What will it take for value to outperform growth

Updated material based on presentation and discussion at Club b family office conference in Montreal held on May 9th, 2019

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Carlyon AG

Overview

- **What will it take for value to outperform growth?**
  - QE needs to become QT (with a second attempt)
  - Tech and Healthcare leaders have to de-rate. These two sectors represent 77% of S&P 500 expected revenue growth in 2019, however tech revenue path is slowing and capital intensity, regulatory risk rising.
  - Healthcare faces pricing questions in political run up to 2020 election.
- **What type of stocks can lead the market after a regime change?**
  - Companies which can sustain shareholder returns without the need for high rates of revenue growth.
  - Previous growth names now seen as value e.g. Apple based on new ETF classification & Berkshire selection.
  - It might take a significant market sell off / recession to increase the number of value opportunities.
- **What is 'value‘, and can we learn from stock selection of Buffett, Elliott, and other successful active managers?**
  - Value is broadly lower expected revenue growth, lower RoE & lower prospective P/E vs S&P 500 average metrics.
  - Value managers typically use multi-year valuation targets to anchor their investment decisions and contrarian opinions about future prospects of a target company.
  - Recent Amazon stock purchase by Berkshire raises interesting questions about ‘what is value?’
- **Are value ETF’s a good alternative for passive portfolio construction?**
  - Current year or trailing multiples, typically used by value ETFs, may have unintended consequences for portfolio selection, active investors typically have longer time horizon.
  - Value and growth ETFs often have 30% overlap, which dilutes the style exposure.

Value and Growth episodes

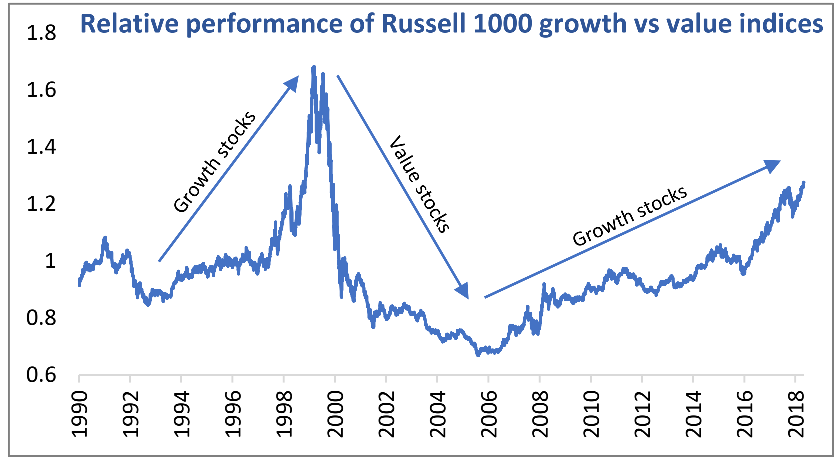
Growth and value episodes based on index performance and factor cheapness since 1990

Last big regime change from growth to value occured at the end of tech bubble in 2000...

Chart showing relative performance of Russell 1000 factor indices, growth stocks have outperformed since 2006 with only 2 recent brief episodes for value during 2016 and Oct/Nov 2018.

The big value opportunity was the peak of the Tech bubble in 2000, which lasted until 2006. Growth supported by the tech and the healthcare sector, has persisted ever since 2006 and QE environment raised most asset prices.

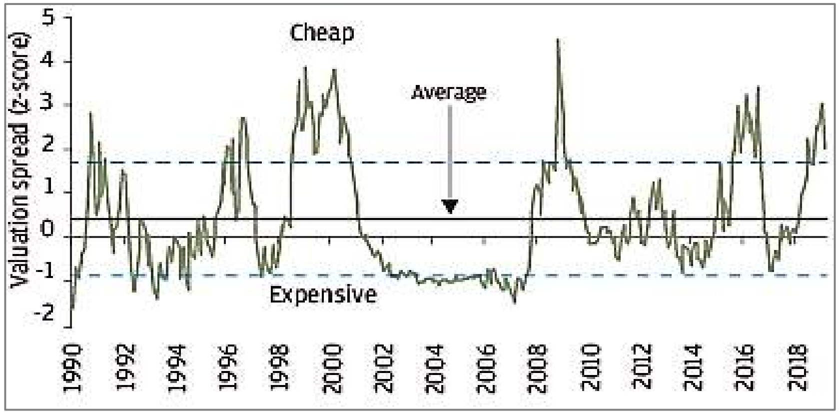
QE needs to become QT (with a second attempt)



Source: Bloomberg

Valuation spread between top and bottom quartile stocks as ranked by the value factor showing value factor remaining very cheap compared to history.

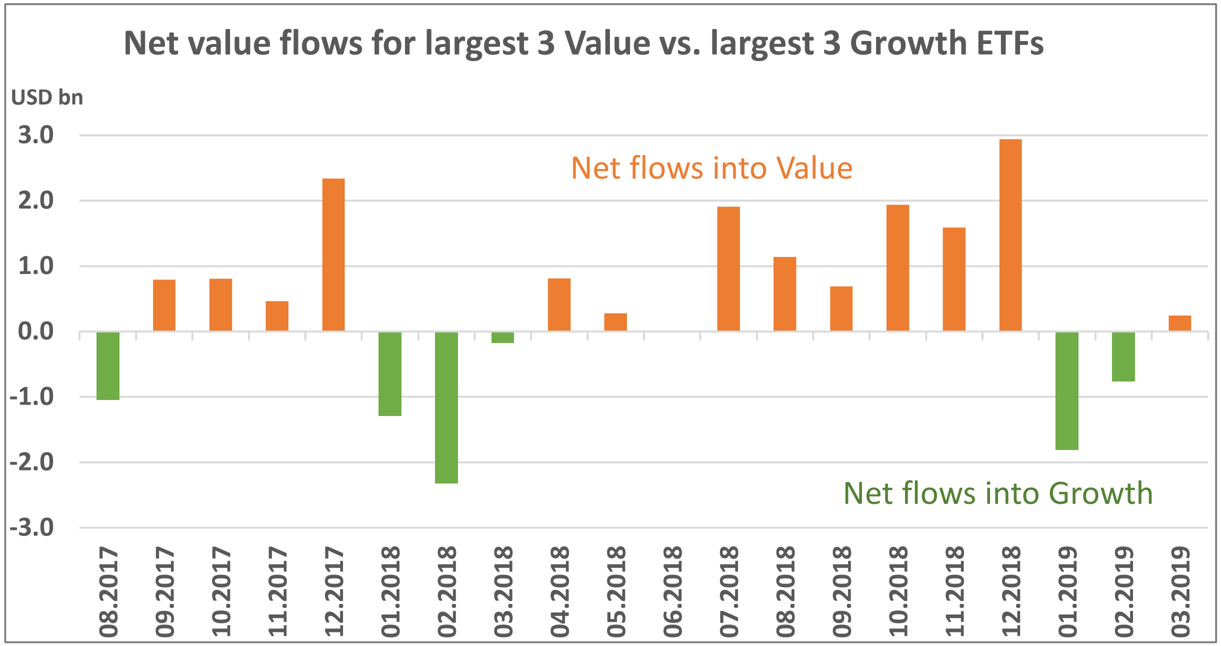
Lower inflation and low interest rates environment since the GFC have increased the attractiveness of longer duration (growth) assets.



