J.P.Morgan

Equity Strategy and Quantitative Research
07 June 2019

Corrected Note (first published 06 June 2019) (See page 18 for details)

The Value Conundrum

Past, Present, Future

One of the enduring and puzzling features of this equity cycle has been Value's lackluster performance. Despite intermittent reversal rallies (2009, 2012-2013, 2016

Figure 1), **Value is currently trading at the biggest discount ever and offers the largest premium over the last 30 years**. The oversold condition of Value is at par with or worse than during the 2000 TMT growth bubble. The median P/E of the cheapest portfolio relative to S&P500 is trading at ~7x discount (99%ile, Figure 34). Similarly the relative P/B spread of the cheapest vs. the most expensive portfolio is at ~9x (widest ever, Figure 37). The average monthly win ratio of the Value portfolio since 2013 has been a measly 40% compared to 57% over the prior 30 years (Figure 14). Value weakness is pervasive and persistent irrespective of its definition (P/E, P/B, P/Sales, P/FCF, Figures 18-21). Even allowing for sector/size biases in selecting cheap/expensive stocks does not solve the conundrum (Figure 22, 23). Across regions, this impairment is most evident in Europe and followed by the US. Value has continued to work in EM and Japan, although more muted than historically (Figure 24-27). **The Value predicament in this cycle appears to be primarily confined to Equities, in particular Large Caps.** Realized Value premia within Small Caps (Russell 2000, Figure 29) is comparable to the prior two decades. In other asset classes, including Commodities, Rates, Credit and FX, Value has remained effective (Figure 3). Within fixed income, High Yield bonds (proxy for risky Value premia) have returned superior performance vs Investment Grade bonds (Quality) both in absolute and risk adjusted terms this cycle (Figure 31).

The key structural headwinds to Value include: (1) slower mean reversion in stock fundamentals; (2) disruptive technologies; (3) indexation and rise of stock correlations; (4) weakest post-War US macro backdrop; (5) easy access to cheap capital globally; and (6) noticeably different fundamental and risk profiles of Value in this cycle. Many of the above structural impediments are residual effects of the global financial crisis (e.g. weak growth and low rates/inflation). These headwinds should naturally unwind/normalize over time. However, effects related to technological disruption (e.g. slower fundamental mean reversion) may require proactive intervention (e.g. anti-trust regulations). See pages 2 and 3 for more details.

In sum, **for Value to make a sustained comeback the following developments are likely needed: (1) regulations that foster competition; (2) saturation of passive products and private equity investments as well as stabilization of active equity AUM; (3) less policy uncertainty (e.g. fewer disruptions from Trump); (4) sustained reacceleration in global growth; or at the other extreme (5) a proper cycle reset (i.e. full-blown recession forcing premia to re-price)**. While acknowledging these structural headwinds, we believe that short-lived and sharp Value snapbacks are still very likely given extreme conditions. For instance, the biggest market dislocation currently lies between Value and Low Vol stocks which are trading at a new record high valuation gap (fwd P/E spread of ~11x 100%ile, Figure 4), and substantially above 2016 levels (see Low Vol Bubble) when US rates were even lower. Further, the degree of miss-alignment between Value and Momentum is at extreme levels (Figure 13) suggesting that the current dislocation is ripe for reversal. The key catalyst that could trigger such a reversal into Value is a trade deal. See Figures 74-84 for industries most exposed to Value.

Global Quantitative Strategy

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Figure 1: Value Underperformance by Years

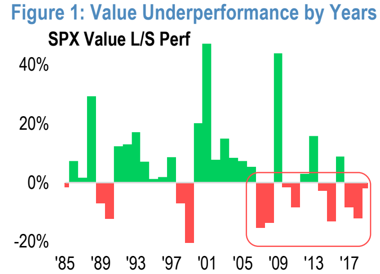
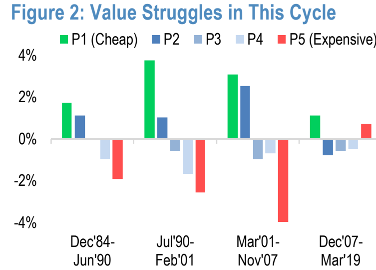


Figure 2: Value Struggles in This Cycle



Source: JPM US Equity Strategy & Quant Research

See page 18 for analyst certification and important disclosures.

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- **Slower mean reversion in fundamentals of stocks is working against the Value trade in this cycle, especially for the short portfolio (i.e. most expensive stocks).** Mean reversion of stock fundamentals is the key driver of the Value trade. For instance, high ROE stocks (typically expensive) over time tend to mean-revert lower towards their peers' ROE average. During the reversion their price tends to underperform the market. Conversely, stocks with low ROE (assuming the firm stays in business) tend to catch up as low ROE discourages new entrants and/or weeds out less efficient peers. Consequently, such stocks typically outperform the market on a relative basis. Analyzing the speed of mean reversion in ROE since 1980s shows that in the previous cycles the top ROE stocks used to mean-revert (i.e. deteriorate) much faster than in the current cycle (50% vs 35% to mid-point, Figure 5). On the contrary, the speed of mean reversion of the bottom ROE stocks (i.e. improvement) in the last 10 years is similar to the prior cycles (Figure 42).

- **Disruptive technologies are a drag on Value.** The convergence of tech, media and communications began more than 25 years ago. That trend has accelerated in the last 10-15 years through disruptive integration of the internet, automation, social media and artificial intelligence in consumer and business applications. As a result many of the legacy market leaders that did not innovate or adapt new technologies effectively have seen their equity multiples stagnate. These have become persistent members of the Value portfolio (Figure 6). On the flip side, many of the high growth companies are initially sustained by private equity and venture capital. They are able to attract investor interest even though the valuation of these private companies is much higher than the newly IPO-ed peers that are further along the life-cycle. It's not that Value has poor fundamentals, but its market share is being eaten away by the disruptive Growth companies (i.e. Amazon vs brick-and-mortar retailers, Netflix vs legacy cable providers, Uber, etc) or by consolidation where technology requires scalability (e.g. bulge bracket financials). We have seen a wide swing in market concentration in this cycle, initially a decline and then a sharp upswing signaling consolidation (Figure 7). Among the industries where sales concentration has risen the most are large financials, internet retail, diversified telecoms, computers & peripherals, and internet software & services. It's become a "Winner Take All" cycle (Figure 46).

- **Indexation and rise of stock correlation have led to Value extinction.** A salient feature of the asset management industry since early 2000s has been the rising demand for passive products by both institutional and retail investors (Figure 47). We estimate that passive products (including Enhanced Index, Smart Beta) currently represent ~ 60% of equity AUM in the US. The turnover of stocks has structurally settled lower relative to their market cap (Figure 8). Index products, including ETFs, have driven intra-stock correlations higher. Index stocks are bought/sold as a group irrespective of their differing fundamentals. It has lowered stock return dispersion (Figure 49), leaving fewer opportunities for price reversion. This has essentially led to Value extinction in the Large Cap space. Further, real-money allocators have been pulling capital out of the public equity market and pouring it into the private market (e.g. average allocation to alternatives of US pension funds has increased to ~25%). By contrast, Small Cap stocks, which are less affected by indexation, have not seen a drop in dispersion (Figure 50). In addition, Small Caps have lower exposure to secular growth and are subject to faster fundamental and price mean reversions.

- **The weakest post-War economic recovery and low real interest rate environment limit Value effectiveness.** In all post-War (1945) recoveries, US real growth has exceeded 4% mid-cycle for at least several quarters. In the current cycle real growth has averaged 1.8% and never reached 4%, making it one of the weakest in the last 70 years (Figure 51). Remarkably, real interest rates are still below the

Figure 3: Value Outperformed In Other Asset Classes Except Equity

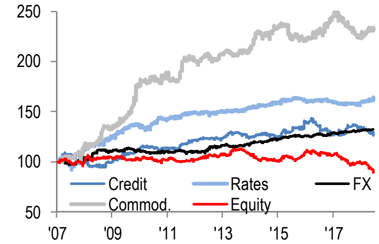


Figure 4: Low Vol-Value Spread, Record High

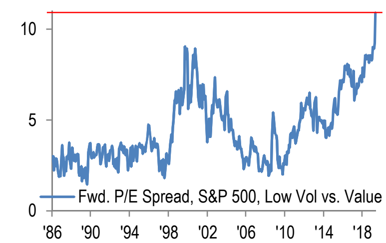


Figure 5: Expensive/High ROE Stocks Reversal to Mean Over Time

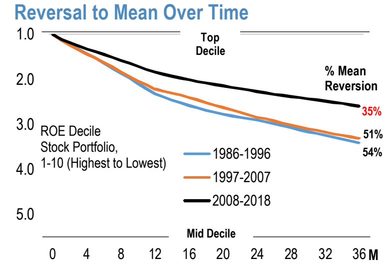


Figure 6: Value Unloved, Sticky in Nature

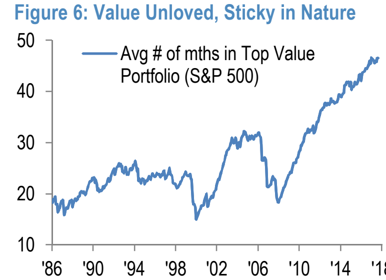
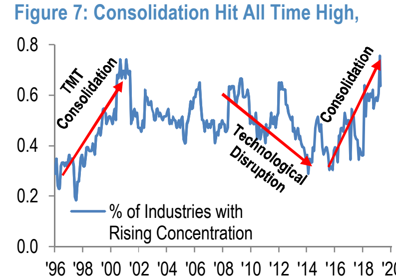


Figure 7: Consolidation Hit All Time High,



Source: JPM US Equity Strategy & Quant Research

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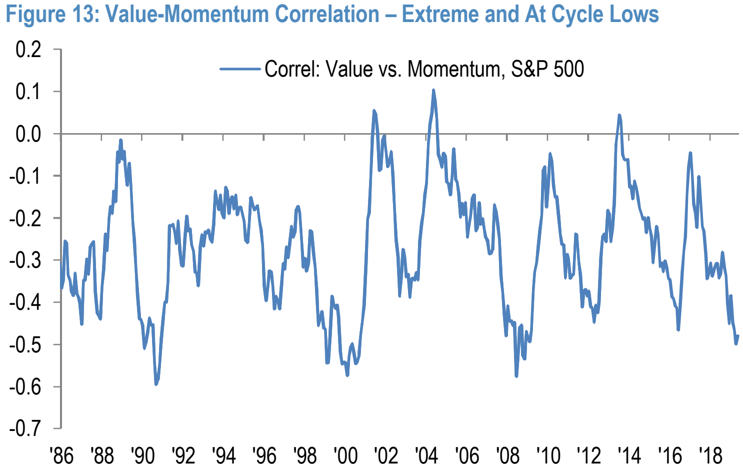
levels seen during the beginning of this cycle (Figure 52). Persistently low rates have driven institutional investors like pension funds and insurance companies (typically large bond holders) into equity "bond proxy" products such as Low Vol and High Quality stocks. Their performance has exhibited a consistently negative correlation to Value (Figure 73) while their valuations have remained extremely high.

