# Buyback ROI Report 2017 

April 25, 2017

## The Purpose of Buyback ROI

Buybacks can be an important tool in the corporate finance toolbox, but unfortunately the buyback strategies and tactics employed by most US companies tend to be misaligned with shareholder value. Academic studies point to the benefits of buybacks based on share price reaction to announcement, often placing less emphasis on long-term performance. In our work, however, we find that companies that dedicate a greater proportion of cash earnings to share repurchases on average experience lower total shareholder returns (TSR), contracting or lower multiple expansion, and poor timing. These findings are evidenced across the market broadly, as well as at the industry level.

Market timing is undoubtedly a large part of the story and it is what often separates worthwhile buyback programs from those that detract from shareholder value. Certainly, it is easy to retroactively identify specific share repurchase programs that did much or little to add value. Unfortunately, evidence points to a market-wide timing problem. More specifically, S\&P 500 constituents tend to buy back more shares when market valuations are high and, even independent from this, when individual company valuations are relatively high. ${ }^{1}$ S\&P 500 companies in aggregate repurchased over $\$ 500$ billion in 2007 and a fraction of that in 2009. Again in 2014-16, constituents repurchased over $\$ 500$ billion per year, arguably when valuations are high. This timing problem stems from the commonly promoted (or assumed) "pecking order" strategy that prioritizes investments and dividends, and allocates the residual to buybacks. Stock prices tend to be higher when company performance is strong and this residual is larger. As a result, selling shareholders benefit from peak pricing at the expense of those that stick around. Companies would repurchase a lot more shares per dollar if they used dollar cost averaging, or even better, if they used a rules-based approach (as we have developed for our clients) to repurchase shares at low valuations.

With such large amounts of cash being spent on repurchases ${ }^{2}$, one may ask if this form of distribution is really in the best interest of shareholder, especially today. Do management teams and boards of directors perform or expect the same level of rigor, planning, and review of share repurchase policies and decisions as they do for other forms of capital deployment such as capital expenditures and acquisitions? Are there other motivations and forces at play (e.g., EPS targeting, overly conservative hurdles for other investments, investor short-termism)? We believe that companies would do well to develop a buyback measurement and review process within a rigorous capital deployment policy framework. To assist with this, we developed Buyback ROI and its associated metrics in order to measure the return and timing of repurchases, especially relative to other capital deployment alternatives. We detail each of their calculations below, discuss recent results, and suggest how to incorporate these measures within financial policy and decision making.

## The Buyback ROI Calculation

The figure below illustrates the metric's calculation. Over a specified time period, an annualized internal rate of return (IRR) is calculated based on (1) the cash outflows associated with share repurchases, (2) the

[^0]estimated cash "inflows" of avoided dividends, and (3) an estimated final "inflow" related to the final value of the accumulated number of shares repurchased.

Figure 1


The Buyback ROI ranking discussed below and published in FORTUNE Magazine is based on the most recent five years of buybacks although longer and shorter periods can also be used. All members of the S\&P 500 are included if they deployed at least $\$ 1$ billion or at least $4 \%$ of the recent market capitalization to buy back shares over the period. As most companies don't disclose average buyback prices, quarterly buybacks are assumed to be executed at the average closing price for each day the market is open during the quarter. For consistency, the final value of the cumulative repurchased shares is set based on the average closing price for the final quarter of the analysis.

Two associated metrics reflect the timing impact of repurchases (Buyback Effectiveness), as well as a company's underlying share price performance (Buyback Strategy). See equation (a) in figure 2 below. Buyback Strategy is similar to total shareholder return, which reflects share price appreciation and dividends, but with the starting and ending share price again based on the average closing price of the quarter. Buyback Effectiveness is the compounded difference between Buyback ROI and Buyback Strategy. See equation (b) in figure 2 below.

Figure 2

$$
\begin{aligned}
& (1+\text { Buyback ROI })=(1+\text { Buyback Strategy }) \times(1+\text { Buyback Effectiveness }) \quad . . . e q u a t i o n(a) \\
& (1+\text { Buyback ROI) } /(1+\text { Buyback Strategy })=(1+\text { Buyback Effectiveness }) \quad . . . e q u a t i o n(b)
\end{aligned}
$$

When companies tend to buy more shares when the share price is below the longer term trend, Buyback Effectiveness is positive. When companies tend to buy more shares at higher prices, Buyback Effectiveness is negative.

## Commentary on the 2017 Ranking

Over the 5 -year period through December 2016, the 353 ranked companies delivered median Buyback ROI of $11.2 \%$, which is down for the third year in row from the peak of $20.8 \%$ realized over the 5 years ending in 2013. Median Buyback Strategy was a strong $16.6 \%$, indicating buybacks were generally a very good idea for many of these companies, but weighing on this was a median Buyback Effectiveness of negative $4.3 \%$ resulting from generally poor buyback timing (most companies buy more stock when its expensive than when it's not). Fully $83 \%$ of companies in the ranking have negative Buyback Effectiveness.

## Figure 3

Annual \$ Buybacks and Trailing 5-YR Buyback Performance


Source: Fortuna Advisors Analysis using data from the Capital IQ database.
Financial Data from December 2002 to December 2016 as of $3 / 1 / 2017$. Includes the members of the S\&P 500 that were publicfor each five year period. 2009 and 2010 uses S\&P 500 constituents from 2008. 2011 uses S\&P 500 consitutnets from 2012.
Companies Included here if \$ Total Buyback / Market Capitalization is greater than $4 \%$ or if \$ Total Buyback is greater than $\$ 1$ billion. Market Capitalization as of $12 / 31 / 2016$.

In total, these companies repurchased a whopping $\$ 2.4$ trillion over the five years. This is $80 \%$ more than what was distributed as dividends. Total buybacks and dividends were $\$ 3.7$ trillion which is $91 \%$ of net income over the period and $46 \%$ of companies deployed more than $100 \%$ of net income into buybacks and dividends. Many experts claim corporate America is underinvesting in the future and these figures suggest that this may be because of an increasing infatuation with dividends and buybacks that is crowding out investments.

By sorting companies into high, medium, and low groups based on their buybacks over the five years as a percent of recent market capitalization, we can measure if companies doing more or less buybacks have better Buyback ROI on average. The High buyback group had the lowest median Buyback ROI, Buyback Strategy and Buyback Effectiveness. Conversely, the Low buyback group had the best median results on all three dimensions. So those doing more buybacks had worse results.

| Figure 4: \$ Total Buyback / Market Cap: High, Medium, Low Groups |  |  |  |  | \% $\Delta$ (Q4 '16 vs Q4 '11) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$ Total Buyback / Market Cap Grouping | \$ Total Buyback / Market Cap | Median Buyback ROI | Median <br> Buyback <br> Strategy | Median <br> Buyback Effectiveness | \% $\Delta$ Earnings | \% $\triangle$ EPS | \% $\Delta$ Share <br> Count |
| High | 25.8\% | 9.3\% | 15.8\% | -5.0\% | 9.9\% | 38.8\% | -18.1\% |
| Medium | 13.5\% | 11.4\% | 16.0\% | -3.9\% | 25.9\% | 34.7\% | -9.6\% |
| Low | 7.4\% | 12.7\% | 17.2\% | -3.6\% | 44.7\% | 45.6\% | -1.5\% |

Source: Fortuna Advisors Analysis using data from the Capital IQ database.
Financial Data from December 2011 to December 2016. Includes the 469 members of the current S\&P 500 that were public for the full period. Market Capitalization as of 12/31/2016.

The High buyback group delivered median EPS growth of $38.8 \%$ on only $9.9 \%$ median net income growth. In other research, we have found that the more that EPS growth comes from buybacks, the more that
price-earnings multiples tend to decline. In fact, it appears that EPS growth from buybacks is only worth about half as much as EPS growth from operations.