Note: Valuation spread is a z-score between the median P/E ratio of top quartile stocks and bottom quartile stocks as ranked by the value factor.

Source: J.P. Morgan Asset Management, Jan. 2019

ETF flows into value in H2 2018, but not sustained so far in 2019



Note: Value represented by VTV, IWD, IVE. Growth represented by VUG, IWF, IVW

H2 2018 flows into value coincide with lower revenue expectations for 2019 and 2020 on trade war and slower global growth.

Q1 2019 flows into growth coincide with policy U-turn by central banks.

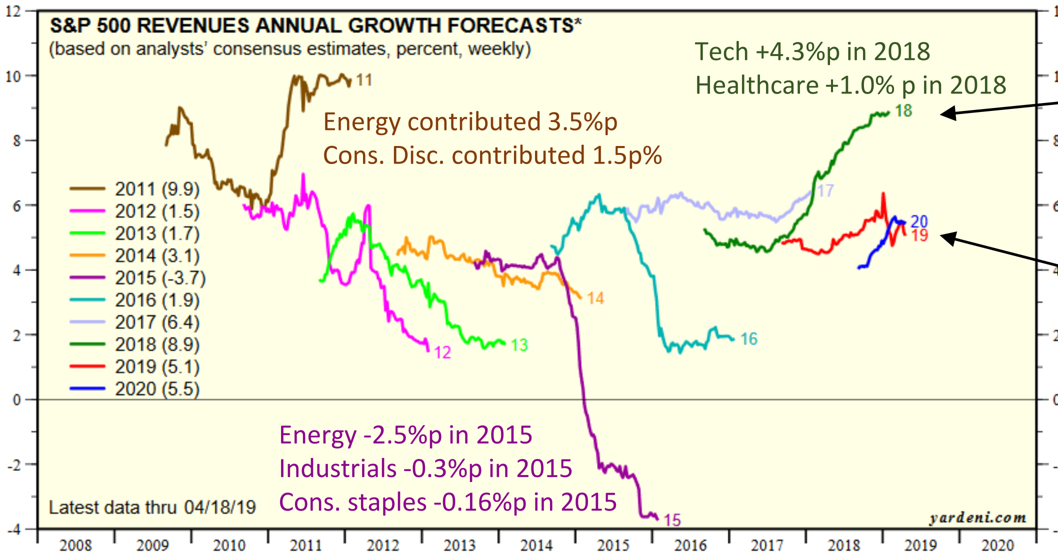
Various value methodologies

ETF	Value methodology	AuM ($ bn)	Performance (%)			Volatility (Avg. 90d)		
			2017	2018	2019 ytd	2017	2018	2019 ytd
iShares S&P 500 Value (IVE)	P/B, P/E, P/S	16	15.3	-9.9	16.2	8.0	12.7	18.3
Vanguard Value (VTV)	P/B, P/ fw E, P/hist E, P/Div ratio, P/S	48	17.1	-6.4	13.6	7.8	13.0	18.1
iShares Russell 1000 Value (IWD)	P/B	39	13.5	-9.2	14.9	8.1	12.6	17.3

Source: Bloomberg

Growth episode highly dependant on tech and healthcare

Tech and Healthcare represent 77% of expected S&P 500 revenue growth in 2019



2018 S&P 500 revenue growth of 8.9% = 2x trend rate of 4% over 10 year period 2011–2020

2019 consensus S&P500 revenue growth approx 5% with Tech and Healthcare representing 77% of the expected growth outcome.

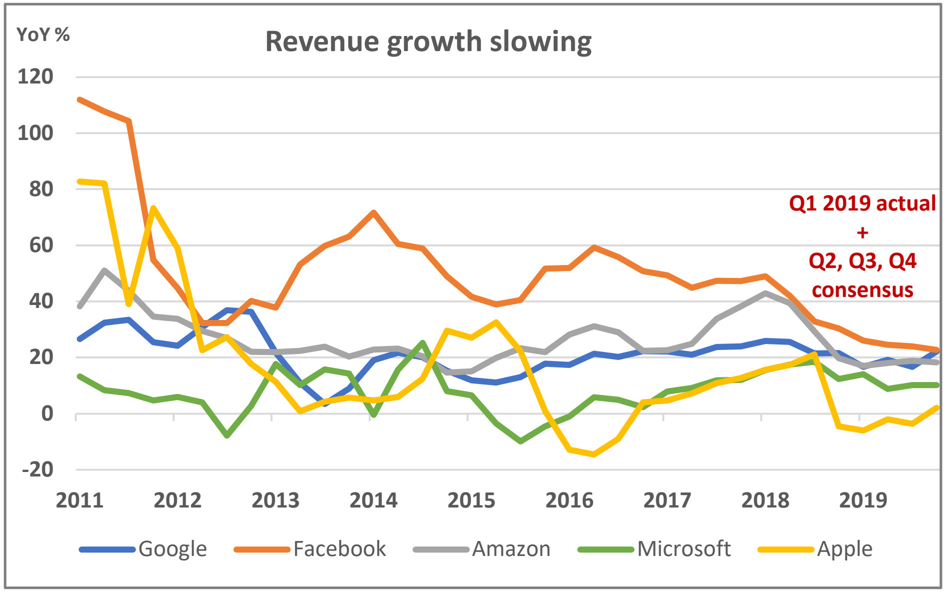
Sector*	Weighting	Revenue growth 2018A	Revenue growth 2019E	2018 weighted	2019 weighted	Performance contribution to S&P500 index 2019 YTD
Technology	29.8%	15.4%	5.9%	4.3%	2.1%	7.56%
Health Care	13.3%	7.5%	12.4%	1.0%	1.6%	0.44%
Financials	13.0%	5.0%	5.6%	0.6%	0.6%	2.13%
Industrials	9.6%	8.3%	3.1%	0.8%	0.3%	1.88%
Consumer Discr.	7.1%	-0.7%	4.8%	-0.1%	-0.1%	1.38%
Consumer Stapl.	7.1%	4.3%	4.3%	0.3%	0.2%	0.91%
Communication	5.4%	-3.3%	7.5%	-0.2%	0.2%	0.93%
Energy	5.3%	17.4%	3.9%	0.9%	-0.1%	0.98%
Utilities	3.2%	3.4%	4.1%	0.1%	0.1%	0.35%
Real Estate	2.9%	13.3%	2.7%	0.4%	0.1%	0.48%
Materials	2.7%	15.9%	0.0%	0.4%	-0.2%	0.34%
S&P 500		**8.7%**	**4.8%**	**8.7%**	**4.8%**	**17.4%**