- **Prolonged easy monetary policy globally and access to cheap capital favors Growth over Value.** Easy access to capital encourages risk taking and facilitates entrepreneurs to create innovative products and services. These new companies provide dynamism to market economies and provide investors with a wider choice of growth opportunities to choose from. As a result, long periods of cheap capital can divert interest from Value (i.e. similar to 1990s).

- **Fundamental and risk characteristics of Value have changed over time, some have deteriorated, others have improved.** Value stocks have intrinsically become more risky—their beta and volatility profiles have increased from below market levels during TMT cycle (when Growth stocks were considered high beta) to above market level in the current cycle (i.e. beta to market of ~1.2, Figure 9). Likely reason for the higher risk profile of Value is deteriorating pricing power, which is reflected in falling operating margins (Figure 11). However, top line growth and cash flow growth remain in line with historical trend (Figures 57-60). Additionally, the debt profile of Value stocks has shown improvement, which is contrary to what many skeptics argue. In fact, leverage of Value stocks has been on a steady decline, with debt/equity ratios below market level in recent years (Figure 12). This is likely a function of low rates. Lastly, Value stocks have seen a pickup in buyback activity relative to the market (Figure 67). This likely signals that management sees their companies as undervalued, but also likely with limited opportunity for growth and investment. In sum, stable growth, lower leverage and higher buyback activity profiles, suggest that Value stocks may be less vulnerable in the next recession than historically. Limited downside could be further supported by the extreme de-rating (P/B of only 1.4x and fwd P/E of 8.5x) that Value has already experienced.

Figure 13: Value-Momentum Correlation – Extreme and At Cycle Lows



Source: JPM US Equity Strategy & Quant Research

Figure 8: Reduced Cash Trading/MCap

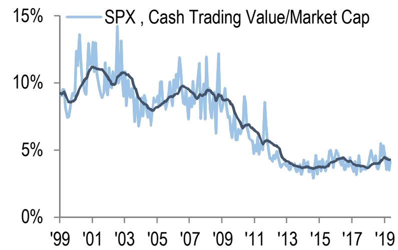


Figure 9: Beta Profile of Value Inverted

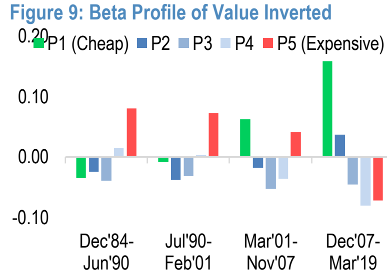


Figure 10: Lower Stock Dispersion in S&P 500

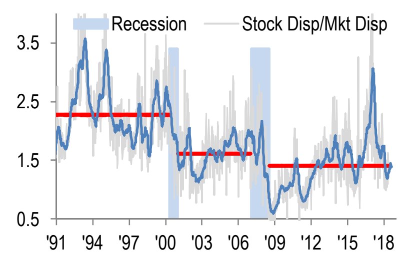


Figure 11: Value Exhibiting Weaker Pricing Power

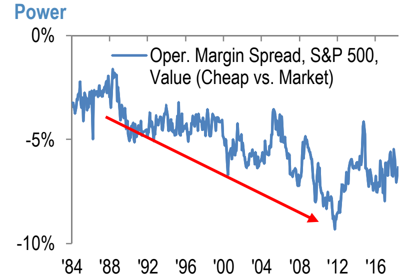
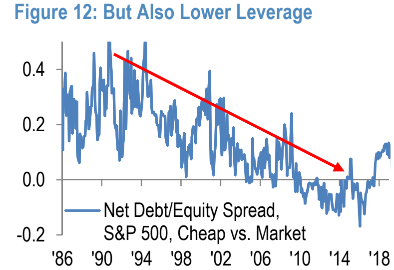


Figure 12: But Also Lower Leverage



Source: JPM US Equity Strategy & Quant Research

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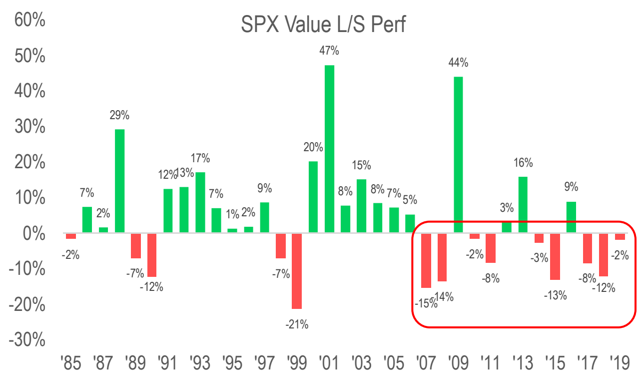
Value Performance

Weaker Performance This Cycle vs Past Cycles

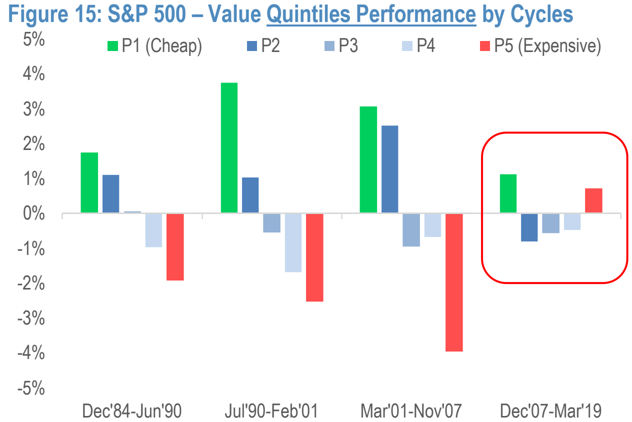
Value factor considered below is a sector neutral composite of fwd. P/E, P/B and P/Sales.

Figure 14: S&P 500 – Value L/S Perf. Unusually Weak This Cycle



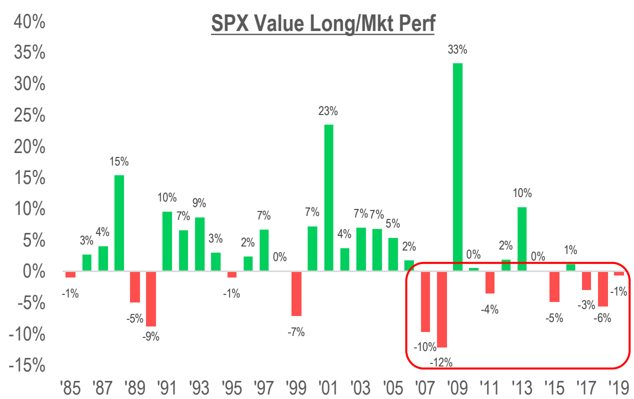
Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 15: S&P 500 – Value Quintiles Performance by Cycles



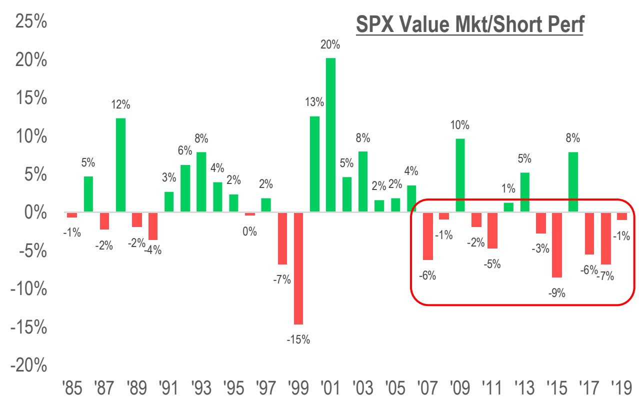
Quintiles of S&P 500 stocks based on Sector Neutral Scores

Figure 16: S&P 500 – Value Performance Cheap vs Market



Source: J.P. Morgan US Equity Strategy and Quantitative Research

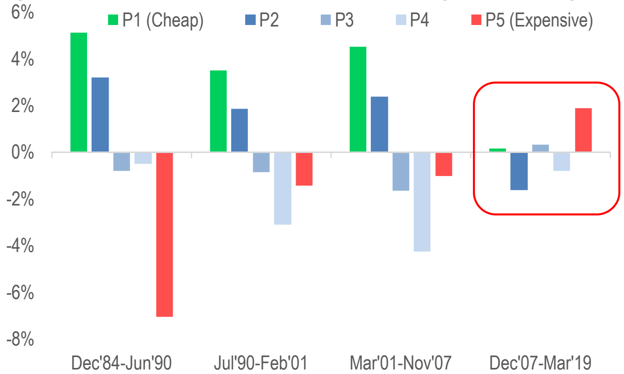
Figure 17: S&P 500 – Value Performance Market vs Expensive



Quintiles of S&P 500 stocks based on Sector Neutral Scores

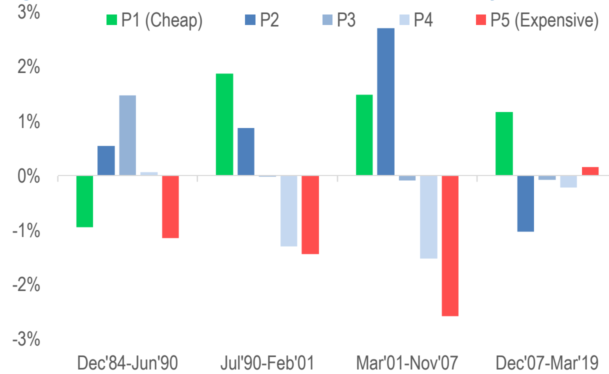
Performance Comparison of Alternate Value Metrics

Figure 18: S&P 500 – Fwd P/E Performance, Very Poor This Cycle



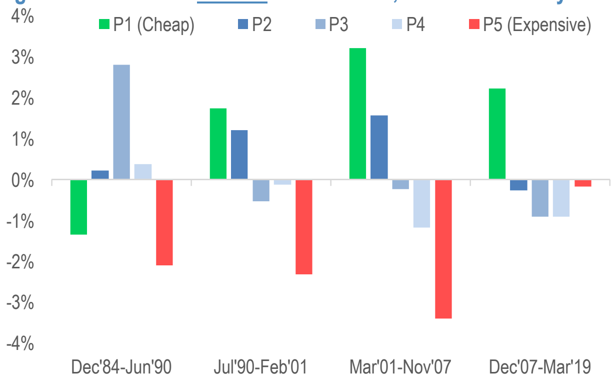
Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 19: S&P 500 – P/B Performance, Weak This Cycle



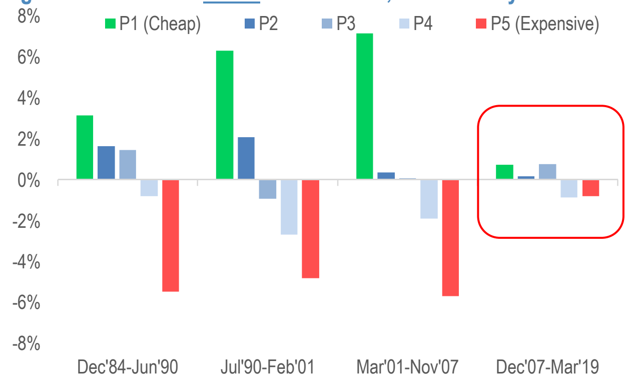
Quintiles of S&P 500 stocks based on Sector Neutral Scores