A small set of companies have generated positive EPS growth despite declining net income. We refer to these companies as the Top EPS Manufacturers. Although Northrop Grumman and a few others had strong share price performance during the five years, $71 \%$ of them had Buyback Strategy below the ranking median and 86\% have negative Buyback Effectiveness.

| Figure 5: Top Manufacturers of EPS* |  |  |  |  |  |  | \% $\Delta$ | 4 '16 vs | '11) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company Name | Ticker | Industry | \$ Total Buyback/ Market Cap | Buyback ROI | Buyback Strategy | Buyback Effectiveness | \% $\Delta$ Earnings | \% $\triangle$ EPS | \% $\Delta$ Share Count |
| 1 Northrop Grumman Corporation | NOC | Capital Goods | 27.0\% | 35.5\% | 36.2\% | (0.5\%) | (4.2\%) | 38.7\% | (30.9\%) |
| 2 Discovery Communications, Inc. | DISC.A | Media | 37.3\% | (6.8\%) | 5.7\% | (11.8\%) | (9.5\%) | 18.4\% | (23.6\%) |
| 3 Nordstrom, Inc. | JWN | Retailing | 39.9\% | 0.3\% | 5.9\% | (5.3\%) | (14.8\%) | 6.1\% | (19.8\%) |
| 4 McDonald's Corporation | MCD | Consumer Services | 24.6\% | 9.6\% | 8.0\% | 1.5\% | (13.3\%) | 7.8\% | (19.6\%) |
| 5 International Business Machines Corporation | IBM | Software and Services | 26.1\% | (1.5\%) | (0.4\%) | (1.1\%) | (18.0\%) | 0.7\% | (18.6\%) |
| 6 General Electric Company | GE | Capital Goods | 14.0\% | 10.7\% | 17.0\% | (5.4\%) | (1.7\%) | 19.4\% | (17.7\%) |
| 7 Target Corporation | TGT | Retailing | 25.9\% | 4.6\% | 9.6\% | (4.5\%) | (16.7\%) | 0.7\% | (17.3\%) |
| 8 Oracle Corporation | ORCL | Software and Services | 29.3\% | 5.1\% | 6.4\% | (1.2\%) | (7.3\%) | 12.1\% | (17.3\%) |
| 9 Dr Pepper Snapple Group, Inc. | DPS | Food, Beverage and Tobacco | 13.4\% | 20.5\% | 21.7\% | (1.0\%) | (0.6\%) | 15.7\% | (14.1\%) |
| 10 Franklin Resources, Inc. | BEN | Diversified Financials | 18.8\% | (5.0\%) | 4.7\% | (9.3\%) | (8.4\%) | 4.9\% | (12.7\%) |
| 11 Pepsico, Inc. | PEP | Food, Beverage and Tobacco | 12.8\% | 11.4\% | 13.8\% | (2.1\%) | (1.0\%) | 10.0\% | (10.0\%) |
| 12 Philip Morris International Inc. | PM | Food, Beverage and Tobacco | 11.5\% | 6.4\% | 9.8\% | (3.1\%) | (9.3\%) | 0.6\% | (9.8\%) |
| 13 Republic Services, Inc. | RSG | Commercial and Professional Services | 9.0\% | 20.4\% | 17.6\% | 2.4\% | (0.8\%) | 8.2\% | (8.3\%) |
| 14 Praxair, Inc. | PX | Materials | 9.1\% | 2.6\% | 5.6\% | (2.8\%) | (3.3\%) | 1.1\% | (4.4\%) |
| * Manufacturers of EPS considers S\&P threshold companies with low (negative) Earnings Growth but high reduction in share count to generate positive EPS Growth. <br> ** EPS calculation = Quarterly Reported Net Income / Actual Quarter's Reported Total Shares Outstanding. <br> Source: Fortuna Advisors Analysis using data from the Capital IQ database. <br> Financial Data from December 2011 to December 2016. Includes the 469 members of the current S\&P 500 that were public for the full period. Market Capitalization as of 12/31/2016. |  |  |  |  |  |  |  |  |  |

## Capital Deployment Policy

By measuring performance, Buyback ROI and its associated measures are intended to help bring a greater amount of rigor and accountability to share repurchase strategy and decision-making. Most importantly, a focus on the measure helps to bring greater attention and consideration to the impact that share repurchases have on value creation. A focus on their potential value, as opposed to a residual distribution view, is especially important in today's climate were shorter-term motivations or pressures may often prevail.

While Buyback ROI can certainly be used to measure past performance, which we think is very important, it is also useful when informing future decisions and policy. We often suggest performing prospective break-even and scenario analysis as is done for other capital deployment decisions. For example, what sort of future share price performance (and dividend yield) will generate a return in-line with other capital deployment hurdles? What are the probabilities that can be associated with the over and underperformance of this breakeven performance especially when considering current company and market valuations? How do these probabilities compare to past results?

The timing and way in which repurchase programs are executed (over the long term) is also critical. Specifying rules related to company valuation, market or industry conditions, and future liquidity needs may be very helpful. For example, should dollar-cost averaging be employed to minimize poor repurchase timing? Alternatively, is it best to focus on opportunistic or tactical repurchases when share prices are below a predetermined valuation threshold? Do current market conditions suggest less upside in the
market or industry? Do future investment opportunities, economic conditions, or long-term company strategy indicate a greater need for future liquidity?

We believe that a consideration of these items and a meaningful effort to quantify future performance, especially in light of past performance, may help to better formalize a share repurchase strategy. A well-thought-out strategy will help a company take advantage of, versus fall victim to, the mood swings of the market, where the timing and magnitude of buybacks will likely be better aligned with shareholder value.

## Further Reading on Buyback ROI

1. "Stock Buybacks: Buy High and Sell Low," Fortune, Scott Cendrowski
2. "What's Your Return on Buybacks," CFO.com, Gregory V. Milano
3. "How to Make Hay Out of Buybacks," CFO.com, Gregory V. Milano
4. "Why to Choose Growth Over Buybacks," CFO.com, Gregory V. Milano and John R Cryan
5. "Advocates Overrating the Benefits of Buybacks," CFO.com, Gregory V. Milano and John R. Cryan
6. "Are Buybacks The Best We Can Do?," Buona Fortuna!, Gregory V. Milano

## Appendix: Buyback ROI - Complete List

Source: Fortuna Advisars Analusis using data from the Capital IQ databse
Financial Data from December 2011 to December 2016. Includes the 469 members of the current S\&P 500 that were public for the full period
Fortuna
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\% $\Delta$ (Q4 '16 vs Q4 '11)


