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TRIVARIATE RESEARCH

IS THERE A POST-ENERGY SPIKE PLAYBOOK?

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RESEARCH SUMMARY AND INVESTMENT CONCLUSIONS

In light of the recent surge in oil prices, and uncertainty among investors as to what the appropriate playbook is, we examined prior oil spikes in search of patterns. We found six spikes - defined as breaking a threshold of 25% price increase over a 6-month rolling window - in the last 20 years, lasting a median duration of 70 days, and moving around 20% higher on average after the initial tipping point. After looking at these events, we have a few conclusions:

Remain bullish energy stocks: Given that supply shortages in the energy sector cannot be quickly be remedied, and demand remains robust, **we believe the distribution of outcomes for oil is positively skewed, and as such we remain bullish on energy equities.**

History shows small caps could work next: We analyzed the subsequent 3-month returns following each oil price hike by looking at size, substance, and style. Size seemed to matter the most, with consistent subsequent outperformance in prior cycles shown by micro-and-small cap stocks. Mega caps typically lagged. Given the huge outperformance of mega caps both last year and the continued underperformance this year, a **case study where small caps consistently beat large caps is noteworthy in this environment.** Value typically beat growth, but quality did not seem to matter as much following oil spikes.

Industry conclusions are difficult: While there is substantial variance in industry 3-month forward returns following the initial oil hikes, the best post-spike returns are for transportation, durables, retail and services; the worst for autos, staples, and insurance. However, the devil is in the details – rails often did well while airlines did poorly, muddying the conclusion about transports, and other times, the market anticipated oil would peak imminently and began discounting improvements or deterioration in fundamentals in certain industries. Amongst the noise, one industry conclusion we can offer is that we believe consumer staples are likely to lag this time around, as margin expectations have remained robust, but input costs will continue to rise and valuations are stretched.

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RESEARCH SUMMARY AND INVESTMENT CONCLUSIONS

Initial valuation and prior momentum matter: Part of the reason there is not a perfect historical industry-by-industry analog to today is macro conditions – each oil surge had different interest rate environments, policy paths, and geopolitical risks – and as such, starting valuation and prior price momentum for certain industries were far different for previous oil spikes relative to today. This fact should not deter investors from looking at valuation and momentum, which we still believe are efficacious signals. **Energy and materials have good price momentum and are still relatively cheap, where as software and autos have bad momentum and still appear expensive on average.**

Selling consumer discretionary and buying energy is not a Texas hedge: Given elevated oil and commodity prices, we think it is likely the consumer will become pinched and discretionary spending will be curtailed, while at the same time consumer companies face sustainably high labor and commodity costs. We analyzed the correlation of the consumer discretionary and energy sector returns following oil price spikes and observed some periods where they trade alike, and some where they trade differently – they are not necessarily sustainably anti-correlated, despite the recent strong outperformance of energy.

Changing our sector weights: Given the huge volatility in stocks, we are making some changes to our recommendations relative to the benchmark. **Our largest change is to lower our consumer discretionary exposure by 5%, now at 10% vs. a benchmark weight of 11.5%.** A key focus of our research today is what to do with our outsized energy and materials recommendations. We added to both, 2% to energy and 1% to materials as our conviction has not waned. We are also adding 2% to our overweight in healthcare, sticking with our barbell of healthcare services and biotechnology. Given we think directional dovishness is more likely than directional hawkishness from here, and we have been too bearish on yield-sensitive staples, we are adding 1% to REITs and 1% to utilities for balance. **Page 9 summarizes our sector recommendations.**