Figure 20: S&P 500 – P/Sales Performance, Mediocre This Cycle



Source: J.P. Morgan US Equity Strategy and Quantitative Research

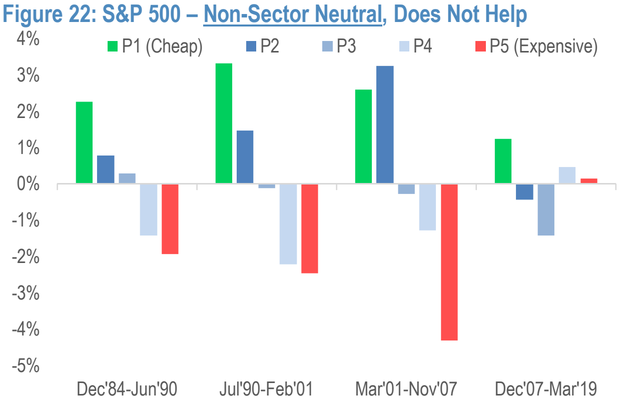
Figure 21: S&P 500 – P/FCF Performance, Poor This Cycle



Quintiles of S&P 500 stocks based on Sector Neutral Scores

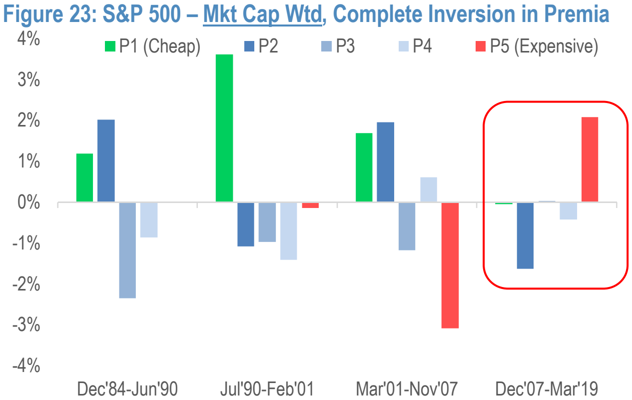
Performance Comparison of Alternate Constructions

Figure 22: S&P 500 – Non-Sector Neutral, Does Not Help



Source: J.P. Morgan US Equity Strategy and Quantitative Research

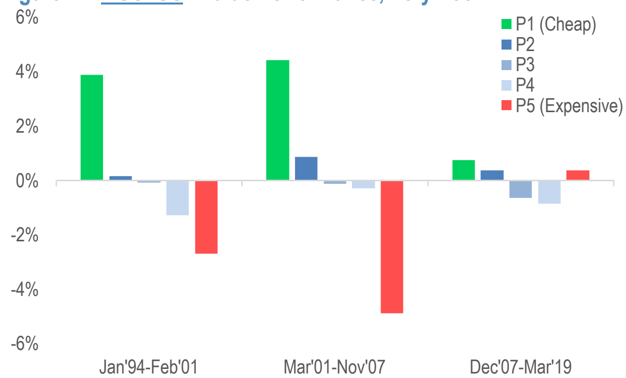
Figure 23: S&P 500 – Mkt Cap Wtd, Complete Inversion in Premia



Quintiles of S&P 500 stocks based on Sector Neutral Scores

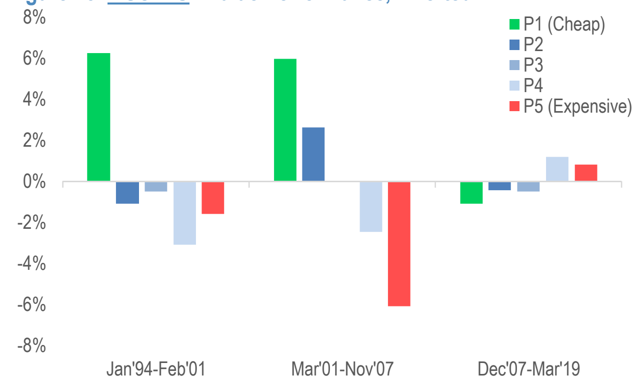
Performance Comparison across Regions

Figure 24: MSCI US - Value Performance, Very Poor



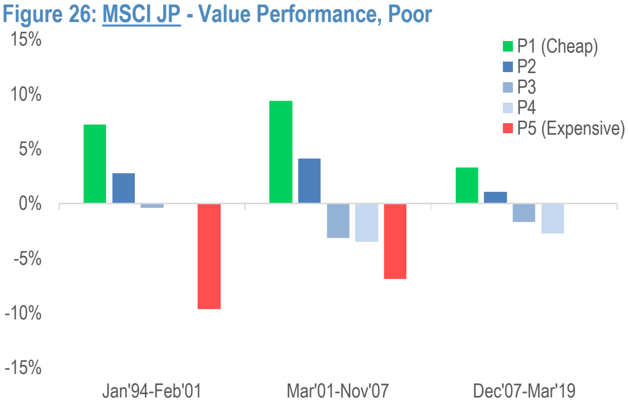
Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 25: MSCI EU - Value Performance, Inverted



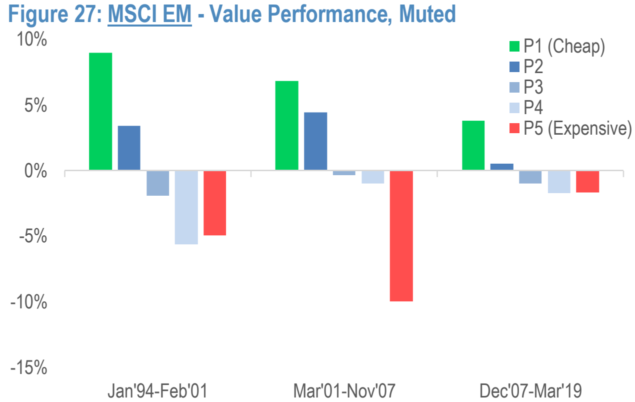
Top Quintile based on Sector Neutral Scores

Figure 26: MSCI JP - Value Performance, Poor



Source: J.P. Morgan US Equity Strategy and Quantitative Research

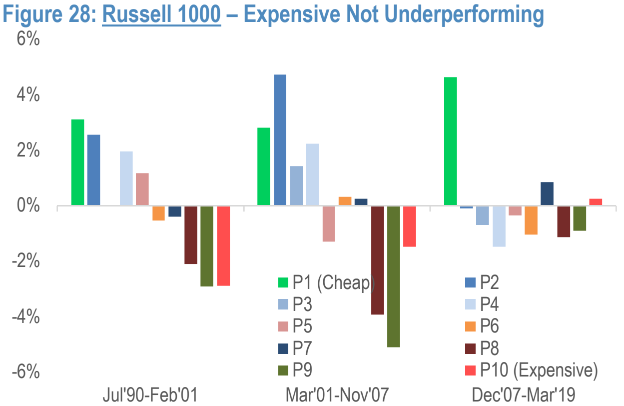
Figure 27: MSCI EM - Value Performance, Muted



Top Quintile based on Sector Neutral Scores

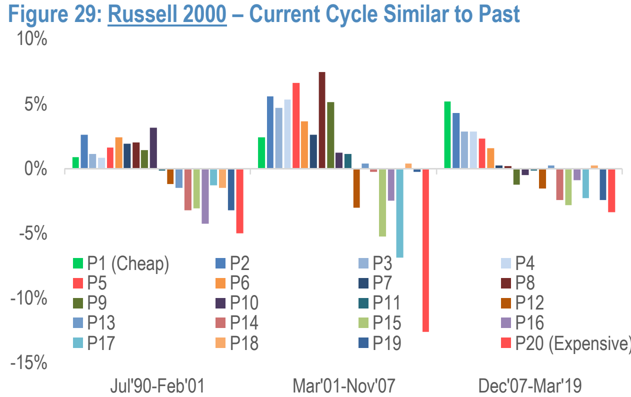
Value Performance in Large Cap and Small Cap

Figure 28: Russell 1000 – Expensive Not Underperforming



Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 29: Russell 2000 – Current Cycle Similar to Past



Based on Sector Neutral Scores

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Value Performance across Asset Classes

Figure 30: Value Outperformed in All Asset Classes Except Equity

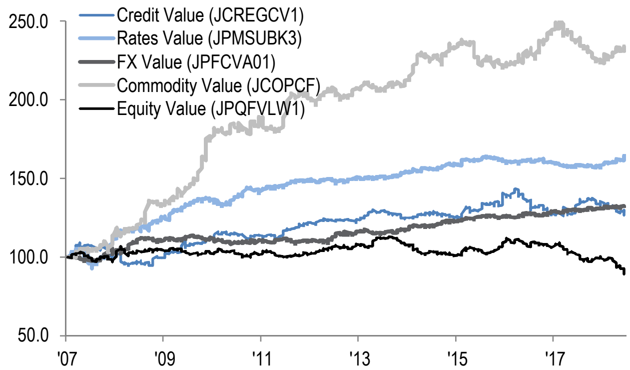
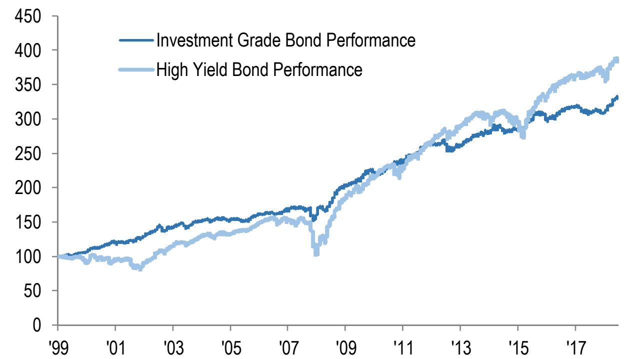


Figure 31: High Yield Performance Outperformed Investment Grade



Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 32: Risk-Reward Across Asset Classes ...