|  |  |  |  |  |  |  |  |  | \% $\Delta$ (Q4 '16 vs Q4 '11) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company Name | Ticker | Industry | Market Capitalization | \$ Total Buyback | \$ Total Buyback/ Market Cap | Buyback ROI | Buyback Strategy | Buyback Effectiveness | $\% \Delta$ Earnings | \% $\Delta$ EPS | $\% \Delta$ Share Count |
| 49 The Home Depot, Inc. | HD | Retailing | \$163,331 | \$33,410 | 20.5\% | 21.0\% | 30.6\% | (7.4\%) | 125.3\% | 185.7\% | (21.1\%) |
| 50 General Dynamics Corporation | GD | Capital Goods | \$52,578 | \$9,899 | 18.8\% | 21.0\% | 23.8\% | (2.3\%) | 32.2\% | 56.7\% | (15.6\%) |
| 51 Symantec Corporation | SYMC | Software and Services | \$14,893 | \$3,644 | 24.5\% | 20.8\% | 14.9\% | 5.1\% | (80.8\%) | (77.4\%) | (15.2\%) |
| 52 Regions Financial Corporation | RF | Banks | \$17,677 | \$2,058 | 11.6\% | 20.5\% | 27.8\% | (5.7\%) | NA | NA | NA |
| 53 Dr Pepper Snapple Group, Inc. | DPS | Food, Beverage and Tobacco | \$16,657 | \$2,240 | 13.4\% | 20.5\% | 21.7\% | (1.0\%) | (0.6\%) | 15.7\% | (14.1\%) |
| 54 Republic Services, Inc. | RSG | Commercial and Professional Services | \$19,395 | \$1,749 | 9.0\% | 20.4\% | 17.6\% | 2.4\% | (0.8\%) | 8.2\% | (8.3\%) |
| 55 C. R. Bard, Inc. | BCR | Healthcare Equipment and Services | \$16,518 | \$2,776 | 16.8\% | 20.3\% | 21.2\% | (0.7\%) | 40.2\% | 64.5\% | (14.7\%) |
| 56 Snap-on Incorporated | SNA | Capital Goods | \$9,938 | \$472 | 4.8\% | 20.3\% | 28.3\% | (6.3\%) | 96.9\% | 97.9\% | (0.5\%) |
| 57 Illinois Tool Works Inc. | ITW | Capital Goods | \$42,984 | \$10,452 | 24.3\% | 20.0\% | 24.1\% | (3.3\%) | NA | NA | NA |
| 58 Autodesk, Inc. | ADSK | Software and Services | \$16,471 | \$2,307 | 14.0\% | 20.0\% | 18.1\% | 1.6\% | (340.8\%) | (347.9\%) | (2.8\%) |
| 59 Fidelity National Information Services, Inc. | FIS | Software and Services | \$24,827 | \$1,472 | 5.9\% | 19.8\% | 27.0\% | (5.7\%) | 76.9\% | 55.8\% | 13.6\% |
| 60 Amphenol Corporation | APH | Technology Hardware and Equipment | \$20,730 | \$1,819 | 8.8\% | 19.7\% | 25.5\% | (4.6\%) | 106.7\% | 119.5\% | (5.8\%) |
| 61 Lincoln National Corporation | LNC | Insurance | \$15,147 | \$3,171 | 20.9\% | 19.7\% | 27.5\% | (6.1\%) | NA | NA | NA |
| 62 Sysco Corporation | SYY | Food and Staples Retailing | \$30,284 | \$4,184 | 13.8\% | 19.6\% | 17.0\% | 2.2\% | 10.0\% | 19.1\% | (7.6\%) |
| 63 KLA-Tencor Corporation | KLAC | Semiconductors and Semiconductor Equipment | \$12,299 | \$1,433 | 11.6\% | 19.6\% | 19.4\% | 0.2\% | 115.0\% | 128.8\% | (6.0\%) |
| 64 Principal Financial Group, Inc. | PFG | Insurance | \$16,645 | \$1,227 | 7.4\% | 19.6\% | 21.9\% | (1.8\%) | 102.8\% | 112.7\% | (4.6\%) |
| 65 Celgene Corporation | CELG | Pharmaceuticals, Biotechnology and Life Sciences | \$89,730 | \$13,210 | 14.7\% | 19.4\% | 28.2\% | (6.9\%) | 4.6\% | 18.0\% | (11.4\%) |
| 66 Visa Inc. | v | Software and Services | \$181,545 | \$22,488 | 12.4\% | 19.2\% | 28.9\% | (7.5\%) | 101.2\% | 131.9\% | (13.3\%) |
| 67 Lowe's Companies, Inc. | Low | Retailing | \$61,864 | \$19,528 | 31.6\% | 19.1\% | 27.5\% | (6.6\%) | 105.9\% | 195.1\% | (30.2\%) |
| 68 SunTrust Banks, Inc. | STI | Banks | \$26,920 | \$2,103 | 7.8\% | 18.9\% | 24.4\% | (4.4\%) | 528.4\% | 589.6\% | (8.9\%) |
| 69 JPMorgan Chase \& Co. | JPM | Banks | \$308,727 | \$25,900 | 8.4\% | 18.6\% | 22.1\% | (2.9\%) | 80.4\% | 90.6\% | (5.3\%) |
| 70 Stryker Corporation | SYK | Healthcare Equipment and Services | \$44,863 | \$1,238 | 2.8\% | 18.6\% | 20.8\% | (1.9\%) | 27.2\% | 30.0\% | (2.2\%) |
| 71 Accenture plc | ACN | Software and Services | \$72,929 | \$12,563 | 17.2\% | 18.4\% | 18.6\% | (0.1\%) | 56.4\% | 62.6\% | (3.8\%) |
| 72 Synopsys, Inc. | SNPS | Software and Services | \$8,835 | \$1,033 | 11.7\% | 18.2\% | 17.3\% | 0.8\% | 52.7\% | 48.0\% | 3.2\% |
| 73 Comerica Incorporated | CMA | Banks | \$11,733 | \$1,409 | 12.0\% | 18.0\% | 20.6\% | (2.2\%) | 70.8\% | 91.3\% | (10.7\%) |
| 74 Conagra Brands, Inc. | CAG | Food, Beverage and Tobacco | \$17,314 | \$834 | 4.8\% | 18.0\% | 17.1\% | 0.7\% | (32.2\%) | (33.9\%) | 2.4\% |
| 75 Cigna Corporation | Cl | Healthcare Equipment and Services | \$34,246 | \$3,633 | 10.6\% | 17.9\% | 25.0\% | (5.7\%) | 39.9\% | 56.6\% | (10.7\%) |
| 81 Torchmark Corporation | TMK | Insurance | \$8,752 | \$2,036 | 23.3\% | 17.5\% | 21.5\% | (3.3\%) | NA | NA | NA |
| 82 Amgen Inc. | AMGN | Pharmaceuticals, Biotechnology and Life Sciences | \$108,769 | \$10,409 | 9.6\% | 17.4\% | 23.6\% | (5.0\%) | 107.2\% | 120.7\% | (6.1\%) |
| 83 Aon plc | AON | Insurance | \$29,343 | \$7,342 | 25.0\% | 17.4\% | 20.7\% | (2.7\%) | NA | NA | NA |
| 84 Analog Devices, Inc. | ADI | Semiconductors and Semiconductor Equipment | \$22,379 | \$1,103 | 4.9\% | 17.4\% | 17.5\% | (0.0\%) | 55.8\% | 27.1\% | 22.6\% |
| 85 Marsh \& McLennan Companies, Inc. | MMC | Insurance | \$34,849 | \$4,108 | 11.8\% | 17.3\% | 20.4\% | (2.5\%) | 70.3\% | 80.3\% | (5.5\%) |
| 86 Intercontinental Exchange, Inc. | ICE | Diversified Financials | \$33,608 | \$1,595 | 4.7\% | 17.3\% | 18.7\% | (1.2\%) | 177.7\% | 70.2\% | 63.2\% |
| 87 AutoZone, Inc. | Azo | Retailing | \$22,604 | \$6,626 | 29.3\% | 17.2\% | 18.6\% | (1.2\%) | 45.5\% | 99.6\% | (27.1\%) |
| 88 Intuit Inc. | INTU | Software and Services | \$29,417 | \$5,652 | 19.2\% | 17.2\% | 17.8\% | (0.5\%) | (89.0\%) | (87.3\%) | (13.3\%) |
| 89 Walgreens Boots Alliance, Inc. | WBA | Food and Staples Retailing | \$89,305 | \$4,738 | 5.3\% | 17.2\% | 22.6\% | (4.4\%) | 90.3\% | 52.1\% | 25.1\% |
| 90 Starbucks Corporation | sbux | Consumer Services | \$80,804 | \$5,720 | 7.1\% | 17.1\% | 22.8\% | (4.6\%) | 96.8\% | 103.4\% | (3.3\%) |
| 91 Corning Incorporated | GLW | Technology Hardware and Equipment | \$23,086 | \$12,225 | 53.0\% | 17.0\% | 14.3\% | 2.4\% | 220.2\% | 425.6\% | (39.1\%) |
| 92 CBOE Holdings, Inc. | CBOE | Diversified Financials | \$6,006 | \$481 | 8.0\% | 17.0\% | 24.3\% | (5.9\%) | 43.0\% | 13.4\% | 26.0\% |
| 93 Monster Beverage Corporation | MNST | Food, Beverage and Tobacco | \$25,317 | \$3,864 | 15.3\% | 16.8\% | 24.7\% | (6.3\%) | 168.0\% | 147.3\% | 8.4\% |
| 94 Stanley Black \& Decker, Inc. | SWK | Capital Goods | \$17,282 | \$1,295 | 7.5\% | 16.7\% | 16.3\% | 0.4\% | 55.8\% | 74.0\% | (10.4\%) |
| 95 American International Group, Inc. | AIG | Insurance | \$67,083 | \$40,650 | 60.6\% | 16.5\% | 23.3\% | (5.5\%) | (114.2\%) | (126.0\%) | (45.5\%) |
| 96 Comcast Corporation | CMCS.A | Media | \$165,225 | \$21,001 | 12.7\% | 16.3\% | 26.1\% | (7.8\%) | 78.4\% | 103.2\% | (12.2\%) |
| 97 Anthem, Inc. | ANTM | Healthcare Equipment and Services | \$37,874 | \$7,514 | 19.8\% | 16.3\% | 17.0\% | (0.6\%) | 9.9\% | 38.8\% | (20.9\%) |
| 98 Ball Corporation | BLL | Materials | \$13,123 | \$1,619 | 12.3\% | 16.1\% | 18.7\% | (2.2\%) | (31.6\%) | (38.9\%) | 12.0\% |
| 99 Leggett \& Platt, Incorporated | LEG | Consumer Durables and Apparel | \$6,534 | \$718 | 11.0\% | 16.1\% | 20.8\% | (3.9\%) | 837.9\% | 887.6\% | (5.0\%) |
| 100 Unum Group | UNM | Insurance | \$10,197 | \$1,943 | 19.1\% | 16.0\% | 15.0\% | 0.9\% | NA | NA | NA |
| 101 Tesoro Corporation | TSO | Energy | \$10,223 | \$1,452 | 14.2\% | 16.0\% | 30.5\% | (11.1\%) | NA | NA | NA |
| 102 Ingersoll-Rand Plc | IR | Capital Goods | \$19,385 | \$3,928 | 20.3\% | 15.8\% | 26.2\% | (8.2\%) | (18.0\%) | (6.0\%) | (12.7\%) |
| 103 Bank of America Corporation | BAC | Banks | \$223,322 | \$12,381 | 5.5\% | 15.7\% | 27.7\% | (9.4\%) | 135.9\% | 153.8\% | (7.1\%) |
| 104 The Bank of New York Mellon Corporation | BK | Diversified Financials | \$50,097 | \$8,596 | 17.2\% | 15.7\% | 20.4\% | (3.9\%) | 72.3\% | 100.4\% | (14.0\%) |
| 105 Intuitive Surgical, Inc. | ISRG | Healthcare Equipment and Services | \$24,572 | \$2,586 | 10.5\% | 15.7\% | 9.4\% | 5.7\% | 34.9\% | 45.6\% | (7.3\%) |
| 106 The PNC Financial Services Group, Inc. | PNC | Banks | \$56,901 | \$5,630 | 9.9\% | 15.5\% | 17.2\% | (1.4\%) | 115.3\% | 133.7\% | (7.8\%) |
| 107 Automatic Data Processing, Inc. | ADP | Software and Services | \$46,372 | \$5,028 | 10.8\% | 15.5\% | 18.7\% | (2.7\%) | 36.2\% | 48.9\% | (8.5\%) |
| 108 VeriSign, Inc. | VRSN | Software and Services | \$7,955 | \$3,550 | 44.6\% | 15.5\% | 19.5\% | (3.3\%) | 96.1\% | 205.8\% | (35.9\%) |
| 109 BlackRock, Inc. | BLK | Diversified Financials | \$62,278 | \$6,980 | 11.2\% | 15.5\% | 21.0\% | (4.5\%) | 53.3\% | 69.0\% | (9.3\%) |
|  |  |  | ROI - Complet | List |  |  |  |  |  |  |  |


