EQUITY 101 | U.S.

Considering Capex Efficiency

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INTRODUCTION

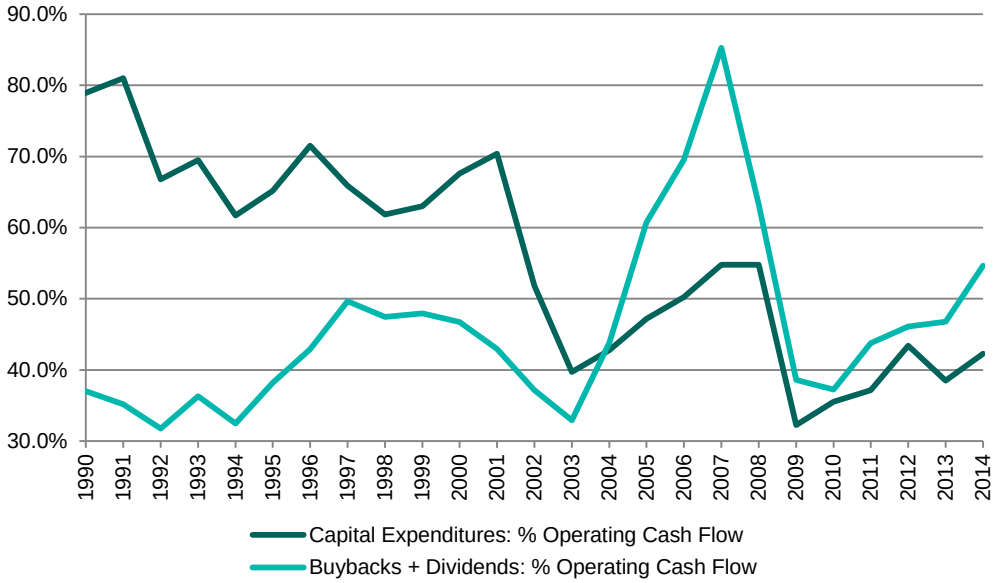
In the world of textbook corporate finance, there are three options that companies can undertake to dispense excess cash. Firms can: (1) invest in capital expenditures, (2) make an acquisition, or (3) return cash to shareholders by increasing dividends or buying back stock, or they can do any combination of the three. The first and second actions are taken with the goal of increasing the asset base in order to drive future sales growth and profits. Capital expenditures involve companies investing in physical assets (e.g., property, plants, or equipment), research and development, or undertaking new projects in order to sustain long-term growth. Acquisitions are similar to capital expenditures but on a much grander scale and, more often than not, at a much higher premium.

Financial theory states that if management cannot find enough value-creating investments, then excess cash should be returned to shareholders through increased dividends or share buybacks.

It's important for a company to be disciplined about its capital expenditures and neither overinvest nor undertake investment projects that do not exceed the company's internal cost of capital. Furthermore, the concept of agency costs also factors in, whereby managers can be tempted to pursue "empire building" and allocate cash to less worthwhile projects in a bid to boost their personal power and prestige. Financial theory states that if management cannot find enough value-creating investments, then excess cash should be returned to shareholders through increased dividends or share buybacks. This theory supports the idea that the shareholder is better equipped to decide where to deploy this excess cash.

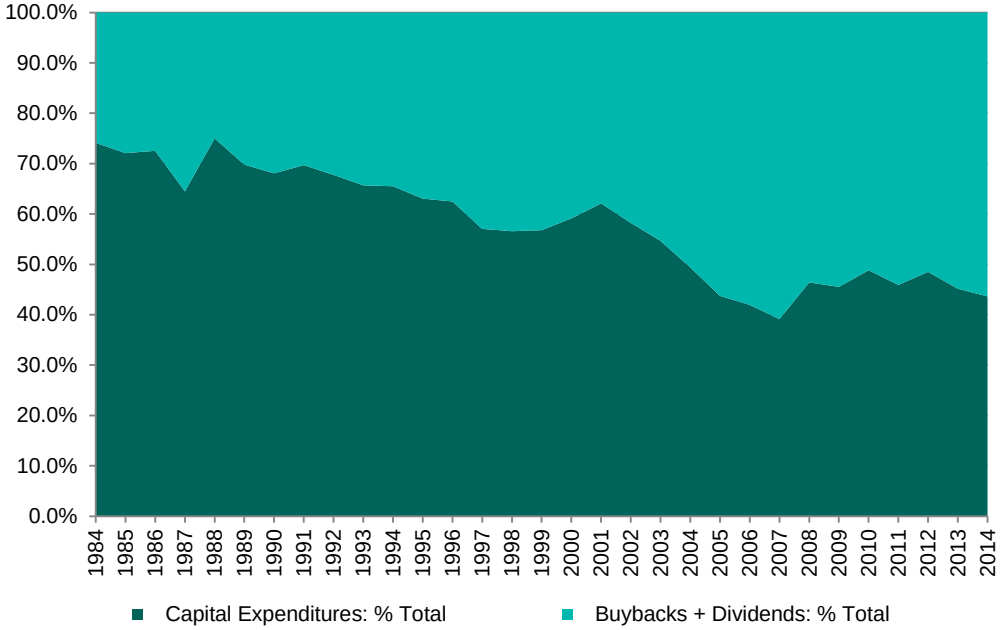
Over the past five years, investors have been receiving record levels of cash in the form of buybacks and dividends. In 2014 alone, S&P 500® companies paid back investors almost 55% of operating cash flow through buybacks and dividends, much higher than the 25-year average of 46%. The heightened payback levels are coming at the expense of capital expenditures, which averaged 42% of operating cash flow for 2014, compared to their 25-year average of 56%. In 2014, the S&P 500 companies most targeted by activist investors cut back on capital expenditures more drastically than others in the index. Capital expenditures as a percent of targeted companies' operating cash flow was 29%, compared to 42% for the broader index.