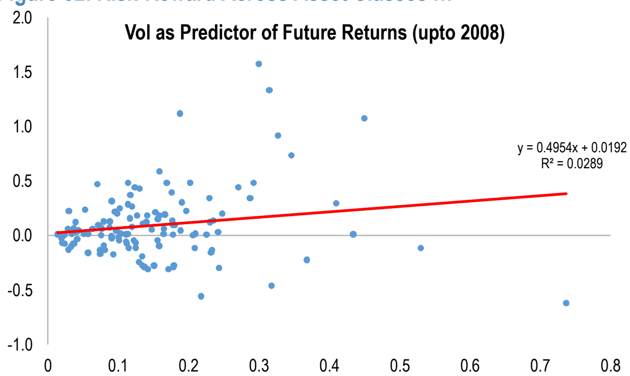
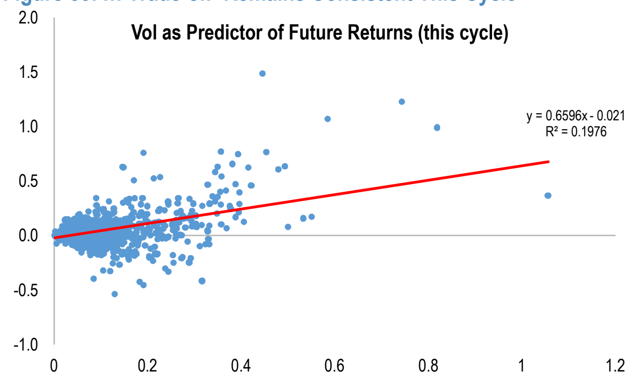


Figure 33: ... Trade-off Remains Consistent This Cycle



Source: J.P. Morgan US Equity Strategy and Quantitative Research

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Relative Valuations

Value Record Cheap vs Market and Historically

Figure 34: Fwd P/E Spread – Value vs Market

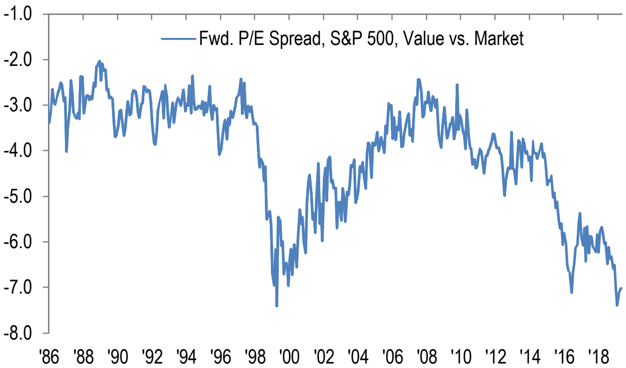


Figure 35: Fwd P/E Spread – Value vs Expensive

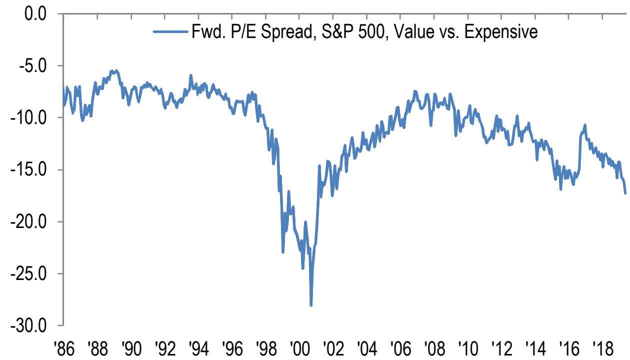
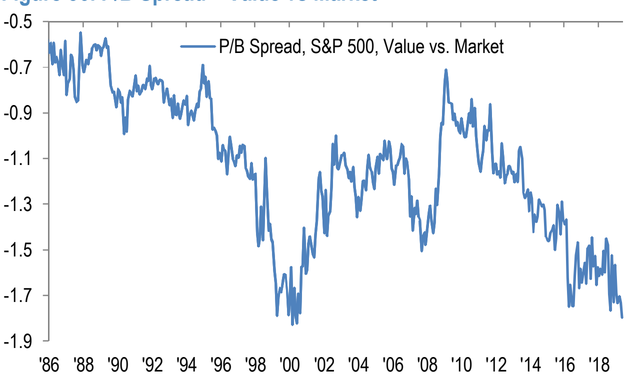
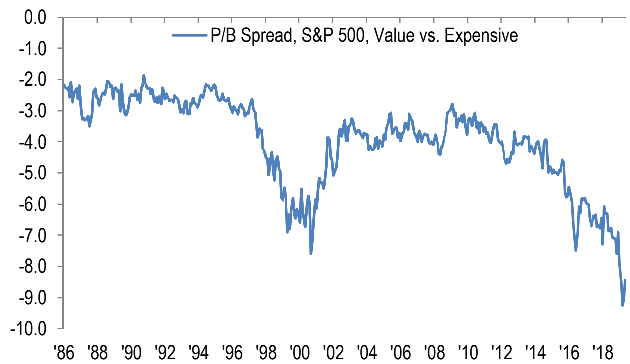


Figure 36: P/B Spread – Value vs Market



Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 37: P/B Spread – Value vs Expensive



Top Quintile of S&P 500 stocks based on Sector Neutral Scores

Figure 38: Current US Style Valuation Comparison vs History as of 31st May'19

	Long Only		Long vs Short		Long vs Market		Long vs Cheapest	
	Current Val.	*30yr %ile*	*Current Val.*	*30yr %ile*	*Current Val.*	*30yr %ile*	*Current Val.*	*30yr %ile*
Price to Forward Earnings								
Market	15.7x	53%	-	-	-	-	-	-
Value	8.5x	5%	-17.0x	8%	-7.2x	1%	-	-
Div. Yield	9.9x	4%	-9.9x	8%	-5.8x	1%	1.4x	26%
Growth	16.3x	55%	1.8x	89%	0.6x	64%	7.8x	97%
Quality	17.3x	72%	2.7x	95%	1.6x	91%	8.7x	97%
Mom 12M	21.7x	89%	11.6x	94%	6.0x	92%	13.2x	94%
Low Vol	19.4x	94%	7.7x	100%	3.7x	100%	10.9x	100%
High Beta	12.0x	7%	-5.9x	1%	-3.7x	2%	3.5x	33%
Price to Book Value								
Market	3.2x	84%	-	-	-	-	-	-
Value	1.4x	38%	-6.2x	12%	-1.8x	1%	-	-
Div. Yield	1.9x	34%	-2.0x	8%	-1.2x	2%	0.6x	32%
Growth	3.2x	64%	0.3x	4%	0.0x	13%	1.8x	81%
Quality	6.4x	94%	4.4x	98%	3.2x	95%	5.0x	97%
Mom 12M	4.4x	83%	2.4x	85%	1.2x	81%	3.0x	87%
Low Vol	4.3x	95%	2.2x	98%	1.1x	95%	2.9x	98%
High Beta	2.3x	33%	-1.4x	6%	-0.9x	1%	0.9x	36%

Source: J.P. Morgan US Equity Strategy and Quantitative Research

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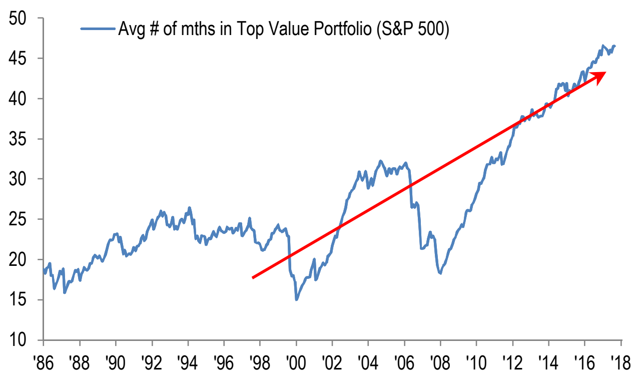
Structural Headwinds to Value

Stickiness in Value Portfolio, Herding in Expensive Basket

Figure 39: Value Unloved

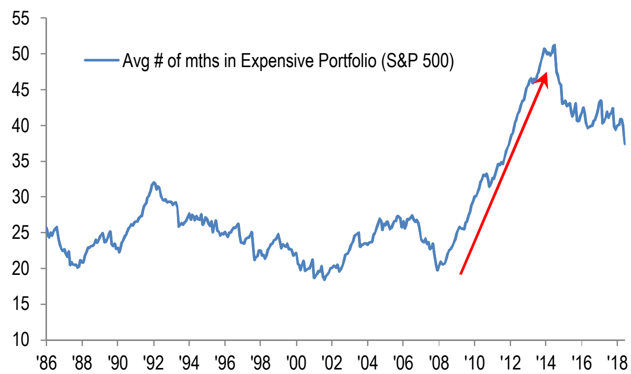
Average age of the stocks in the cheapest portfolio continues to rise



Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 40: Defensives Obsession

Average age of the stocks in the cheapest portfolio is rolling over



Based on S&P 500 Quintiles, Sector Neutral

Slower Mean Reversion in Stock Fundamentals

Figure 41: Highest ROE Stocks Are Mean Reverting at Much Slower Pace in the Current Cycle

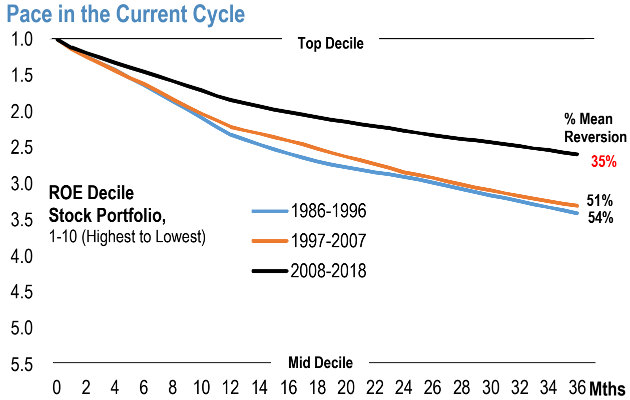
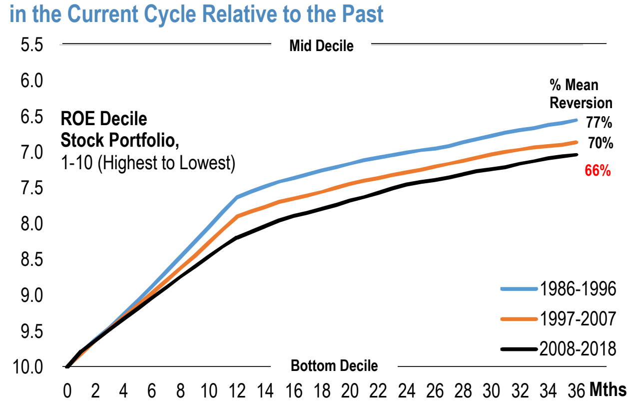
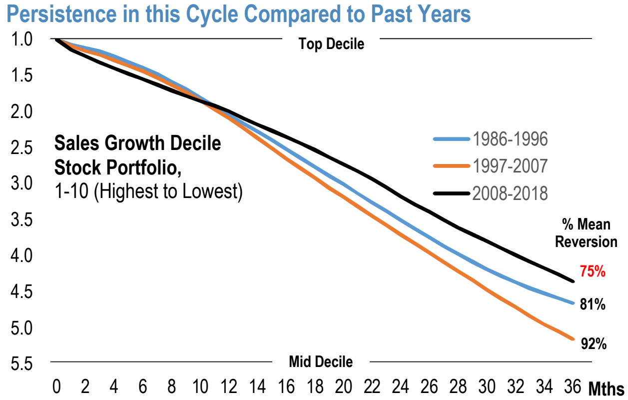


Figure 42: Mean Reversion of Low ROE Stocks Is Not Very Different in the Current Cycle Relative to the Past



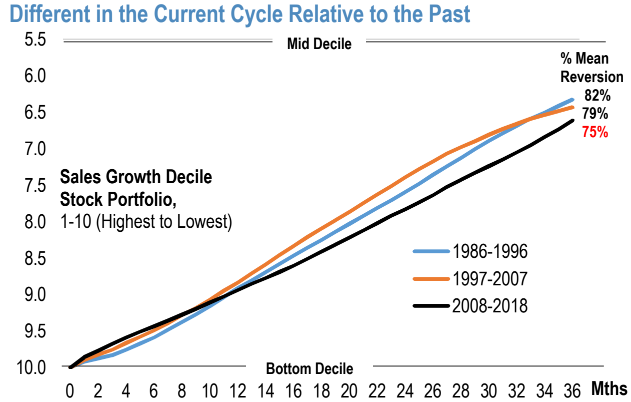
Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 43: High Sales Growth Stocks Have Displayed More Persistence in this Cycle Compared to Past Years



Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 44: Mean Reversion of Low Sales Growth Stocks Is Not Very Different in the Current Cycle Relative to the Past



The Decile of Bottom Portfolio stocks is tracked over 36 months. This is repeated each month and averaged over all stocks and months.