|  |  |  |  |  |  |  |  |  | \% $\Delta$ ( Q 4 '16 vs Q4 '11) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company Name | Ticker | Industry | Market Capitalization | \$ Total Buyback | \$ Total Buyback/ Market Cap | Buyback ROI | Buyback Strategy | Buyback Effectiveness | \% $\Delta$ Earnings | \% $\triangle$ EPS | \% $\Delta$ Share Count |
| 110 Prudential Financial, Inc. | PRU | Insurance | \$44,746 | \$6,171 | 13.8\% | 15.2\% | 17.2\% | (1.7\%) | (54.3\%) | (49.9\%) | (8.8\%) |
| 111 Jacobs Engineering Group Inc. | JEC | Capital Goods | \$6,887 | \$683 | 9.9\% | 15.1\% | 7.3\% | 7.3\% | (32.5\%) | (28.4\%) | (5.8\%) |
| 112 Johnson \& Johnson | JNJ | Pharmaceuticals, Biotechnology and Life Sciences | \$313,432 | \$37,935 | 12.1\% | 15.1\% | 16.0\% | (0.8\%) | 1,649.5\% | 1,671.8\% | (1.3\%) |
| 113 3M Company | MMM | Capital Goods | \$107,404 | \$22,059 | 20.5\% | 15.0\% | 19.9\% | (4.1\%) | 21.1\% | 40.7\% | (14.0\%) |
| 114 E. I. du Pont de Nemours and Company | DD | Materials | \$63,810 | \$5,730 | 9.0\% | 15.0\% | 13.6\% | 1.2\% | (29.0\%) | (23.2\%) | (7.5\%) |
| 115 KeyCorp | KEY | Banks | \$19,745 | \$1,480 | 7.5\% | 14.9\% | 20.0\% | (4.3\%) | 14.5\% | 0.9\% | 13.5\% |
| 116 Gartner, Inc. | IT | Software and Services | \$8,349 | \$1,293 | 15.5\% | 14.9\% | 21.1\% | (5.2\%) | 47.7\% | 66.2\% | (11.1\%) |
| 117 Bristol-Myers Squibb Company | BMY | Pharmaceuticals, Biotechnology and Life Sciences | \$97,667 | \$3,072 | 3.1\% | 14.7\% | 14.3\% | 0.4\% | 4.9\% | 7.5\% | (2.4\%) |
| 118 Marriott International, Inc. | MAR | Consumer Services | \$32,285 | \$5,975 | 18.5\% | 14.6\% | 22.7\% | (6.6\%) | 73.0\% | 51.2\% | 14.5\% |
| 119 Quest Diagnostics Incorporated | DGX | Healthcare Equipment and Services | \$12,741 | \$2,083 | 16.3\% | 14.5\% | 11.7\% | 2.5\% | (18.2\%) | (5.4\%) | (13.5\%) |
| 120 Fifth Third Bancorp | FITB | Banks | \$20,343 | \$4,135 | 20.3\% | 14.4\% | 18.3\% | (3.2\%) | 23.9\% | 51.9\% | (18.4\%) |
| 121 Valero Energy Corporation | VLO | Energy | \$30,926 | \$6,473 | 20.9\% | 14.2\% | 28.1\% | (10.8\%) | NA | NA | NA |
| 122 FedEx Corporation | FDX | Transportation | \$49,624 | \$9,413 | 19.0\% | 14.2\% | 18.9\% | (3.9\%) | 40.8\% | 66.1\% | (15.2\%) |
| 123 Quanta Services, Inc. | PWR | Capital Goods | \$5,270 | \$1,700 | 32.3\% | 14.1\% | 9.2\% | 4.6\% | NA | NA | NA |
| 124 Medtronic plc | MDT | Healthcare Equipment and Services | \$97,802 | \$11,959 | 12.2\% | 14.1\% | 20.2\% | (5.1\%) | (12.2\%) | (33.3\%) | 31.5\% |
| 125 Apple Inc. | AAPL | Technology Hardware and Equipment | \$617,588 | \$143,686 | 23.3\% | 14.1\% | 17.3\% | (2.7\%) | 36.9\% | 70.4\% | (19.6\%) |
| 126 Northern Trust Corporation | NTRS | Diversified Financials | \$20,164 | \$1,861 | 9.2\% | 14.0\% | 18.2\% | (3.5\%) | 104.7\% | 115.2\% | (4.9\%) |
| 127 Cisco Systems, Inc. | csco | Technology Hardware and Equipment | \$151,697 | \$27,066 | 17.8\% | 13.9\% | 14.5\% | (0.5\%) | 7.6\% | 15.7\% | (7.0\%) |
| 128 Omnicom Group Inc. | OMC | Media | \$20,076 | \$4,105 | 20.4\% | 13.9\% | 17.5\% | (3.1\%) | 28.8\% | 49.9\% | (14.0\%) |
| 129 The Progressive Corporation | PGR | Insurance | \$20,586 | \$1,120 | 5.4\% | 13.9\% | 16.7\% | (2.4\%) | 49.3\% | 57.1\% | (5.0\%) |
| 130 Xilinx, Inc. | XLNX | Semiconductors and Semiconductor Equipment | \$15,244 | \$1,961 | 12.9\% | 13.8\% | 14.2\% | (0.3\%) | 11.7\% | 17.5\% | (4.9\%) |
| 131 Huntington Bancshares Incorporated | HBAN | Banks | \$14,341 | \$862 | 6.0\% | 13.8\% | 20.5\% | (5.5\%) | 88.4\% | 49.6\% | 25.9\% |
| 132 CSX Corporation | CSX | Transportation | \$33,654 | \$3,464 | 10.3\% | 13.8\% | 12.3\% | 1.3\% | 0.2\% | 12.8\% | (11.2\%) |
| 133 Campbell Soup Company | CPB | Food, Beverage and Tobacco | \$18,567 | \$861 | 4.6\% | 13.7\% | 14.3\% | (0.5\%) | (50.7\%) | (48.8\%) | (3.8\%) |
| 134 International Flavors \& Fragrances Inc. | IFF | Materials | \$9,359 | \$389 | 4.2\% | 13.7\% | 19.8\% | (5.1\%) | 227.6\% | 235.8\% | (2.4\%) |
| 135 Church \& Dwight Co., Inc. | CHD | Household and Personal Products | \$11,428 | \$1,543 | 13.5\% | 13.6\% | 17.6\% | (3.3\%) | 73.0\% | 94.3\% | (11.0\%) |
| 136 Dollar Tree, Inc. | DLTR | Retailing | \$18,220 | \$1,452 | 8.0\% | 13.6\% | 15.0\% | (1.2\%) | 71.3\% | 67.6\% | 2.2\% |
| 137 Costco Wholesale Corporation | COST | Food and Staples Retailing | \$70,327 | \$1,950 | 2.8\% | 13.6\% | 16.4\% | (2.4\%) | 70.3\% | 68.4\% | 1.1\% |
| 138 The Sherwin-Williams Company | SHW | Materials | \$24,968 | \$3,851 | 15.4\% | 13.6\% | 27.3\% | (10.8\%) | 1,295.2\% | 1,455.3\% | (10.3\%) |
| 139 The Allstate Corporation | ALL | Insurance | \$27,294 | \$9,193 | 33.7\% | 13.6\% | 24.6\% | (8.8\%) | 18.0\% | 61.0\% | (26.7\%) |
| 140 Fortune Brands Home \& Security, Inc. | FBHS | Capital Goods | \$8,249 | \$796 | 9.7\% | 13.6\% | 30.6\% | (13.0\%) | NA | NA | NA |
| 141 Motorola Solutions, Inc. | MSI | Technology Hardware and Equipment | \$13,756 | \$10,151 | 73.8\% | 13.6\% | 13.8\% | (0.2\%) | 32.1\% | 135.1\% | (43.8\%) |
| 142 The Goldman Sachs Group, Inc. | GS | Diversified Financials | \$100,282 | \$26,497 | 26.4\% | 13.5\% | 17.5\% | (3.4\%) | 131.7\% | 182.8\% | (18.1\%) |
| 143 Henry Schein, Inc. | HSIC | Healthcare Equipment and Services | \$12,211 | \$1,750 | 14.3\% | 13.3\% | 19.2\% | (4.9\%) | 32.9\% | 51.5\% | (12.2\%) |
| 144 The TJX Companies, Inc. | TJX | Retailing | \$48,977 | \$7,995 | 16.3\% | 13.3\% | 21.5\% | (6.8\%) | 42.6\% | 65.0\% | (13.5\%) |
| 145 The Hartford Financial Services Group, Inc. | HIG | Insurance | \$17,999 | \$4,670 | 25.9\% | 13.3\% | 23.7\% | (8.4\%) | (168.6\%) | (181.6\%) | (15.9\%) |
| 146 McCormick \& Company, Incorporated | MKC | Food, Beverage and Tobacco | \$11,763 | \$942 | 8.0\% | 13.2\% | 16.3\% | (2.7\%) | 19.4\% | 27.4\% | (6.3\%) |
| 147 People's United Financial, Inc. | PBCT | Banks | \$5,892 | \$693 | 11.8\% | 13.1\% | 12.6\% | 0.5\% | 83.3\% | 107.4\% | (11.6\%) |
| 148 TE Connectivity Ltd. | TEL | Technology Hardware and Equipment | \$24,618 | \$5,267 | 21.4\% | 13.0\% | 17.8\% | (4.1\%) | 57.3\% | 88.6\% | (16.6\%) |
| 149 Rockwell Automation Inc. | ROK | Capital Goods | \$17,300 | \$2,326 | 13.4\% | 13.0\% | 15.5\% | (2.2\%) | 17.1\% | 29.7\% | (9.7\%) |
| 150 Citrix Systems, Inc. | CTXS | Software and Services | \$13,929 | \$3,083 | 22.1\% | 13.0\% | 5.5\% | 7.1\% | 83.9\% | 118.2\% | (15.7\%) |
| 151 Discover Financial Services | DFS | Diversified Financials | \$28,432 | \$7,400 | 26.0\% | 13.0\% | 23.7\% | (8.7\%) | 9.8\% | 51.6\% | (27.6\%) |
| 152 The Travelers Companies, Inc. | TRV | Insurance | \$34,774 | \$13,016 | 37.4\% | 12.9\% | 18.4\% | (4.6\%) | 52.6\% | 114.6\% | (28.9\%) |
| 153 Honeywell International Inc. | HON | Capital Goods | \$88,292 | \$6,277 | 7.1\% | 12.9\% | 19.6\% | (5.6\%) | NA | NA | NA |
| 154 The J. M. Smucker Company | SJM | Food, Beverage and Tobacco | \$14,910 | \$1,582 | 10.6\% | 12.5\% | 13.9\% | (1.3\%) | 15.2\% | 10.8\% | 3.9\% |
| 155 Waters Corporation | WAT | Pharmaceuticals, Biotechnology and Life Sciences | \$10,829 | \$1,595 | 14.7\% | 12.3\% | 13.2\% | (0.8\%) | 27.1\% | 41.4\% | (10.1\%) |
| 156 Moody's Corporation | MCO | Diversified Financials | \$18,024 | \$4,302 | 23.9\% | 12.3\% | 26.6\% | (11.3\%) | (545.5\%) | (620.9\%) | (14.5\%) |
| 157 Eli Lilly and Company | LLY | Pharmaceuticals, Biotechnology and Life Sciences | \$77,163 | \$4,569 | 5.9\% | 12.3\% | 18.2\% | (5.0\%) | (10.1\%) | (5.2\%) | (5.1\%) |
| 158 Chubb Limited | CB | Insurance | \$61,481 | \$2,485 | 4.0\% | 12.3\% | 16.3\% | (3.4\%) | 119.0\% | 58.6\% | 38.2\% |
| 159 Verisk Analytics, Inc. | VRSK | Commercial and Professional Services | \$13,592 | \$1,531 | 11.3\% | 12.3\% | 17.3\% | (4.3\%) | 36.0\% | 34.7\% | 1.0\% |
| 160 Red Hat, Inc. | RHT | Software and Services | \$12,518 | \$1,553 | 12.4\% | 12.2\% | 10.5\% | 1.6\% | 77.7\% | 92.0\% | (7.5\%) |
| 161 F5 Networks, Inc. | FFIV | Technology Hardware and Equipment | \$9,453 | \$2,458 | 26.0\% | 12.2\% | 5.9\% | 5.9\% | 41.7\% | 73.2\% | (18.2\%) |
| 162 Textron Inc. | TXT | Capital Goods | \$13,121 | \$1,072 | 8.2\% | 12.2\% | 19.1\% | (5.8\%) | NA | NA | NA |
| 163 Kimco Realty Corporation | KIM | Real Estate | \$10,694 | \$633 | 5.9\% | 12.1\% | 15.0\% | (2.6\%) | 68.7\% | 61.6\% | 4.4\% |
| 164 Agilent Technologies, Inc. | A | Pharmaceuticals, Biotechnology and Life Sciences | \$14,659 | \$2,050 | 14.0\% | 12.0\% | 13.6\% | (1.4\%) | (27.0\%) | (21.2\%) | (7.3\%) |
| 165 The Walt Disney Company | DIS | Media | \$165,862 | \$27,888 | 16.8\% | 11.9\% | 24.6\% | (10.2\%) | 69.3\% | 91.9\% | (11.8\%) |