Exhibit 1: S&P 500 Companies Capital Expenditures Versus Buybacks and Dividends



Source: S&P Dow Jones Indices LLC. Data from 1990 to 2014. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Exhibit 2: S&P 500 Companies Capital Expenditures Versus Buybacks and Dividends Breakdown



Source: S&P Dow Jones Indices LLC. Data from 1984 to 2014. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

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The percentage levels for capital expenditures are at a record low, which would indicate that this level of underinvestment cannot continue and that companies will have to reinvest to generate sales growth. The S&P 500 Capex Efficiency Index has been designed to track the companies in the S&P 500 that demonstrate efficient use of capital expenditures.

METHODOLOGY

The S&P 500 Capex Efficiency Index is designed to measure the performance of the top 100 companies in the S&P 500 that have exhibited strong capital discipline in the form of efficient capital expenditures. Efficiency of capital expenditures is measured through capital expenditures that have resulted in increased sales. In order to qualify for inclusion, a company's most recent year of capital expenditures as a percentage of sales must be lower than its historical three-year average. This measure of capex as a percentage of sales is used so as not to exclude capital intensive firms as different industries have different levels of capital intensity.

The companies are then ranked in ascending order based on the ratio of current-year-to-three-year average of capital expenditures as a percentage of sales. The 100 companies with the lowest ratios form the index and are then given equal weights.

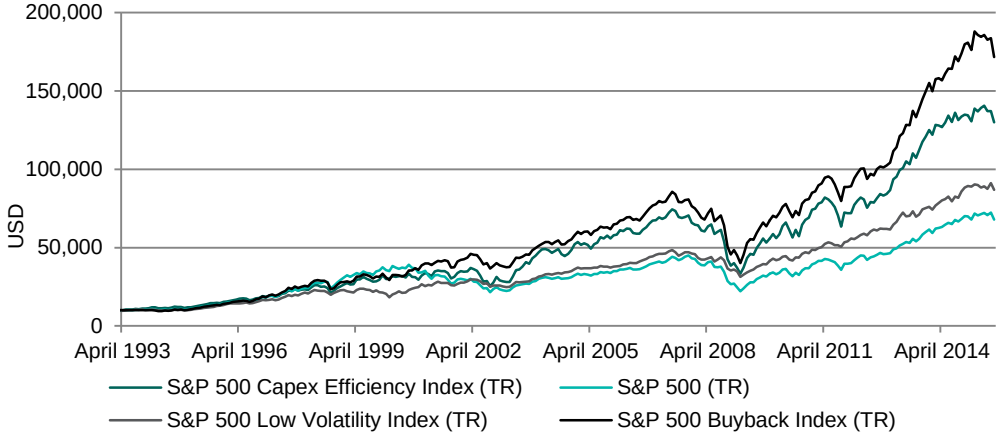
The index is rebalanced quarterly. The rebalancing reference dates are the last trading days of March, June, September, and December. Index rebalancings are effective after market close on the third Friday of January, April, July, and October. As part of the rebalancing process, index constituents are reset to equal weight at each quarterly rebalancing.

Over the long-term investment horizon, the S&P 500 Capex Efficiency Index has delivered higher cumulative returns than the S&P 500 and the S&P 500 Low Volatility Index.