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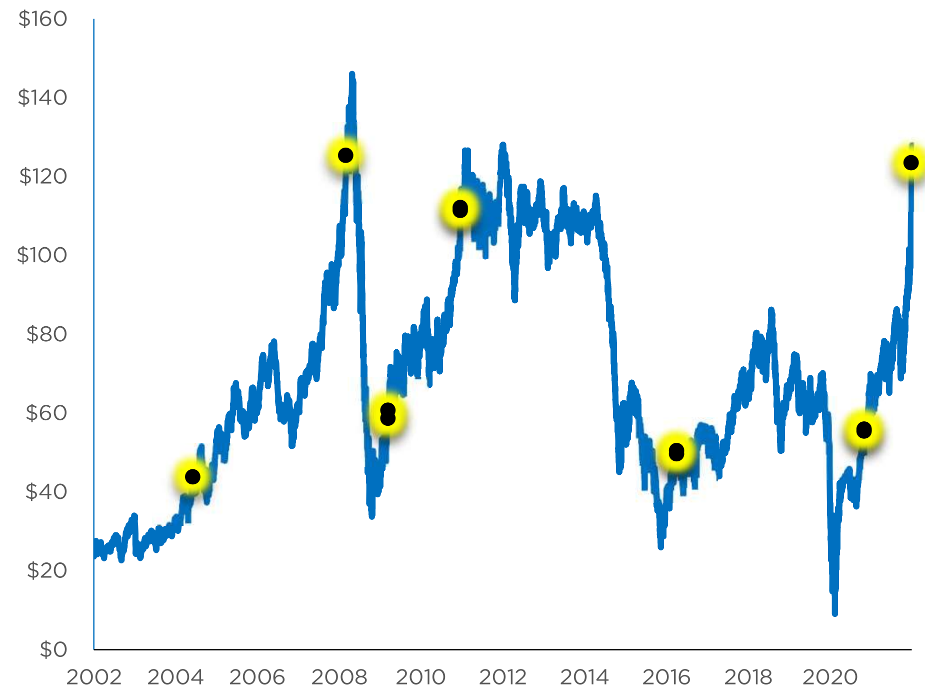
WE OBSERVED SIX PRIOR ENERGY SPIKES IN THE LAST 20 YEARS

Fueled by the huge volatility in oil due to supply / demand imbalances, and now exacerbated by the Russia / Ukraine war, we decided to study oil spikes and look for relevant historical analogs. We found six moves of 25% or more over 6-month rolling windows, lasting a median duration of 70 days, and moving around 20% higher on average after the initial tipping point (left chart). While the amplitude and periodicity of the current cycle are yet to be known, the current starting point for this oil price hike is higher than all but one in the previous 20+ years (right chart).

25%+ Moves in Brent Oil Prices Over 6-Month Windows

Starting Date	End Date	Length (Days)	25% Move Price	Peak Price	Dist. To Peak
8/13/2004	10/26/2004	74	$43.88	$51.56	17.5%
5/9/2008	7/4/2008	56	$125.4	$144.42	15.2%
5/22/2009	8/24/2009	94	$60.78	$74.26	22.2%
2/25/2011	5/2/2011	66	$112.14	$125.12	11.6%
6/10/2016	5/22/2018	711	$50.54	$79.57	57.4%
1/8/2021	3/11/2021	62	$55.99	$69.63	24.4%
3/4/2022			$118.11	$111.14	(5.9%)
Average		70			19.8%

Brent Oil Price vs. 25% Moves Over 6-Month Periods



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COULD SMALL CAP STOCKS WORK NOW?

We analyzed the subsequent 3-month returns following each oil price hike by looking at size, substance, and style. Size seemed to matter the most, with consistent subsequent outperformance in prior cycles shown by micro-and-small cap stocks. We wonder if this is because economic growth driving strong demand typically drove higher oil, because this cycle inferior profit margins have driven large cap outperformance so far this cycle. Nonetheless, it has happened all six times, and we have not seen any case studies favoring small caps recently, so this result is of note. Value typically beat growth, but quality did not seem to matter as much.