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|  |  |  |  |  |  |  |  |  | \% $\Delta$ (Q4 '16 vs Q4 '11) |  |  |
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| Company Name | Ticker | Industry | Market Capitalization | \$ Total Buyback | \$ Total Buyback / Market Cap | Buyback ROI | Buyback Strategy | Buyback Effectiveness | \% $\Delta$ Earnings | \% $\triangle$ EPS | $\% \Delta$ Share Count |
| 222 CVS Health Corporation | CVS | Food and Staples Retailing | \$84,153 | \$20,569 | 24.4\% | 8.1\% | 18.6\% | (8.8\%) | NA | NA | NA |
| 223 Pfizer Inc. | PFE | Pharmaceuticals, Biotechnology and Life Sciences | \$197,100 | \$39,355 | 20.0\% | 8.1\% | 14.2\% | (5.4\%) | (46.1\%) | (31.8\%) | (21.0\%) |
| 224 Dollar General Corporation | DG | Retailing | \$20,463 | \$4,382 | 21.4\% | 8.0\% | 13.4\% | (4.8\%) | 41.6\% | 74.2\% | (18.7\%) |
| 225 Biogen Inc. | BIIB | Pharmaceuticals, Biotechnology and Life Sciences | \$61,700 | \$8,272 | 13.4\% | 8.0\% | 22.1\% | (11.6\%) | 116.2\% | 139.0\% | (9.5\%) |
| 226 Universal Health Services, Inc. | UHS | Healthcare Equipment and Services | \$10,314 | \$710 | 6.9\% | 8.0\% | 26.0\% | (14.3\%) | 82.9\% | 83.1\% | (0.1\%) |
| 227 The Hershey Company | HSY | Food, Beverage and Tobacco | \$21,951 | \$2,568 | 11.7\% | 8.0\% | 13.6\% | (4.9\%) | (17.8\%) | (13.4\%) | (5.0\%) |
| 228 CBS Corporation | CBS | Media | \$27,383 | \$10,976 | 40.1\% | 7.9\% | 20.4\% | (10.4\%) | NA | NA | NA |
| 229 General Motors Company | GM | Automobiles and Components | \$52,682 | \$16,833 | 32.0\% | 7.9\% | 11.3\% | (3.0\%) | 153.1\% | 162.9\% | (3.7\%) |
| 230 Capital One Financial Corporation | COF | Diversified Financials | \$42,076 | \$9,223 | 21.9\% | 7.9\% | 15.0\% | (6.2\%) | 94.3\% | 133.6\% | (16.8\%) |
| 231 Cardinal Health, Inc. | CAH | Healthcare Equipment and Services | \$23,035 | \$3,210 | 13.9\% | 7.7\% | 13.8\% | (5.4\%) | 23.7\% | 35.5\% | (8.7\%) |
| 232 Mylan N.V. | MYL | Pharmaceuticals, Biotechnology and Life Sciences | \$20,414 | \$2,067 | 10.1\% | 7.6\% | 14.4\% | (5.9\%) | 222.4\% | 157.1\% | 25.4\% |
| 233 Varian Medical Systems, Inc. | VAR | Healthcare Equipment and Services | \$8,386 | \$2,238 | 26.7\% | 7.5\% | 9.1\% | (1.5\%) | (77.4\%) | (72.7\%) | (17.3\%) |
| 234 The Procter \& Gamble Company | PG | Household and Personal Products | \$224,997 | \$21,509 | 9.6\% | 7.5\% | 9.2\% | (1.6\%) | 366.0\% | 402.1\% | (7.2\%) |
| 235 Baker Hughes Incorporated | BHI | Energy | \$27,469 | \$1,713 | 6.2\% | 7.4\% | 3.8\% | 3.6\% | (232.8\%) | (236.6\%) | (2.8\%) |
| 236 Dover Corporation | DOV | Capital Goods | \$11,640 | \$2,411 | 20.7\% | 7.3\% | 11.9\% | (4.2\%) | (42.1\%) | (31.6\%) | (15.4\%) |
| 237 Juniper Networks, Inc. | JNPR | Technology Hardware and Equipment | \$10,748 | \$4,968 | 46.2\% | 7.2\% | 4.8\% | 2.3\% | 96.5\% | 172.8\% | (28.0\%) |
| 238 Colgate-Palmolive Company | CL | Household and Personal Products | \$58,166 | \$7,880 | 13.5\% | 7.2\% | 11.2\% | (3.6\%) | 2.7\% | 11.0\% | (7.5\%) |
| 239 Whirlpool Corporation | WHR | Consumer Durables and Apparel | \$13,652 | \$1,150 | 8.4\% | 7.1\% | 29.1\% | (17.0\%) | (12.2\%) | (9.3\%) | (3.2\%) |
| 240 Seagate Technology plc | STX | Technology Hardware and Equipment | \$11,242 | \$8,226 | 73.2\% | 7.0\% | 25.4\% | (14.6\%) | (47.2\%) | (19.8\%) | (34.2\%) |
| 241 Garmin Ltd. | GRMN | Consumer Durables and Apparel | \$9,138 | \$599 | 6.6\% | 7.0\% | 11.5\% | (4.0\%) | (17.5\%) | (14.8\%) | (3.1\%) |
| 242 Cognizant Technology Solutions Corporation | CTSH | Software and Services | \$33,993 | \$1,920 | 5.6\% | 7.0\% | 9.6\% | (2.3\%) | 72.8\% | 72.3\% | 0.3\% |
| 243 Eaton Corporation plc | ETN | Capital Goods | \$30,305 | \$2,062 | 6.8\% | 7.0\% | 12.2\% | (4.7\%) | 39.2\% | 4.2\% | 33.6\% |
| 244 DENTSPLY SIRONA Inc. | XRAY | Healthcare Equipment and Services | \$13,329 | \$1,247 | 9.4\% | 7.0\% | 11.9\% | (4.4\%) | 163.5\% | 63.0\% | 61.7\% |
| 245 International Paper Company | IP | Materials | \$21,819 | \$1,436 | 6.6\% | 6.9\% | 16.5\% | (8.2\%) | (22.4\%) | (17.5\%) | (5.9\%) |
| 246 Verizon Communications Inc. | vz | Telecommunication Services | \$217,611 | \$5,287 | 2.4\% | 6.9\% | 10.9\% | (3.6\%) | NA | NA | NA |
| 247 Wells Fargo \& Company | WFC | Banks | \$276,779 | \$35,501 | 12.8\% | 6.7\% | 17.6\% | (9.2\%) | 28.4\% | 35.5\% | (5.2\%) |
| 248 Willis Towers Watson Public Limited Company | WLTw | Insurance | \$16,721 | \$754 | 4.5\% | 6.6\% | 7.9\% | (1.2\%) | NA | NA | NA |
| 249 HCA Holdings, Inc. | HCA | Healthcare Equipment and Services | \$27,734 | \$7,398 | 26.7\% | 6.6\% | 33.0\% | (19.9\%) | (52.5\%) | (43.8\%) | (15.5\%) |
| 250 Deere \& Company | DE | Capital Goods | \$32,651 | \$8,445 | 25.9\% | 6.5\% | 7.6\% | (1.1\%) | (63.6\%) | (54.1\%) | (20.8\%) |
| 251 Philip Morris International Inc. | PM | Food, Beverage and Tobacco | \$141,933 | \$16,369 | 11.5\% | 6.4\% | 9.8\% | (3.1\%) | (9.3\%) | 0.6\% | (9.8\%) |
| 252 TEGNA Inc. | tGNA | Media | \$4,586 | \$754 | 16.4\% | 6.4\% | 21.6\% | (12.5\%) | 13.8\% | 25.6\% | (9.4\%) |
| 253 Loews Corporation | L | Insurance | \$15,780 | \$2,376 | 15.1\% | 5.9\% | 3.7\% | 2.1\% | 7.0\% | 26.1\% | (15.2\%) |
| 254 Wyndham Worldwide Corporation | WYn | Consumer Services | \$8,231 | \$3,147 | 38.2\% | 5.9\% | 18.7\% | (10.8\%) | 192.9\% | 309.3\% | (28.4\%) |
| 255 Abbott Laboratories | ABT | Healthcare Equipment and Services | \$56,551 | \$8,633 | 15.3\% | 5.8\% | 11.6\% | (5.3\%) | (50.7\%) | (55.1\%) | 9.9\% |
| 256 Johnson Controls International plc | JCI | Capital Goods | \$38,546 | \$3,439 | 8.9\% | 5.4\% | 11.5\% | (5.5\%) | (22.4\%) | (43.7\%) | 37.9\% |
