# Both Sides of the Buyback Debate

## It's Mostly About the Free Cash Flow

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### Key takeaways

- Share buybacks (along with the Fed's QE) have been an easy scapegoat for the bears, but few of them have been able to actually quantify the effects of these buybacks.
- While buybacks likely have inflated companies' earnings per share—and may even have led to some misallocation of capital—the counterpoint is that many buybacks are the result of robust free cash flow.
- Once we consider the value of returning this excess cash to shareholders, I find it plausible that stocks are actually undervalued instead of overvalued as of April 30, 2019.

With the topic of share buybacks taking up more and more of the conversation these days, I think it is worth trying to quantify their impact on the stock market. Plenty has been written about the current era of "financial engineering," but I haven't seen much work that actually tries to put a number on buybacks in terms of their impact on companies' earnings per share (EPS), returns, or valuation. Like the Federal Reserve's quantitative easing (QE) actions, share buybacks are an easy target for the bears—who view them as artificially supporting elevated valuations—because they are easy to point to conceptually but hard to quantify in practice.

In this report, though, I am going to attempt to do just that—quantify the effects of stock buybacks—with the caveat that this is a highly nuanced concept with plenty of qualifications to be made on both sides.

We know plenty about share buybacks, of course. We know that, generally, a buyback program is funded from a company's free cash flow (FCF), but debt financing also can play a funding role. We also know that the cumulative $4.8 trillion in buybacks since the stock market's 2009 low has been a big support for equities. It makes me wonder whether the stock market would have been able to increase nearly fivefold (total return, dividends reinvested) without this constant bid from constituent companies.

As a result, there is a general perception that if (a) the debt financing spigot were ever to close, and (b) free cash flow were ever to ebb, then (c) buybacks would evaporate, taking with them any remaining bid for equities. This is why the bears usually bring up buybacks as their case in point that the market is being propped up.

Both (a) and (b) would seem plausible during a severe recession but, in my opinion, are unlikely during an ongoing economic expansion. Thus it certainly raises the stakes for trying to get the timing of the next recession right (which seems to be everyone's favorite pastime these days).

Whether buybacks are simply a benign way for companies to return capital to shareholders (akin to dividends) or a more troublesome sign of capital misallocation driven by easy money and misguided incentives is a hotly debated topic. So let's at least try to quantify the degree to which buybacks have affected company earnings per share and thus valuations. Then I will provide a counterpoint.

## Point

In order to quantify the "buyback effect," I am going to test the premise that buybacks have reduced the stock market's total share count (which is what share buybacks do, after all). In the process, I'll also test whether buybacks have inflated the market's overall EPS and, thus, led to an understatement of the market's price-to-earnings (P/E) ratio.

The first step is to compare the "supply" (share count) of shares in the S&P 500® with the "demand" from buybacks (Exhibit 1), plotting the S&P 500's shares outstanding (green line) against the quarterly flow of buybacks in dollar terms (blue line). The inflection points don't line up quite perfectly, but one can clearly discern an inverse historical correlation between the two (yellow scatter plot). This is exactly as it should be, of course, since buybacks should reduce the share count. Obviously, other factors also can affect the share count (IPOs, secondary offerings, and merger-and-acquisition activity come to mind), but I think it's fairly clear that buybacks have been a dominant driver.

So we have established a relationship of sorts. If buybacks reduce the share count, then it follows that this lower share count should inflate the S&P 500's EPS relative to the dollar amount of earnings. How do we test this? The scatter plot inset in Exhibit 2 (page 3) compares dollar earnings (horizontal axis) with EPS (vertical axis). The orange line shows the history prior to 2004, what I deem the start of the buyback era. The blue line runs from 2004 through 2018. Interestingly, we can see that the slope differential between the two series has shifted upward since 2004, with the blue trend line steeper than the orange line. This seems to support the notion that ever-increasing amounts of buybacks have indeed had an upward effect on EPS relative to dollar earnings.

The next step is to use the old and new trend lines to estimate where EPS would be today if the pre-buyback-era relationship were still in force. As of Q4 2018 (Q1 data isn't final as of this writing), trailing four-quarter operating EPS for the S&P 500 stood at $150 and the dollar earnings were $1.28 trillion. Using the pre-2004 formula on that same $1.28 trillion of dollar earnings, I come up with $129 per share. This suggests that buybacks could be adding roughly $20 of earnings per share (or about 15%).