3m Index-Relative Forward Returns of Style, Size, and Substance Baskets after Oil Spike

Group	8/13/2004	5/9/2008	5/22/2009	2/25/2011	6/10/2016	1/8/2021	Average	Median
Micro-Cap	6.9%	9.5%	11.1%	(1.4%)	4.8%	3.2%	5.7%	5.9%
Small Cap	9.0%	6.8%	5.9%	1.3%	2.1%	0.6%	4.3%	4.0%
Mid Cap	5.0%	2.1%	4.0%	3.3%	0.2%	(0.4%)	2.4%	2.7%
Value	2.3%	1.8%	4.0%	0.5%	0.8%	3.3%	2.1%	2.0%
Junk Substance	1.8%	(2.1%)	5.2%	0.2%	0.8%	2.1%	1.3%	1.3%
Low Substance	2.8%	1.3%	1.0%	(0.2%)	(0.7%)	0.9%	0.9%	1.0%
High Substance	0.3%	3.8%	(2.5%)	0.7%	1.8%	(2.2%)	0.3%	0.5%
Large Cap	2.4%	(0.6%)	0.5%	1.3%	(0.3%)	(0.7%)	0.4%	0.1%
Medium Substance	0.9%	(0.2%)	0.3%	0.1%	(1.0%)	1.2%	0.2%	0.2%
Growth	3.6%	2.2%	0.3%	(0.3%)	1.1%	(1.6%)	0.9%	0.7%
Neither Value nor Growth	(0.5%)	1.6%	(1.1%)	0.2%	(0.7%)	1.0%	0.1%	(0.2%)
Mega Cap	(2.3%)	1.1%	(1.8%)	(2.2%)	0.5%	(1.0%)	(1.0%)	(1.4%)

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WE WORRY HISTORICAL INDUSTRY ANALYSIS IS NOT INSTRUCTIVE

While there is substantial variance of 3-month forward returns following the initial oil hikes, the best subsequent returns are for transportation, durables, and retail; the worst for autos, staples, and insurance. But the devil is in the details, as sometimes rails did well while airlines did poorly, or the market anticipated oil would peak and began discounting improvements or deterioration in fundamentals in an anticipatory fashion. Nonetheless, laggards with existing headwinds like Household & Personal products and Food & Beverage seem like good underweights to us.

3m Index-Relative Forward Returns by Industry Group after Oil Spike

Group	8/13/2004	5/9/2008	5/22/2009	2/25/2011	6/10/2016	1/18/2021	Mean	Median
Transportation	10.1%	7.4%	7.2%	3.2%	0.4%	4.5%	5.5%	5.9%
Consumer Durables & Apparel	6.9%	4.5%	9.8%	4.2%	(1.7%)	(1.4%)	3.7%	4.4%
Retailing	11.5%	4.7%	2.7%	4.3%	0.8%	1.3%	4.2%	3.5%
Consumer Services	11.2%	2.3%	(0.3%)	3.0%	(1.9%)	2.5%	2.8%	2.4%
Health Care Equipment & Services	2.6%	11.8%	1.6%	7.4%	(1.7%)	(6.3%)	2.6%	2.1%
Diversified Financials	0.6%	(4.8%)	10.5%	(9.2%)	3.4%	4.1%	0.7%	2.0%
Banks	1.0%	(2.3%)	0.7%	(7.9%)	3.4%	7.7%	0.4%	0.9%
Commercial & Professional Services	(0.9%)	7.7%	(1.1%)	2.9%	(0.2%)	(3.8%)	0.8%	(0.5%)
Capital Goods	3.1%	(0.7%)	(1.3%)	(1.1%)	(0.5%)	2.2%	0.3%	(0.6%)
Materials	5.4%	(7.7%)	0.9%	(0.2%)	(1.1%)	(3.5%)	(1.0%)	(0.7%)
Energy	3.1%	(9.4%)	(6.0%)	(2.7%)	(0.3%)	6.4%	(1.5%)	(1.5%)
Pharma & Biotech	(8.8%)	17.5%	(2.3%)	10.2%	(0.7%)	(10.4%)	0.9%	(1.5%)
Food & Staples	(1.5%)	6.3%	(8.5%)	6.3%	(2.9%)	(7.6%)	(1.3%)	(2.2%)
Insurance	(6.1%)	(5.3%)	1.7%	(6.8%)	0.8%	2.0%	(2.3%)	(2.2%)
Food, Beverage & Tobacco	(3.9%)	7.9%	(4.2%)	8.0%	(3.6%)	(1.3%)	0.5%	(2.4%)
Household & Personal Products	(9.1%)	13.2%	(6.9%)	5.1%	(0.3%)	(5.8%)	(0.6%)	(3.0%)
Automobiles & Components	(3.7%)	(9.5%)	22.5%	(3.3%)	(2.7%)	(13.5%)	(1.7%)	(3.5%)