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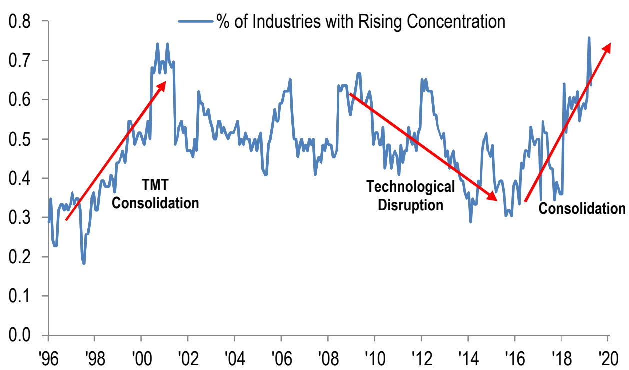
Technological Disruption

Figure 45: U-shape Industry Sales Concentration in This Cycle



Source: J.P. Morgan US Equity Strategy and Quantitative Research

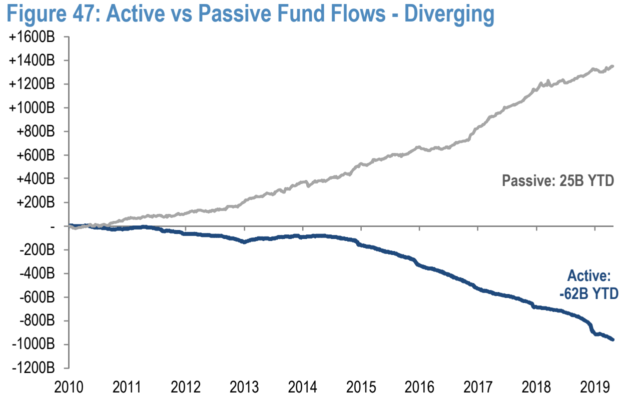
Figure 46: Select Industries with Biggest Change in Concentration

Industry	Pre-2008 Avg	Post-2008 Avg	Change in Conc.	Avg # stocks
Diversified Financial Services	30.8%	61.0%	30.3%	14
Internet & Catalog Retail	21.3%	47.9%	26.6%	17
Diversified Telecommunication	19.1%	37.4%	18.3%	30
Computers & Peripherals	17.6%	31.0%	13.4%	35
Internet Software & Services	13.2%	25.7%	12.5%	62
...	...	...	...	...
Health Care Technology	29.3%	18.2%	-11.1%	12
Marine	49.1%	28.6%	-20.5%	5
IT Services	37.0%	16.2%	-20.7%	52
Thrifts & Mortgage Finance	33.5%	9.2%	-24.4%	53
Tobacco	71.5%	34.0%	-37.5%	7

The percentages are the Herfindahl Score for the Industries

Indexation on the Rise

Figure 47: Active vs Passive Fund Flows - Diverging



Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 48: Reduced Cash Trading in Last Decade

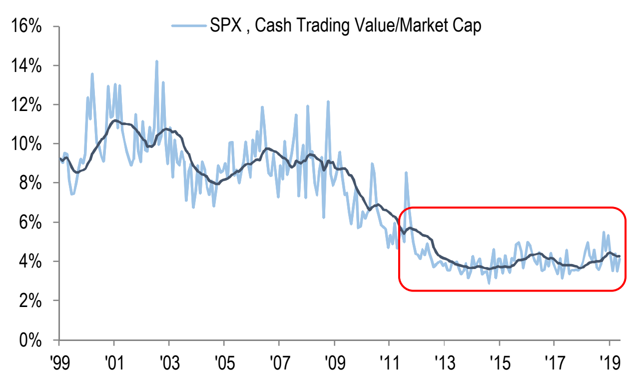
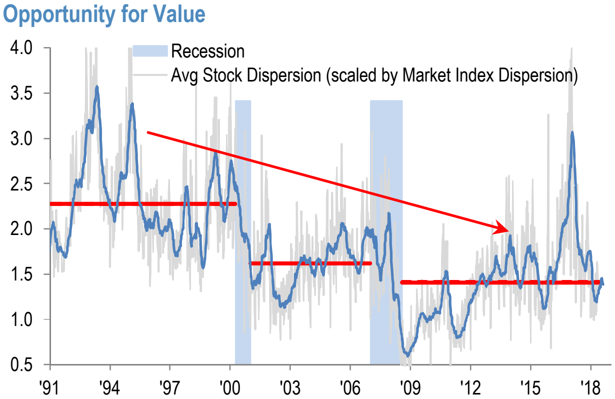
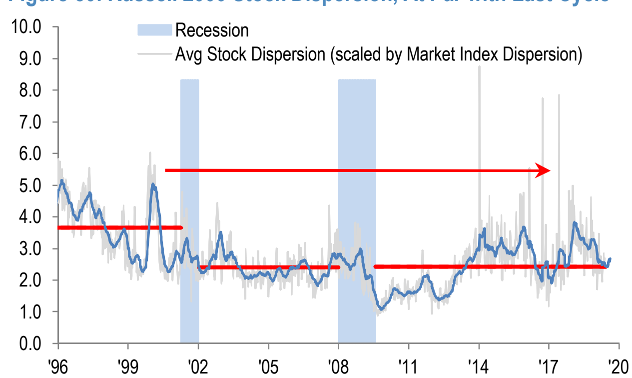


Figure 49: S&P 500 Stock Dispersion Lowest this Cycle – Less Opportunity for Value



Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 50: Russell 2000 Stock Dispersion, At Par with Last Cycle



average of 52-week rolling pairwise correlation of S&P 500 stocks

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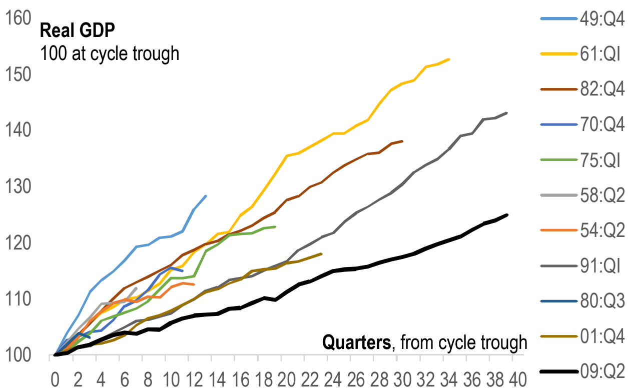
dubravko.lakos-bujas@jpmorgan.com

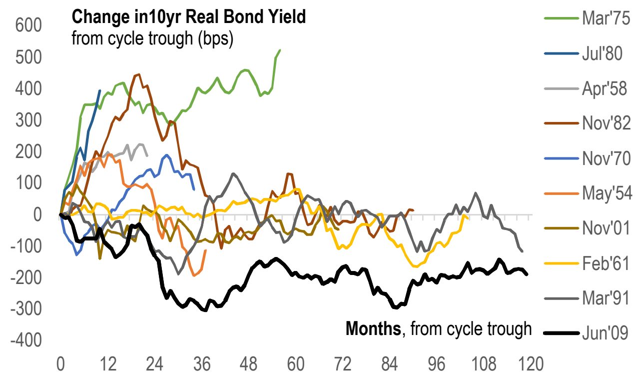
Weaker Economic Growth

Figure 51: Current Cycle Is the Weakest Post-War Recovery



Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 52: Real Interest Rates, Most Subdued Post-War Cycle



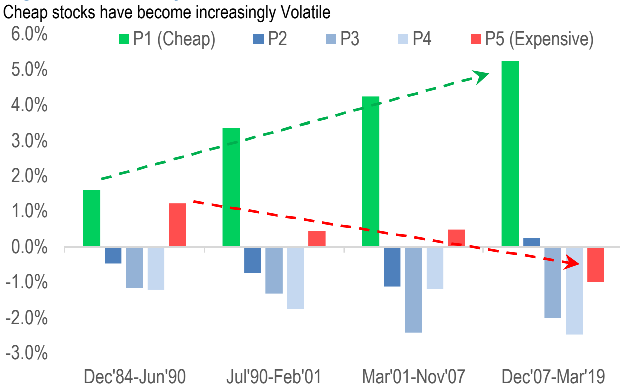
Real Yield = 10-Year Bond Yield - Core Rate of Inflation

Fundamental Characteristics of Value

Value Intrinsically Risky

Figure 53: Volatility of Value Quintiles (Relative to Market)

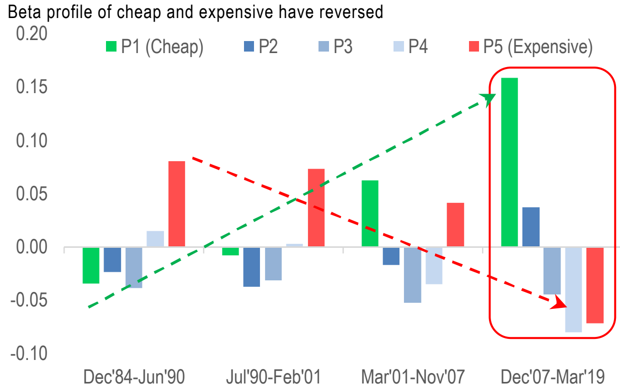
Cheap stocks have become increasingly Volatile



Source: J.P. Morgan US Equity Strategy and Quantitative Research

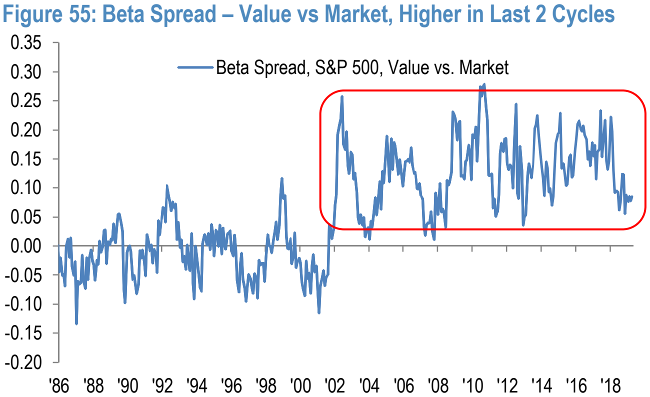
Figure 54: Beta of Value Quintiles (Relative to Market)