* Adjusted sector weight based on old classification ie AMZN, GOOG, and FB included in Technology sector.
Source: Bloomberg, Carlyon analysis

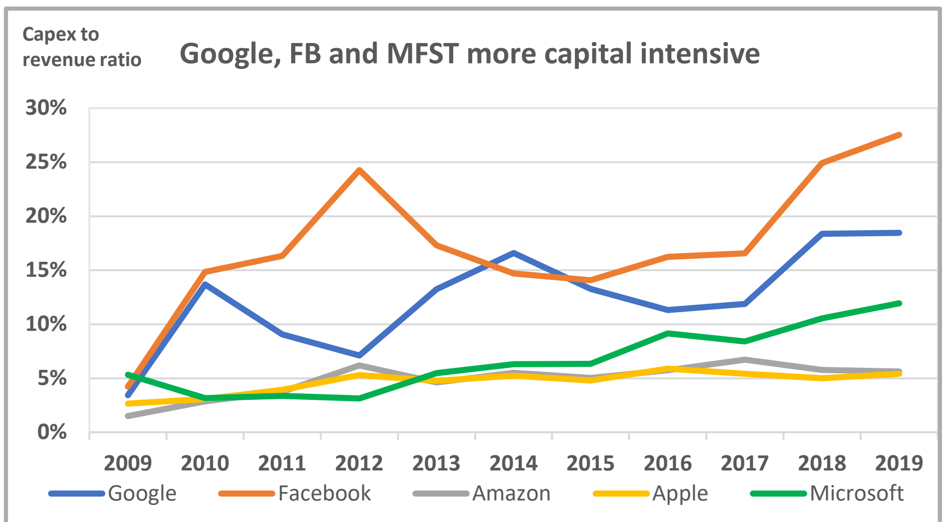
YTD 2019 Healthcare flat after strong 2018 performance, now facing 2020 election concerns over drug pricing.

Technology revenue deceleration evident in Q1 2019 results, sector vulnerable to de-rating.

Tech experiencing slowing revenue growth and increased capital intensity



Q1 2019 earning season confirmed slowing revenue trajectory for leading tech names especially Intel, Amazon, Google, Apple and question marks for future competitive position for Netflix. Facebook highly dependant on Instagram for growth momentum.



Source: Bloomberg

'In terms of the expense guidance, we don't have a specific update on a long-term margin target. But I would just note that we are not changing our overall philosophy of continuing to invest aggressively across the business in these important areas like safety, and security and innovation, which are going to play into continued expense growth both in 2019 and 2020. We're still expecting to continue to invest aggressively in the business, and that will have an impact on operating margins.'

Dave Wehner, CFO, Facebook
Q1 earnings call transcript 24. April 2019

What is value?

Comparison of value ETFs, growth ETFs and other manager portfolios

Fund		Fund AuM (US$ bn)	P/E (trailing 12M)	P/B historic	Consensus forward P/E 12M	RoE (trailing 12M) (%)	2019 consensus est. rev. growth (%)	Gross profit margin (%), trailing 12M	Net profit margin (%), trailing 12M	Dividend payout ratio (%) historic
VLUE	Passive Value	3	11.2	1.6	10.3	10.8	3.1	25.1	5.8	53.4
IVE		16	15.1	2.4	13.9	12.8	3.3	28.2	8.2	46.2
VTV		48	15.3	2.2	13.7	12.1	3.8	29.4	7.9	53.5
IWD		39	16.3	2.1	14.4	10.2	4.2	30.8	8.0	52.3
IWF	Passive Growth	45	24.6	7.5	21.0	28.9	10.2	38.1	12.5	42.5
VUG		40	26.5	7.0	22.4	23.5	10.6	43.9	14.5	38.5
IVW		23	25.2	5.8	21.0	21.0	10.1	45.7	14.4	46.7
Berkshire Hathaway	Active Value	192	13.6	2.1	13.1	10.5	1.3	32.4	11.9	30.5
Elliott Mgmt. Corp.		35	27.8	1.5	14.4	4.0	2.7	37.0	5.3	45.6
Cevian Capital		15	17.8	2.2	15.5	1.2	1.2	22.1	1.5	79.7
S&P 500			19.0	3.4	16.9	15.4	5.0	33.9	10.7	69.1

Source: Bloomberg

All metrics shown above calculated using publicly available information on funds' holdings - see appendix. Bloomberg's PORT function using index weight as consolidation methodology. Please refer to appendix for single name positions of active value managers. All above metrics are based upon the weighted single name portfolio holdings, the fund entity level may not distribute dividends. For example Berkshire does not pay dividends, but does have a stock buyback policy.

Largest 3 Value ETFs have aggregated AuM of ~ $100 bn

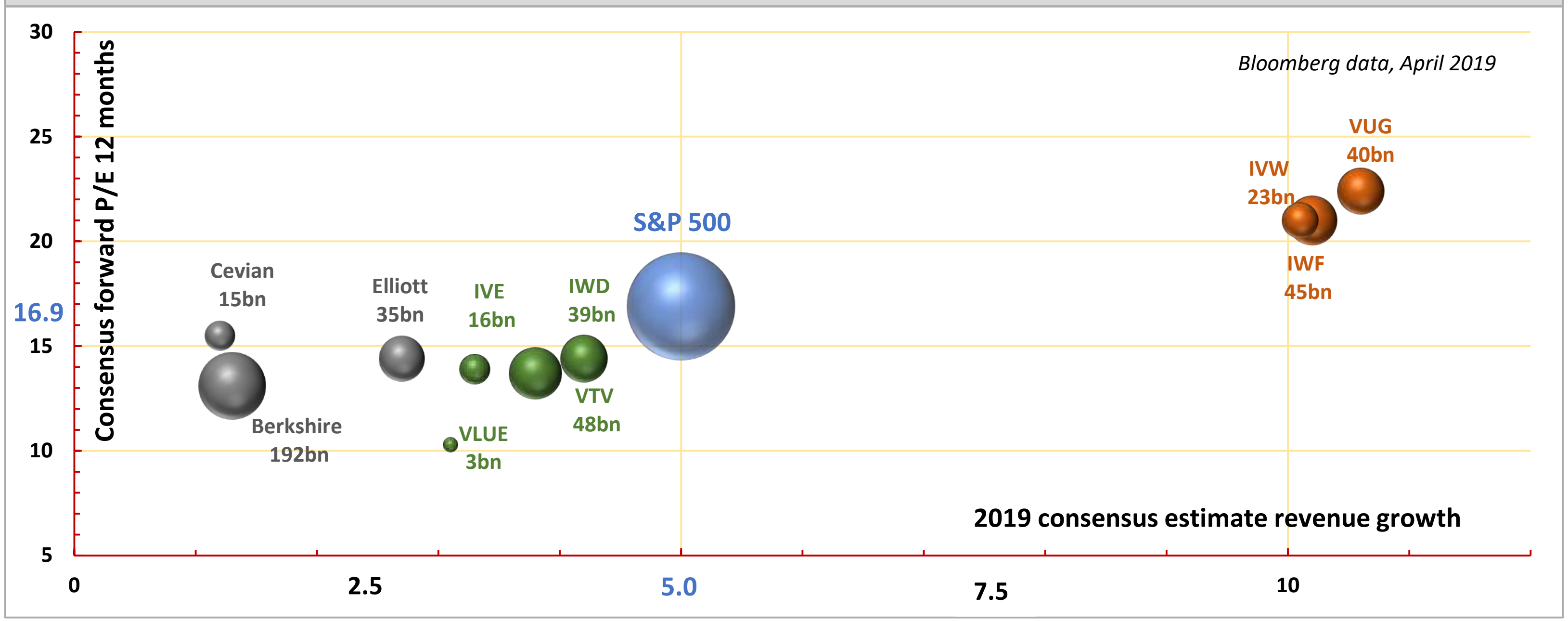
Large Value ETFs mostly no 'Pure Value' ETFs but 'Relative Value' ETFs, meaning they filter out the cheaper half of a broad index and then apply a market-cap weighting