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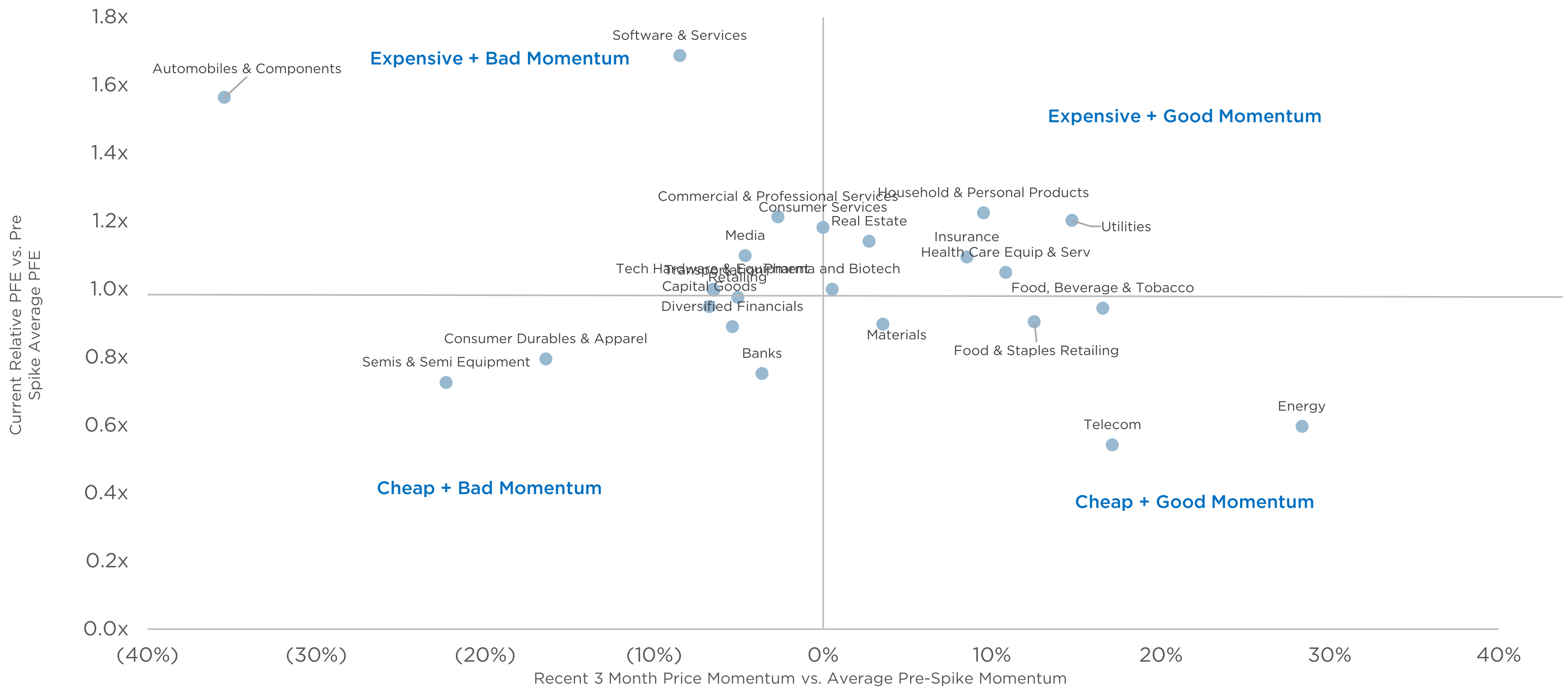
ENERGY AND MATERIALS ARE STILL CHEAP, SOFTWARE STILL ISN'T