| 257 Duke Energy Corporation | DUK | Utilities | \$53,480 | \$1,500 | 2.8\% | 5.4\% | 9.1\% | (3.5\%) | (178.8\%) | (150.2\%) | 56.9\% |
| 258 Oracle Corporation | ORCL | Software and Services | \$157,735 | \$46,279 | 29.3\% | 5.1\% | 6.4\% | (1.2\%) | (7.3\%) | 12.1\% | (17.3\%) |
| 259 PVH Corp. | PVH | Consumer Durables and Apparel | \$7,153 | \$547 | 7.6\% | 5.1\% | 9.1\% | (3.7\%) | 157.8\% | 126.8\% | 13.6\% |
| 260 Patterson Companies, Inc. | PDCO | Healthcare Equipment and Services | \$3,926 | \$612 | 15.6\% | 4.9\% | 9.8\% | (4.5\%) | (53.8\%) | (48.2\%) | (10.9\%) |
| 261 Tractor Supply Company | TSCO | Retailing | \$9,950 | \$1,344 | 13.5\% | 4.8\% | 15.9\% | (9.6\%) | 75.3\% | 93.8\% | (9.6\%) |
| 262 QUALCOMM Incorporated | QCOM | Semiconductors and Semiconductor Equipment | \$96,293 | \$25,613 | 26.6\% | 4.8\% | 7.1\% | (2.2\%) | (51.3\%) | (44.3\%) | (12.7\%) |
| 263 The Estée Lauder Companies Inc. | EL | Household and Personal Products | \$28,029 | \$3,361 | 12.0\% | 4.8\% | 10.3\% | (5.0\%) | 7.9\% | 14.2\% | (5.5\%) |
| 264 Harley-Davidson, Inc. | HOG | Automobiles and Components | \$10,263 | \$3,409 | 33.2\% | 4.7\% | 11.0\% | (5.7\%) | NA | NA | NA |
| 265 Target Corporation | TGT | Retailing | \$40,571 | \$10,525 | 25.9\% | 4.6\% | 9.6\% | (4.5\%) | (16.7\%) | 0.7\% | (17.3\%) |
| 266 The Coca-Cola Company | KO | Food, Beverage and Tobacco | \$178,815 | \$20,798 | 11.6\% | 4.6\% | 7.5\% | (2.7\%) | (66.8\%) | (65.0\%) | (5.2\%) |
| 267 United Technologies Corporation | UTX | Capital Goods | \$90,262 | \$14,194 | 15.7\% | 4.5\% | 9.7\% | (4.7\%) | (23.5\%) | (13.2\%) | (11.9\%) |
| 268 Tiffany \& Co. | TIF | Retailing | \$9,637 | \$485 | 5.0\% | 4.5\% | 3.7\% | 0.7\% | (11.5\%) | (10.3\%) | (1.4\%) |
| 269 Robert Half International Inc. | RHI | Commercial and Professional Services | \$6,188 | \$946 | 15.3\% | 4.4\% | 12.5\% | (7.2\%) | 82.5\% | 102.9\% | (10.1\%) |
| 270 Western Digital Corporation | WDC | Technology Hardware and Equipment | \$19,398 | \$3,292 | 17.0\% | 4.2\% | 19.0\% | (12.4\%) | 62.1\% | 32.2\% | 22.6\% |
| 271 Ryder System, Inc. | R | Transportation | \$3,980 | \$177 | 4.4\% | 4.0\% | 10.9\% | (6.2\%) | 0.2\% | (4.2\%) | 4.5\% |
| 272 MetLife, Inc. | MET | Insurance | \$59,232 | \$3,302 | 5.6\% | 3.8\% | 13.4\% | (8.5\%) | (310.9\%) | (306.3\%) | 2.2\% |
| 273 Caterpillar Inc. | CAT | Capital Goods | \$54,260 | \$8,264 | 15.2\% | 3.8\% | 3.3\% | 0.5\% | (175.7\%) | (183.6\%) | (9.4\%) |
| 274 CarMax Inc. | кмх | Retailing | \$12,064 | \$2,907 | 24.1\% | 3.7\% | 14.2\% | (9.2\%) | 66.4\% | 101.5\% | (17.4\%) |
| 275 Halliburton Company | HAL | Energy | \$46,758 | \$5,156 | 11.0\% | 3.3\% | 8.9\% | (5.1\%) | (116.4\%) | (117.5\%) | (5.8\%) |
| 276 PPG Industries, Inc. | PPG | Materials | \$25,017 | \$3,393 | 13.6\% | 3.2\% | 20.2\% | (14.1\%) | 59.3\% | 89.4\% | (15.9\%) |
| 277 Archer-Daniels-Midland Company | ADM | Food, Beverage and Tobacco | \$26,267 | \$4,424 | 16.8\% | 2.9\% | 12.0\% | (8.2\%) | 430.0\% | 514.5\% | (13.7\%) |
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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company Name | Ticker | Industry | Market Capitalization | \$ Total Buyback | \$ Total Buyback / Market Cap | Buyback ROI | Buyback Strategy | Buyback Effectiveness | \% $\Delta$ Earnings | \% $\triangle$ EPS | $\% \Delta$ Share Count |
| 278 Invesco Ltd. | IVZ | Diversified Financials | \$12,395 | \$1,739 | 14.0\% | 2.9\% | 13.2\% | (9.1\%) | 12.0\% | 22.8\% | (8.8\%) |
| 279 Host Hotels \& Resorts, Inc. | HST | Real Estate | \$13,939 | \$894 | 6.4\% | 2.8\% | 8.2\% | (5.0\%) | 641.2\% | 609.4\% | 4.5\% |
| 280 Wal-Mart Stores, Inc. | WMT | Food and Staples Retailing | \$212,419 | \$24,640 | 11.6\% | 2.8\% | 6.8\% | (3.8\%) | (27.2\%) | (18.3\%) | (10.9\%) |
| 281 Praxair, Inc. | PX | Materials | \$33,445 | \$3,028 | 9.1\% | 2.6\% | 5.6\% | (2.8\%) | (3.3\%) | 1.1\% | (4.4\%) |
| 282 Sealed Air Corporation | SEE | Materials | \$8,765 | \$1,257 | 14.3\% | 2.6\% | 23.8\% | (17.2\%) | NA | NA | NA |
| 283 Exxon Mobil Corporation | хом | Energy | \$374,281 | \$55,266 | 14.8\% | 2.4\% | 5.1\% | (2.6\%) | (82.1\%) | (79.7\%) | (12.0\%) |
| 284 Royal Caribbean Cruises Ltd. | RCL | Consumer Services | \$17,604 | \$736 | 4.2\% | 2.4\% | 26.9\% | (19.4\%) | 614.1\% | 623.0\% | (1.2\%) |
| 285 Chevron Corporation | cVX | Energy | \$222,190 | \$13,048 | 5.9\% | 2.3\% | 5.2\% | (2.8\%) | (91.9\%) | (91.5\%) | (4.2\%) |
| 286 LyondellBasell Industries N.V. | LYB | Materials | \$34,957 | \$15,331 | 43.9\% | 2.2\% | 29.1\% | (20.8\%) | NA | NA | NA |
| 287 Scripps Networks Interactive, Inc. | SNI | Media | \$9,215 | \$2,341 | 25.4\% | 2.1\% | 11.9\% | (8.8\%) | (61.4\%) | (53.4\%) | (17.1\%) |
| 288 Nielsen Holdings plc | NLSN | Commercial and Professional Services | \$14,994 | \$1,562 | 10.4\% | 2.0\% | 11.7\% | (8.7\%) | NA | NA | NA |
| 289 Kohl's Corporation | KSS | Retailing | \$8,714 | \$4,403 | 50.5\% | 1.8\% | 2.1\% | (0.3\%) | (44.5\%) | (21.7\%) | (29.1\%) |
| 290 NetApp, Inc. | NTAP | Technology Hardware and Equipment | \$9,713 | \$5,173 | 53.3\% | 1.8\% | (0.2\%) | 2.0\% | 22.1\% | 63.5\% | (25.4\%) |
| 291 Schlumberger Limited | SLB | Energy | \$116,800 | \$9,178 | 7.9\% | 1.4\% | 5.2\% | (3.6\%) | (114.5\%) | (113.9\%) | 4.5\% |
| 292 V.F. Corporation | VFC | Consumer Durables and Apparel | \$22,071 | \$3,062 | 13.9\% | 1.2\% | 12.9\% | (10.3\%) | 2.7\% | 10.4\% | (7.0\%) |
| 293 W.W. Grainger, Inc. | GWW | Capital Goods | \$13,835 | \$3,494 | 25.3\% | 0.8\% | 7.0\% | (5.7\%) | (59.1\%) | (51.1\%) | (16.4\%) |
| 294 American Express Company | AXP | Diversified Financials | \$67,802 | \$21,235 | 31.3\% | 0.8\% | 9.3\% | (7.8\%) | (30.8\%) | (10.1\%) | (23.0\%) |