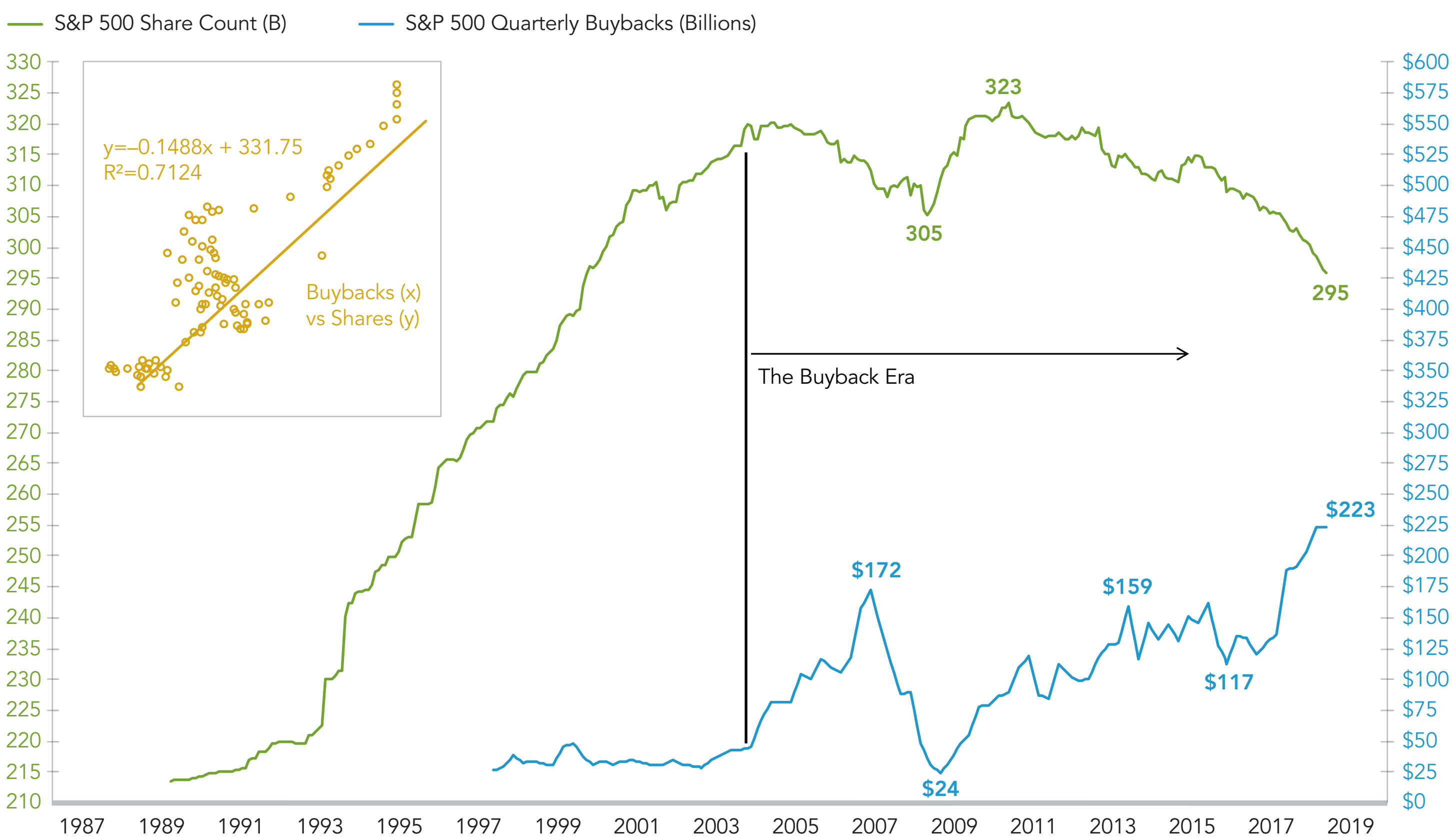
What is that $20 worth in terms of valuation? Well, that's easy enough: As shown in the lower panel of Exhibit 2, at the end of Q1 2019 the S&P 500 was trading at a five-year cyclically adjusted P/E ratio of 23.4 times. If we adjust for $20 lower EPS, that P/E goes up by three points to 26.3 times. In turn, that suggests to me that the S&P 500 price index is about 400 points higher than it "should" be.

There you have it, my attempt to quantify the buyback effect. Buybacks have become the new bogeyman for all the bull-market skeptics out there, and the above math seems to at least directionally support the naysayer's notion that S&P 500 valuations are perhaps unfairly elevated.