RISK/RETURN PROFILE

Exhibit 3 compares the cumulative return of the S&P 500 Capex Efficiency Index to the S&P 500, the S&P 500 Low Volatility Index, and the S&P 500 Buyback Index. The data shows that over the long-term investment horizon, the S&P 500 Capex Efficiency Index has delivered higher cumulative returns than the S&P 500 and the S&P 500 Low Volatility Index, demonstrating that, on average, companies that exhibit capital expenditure discipline through prudent and efficient use of capital tend to generate above-market returns. In comparison, the S&P 500 Buyback Index outperformed the other three indices.

Exhibit 3: Cumulative Returns



Source: S&P Dow Jones Indices LLC. Data as of Aug. 31, 2015. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

The risk/return profile of the S&P 500 Capex Efficiency Index shows that the index achieved higher returns than the broader market index over the three-year, five-year, and longer term investment horizons (see Exhibit 4). However, due to higher realized volatility, the index underperformed the S&P 500 in the near and medium term on a risk-adjusted basis, as shown by lower risk-adjusted returns. Over longer-term investment horizons, such as the 20-year period, the S&P 500 Capex Efficiency Index had a higher risk-adjusted return than the S&P 500.

Exhibit 4: Risk/Return Profiles of the S&P 500 and the S&P 500 Capex Efficiency Index

Annualized Return (%)	S&P 500 Capex Efficiency Index	S&P 500
1-Year	-4.54	0.48
3-Year	16.74	14.31
5-Year	17.79	15.87
10-Year	8.79	7.15
20-Year	11.59	8.49
Since April 30, 1993	12.17	9.08
Annualized Volatility (%)		
3-Year	11.21	9.56
5-Year	15.04	11.91
10-Year	18.66	14.86
20-Year	18.31	15.25
Since April 30, 1993	17.61	14.69
Risk-Adjusted Return		
3-Year	1.49	1.50
5-Year	1.18	1.33
10-Year	0.47	0.48
20-Year	0.63	0.56
Since April 30, 1993	0.69	0.62

Source: S&P Dow Jones Indices LLC. Data as of Aug. 31, 2015. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Based on the regression analysis results, the market independent variable was by far the largest contributing factor in explaining all three indices' returns.

FACTOR EXPOSURE

We utilized the Fama-French Three Factor Model plus the momentum factor in order to break down the factor exposures of capital return strategies. We used the returns of the S&P 500 Capex Efficiency Index, the S&P 500 Buyback Index, and the S&P 500 Dividend Aristocrats® as proxies for capital expenditures, buyback, and dividend strategies (see Exhibit 5).

Based on the regression analysis results, the market independent variable was by far the largest contributing factor in explaining all three indices' returns. Of the three indices, the dividend strategy had the lowest exposure to the market, while the capital expenditures strategy was in line with the market. The t-statistics show that exposures are statistically significant, with the exception of the size factor exposure in the buyback strategy.

Exhibit 5: Fama-French Three Factor Model Plus Momentum Regression Results				
S&P 500 Capex Efficiency Index	**Market**	**Size**	**Value**	**Momentum**
Coefficient	1.048	0.239	0.294	-0.114
T-Statistic	43.509	7.737	8.909	-5.716
S&P 500 Buyback Index				
Coefficient	0.965	0.015	0.404	-0.070
T-Statistic	41.074	0.513	12.485	-3.578
S&P 500 Dividend Aristocrats				
Coefficient	0.781	-0.172	0.411	-0.062
T-Statistic	30.823	-5.286	11.807	-2.976

Source: S&P Dow Jones Indices LLC, Fama/French Data Library, Center for Research in Security Prices. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical information.