| 295 Emerson Electric Co. | EMR | Capital Goods | \$35,928 | \$5,307 | 14.8\% | 0.8\% | 5.4\% | (4.4\%) | (16.7\%) | (5.2\%) | (12.2\%) |
| 296 Xerox Corporation | XRX | Technology Hardware and Equipment | \$8,850 | \$4,121 | 46.6\% | 0.6\% | 6.2\% | (5.2\%) | (51.7\%) | (36.0\%) | (24.5\%) |
| 297 Micron Technology, Inc. | MU | Semiconductors and Semiconductor Equipment | \$24,091 | \$1,132 | 4.7\% | 0.6\% | 27.1\% | (20.9\%) | NA | NA | NA |
| 298 AutoNation, Inc. | AN | Retailing | \$4,916 | \$1,867 | 38.0\% | 0.6\% | 5.1\% | (4.3\%) | 66.1\% | 105.1\% | (19.0\%) |
| 299 T. Rowe Price Group, Inc. | TROW | Diversified Financials | \$18,426 | \$2,230 | 12.1\% | 0.4\% | 9.1\% | (8.0\%) | 101.6\% | 111.5\% | (4.7\%) |
| 300 Nordstrom, Inc. | Jwn | Retailing | \$8,308 | \$3,319 | 39.9\% | 0.3\% | 5.9\% | (5.3\%) | (14.8\%) | 6.1\% | (19.8\%) |
| 301 Flowserve Corporation | FLS | Capital Goods | \$6,268 | \$1,780 | 28.4\% | 0.2\% | 9.6\% | (8.6\%) | (47.9\%) | (34.8\%) | (20.2\%) |
| 302 ConocoPhillips | COP | Energy | \$62,125 | \$5,243 | 8.4\% | 0.2\% | 1.2\% | (1.0\%) | (101.0\%) | (101.1\%) | (2.8\%) |
| 303 Kansas City Southern | KSU | Transportation | \$9,128 | \$380 | 4.2\% | (0.1\%) | 8.0\% | (7.6\%) | 35.4\% | 39.6\% | (3.0\%) |
| 304 The AES Corporation | AES | Utilities | \$7,660 | \$1,220 | 15.9\% | (0.2\%) | 2.8\% | (2.9\%) | NA | NA | NA |
| 305 Monsanto Company | MON | Materials | \$46,133 | \$12,146 | 26.3\% | (0.3\%) | 9.4\% | (8.9\%) | (77.0\%) | (71.9\%) | (18.1\%) |
| 306 Eastman Chemical Company | EMN | Materials | \$11,037 | \$923 | 8.4\% | (0.6\%) | 16.1\% | (14.4\%) | 866.7\% | 814.4\% | 5.7\% |
| 307 Pentair plc | PNR | Capital Goods | \$10,190 | \$2,005 | 19.7\% | (0.6\%) | 12.6\% | (11.7\%) | NA | NA | NA |
| 308 PulteGroup, Inc. | PHM | Consumer Durables and Apparel | \$6,079 | \$1,428 | 23.5\% | (0.7\%) | 30.1\% | (23.7\%) | 1,876.5\% | 2,285.3\% | (17.1\%) |
| 309 International Business Machines Corporation | IBM | Software and Services | \$157,832 | \$41,235 | 26.1\% | (1.5\%) | (0.4\%) | (1.1\%) | (18.0\%) | 0.7\% | (18.6\%) |
| 310 FMC Corporation | FMC | Materials | \$7,570 | \$537 | 7.1\% | (1.6\%) | 6.7\% | (7.8\%) | (79.6\%) | (78.9\%) | (3.2\%) |
| 311 Express Scripts Holding Company | ESRX | Healthcare Equipment and Services | \$42,417 | \$18,795 | 44.3\% | (1.7\%) | 10.5\% | (11.1\%) | 394.0\% | 299.0\% | 23.8\% |
| 312 Mead Johnson Nutrition Company | MJN | Food, Beverage and Tobacco | \$13,071 | \$1,852 | 14.2\% | (2.0\%) | 2.5\% | (4.4\%) | 96.0\% | 117.5\% | (9.9\%) |
| 313 Brown-Forman Corporation | BF.B | Food, Beverage and Tobacco | \$17,509 | \$2,180 | 12.5\% | (2.2\%) | 15.5\% | (15.4\%) | 36.7\% | 51.7\% | (9.9\%) |
| 314 Cerner Corporation | CERN | Healthcare Equipment and Services | \$16,082 | \$1,432 | 8.9\% | (2.6\%) | 11.1\% | (12.3\%) | 64.1\% | 69.0\% | (2.8\%) |
| 315 Twenty-First Century Fox, Inc. | FOX | Media | \$51,393 | \$18,077 | 35.2\% | (2.7\%) | 12.8\% | (13.7\%) | NA | NA | NA |
| 316 Alliance Data Systems Corporation | ADS | Software and Services | \$13,198 | \$2,394 | 18.1\% | (3.0\%) | 17.0\% | (17.1\%) | (83.9\%) | (85.6\%) | 11.8\% |
| 317 CenturyLink, Inc. | CTL | Telecommunication Services | \$13,000 | \$3,109 | 23.9\% | (3.2\%) | 0.1\% | (3.3\%) | (61.5\%) | (56.3\%) | (11.8\%) |
| 318 BorgWarner Inc. | BWA | Automobiles and Components | \$8,400 | \$1,315 | 15.7\% | (3.6\%) | 2.4\% | (5.9\%) | (340.4\%) | (347.2\%) | (2.7\%) |
| 319 Occidental Petroleum Corporation | OXY | Energy | \$54,433 | \$4,641 | 8.5\% | (3.8\%) | (0.8\%) | (3.0\%) | (116.6\%) | (117.7\%) | (5.7\%) |
| 320 Mattel, Inc. | MAT | Consumer Durables and Apparel | \$9,423 | \$737 | 7.8\% | (4.0\%) | 6.3\% | (9.6\%) | (53.1\%) | (53.4\%) | 0.7\% |
| 321 Fluor Corporation | FLR | Capital Goods | \$7,313 | \$1,884 | 25.8\% | (4.3\%) | 0.9\% | (5.2\%) | (54.0\%) | (44.2\%) | (17.5\%) |
| 322 Franklin Resources, Inc. | ben | Diversified Financials | \$22,513 | \$4,244 | 18.8\% | (5.0\%) | 4.7\% | (9.3\%) | (8.4\%) | 4.9\% | (12.7\%) |
| 323 AMETEK, Inc. | AME | Capital Goods | \$11,248 | \$1,031 | 9.2\% | (5.1\%) | 13.0\% | (16.0\%) | 7.1\% | 12.2\% | (4.6\%) |
| 324 Ford Motor Company | F | Automobiles and Components | \$48,201 | \$2,576 | 5.3\% | (6.1\%) | 5.9\% | (11.3\%) | (105.8\%) | (105.5\%) | 4.8\% |
| 325 Macy's, Inc. | M | Retailing | \$10,946 | \$7,186 | 65.6\% | (6.3\%) | 7.5\% | (12.8\%) | (36.2\%) | (12.6\%) | (27.1\%) |
| 326 Discovery Communications, Inc. | DISC.A | Media | \$16,190 | \$6,035 | 37.3\% | (6.8\%) | 5.7\% | (11.8\%) | (9.5\%) | 18.4\% | (23.6\%) |
| 327 Staples, Inc. | SPLS | Retailing | \$5,887 | \$954 | 16.2\% | (7.4\%) | (6.1\%) | (1.4\%) | (435.7\%) | (457.1\%) | (6.0\%) |
| 328 The Macerich Company | MAC | Real Estate | \$10,181 | \$1,200 | 11.8\% | (8.5\%) | 13.5\% | (19.4\%) | (77.2\%) | (79.1\%) | 9.0\% |
| 329 Coach, Inc. | COH | Consumer Durables and Apparel | \$9,818 | \$1,266 | 12.9\% | (8.6\%) | (7.1\%) | (1.7\%) | (42.5\%) | (41.1\%) | (2.5\%) |
| 330 The Gap, Inc. | GPS | Retailing | \$8,951 | \$4,203 | 47.0\% | (9.7\%) | 9.4\% | (17.4\%) | 0.9\% | 23.1\% | (18.0\%) |
| 331 Chipotle Mexican Grill, Inc. | CMG | Consumer Services | \$10,923 | \$1,743 | 16.0\% | (9.7\%) | 4.0\% | (13.2\%) | (72.2\%) | (72.5\%) | 1.3\% |
| 332 H\&R Block, Inc. | HRB | Consumer Services | \$4,762 | \$2,698 | 56.7\% | (10.0\%) | 12.3\% | (19.9\%) | NA | NA | NA |
| 333 Apache Corporation | APA | Energy | \$24,082 | \$2,863 | 11.9\% | (10.4\%) | (6.4\%) | (4.3\%) | (115.3\%) | (115.5\%) | (1.0\%) |
| Fortuna Advisors ${ }_{\text {uc }}$ |  |  | ROI - Complet | List |  |  |  |  |  |  |  |