We looked at the ratio of industry price-to-forward earnings vs. SP500 price-to-forward earnings at the time of an oil spike, and the median industry 3-month price momentum pre oil spike and compared those to current valuation and 3-month trailing momentum. Generally, being cheap with good momentum is better than expensive and bad, supporting our existing overweight on energy and materials.



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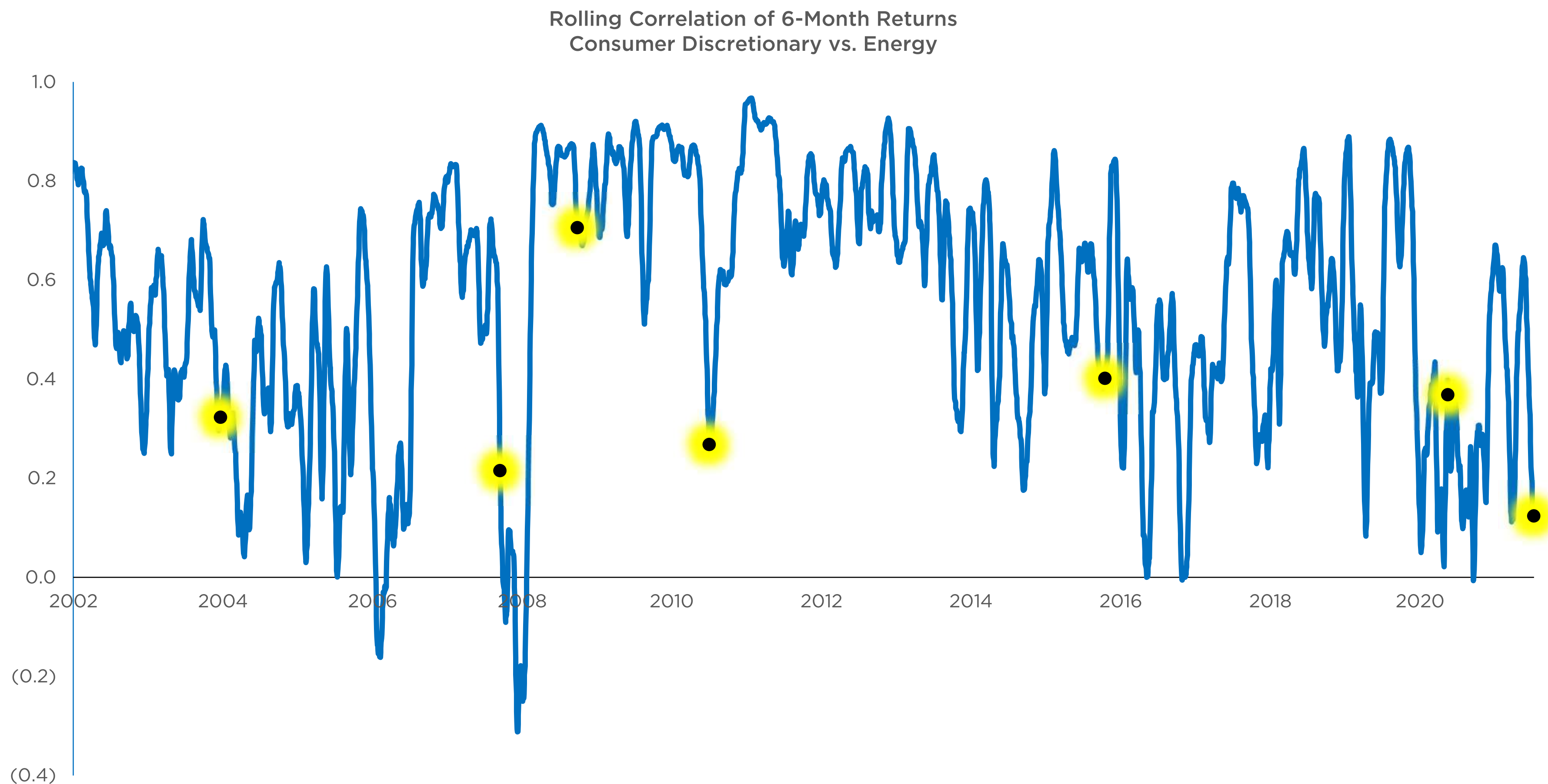
LONG ENERGY AND SHORT DISCRETIONARY IS NOT A TEXAS HEDGE