30%+ of constituents of S&P 500 Value ETF also member of Growth counterpart and vice versa.

Revenue growth a strong metric to delineate growth and value styles

- **Growth ETFs** select stocks with 2x the average revenue growth rates of the S&P 500 index constituents.
- **Value ETF’s** & **value managers** eg **Berkshire,** accept lower growth rates and in return will select constituents with discounted P/E’s.
- **Elliott** and **Cevian** (activist managers) have portfolio constituents with materially lower growth characteristics based on current year consensus revenue growth. These managers lobby for margin improvements and higher shareholder returns.

Forward P/E vs forward revenue growth



VLUE – iShares Edge MSCI Value Factor ETF
IVE – iShares S&P500 Value ETF
VTV – Vanguard Value ETF
IWD – iShares Russell 1000 Value ETF

IWF – iShares Russell 1000 Growth ETF
VUG - Vanguard Growth ETF
IVW - iShares S&P 500 Growth ETF

Berkshire Hathaway
Elliott Mgmt. Corp.
Cevian Capital

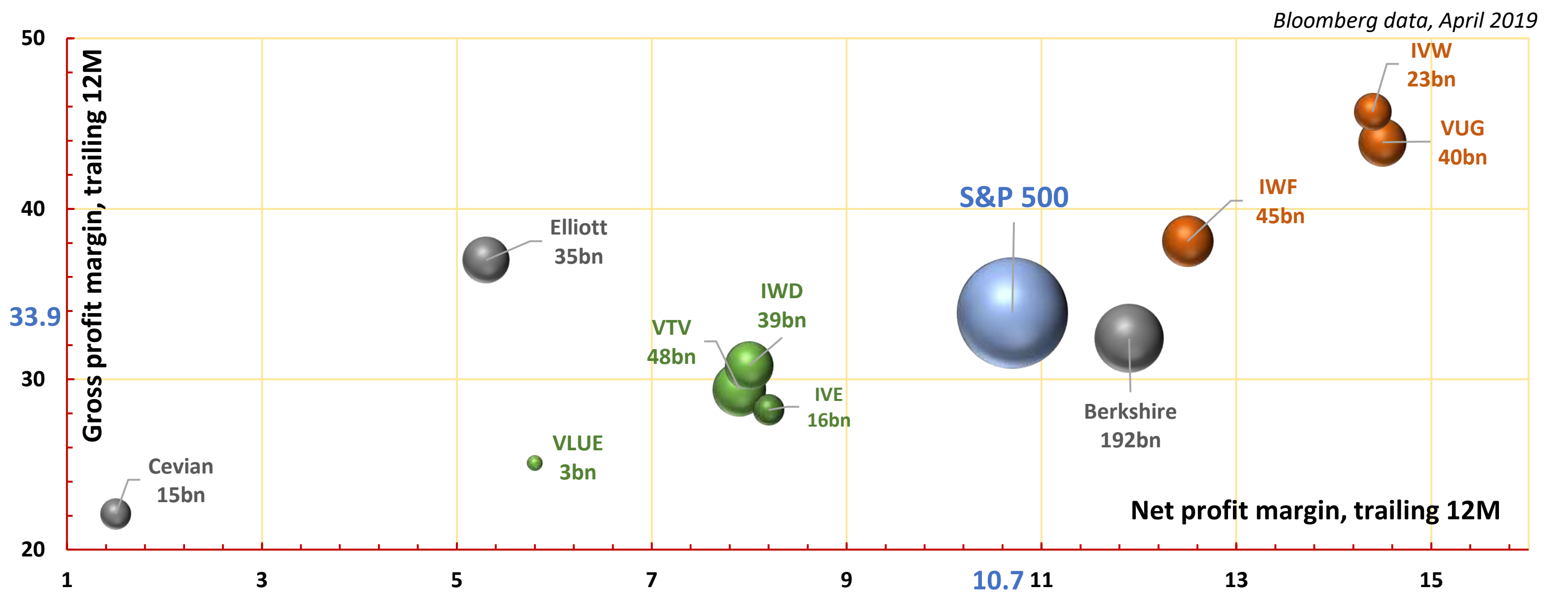
S&P 500

Source: Bloomberg

Profitability helps to explain portfolio style in conjunction with other metrics

- **Berkshire Hathaway's** focus on high net margins from sustainable cash flows and high shareholder returns through dividends and buybacks but with trade-off being significantly lower revenue growth than S&P 500.
- **Cevian Capital** an activist with portfolio of mostly European names has a deep value approach with focus on restructuring via board representation.
- **Elliott** targets high gross margin portfolio constituents which need action to deliver on net margin.