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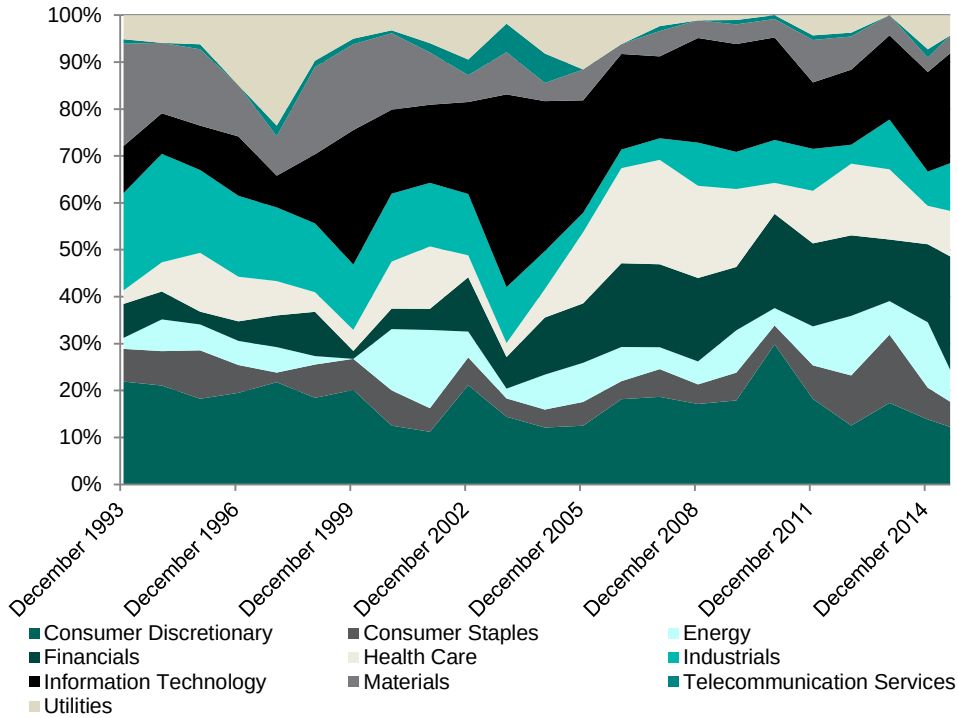
SECTOR COMPOSITION

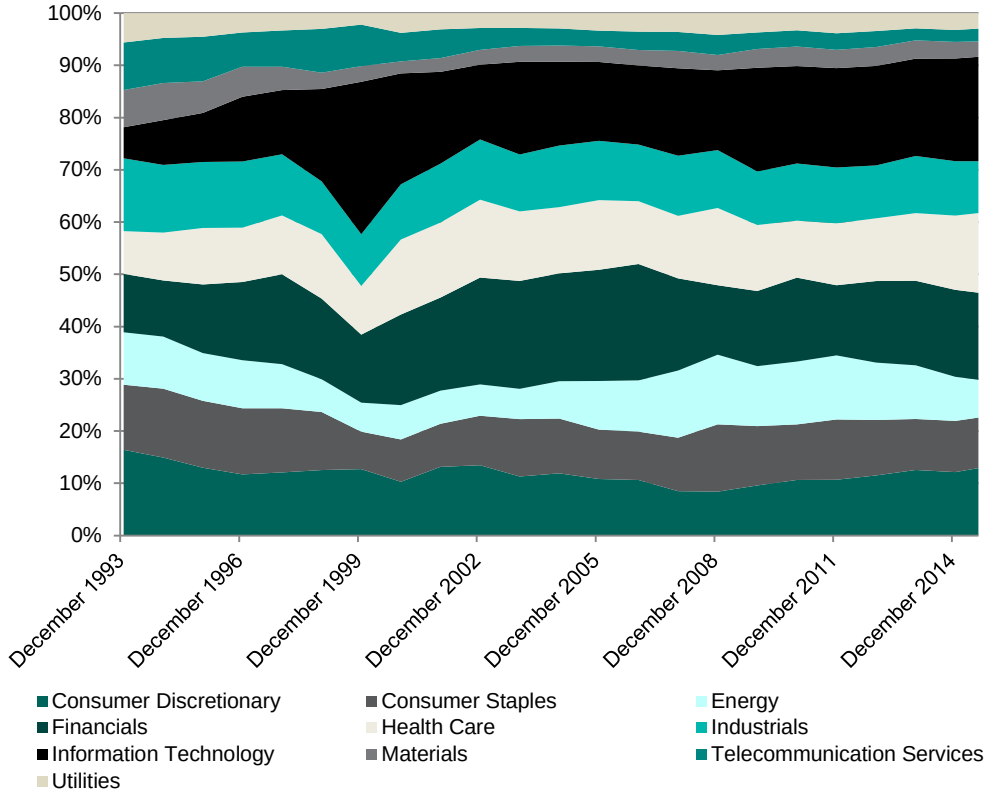
Conventional wisdom may suggest that a capex efficiency portfolio would have a low exposure to traditionally capital-intensive industries such as energy, telecommunications, and transportation. However, given that the index construction only considers companies that have successfully increased sales relative to the amount spent on capital expenditures, the S&P 500 Capex Efficiency Index has maintained a healthy sector diversification over time without significant concentration in any one sector. Exhibits 6 and 7 show the historical sector composition of the S&P 500 Capex Efficiency Index and the S&P 500 from January 1994 through Aug. 31, 2015.

Exhibit 6: S&P 500 Capex Efficiency Index Sector Composition



Source: S&P Dow Jones Indices LLC. Data as of Aug. 31, 2015. Chart is provided for illustrative purposes and reflects hypothetical historical information.