And it's not just about the math, of course. The broader negative take on the buyback phenomenon has to do with whether buybacks constitute a problematic misallocation of capital driven by poor incentives and easy money (low rates and quantitative easing). Those in this camp believe that buybacks are mostly a byproduct

**EXHIBIT 1: Buybacks indeed affect the market's share count**

S&P 500: Share Count versus Buyback Flows




The inset trend line describes the relationship between S&P 500 buybacks and shares outstanding using the data represented in the charts. Source: Bloomberg Finance, L.P., Haver Analytics, Fidelity Investments; monthly data through April 2019.

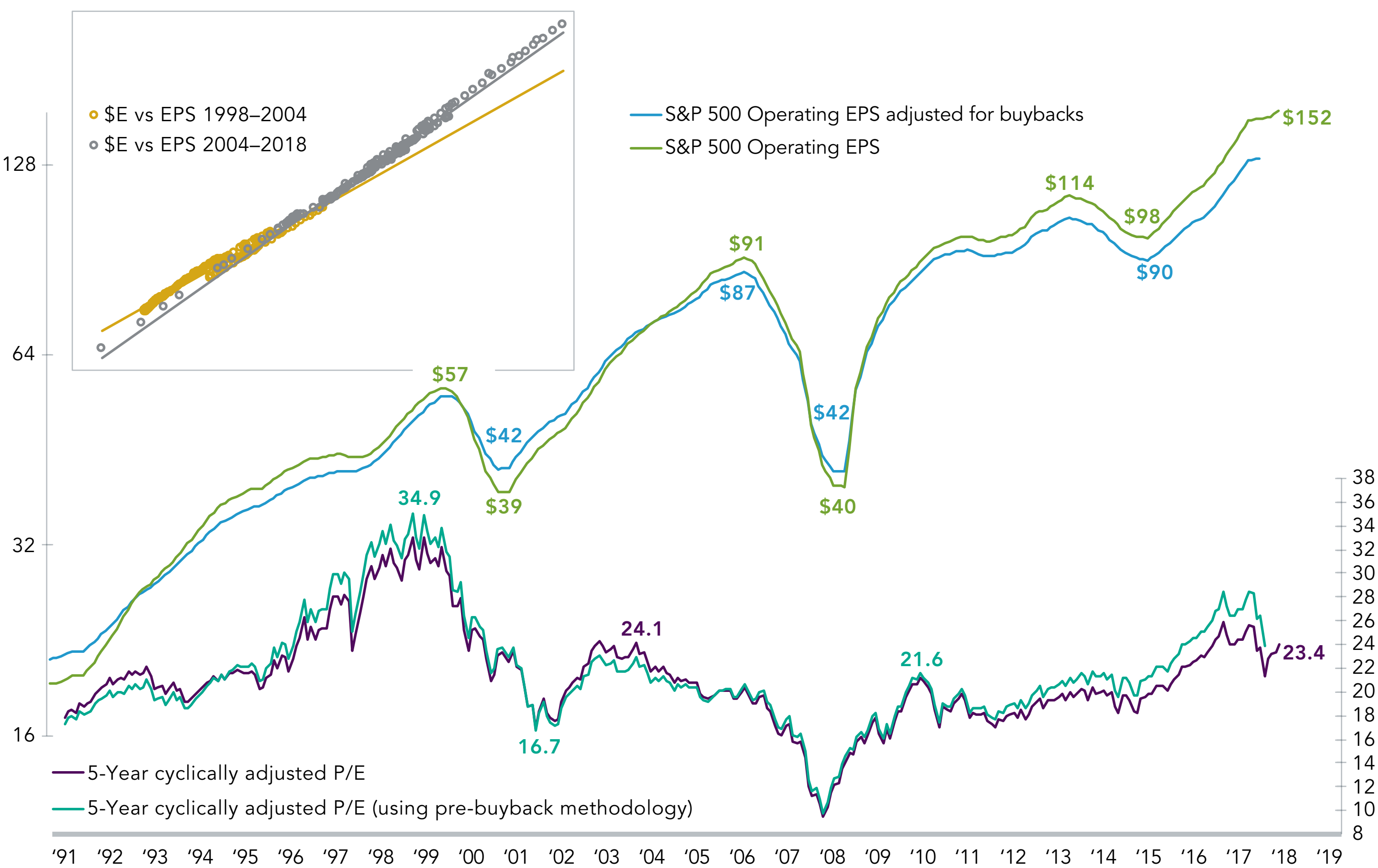
of a corporate debt-for-equity arbitrage (borrowing in the corporate bond market to buy back shares in the equity market). Once the Fed moves off the ZLB[1] and QE becomes QT (quantitative tightening), it's plausible that the whole process reverses, the debt-financing window closes, and buybacks cease. As a result, the equity market's "house of cards" collapses. In the meantime, the misallocation of capital comes at the expense of much-needed capital expenditures (capex). This has now even become a political issue.