Trailing net vs gross profit margins



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Berkshire Hathaway
Elliott Mgmt. Corp.
Cevian Capital

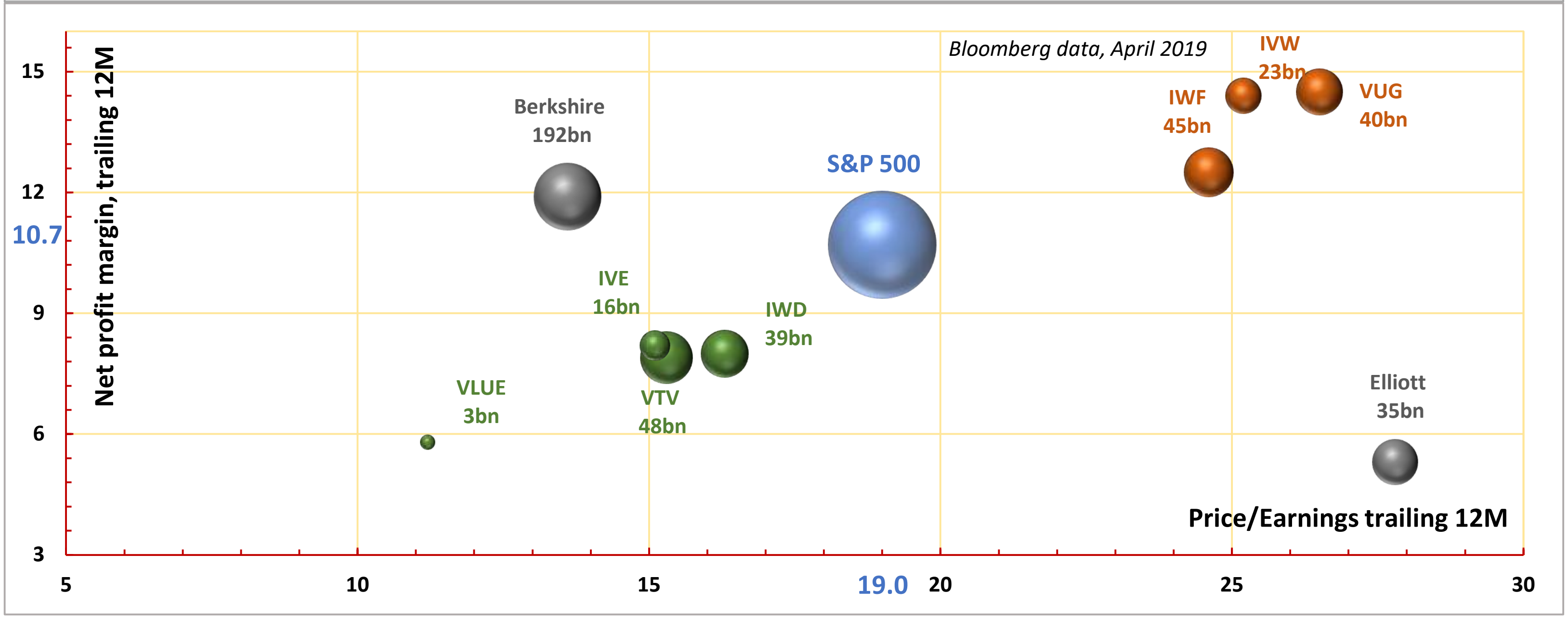
S&P 500

Source: Bloomberg

Relationship between price and profitability highlights outliers (Berkshire, Elliott)

- **Berkshire Hathaway** selects sustainable businesses with higher than average net margins, great efficiency in converting gross margin into net margin, but with a discounted P/E. The trade-off being that their portfolio constituents typically have low growth.
- **Elliott** typically selects high gross margin companies with below average growth. His activist pressure on company boards helps transition towards higher net margins. Investment horizon is multi-year and therefore historic 12 month not so meaningful and current prospective P/E (14.4x) in line with other active value managers and slightly higher than Value ETFs (13.1x). Some positions e.g. SAP have targeted outcomes with 5-year profitability plan.

Trailing P/E vs trailing net profit margins



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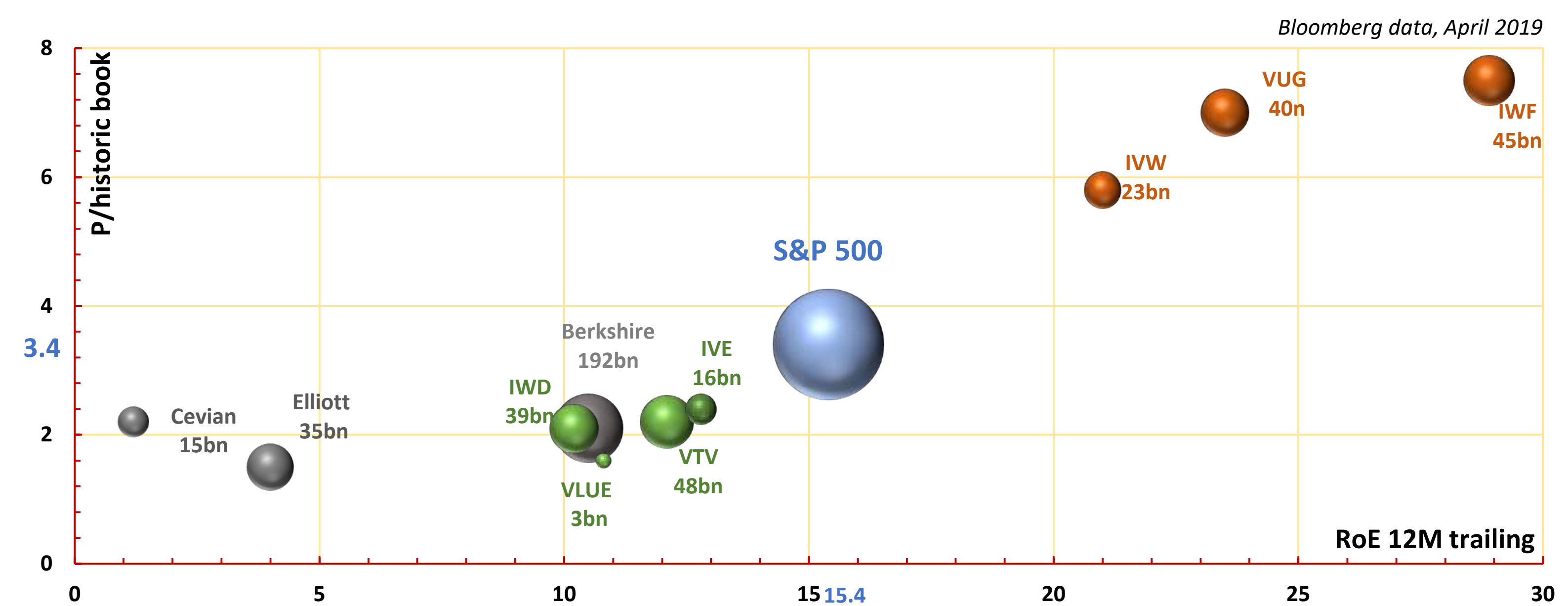
Berkshire Hathaway
Elliott Mgmt. Corp.
Cevian Capital

S&P 500

Source: Bloomberg

Return on equity provides another perspective on growth and value

Trailing RoE vs historic P/B metrics



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Berkshire Hathaway
Elliott Mgmt. Corp.
Cevian Capital