We analyzed the correlation of the consumer discretionary and energy stock's returns and observed some periods where they trade alike, and some where they trade differently following energy price hikes (yellow dots). At present, return correlations over a six-month horizon are near zero. We were worried that shorting consumer discretionary stocks while owning a lot of energy would be a Texas Hedge, given the recent strong outperformance, but that is not borne out by history.



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TRIVARIATE SECTOR OVERVIEW: SUMMARY RECOMMENDATIONS

We are modifying our bets on energy and materials to keep overweight and capture what we believe to be continued supply / demand imbalances. We are reducing our exposure substantially to consumer discretionary, believing a combination of rising input costs, including most commodities and oil, and rising rates will be negative for estimate achievability. We would rather own REITS or utilities than staples. We remain market-weight technology. The combination of healthcare services and biotechnology should be better than profitless software.

Trivariate Sector Recommendations

Sector	Total S&P 500 Market Cap. (US$ Bil.)	Current S&P 500 Weight	Trivariate-Recommended Weight		Current Trivariate-Relative Weight	Trivariate Recommendation	Comments
			Previous	Current			
Materials	946.94	2.6%	6.0%	7.0%	4.4%	Overweight	Buy the cheap stocks with upward revisions
Energy	1,468.12	4.0%	6.0%	8.0%	4.0%	Overweight	Supply won't catch up for awhile and we do not see demand destruction yet
Health Care	5,013.63	13.7%	15.0%	17.0%	3.3%	Overweight	Healthcare services have cheap growth, and the biotechnology sell-off appears over-done
Utilities	994.65	2.7%	3.0%	4.0%	1.3%	Equal-Weight	Some idiosyncratic investments are sensible
Communication Services	3,497.80	9.5%	12.0%	10.0%	0.5%	Equal-Weight	Makes sense to keep market-weight FAANGM
Real Estate	1,005.66	2.7%	1.0%	2.0%	(0.7%)	Equal-Weight	Metrics for stock selection are becoming more effective, commercial remains challenged
Information Technology	10,207.10	27.8%	27.0%	27.0%	(0.8%)	Equal-Weight	Focus on positive FCF, pricing power – avoid profitless software
Financials	4,165.79	11.4%	10.0%	10.0%	(1.4%)	Equal-Weight	Prefer large cap banks to small
Consumer Discretionary	4,209.84	11.5%	15.0%	10.0%	(1.5%)	Equal-Weight	Margins are at risk with rising input costs
Consumer Staples	2,268.25	6.2%	2.0%	2.0%	(4.2%)	Under-Weight	Plenty of short ideas in idiosyncratic staples, and valuation of large-caps is stretched
Industrials	2,928.90	8.0%	3.0%	3.0%	(5.0%)	Under-Weight	Industrial activity is rolling over, but earnings expectation are very high

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