Beta profile of cheap and expensive have reversed



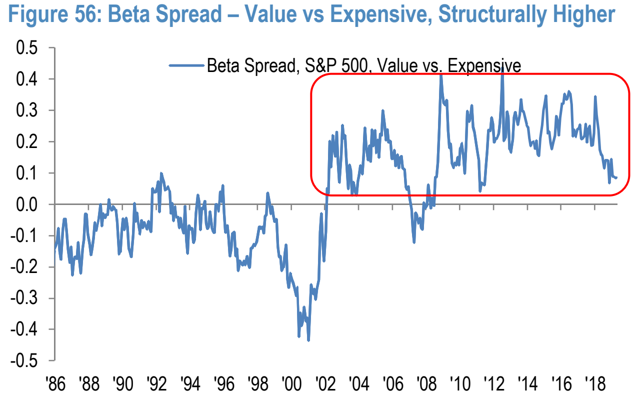
Quintile averages vs Market averages of S&P 500 stocks

Figure 55: Beta Spread – Value vs Market, Higher in Last 2 Cycles



Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 56: Beta Spread – Value vs Expensive, Structurally Higher



Quintiles of S&P 500 stocks based on Sector Neutral Scores

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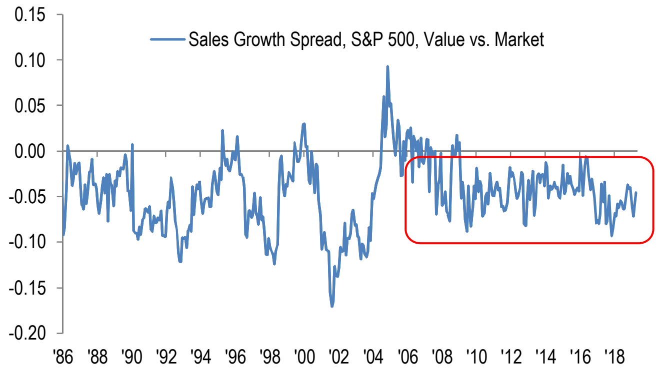
Spreads in ROE, Sales Growth, FCF Growth, Operating Margin and Net/Debt to Equity in Cheap Portfolio vs Market and Cheap Portfolio vs Expensive Portfolio. Most charts demonstrate persistent levels and weak cyclicality.

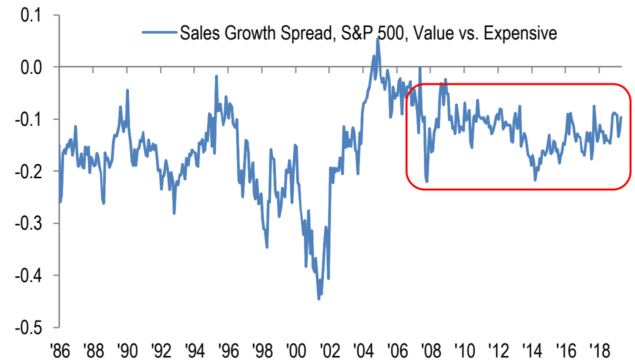
Persistently Weaker Growth in Value Stocks

Figure 57: Sales Growth Spread – Value vs Market



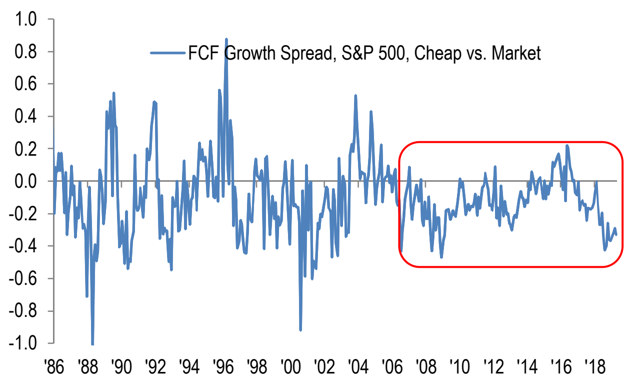
Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 58: Sales Growth Spread – Value vs Expensive



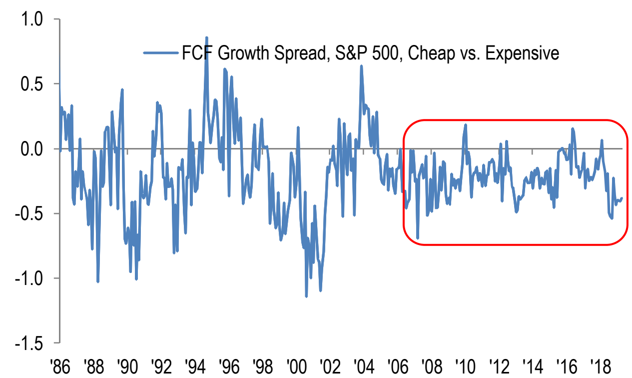
Top Quintile of S&P 500 stocks based on Sector Neutral Scores

Figure 59: FCF Growth Spread – Value vs Market



Source: J.P. Morgan US Equity Strategy and Quantitative Research

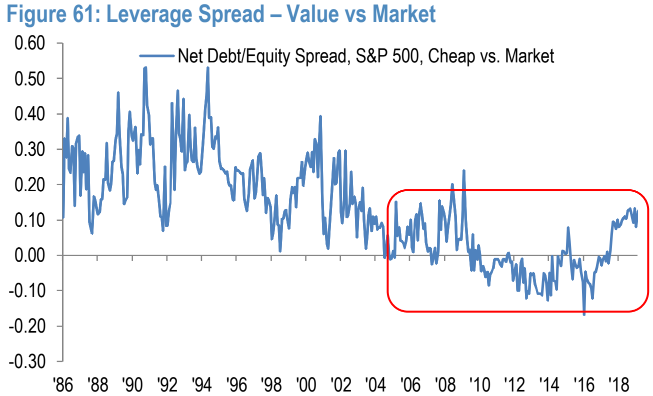
Figure 60: FCF Growth Spread – Value vs Expensive



Top Quintile of S&P 500 stocks based on Sector Neutral Scores

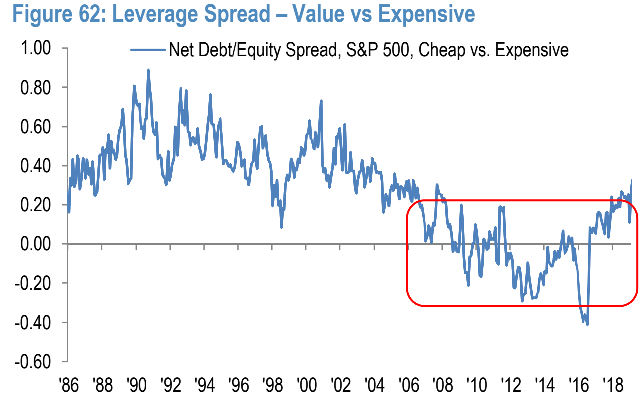
Unusually Low Leverage in Value Stocks This Cycle

Figure 61: Leverage Spread – Value vs Market



Source: J.P. Morgan US Equity Strategy and Quantitative Research

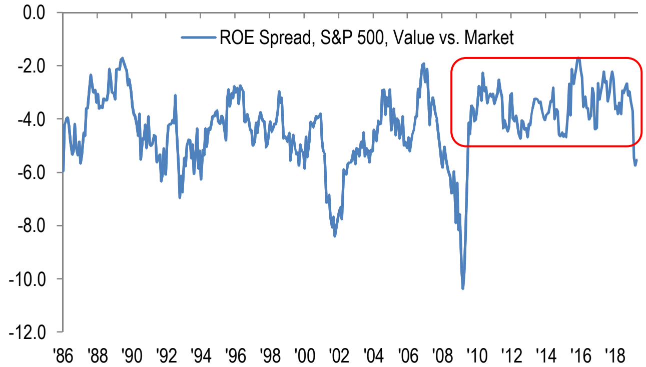
Figure 62: Leverage Spread – Value vs Expensive



Top Quintile of S&P 500 stocks based on Sector Neutral Scores

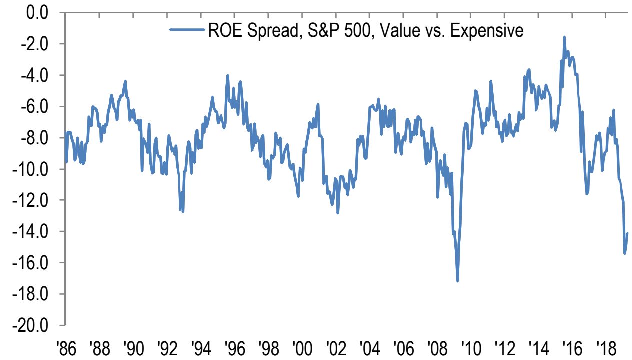
Profitability Measures Mixed in Value Stocks

Figure 63: ROE Spread – Value vs Market



Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 64: ROE Spread – Value vs Expensive



Top Quintile of S&P 500 stocks based on Sector Neutral Scores

Figure 65: Operating Margin Spread – Value vs Market

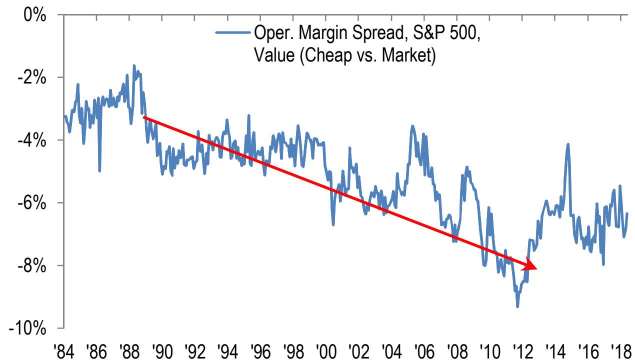
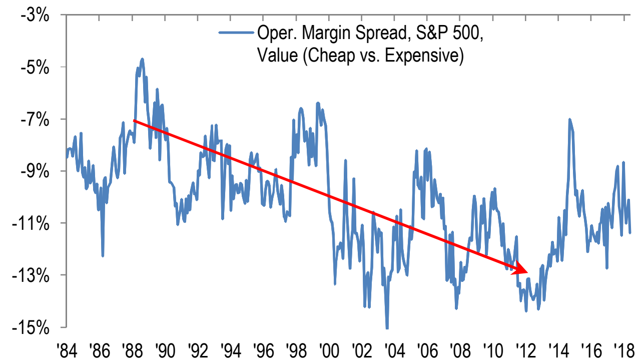


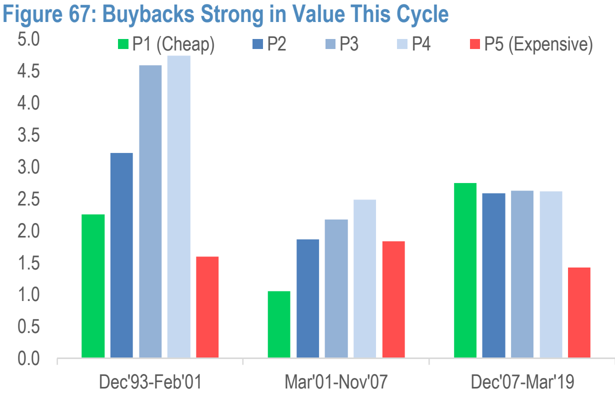
Figure 66: Operating Margin Spread – Value vs Expensive