S&P 500

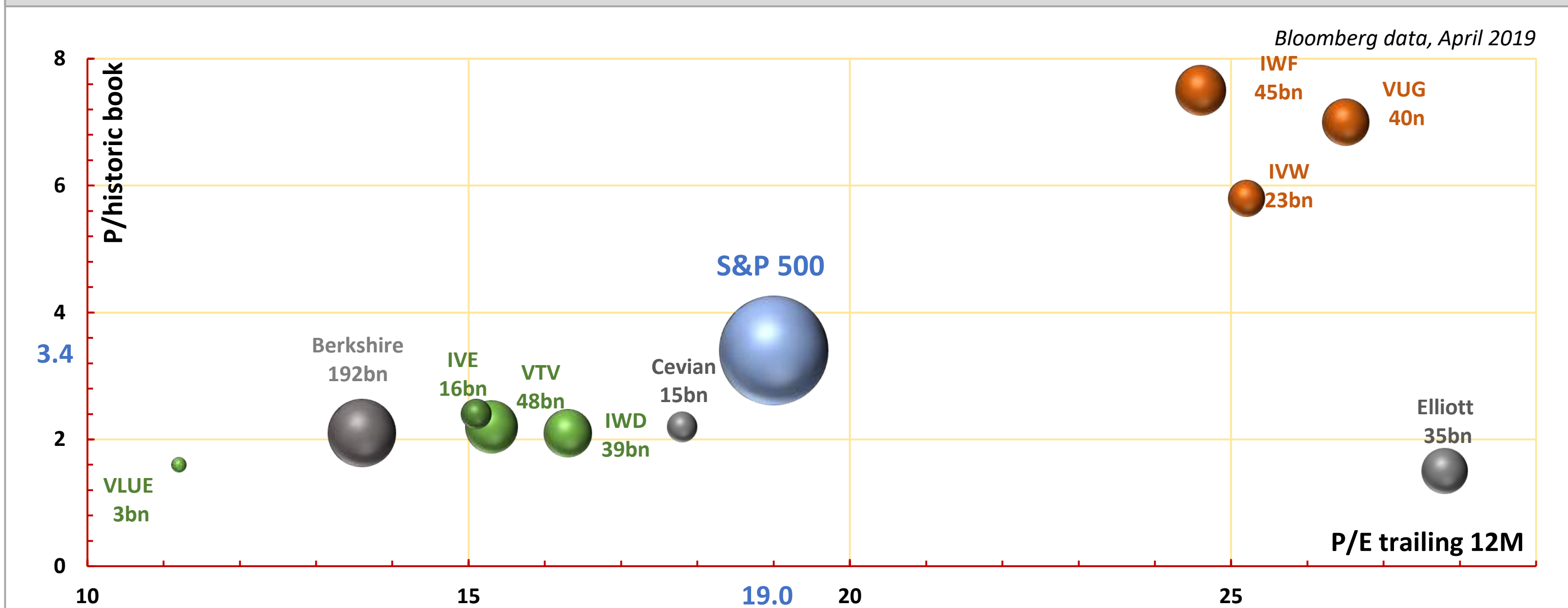
Source: Bloomberg

Book value as selection metric may have unintended consequences

- **Buffett** cited several sources for the lost relevance of book value including accounting rules and the impact of share repurchases.
- **Accounting distortions** have worsened over time with economic evolution from an asset-intensive to an asset-light economy.
- Investors in Value ETFs that are waiting for a revival in 'value' investing are instead getting unintended sector exposures (e.g. Financials and Energy) and chronically missing pricing opportunities in other areas of the market.

Source: Distillate Capital Partners, 2019

Trailing P/E vs historic P/B metrics



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Berkshire Hathaway
Elliott Mgmt. Corp.
Cevian Capital

S&P 500

Source: Bloomberg

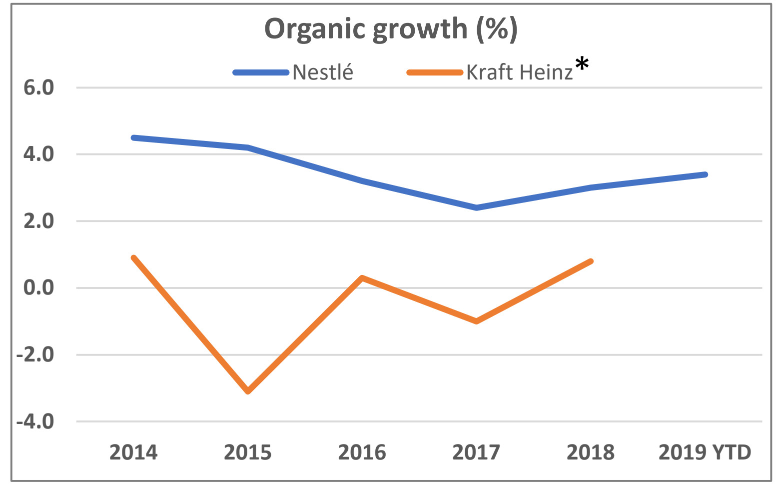
Single name observations

Berkshire Hathaway: ‘We overpaid for Kraft’ ...

Berkshire owns 26.7% of Kraft Heinz.
‘ I was wrong in a couple of ways on Kraft Heinz ’ Buffett said on CNBC television on 25th Feb 2019.
‘**We overpaid for Kraft**’

‘Great companies are the ones that have the costs in control, that grow the top line, and grow the bottom line, - it’s not one or the other, I have very good experience on that, on being more efficient every year, which doesn’t mean cutting costs. It means to be more efficient’.

Patricio Miguel, new CEO, Kraft Heinz
24th April 2019, CNBC



Note: organic sales growth is stated in 2018 as -1.5% in Q1, -0.4% in Q2, 2.6% in Q3 and 2.4% in Q4 but the accounts have not been filed.

‘Patricio inherits a mountain to fix. The depth of the company’s ailments will not be clear until Kraft Heinz files its annual report, **the company has twice delayed the filling as it finishes investigating its accounting and procurement practices following the SEC inquiry**’.