|  |  |  |  |  |  |  |  |  | \% $\Delta$ (Q4 '16 vs Q4 '11) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company Name | Ticker | Industry | Market Capitalization | \$ Total Buyback | \$ Total Buyback/ Market Cap | Buyback ROI | Buyback Strategy | Buyback Effectiveness | \% $\Delta$ Earnings | \% $\operatorname{AEPS}$ | $\% \Delta$ Share Count |
| 334 Whole Foods Market, Inc. | WFM | Food and Staples Retailing | \$9,794 | \$2,184 | 22.3\% | (10.7\%) | (0.9\%) | (9.9\%) | (19.5\%) | (7.8\%) | (12.7\%) |
| 335 Gilead Sciences, Inc. | GILD | Pharmaceuticals, Biotechnology and Life Sciences | \$94,343 | \$27,601 | 29.3\% | (11.3\%) | 30.9\% | (32.2\%) | 367.3\% | 441.9\% | (13.8\%) |
| 336 Ralph Lauren Corporation | RL | Consumer Durables and Apparel | \$7,424 | \$2,252 | 30.3\% | (11.7\%) | (5.8\%) | (6.2\%) | (51.5\%) | (45.5\%) | (11.0\%) |
| 337 Kinder Morgan, Inc. | кмı | Energy | \$46,232 | \$1,053 | 2.3\% | (11.8\%) | (2.0\%) | (10.0\%) | 34.8\% | (57.3\%) | 215.8\% |
| 338 Affiliated Managers Group, Inc. | AMG | Diversified Financials | \$7,965 | \$715 | 9.0\% | (12.4\%) | 10.0\% | (20.4\%) | 276.4\% | 255.5\% | 5.9\% |
| 339 Alexion Pharmaceuticals, Inc. | ALXN | Pharmaceuticals, Biotechnology and Life Sciences | \$27,437 | \$1,138 | 4.1\% | (13.6\%) | 13.0\% | (23.5\%) | 91.9\% | 58.5\% | 21.1\% |
| 340 Hess Corporation | HES | Energy | \$19,542 | \$5,359 | 27.4\% | (13.7\%) | (0.1\%) | (13.7\%) | NA | NA | NA |
| 341 CF Industries Holdings, Inc. | CF | Materials | \$7,338 | \$4,401 | 60.0\% | (14.1\%) | (0.0\%) | (14.1\%) | (172.9\%) | (202.4\%) | (28.8\%) |
| 342 Bed Bath \& Beyond Inc. | BBBY | Retailing | \$6,109 | \$6,371 | 104.3\% | (14.3\%) | (6.3\%) | (8.6\%) | (44.7\%) | (11.2\%) | (37.7\%) |
| 343 Viacom, Inc. | VIAB | Media | \$14,096 | \$11,088 | 78.7\% | (14.6\%) | (0.9\%) | (13.9\%) | 86.8\% | 154.2\% | (26.5\%) |
| 344 Murphy Oil Corporation | MUR | Energy | \$5,361 | \$1,375 | 25.7\% | (15.4\%) | (4.4\%) | (11.6\%) | NA | NA | NA |
| 345 Teradata Corporation | TDC | Software and Services | \$3,529 | \$1,949 | 55.2\% | (16.4\%) | (12.1\%) | (4.8\%) | (40.8\%) | (23.9\%) | (22.2\%) |
| 346 DaVita Inc. | DVA | Healthcare Equipment and Services | \$12,673 | \$1,650 | 13.0\% | (16.5\%) | 11.8\% | (25.4\%) | 6.5\% | 2.5\% | 3.8\% |
| 347 Stericycle, Inc. | SRCL | Commercial and Professional Services | \$6,555 | \$577 | 8.8\% | (16.7\%) | (1.2\%) | (15.6\%) | (70.8\%) | (71.0\%) | 0.6\% |
| 348 Hanesbrands Inc. | HBI | Consumer Durables and Apparel | \$8,152 | \$737 | 9.0\% | (17.8\%) | 32.5\% | (38.0\%) | 283.5\% | 301.8\% | (4.5\%) |
| 349 National Oilwell Varco, Inc. | Nov | Energy | \$14,140 | \$3,000 | 21.2\% | (18.4\%) | (7.8\%) | (11.4\%) | (224.4\%) | (239.3\%) | (10.7\%) |
| 350 The Mosaic Company | MOS | Materials | \$10,272 | \$3,556 | 34.6\% | (18.7\%) | (10.9\%) | (8.7\%) | (98.1\%) | (97.7\%) | (17.5\%) |
| 351 Allergan plc | AGN | Pharmaceuticals, Biotechnology and Life Sciences | \$78,771 | \$15,468 | 19.6\% | (19.2\%) | 26.2\% | (36.0\%) | (100.6\%) | (100.2\%) | 163.9\% |
| 352 Marathon Oil Corporation | MRO | Energy | \$14,665 | \$1,500 | 10.2\% | (22.4\%) | (7.4\%) | (16.2\%) | (349.7\%) | (307.6\%) | 20.3\% |
| 353 NRG Energy, Inc. | NRG | Utilities | \$3,867 | \$501 | 13.0\% | (30.0\%) | (8.8\%) | (23.3\%) | NA | NA | NA |


[^0]:    ${ }^{1}$ Companies often buy above share price trend, see reinvestment effectiveness in figure 3.
    ${ }^{2}$ And more than what's necessary to offset dilution - share counts have fallen by more than $9 \%$ over the past five years. See median \% $\Delta$ Share Count at the top of the table included in the appendix.