Source: J.P. Morgan US Equity Strategy and Quantitative Research

Buybacks Supportive of Value

Figure 67: Buybacks Strong in Value This Cycle



Source: J.P. Morgan US Equity Strategy and Quantitative Research

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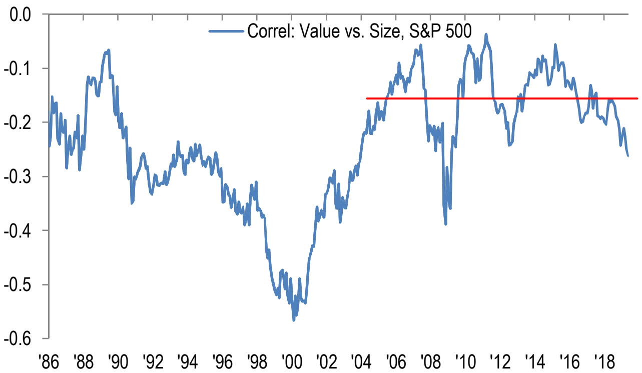
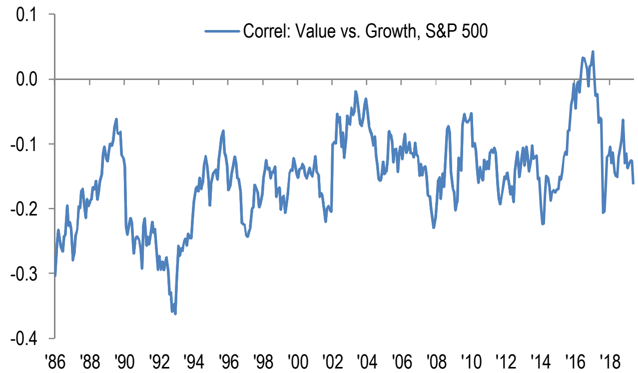
Value Alignment with Styles

Figure 68: Value-Size Correlation Structurally Higher



Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 69: Value-Growth Correlation



Cross-sectional Rank Correlation, Sector Neutral Scores

Figure 70: Value-Low Vol Correlation Structurally Higher

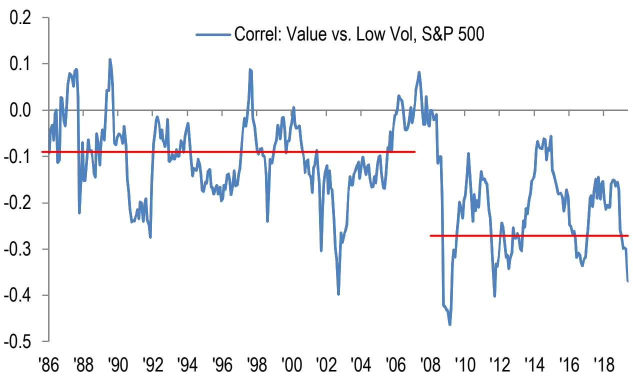
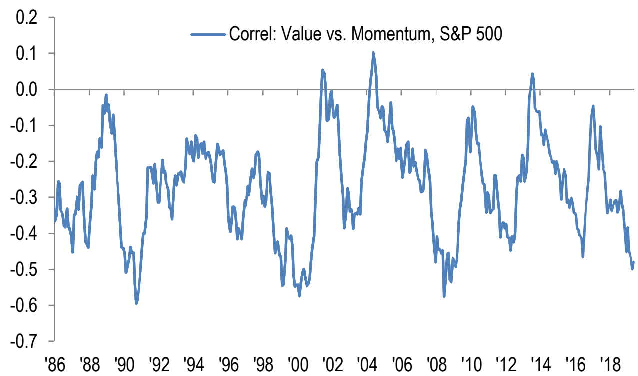


Figure 71: Value-Momentum Correlation Extremely Low



Cross-sectional Rank Correlation, Sector Neutral Scores

Figure 72: Value-Beta Correlation Structurally Higher

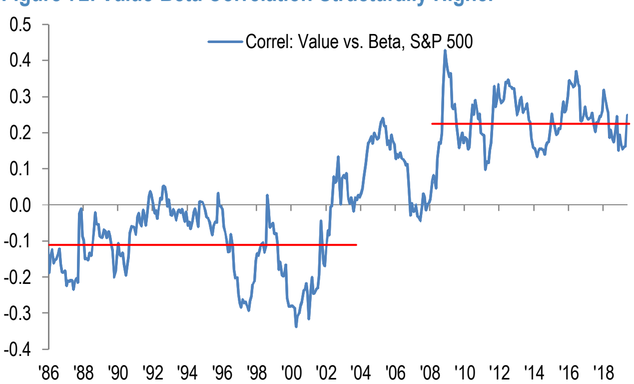
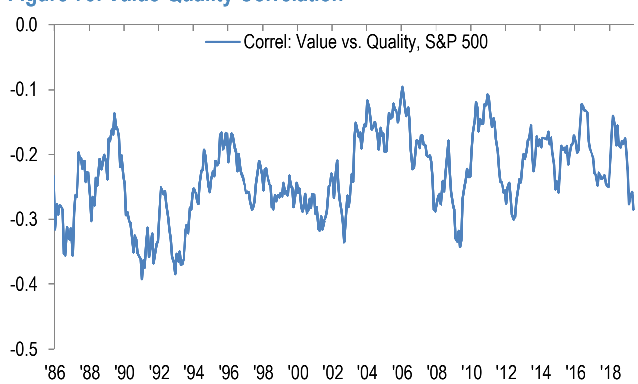


Figure 73: Value-Quality Correlation



Source: J.P. Morgan US Equity Strategy and Quantitative Research

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Sector – Style Relationship

Figure 74: Sector Exposure to Styles

Industry	Cheap Value	High Growth	Good Quality	Low Vol.	High Mom.
Energy	Favored	Favored	Neutral	Unfavored	Most Unfavored
Energy Equip & Serv	Favored	Most Unfavored	Unfavored	Unfavored	Most Unfavored
Oil, Gas & Cons Fuels	Neutral	Most Favored	Neutral	Unfavored	Unfavored
Materials	Neutral	Neutral	Unfavored	Neutral	Unfavored
Chemicals	Neutral	Neutral	Unfavored	Favored	Neutral
Construction Materials	Unfavored	Favored	Unfavored	Neutral	Neutral
Containers & Packaging	Favored	Neutral	Unfavored	Neutral	Unfavored
Metals & Mining	Favored	Neutral	Neutral	Neutral	Most Unfavored
Industrials	Neutral	Neutral	Neutral	Neutral	Neutral
Aerospace & Defense	Neutral	Neutral	Favored	Neutral	Neutral
Building Products	Neutral	Neutral	Favored	Neutral	Neutral
Construction & Engg	Most Favored	Neutral	Unfavored	Unfavored	Neutral
Electrical Equip	Unfavored	Neutral	Neutral	Neutral	Neutral
Industrial Conglomerates	Unfavored	Unfavored	Neutral	Neutral	Neutral
Machinery	Neutral	Unfavored	Neutral	Neutral	Neutral
Trading Cos & Distri	Neutral	Favored	Favored	Most Unfavored	Neutral
Comm. Serv & Supplies	Unfavored	Neutral	Neutral	Favored	Most Favored
Professional Serv	Unfavored	Neutral	Unfavored	Neutral	Neutral
Air Freight & Logistics	Neutral	Favored	Most Favored	Neutral	Unfavored
Airlines	Most Favored	Neutral	Neutral	Unfavored	Neutral
Road & Rail	Unfavored	Favored	Neutral	Neutral	Favored
Cons Disc	Neutral	Neutral	Neutral	Neutral	Neutral
Auto Components	Favored	Neutral	Favored	Unfavored	Unfavored
Automobiles	Most Favored	Unfavored	Neutral	Unfavored	Unfavored
Household Durables	Favored	Favored	Unfavored	Unfavored	Unfavored
Leisure Products	Unfavored	Most Unfavored	Most Unfavored	Most Unfavored	Unfavored
Textiles, Apparel & Luxury	Neutral	Favored	Neutral	Unfavored	Neutral
Hotels, Rest. & Leisure	Unfavored	Unfavored	Neutral	Neutral	Neutral
Diversified Consumer Serv	Unfavored	Favored	-	Neutral	Unfavored
Distributors	Favored	Favored	Unfavored	Favored	Neutral
Internet & Direct Marketing	Unfavored	Favored	Favored	Neutral	Neutral
Multiline Retail	Favored	Neutral	Neutral	Neutral	Neutral
Specialty Retail	Neutral	Neutral	Most Favored	Neutral	Favored
Cons Stap	Neutral	Unfavored	Neutral	Neutral	Neutral
Food & Staples Retailing	Favored	Neutral	Favored	Favored	Neutral
Beverages	Unfavored	Neutral	Most Favored	Neutral	Neutral
Food Products	Neutral	Unfavored	Unfavored	Neutral	Neutral
Tobacco	Unfavored	Neutral	Favored	Neutral	Neutral
Household Products	Unfavored	Unfavored	Favored	Most Favored	Most Favored
Personal Products	Neutral	Unfavored	Unfavored	Most Unfavored	Most Unfavored

Industry	Cheap Value	High Growth	Good Quality	Low Vol.	High Mom.
H Care	Neutral	Neutral	Neutral	Neutral	Neutral
H Care Equip & Suppli	Unfavored	Favored	Neutral	Neutral	Favored
H Care Providers & Servic	Favored	Neutral	Unfavored	Neutral	Unfavored
H Care Technology	Unfavored	Neutral	Neutral	Favored	Neutral
Biotechnology	Neutral	Favored	Most Favored	Unfavored	Neutral
Pharmaceuticals	Neutral	Neutral	Neutral	Neutral	Unfavored
Life Sciences Tools & Serv	Unfavored	Neutral	Favored	Neutral	Most Favored
Financials	Favored	Neutral	Unfavored	Neutral	Unfavored
Banks	Favored	Favored	Unfavored	Neutral	Unfavored
Diversified Financial Serv	Favored	Most Unfavored	Unfavored	Neutral	Unfavored
Consumer Finance	Favored	Neutral	Neutral	Neutral	Neutral
Capital Markets	Neutral	Neutral	Unfavored	Neutral	Unfavored
Insurance	Favored	Neutral	Unfavored	Favored	Neutral
Technology	Unfavored	Neutral	Favored	Neutral	Favored
IT Serv	Unfavored	Neutral	Favored	Favored	Favored
Software	Most Unfavored	Favored	Favored	Neutral	Most Favored
Communications Equip	Unfavored	Unfavored	Favored	Neutral	Favored
Tech Hardware, Storage	Favored	Unfavored	Most Favored	Unfavored	Unfavored
Electronic Equip, Instrume	Unfavored	Neutral	Neutral	Unfavored	Favored
Semiconductors	Unfavored	Favored	Most Favored	Unfavored	Favored
Comm	Neutral	Favored	Neutral	Unfavored	Neutral
Diversified Telecom	Most Favored	Favored	Unfavored	Favored	Unfavored
Media	Favored	Favored	Unfavored	Neutral	Neutral
Entertainment	Unfavored	Favored	Favored	Unfavored	Unfavored
Interactive Media & Serv	Unfavored	Most Favored	Neutral	Unfavored	Favored
Utilities	Neutral	Unfavored	Unfavored	Most Favored	Favored
Electric Util	Neutral	Most Unfavored	Unfavored	Most Favored	Favored
Gas Util	Unfavored	-	Unfavored	Most Favored	Favored
Multi-Util	Neutral	Unfavored	Unfavored	Most Favored	Favored
Water Util	Unfavored	Most Unfavored	Neutral	Most Favored	Favored
Inde Power and Renewable	Neutral	Neutral	Favored	Favored	Most Favored
REITs	Unfavored	Neutral	Unfavored	Favored	Favored
Equity Real Estate Inv	Unfavored	Unfavored	Unfavored	Favored	Favored
Real Estate Mngmt & Dvlpmt	Favored	Most Favored	Neutral	Neutral	Neutral