## Counterpoint

Naturally, there is a whole other side to the story. Bulls will argue that buybacks are just another way for companies to remunerate stockholders, picking up where dividends left off a few decades ago. It is worth noting that, in the old days, half the S&P 500's total return derived from dividends, which amounted to about 5% per year. But since the 1990s, dividends have been running at only about 2%. When we add in the roughly 3% buyback yield, we are back to a total cash yield of around 5%. So, one could make the argument that

**EXHIBIT 2: Buybacks seem to have some effect on EPS**

S&P 500 Operating EPS and P/E Adjusted for Stock Buybacks




Using the data represented in the charts, the inset trend line describes the general relationship of S&P 500 earnings versus EPS between two time periods: 1988–2004 and 2004–2018. Sources: Bloomberg Finance, L.P., Haver Analytics, Fidelity Investments; monthly data through April 2019.

buybacks are indeed mostly just a way of returning cash to shareholders.

Plenty of companies buy their own shares simply because they have the excess free cash flow to do so—even after capex and dividends. And this cash is worth something (a lot actually), whether it remains on the balance sheet or is returned to shareholders. My math above does not take that into consideration at all; it shows only the negative side.

Perhaps instead of looking solely at dividends or earnings, we should be using the total cash yield—dividends plus buybacks—to value equities. If so, that changes the whole overvaluation argument outlined above. So let's peel the onion a bit further and see how the cash dimension changes the story.

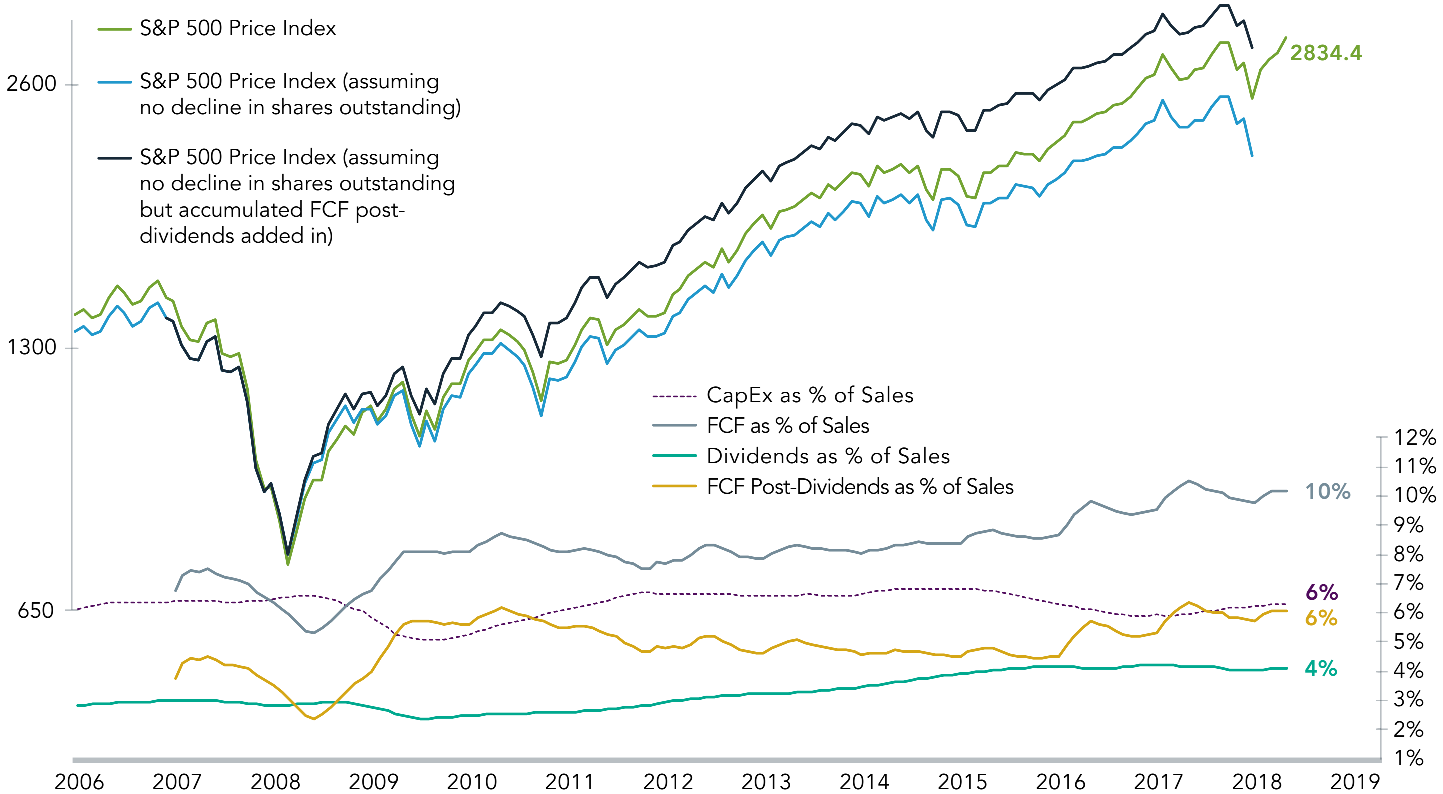
Looking at free cash flow as a percentage of sales, we can see that even after stripping out dividends (and capex) the S&P 500 still generates a robust FCF of 6.1% of revenues (Exhibit 3). That cash has to go somewhere, and that somewhere lately has been back into shareholders' pockets.

