wesley Gray	Quantitative Momentum	20	Monthly	12/30/2005	10.00%	6.60%	3.40%	1.22
Meb Faber	Shareholder Yield	10	Quarterly	1/23/2009	16.20%	12.90%	3.30%	1.07
Validea	Private Equity	20	Monthly	12/26/2008	15.10 %	12.30%	2.80%	1.23
J. O'Shaughnessy	Value Composite	10	Monthly	12/26/2008	14.60%	12.30%	2.30%	1.29
Tobias Carlisle	Acquirer's Multiple	10	Monthly	12/26/2008	11.40%	12.30%	-0.90%	1.31

Model portfolio returns as of 7/31/2019
Based on optimal size & rebalanced portfolios



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