Exhibit 7: S&P 500 Sector Composition

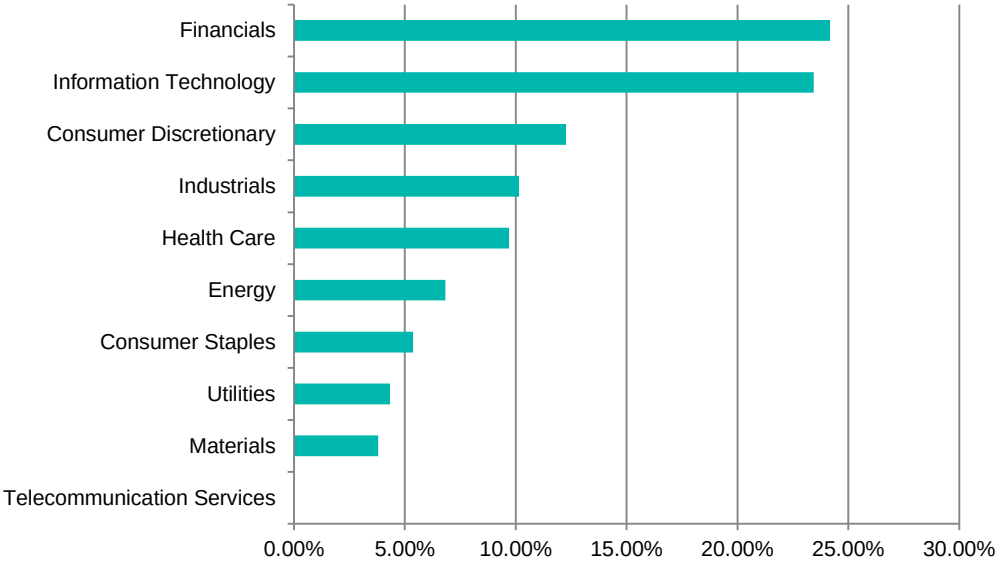


Source: S&P Dow Jones Indices LLC. Data as of Aug. 31, 2015. Chart is provided for illustrative purposes.

The only GICS sector that currently has a weighting of zero in the S&P 500 Capex Efficiency Index is telecommunication services.

Exhibit 8 shows the current sector allocations as of Aug. 31, 2015. The only GICS® sector that currently has a weighting of zero in the S&P 500 Capex Efficiency Index is telecommunication services, indicating that the sector has been unable to translate capital spending into increased sales successfully over the past three fiscal years.

Exhibit 8: S&P 500 Capex Efficiency Index GICS Sector Allocation



Source: S&P Dow Jones Indices LLC. Data as of Aug. 31, 2015. Chart is provided for illustrative purposes.

CONCLUSION

Historically, the market has rewarded companies that practice capital discipline.

Much has been written on the benefits of dividends and buybacks, two of the most common ways that companies return value to shareholders. Little research has been conducted on the efficient use of capital expenditures. Historically, the market has rewarded companies that practice capital discipline, and the S&P 500 Capex Efficiency Index was designed to identify companies who are promoting a more efficient use of capital. An index composed of these disciplined companies could deliver alpha without adding significant volatility over longer time horizons and may merit consideration for those seeking additional asset allocation strategies.

PERFORMANCE DISCLOSURES

The S&P 500 Capex Efficiency Index was launched on April 23, 2015. The S&P 500 Low Volatility Index was launched on April 4, 2011. The S&P 500 Buyback Index was launched on November 9, 2012. All information presented for an index prior to its launch date is back-tested. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. Complete index methodology details are available at www.spdji.com. It is not possible to invest directly in an index.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency on their products. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the Index is set at a fixed value for calculation purposes. The Launch Date designates the date upon which the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its datafeed to external parties. For Dow Jones-branded indicates introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Past performance of the Index is not an indication of future results. Prospective application of the methodology used to construct the Index may not result in performance commensurate with the back-test returns shown. The back-test period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper for the Index, available at www.spdji.com for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Another limitation of using back-tested information is that the back-tested calculation is prepared with the benefit of hindsight. Back-tested information reflects the application of the index methodology and selection of index constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities, fixed income, or commodities markets in general which cannot be, and have not been accounted for in the preparation of the index information set forth, all of which can affect actual performance.

The Index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices LLC maintains the Index and calculates the Index levels and performance shown or discussed, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US $100,000 investment for a 12-month period (or US $10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US $1,650), the net return would be 8.35% (or US $8,350) for the year. Over a three year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US $5,375, and a cumulative net return of 27.2% (or US $27,200).

GENERAL DISCLAIMER