As the chart shows, this robust level of excess FCF has been a persistent attribute of the S&P 500 since the 2007–2008 financial crisis. It's difficult for me to conclude that the market is a "house of cards" with that kind of cash flow.

So how can we value this free cash flow? One way is simply to add the accumulated FCF per share (after dividends) to the S&P 500 price index. Since the financial

**EXHIBIT 3: The other side of the buyback debate appears more positive**

Post-Dividends Free Cash Flow as a Percentage of Sales




Sources: Bloomberg Finance L.P., Haver Analytics, Fidelity Investments; monthly data through April 2019.

crisis, this has amounted to $735 per share. If we add that to the downward-adjusted price-index value of 2437 from the first approach, we get a new value of 3172 (keeping in mind the accumulating assumptions and caveats underlying these figures). That is actually several hundred points above the March 2019 level of 2834.

Another way is to consider the total cash yield (dividends plus buybacks) as the proxy for the "income" part of the total return, calculated as income return plus price return. In my view, businesses that are "capital light"—via returning to shareholders a substantial portion of cash holdings—should on this basis be valued higher than businesses that are not. And, in fact, this is exactly what has happened over the past five to 10 years, as the performance of growth stocks versus value stocks (and U.S. stocks versus the rest of world) has demonstrated.

Taking a total cash yield approach to valuation suggests to me that the market is actually cheap instead of expensive (as is commonly believed). We can illustrate this another way, by showing the valuation ranking of the S&P 500 using both the price-to-earnings ratio and the price-to-total cash yield ratio (Exhibit 4). Both yields are

**EXHIBIT 4: The total cash yield ratio suggests markets might not be overvalued**

Percentile Valuation Rankings of Certain Ratios


Sources: Bloomberg Finance L.P., Haver Analytics, FactSet, Fidelity Investments; monthly data through April 2019. LTM – Last twelve months.

very close right now (4.5% for earnings yield and 5.2% for total cash yield), but historically the P/E is at the 85th percentile—meaning that the market has been more expensive only 15% of the time since 1900—while on a cash yield basis the market currently ranks at only the 28th percentile. Caveat: The flatness of the price-to-cash yield curve means that slight adjustments could push the P/E much higher or lower in the percentile rankings. Nevertheless, there is your counterpoint.

In conclusion, I have no doubt there are bad corporate actors out there that financially engineer their earnings to compensate for outdated business models, and that their debt-financed buybacks do nothing more than create the illusion of shareholder value. The increase in corporate debt since the 2007–2008 financial crisis certainly supports the idea that financial engineering through the debt market has been a factor. But at the same time, I see plenty of companies that generate so much free cash flow that they can invest in their business, pay dividends, and return additional value via buybacks. In my view, that's worth something.

The stock market is much smarter than the bears perhaps will give it credit for, and I think it is quite efficient in separating the winners from the losers. How can we do the same? Well, that's what active management is all about, really, isn't it?

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**Endnotes**

[1] Zero lower bound, or ZLB, is a macroeconomic problem that occurs when short-term nominal interest rates are at or near zero, causing a liquidity trap—low interest rates coupled with high savings rates—and limiting the capacity of central banks to stimulate economic growth.

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