Lauren Hirsch
23rd April 2019, CNBC

... and just bought Amazon

Consensus for Amazon future growth and margins (2019 – 2022)

AMZN US Equity 96) Actions 97) Export 98) Settings Financial Analysis

ADJ Amazon.com Inc Periodicity Annuals Cur FRC (USD)

1) Key Stats 2) I/S 3) B/S 4) C/F 5) Ratios 6) Segments 7) Addl 8) ESG 9) Custom

11) Adj Highlights 12) GAAP Highlights 13) Earnings 14) Enterprise Value 15) Multiples 16) Per Share 17) Stock Value

In Millions of USD	2017 Y	2018 Y	Current/LTM	2019 Y Est	2020 Y Est	2021 Y Est	2022 Y Est
12 Months Ending	12/31/2017	12/31/2018	03/31/2019	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Market Capitalization	566,023.5	737,467.3	897,363.3				
- Cash & Equivalents	30,986.0	41,250.0	37,020.0				
+ Preferred & Other	0.0	0.0	0.0				
+ Total Debt	44,147.0	49,289.0	66,515.0				
Enterprise Value	579,184.5	745,506.3	926,858.3				
Revenue, Adj	177,866.0	232,887.0	241,545.0	275,053.9	323,744.4	381,106.8	444,731.5
Growth %, YoY	30.8	30.9	25.0	18.1	17.7	17.7	16.7
Gross Profit, Adj	65,932.0	93,731.0	99,204.0	115,731.7	141,191.4	169,684.0	205,541.6
Margin %	37.1	40.2	41.1	42.1	43.6	44.5	46.2
EBITDA, Adj	15,584.0	27,762.0	32,273.0	43,081.7	53,439.6	66,024.2	74,273.0
Margin %	8.8	11.9	13.4	15.7	16.5	17.3	16.7
Net Income, Adj	2,247.9	10,078.5	11,409.0	19,124.4	25,700.7	33,396.8	39,931.0
Margin %	1.3	4.3	4.7	7.0	7.9	8.8	9.0
EPS, Adj	4.56	20.15	22.76	36.65	49.17	65.56	84.66
Growth %, YoY	-7.2	342.2	258.4	81.9	34.1	33.3	29.1
Cash from Operations	18,365.0	30,723.0	34,361.0				
Capital Expenditures	-11,955.0	-13,427.0	-13,618.0	-15,320.4	-17,694.7	-20,784.0	-21,084.5
Free Cash Flow	6,410.0	17,296.0	20,743.0	28,907.9	37,881.5	49,333.3	60,073.4

What options may be available to improve profit margins and shareholder returns versus current market consensus and an average Berkshire equity holding?

- Focus on higher margin business areas eg Amazon Web Services (AWS), digital services, and own label revenues, moderate capital expenditures and development costs, reduce or eliminate losses in the international business units.

- Deliver shareholder returns, initiate a dividend policy with payout ratios, at least equivalent to Berkshire's average payout ratio of 30% and/ or start a buyback program via increased net borrowing. Current net debt stated as $29bn. Forward EBITDA in range of $50-70bn could support net debt of $90bn to $126bn using average S&P 500 EBITDA to Net debt multiple of 1.8x.

Observations on Amazon from perspective of 'value' and 'growth' metrics:

Price to book value: 18.9x, Price to sales: 3.7x, Price to cash flow: 25.9x, Return on equity: 30%. Berkshire purchase of Amazon shares based on a multi-year view unlike existing ETF metrics.

Fund	P/E (trailing 12M)	P/B	Consensus fw P/E 12M	RoE (trailing 12M) (%)	Curr. FY consensus est. rev. growth (%)	Gross profit margin (%), trailing 12M	Net profit margin (%), trailing 12M	Div. payout ratio (%)
Berkshire Hathaway	13.6	2.1	13.1	10.5	1.3	32.4	11.9	30.5
Amazon 2019	90.4	18.5	49.7	30.0	18.1	42.1	7.0	0.0
Amazon 2020	-	-	37.1	-	17.7	43.6	7.9	?
Amazon 2021	-	-	27.8	-	17.7	44.5	8.8	?

Source: Bloomberg

Value investors base their assumptions for Ford shares on 2021 profitability

Source: Bloomberg

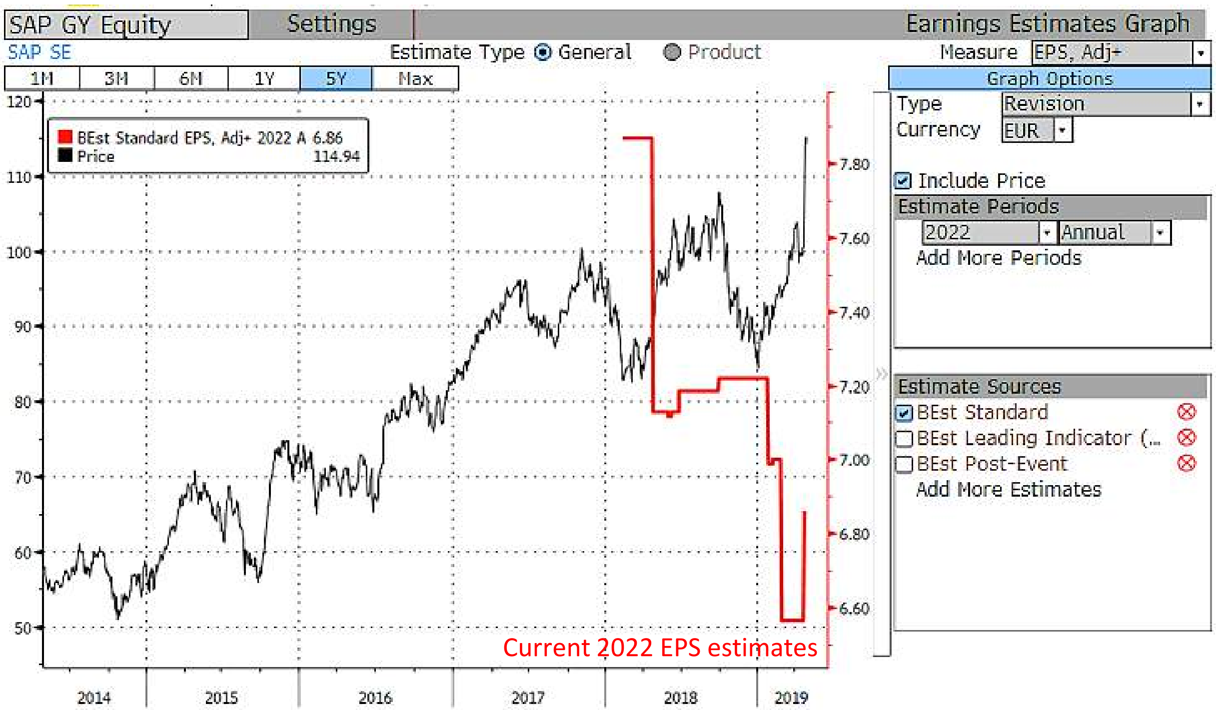
ETF

ETF managers will filter securities on prospective earnings based on 2019 full year estimate of USD 1.30 a share.

Value investors

Deep value investors base their assumptions on 2021 earnings per share of USD 2.10 and a price target of over USD 20.

Elliott bases assumptions for SAP shares on 5-year profitability plan



Source: Bloomberg

Elliott Management disclosed that it had built a €1.2bn stake in SAP on April 24th 2019, Europe's largest software group, and that it fully supported the group's plans to improve performance. 'The company's stock has been consistently undervalued relative to its revenue growth, and today's announcement lays the groundwork for substantial value realisation Elliott said it saw potential for SAP to achieve earnings per share of €8.50 in 2023'.