Most Favored	*Favored*	*Neutral*	*Unfavored*	*Most Unfavored*
Most Favored	Favored	Neutral	Unfavored	Most Unfavored

Source: J.P. Morgan US Equity Strategy and Quantitative Research

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Sector Valuations vs Fundamentals

Figure 75: Energy – Price-to-Book vs Return on Equity

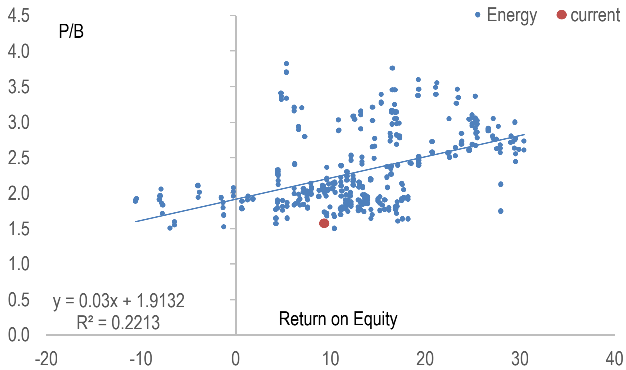


Figure 76: Materials – Price-to-Book vs Return on Equity

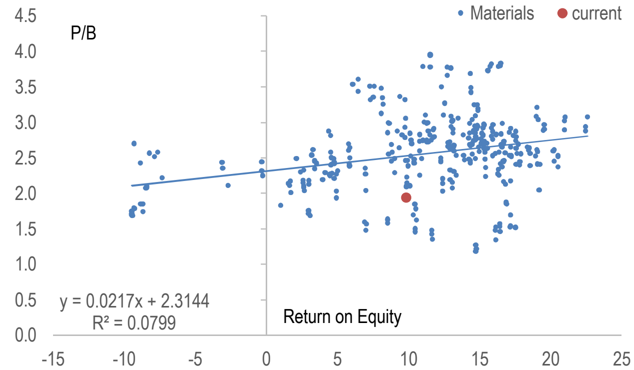


Figure 77: Industrials – Price-to-Book vs Return on Equity

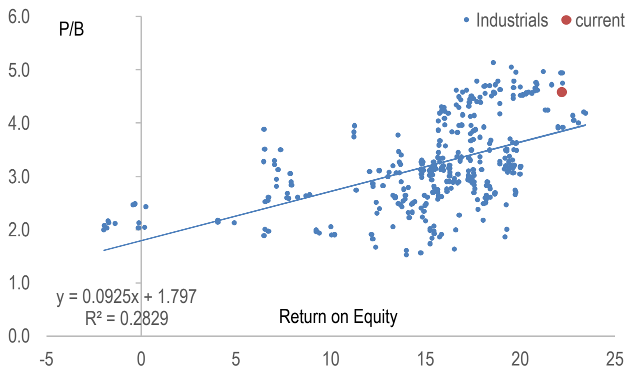


Figure 78: Discretionary – Price-to-Book vs Return on Equity

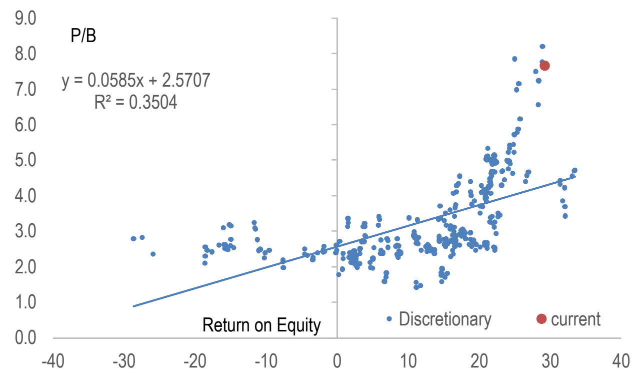


Figure 79: Staples – Price-to-Book vs Return on Equity

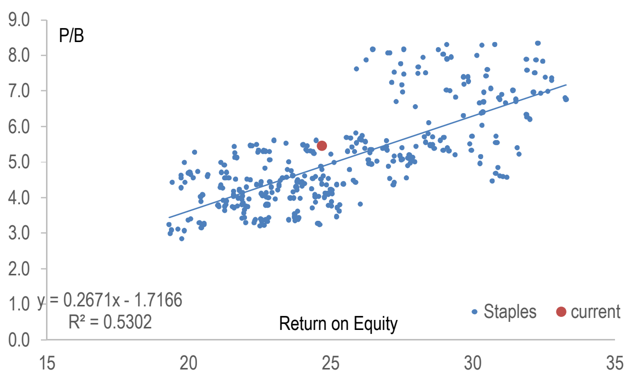
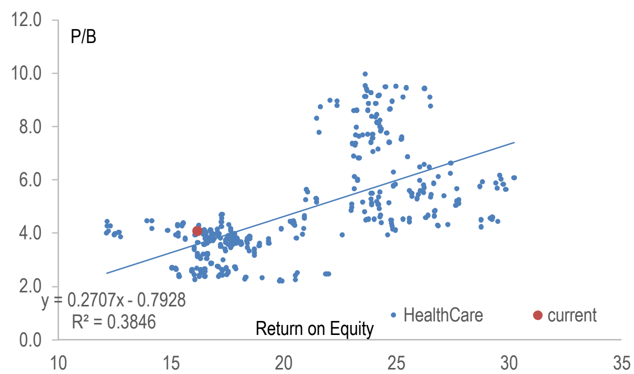


Figure 80: Health Care – Price-to-Book vs Return on Equity



Source: J.P. Morgan US Equity Strategy and Quantitative Research

Figure 81: Financials – Price-to-Book vs Return on Equity

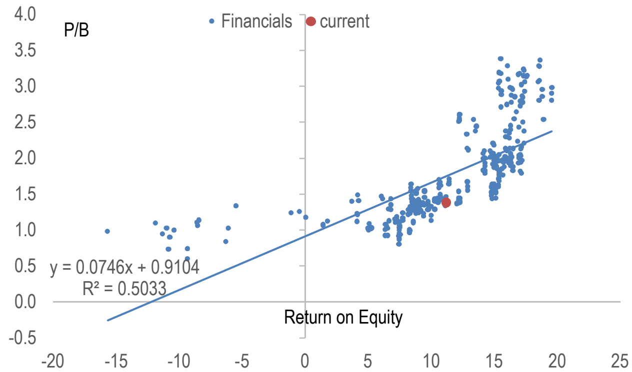


Figure 82: Technology – Price-to-Book vs Return on Equity

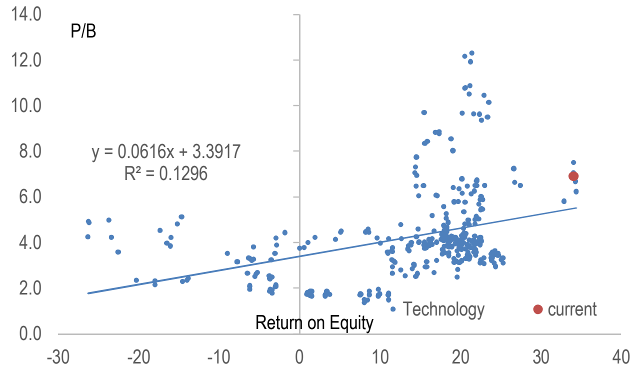


Figure 83: Telecom – Price-to-Book vs Return on Equity

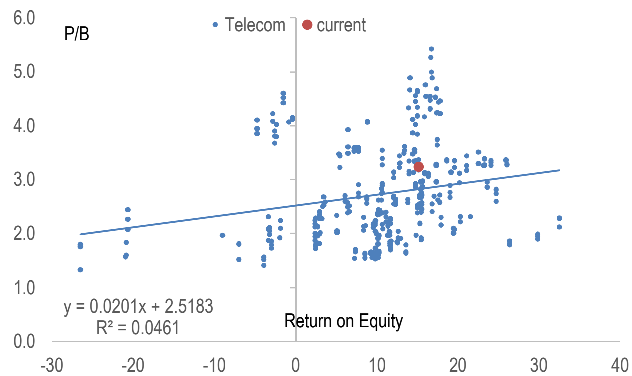


Figure 84: Utilities – Price-to-Book vs Return on Equity

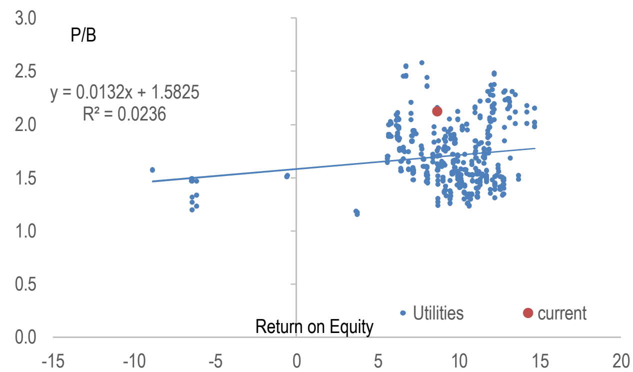
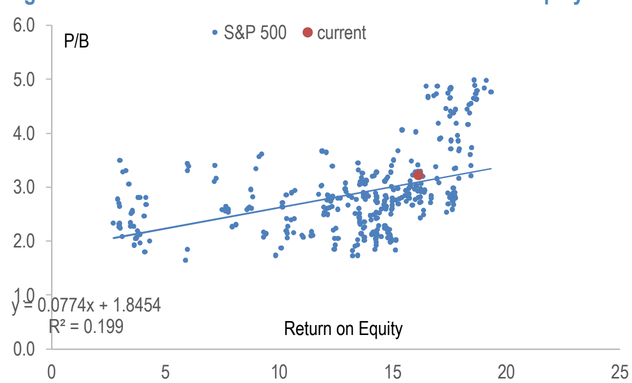


Figure 85: Overall Market – Price-to-Book vs Return on Equity



Source: J.P. Morgan US Equity Strategy and Quantitative Research

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Corrected Note: We corrected Figures 59 and 60 in this report.

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