(FT, 25th April, 2019)

Appendix

Active value fund constituents – Berkshire Hathaway

Name	% of holding, 12/31/2018
Apple, Inc.	21.6%
Bank of America Corp.	12.1%
Wells Fargo & Co.	10.8%
Coca Cola Co.	10.4%
American Express Co.	7.9%
Kraft Heinz Company	7.7%
U.S. Bancorp	3.2%
JPMorgan Chase & Co.	2.7%
Bank of New York Mellon Corp. (The)	2.1%
Moody's Corp.	1.9%
Delta Air Lines, Inc.	1.8%
Goldman Sachs Group, Inc. (The)	1.7%
Southwest Airlines Co.	1.4%
General Motors Company	1.3%
Charter Communications, Inc.	1.1%
DaVita HealthCare Partners Inc.	1.1%
VeriSign, Inc.	1.1%
United Continental Holdings, Inc.	1.0%
USG Corp.	0.9%
American Airlines Group Inc.	0.8%
Visa, Inc.	0.8%
Liberty Media, Sirius XM Group Series C	0.6%
Phillips 66	0.6%
PNC Financial Services Group, Inc. (The)	0.5%
MasterCard Incorporated	0.5%
Costco Wholesale Corp.	0.5%
Sirius XM Holdings Inc.	0.4%
M & T Bank Corp.	0.4%
Travelers Companies, Inc. (The)	0.4%
TEVA / Teva Pharmaceutical Industries Ltd.	0.4%
Axalta Coating Systems Ltd.	0.3%
Liberty Media, Sirius XM Group Series A	0.3%
STORE Capital Corp.	0.3%
Synchrony Financial	0.3%
Torchmark Corp.	0.3%
Restaurant Brands International Inc.	0.2%
Liberty Global plc (Class C)	0.2%
SU / Suncor Energy Inc.	0.2%
Liberty Global plc (Class A)	0.1%

Source: Berkshire Hathaway 13F Filing as at 12/31/2018

Active value fund constituents – Elliott Mgmt. Corp.

Name	% of holding, 12/31/2018
Altaba Inc	14.0%
Sempra Energy	12.9%
Hess Corp	12.3%
Arconic Inc	10.2%
Firstenergy Corp	9.3%
Peabody Energy Corp New	7.3%
Citrix Sys Inc	5.2%
Devon Energy Corp New	4.6%
Dell Technologies Inc	3.9%
Nielsen Hldgs Plc	3.0%
Akamai Technologies Inc	1.6%
Disney Walt Co	1.1%
Element Solutions Inc	1.1%
Opus Bk Irvine Calif	1.0%
Eqt Corp	1.0%
Transocean Ltd	1.0%
Acadia Healthcare Company	0.9%
Commvault Systems Inc	0.9%
Travelport Worldwide Ltd	0.9%
Uniti Group Inc	0.9%
Logmein Inc	0.8%
Qep Res Inc	0.8%
Roan Res Inc	0.7%
Dish Network Corp	0.6%
Mednax Inc	0.4%
Equitrans Midstream Corp.	0.4%
B Riley Finl Inc	0.4%
Gty Technology Holdings Inc	0.4%
Vantage Energy Acquisition	0.4%
Zayo Group Hldgs Inc	0.3%
Sunstone Hotel Invs Inc New	0.2%
Encana Corp	0.2%
Exxon Mobil Corp	0.2%
Healthcare Rlty Tr	0.2%
Macerich Co	0.1%
Community Health Sys Inc New	0.1%
Perspecta Inc	0.1%
International Speedway Corp	0.1%
KKR Real Estate Fin Tr Inc	0.1%
Sanofi	0.1%
Vornado Rlty	0.1%
Cormedix Inc	0.1%

Source: Elliott 13F Filing as at 12/31/2018

Active value fund constituents – Cevian Capital

Name	% of holding, 12/31/2018
Ericsson	27.2%
ABB Ltd	23.0%
ThyssenKrupp Ag	14.1%
RSA Insurance Group Plc	10.3%
Panalpina Welttransport	6.5%
Rexel Sa	6.1%
Vesuvius Plc	4.5%
Autoliv Inc	4.5%
Bilfinger Se	3.8%

Source: Cevian Capital 13F Filing

Criticism of passive value selection by ETFs

Facts about Formulaic Value Investing

U-Wen Kok, CFA

Jason Ribando, CFA

and

Richard Sloan

Forthcoming, *Financial Analysts Journal*

Abstract:

The term 'value investing' is increasingly being adopted by quantitative investment strategies that use ratios of common fundamental metrics (e.g., book value, earnings) to market price. A hallmark of such strategies is that they do not involve a comprehensive effort to determine the intrinsic value of the underlying securities. We document two facts about such strategies. First, there is little compelling evidence that such strategies deliver superior investment performance for U.S. equities. Second, instead of identifying undervalued securities, these strategies systematically identify firms with temporarily inflated accounting numbers. We argue that these strategies should not be confused with value strategies that employ a comprehensive approach to determine the intrinsic value of the underlying securities.

Keywords: Value Investing; Book Value; Earnings; Intrinsic Value; Accounting Artifices.

Publication in Q2, 2017

'The dirty truth about value investing'
May 4 2017, Alex Rosenberg

Quantitative value investing strategies are becoming increasingly popular.
Many of these merely identify stocks with overstated fundamentals, according to a recent paper.
"You still need to have a pair of human eyes," author U-Wen Kok of RS Investments said.

Explaining Berkshire version of value and returns

Buffett's Alpha

Andrea Frazzini, David Kabiller, and Lasse Heje Pedersen*

First Draft: May 3, 2012

This draft: November 21, 2013

Abstract

Berkshire Hathaway has realized a Sharpe ratio of 0.76, higher than any other stock or mutual fund with a history of more than 30 years, and Berkshire has a significant alpha to traditional risk factors. However, we find that the alpha becomes insignificant when controlling for exposures to Betting-Against-Beta and Quality-Minus-Junk factors. Further, we estimate that Buffett's leverage is about 1.6-to-1 on average. Buffett's returns appear to be neither luck nor magic, but, rather, reward for the use of leverage combined with a focus on cheap, safe, quality stocks. Decomposing Berkshires' portfolio into ownership in publicly traded stocks versus wholly-owned private companies, we find that the former performs the best, suggesting that Buffett's returns are more due to stock selection than to his effect on management. These results have broad implications for market efficiency and the implementability of academic factors.

JEL Classification: G11, G12, G14, G22, G23

Keywords: market efficiency, leverage, quality, value, betting against beta

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'We find that stocks with the characteristics favored by Buffett have done well in general, that Buffett applies about 1.6-to-1 leverage financed partly using insurance float with a low financing rate, and that leveraging safe stocks can largely explain Buffett's performance'

Frazzini, Kabiller & Pedersen

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