Neox Capital

Share Buybacks

Share buyback programs, where companies repurchase some of their own stocks can be seen as a complement to dividends. In some justifications it can be more tax efficient than dividends. We put buybacks in historical perspective and discuss some articles suggesting abnormal reruns around the announcements of these programs.

Characteristics

A lot of debate about, and a fair amount of criticism of, share buybacks has been going on in the media over the last few years. Probably driven by the historically high amount of buybacks being announced by listed corporates lately.

Most of the discussions circle around the issue of whether or not share buybacks deprive dollars from being invested into otherwise profitable projects. Hence the buyback schemes are accused of siphoning capital from companies and reducing investments. Some critics has also targeted the potential agent problem where managers are accused of sub optimally increase share prices with large buyback programs.

Instead of relying on assumptions and lose accusations, we would like to shine some light on the actual numbers and the practical effects of the buybacks in the market. We are also interested in the stock price movement around the actual buyback programs to see if there are any distinguished market effects.

Several researchers have gone through the cost and benefits of stock repurchases. Almeida and Kronlund (Journal of Financial Economics 2017), Edmans (Harvard Business Review 2017), Bhattacharya and Jacobsen (Review of Finance 2016), Baker and Wurgler, (Journal of Finance 2006) among others. We will try to condense the most important findings below.

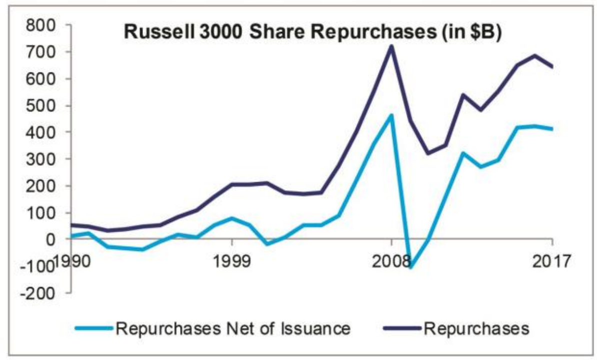
At a first glance the amount used for buybacks has risen substantially as seen in figure 1 below. However, this is misleading for two reasons. Whenever looking at an economic or financial time series, it is easy to end up comparing apples and oranges.

The first issue is inflation. 1 Dollar 1990 is not 1 dollar today. Rather it is equivalent to 2,21 dollars today i.e., a cumulative inflation of 121,2% over the period.

The second issue is the ceteris paribus assumption. Other factors than the studied timeseries also move over time. The movement of these factors also needs to be taken into account in order to make a relevant analysis.

In the case of buybacks, the fact that firms have grown since 1990 changes how much a company needs to buy back in order to keep the buyback rate constant over time. 1 dollar used to buy back stock in 1990 gave you a bigger part of the company than 1 dollar, or inflation adjusted 2,21 dollar gives today.

Figure 1. *Share repurchases in USD billions.*

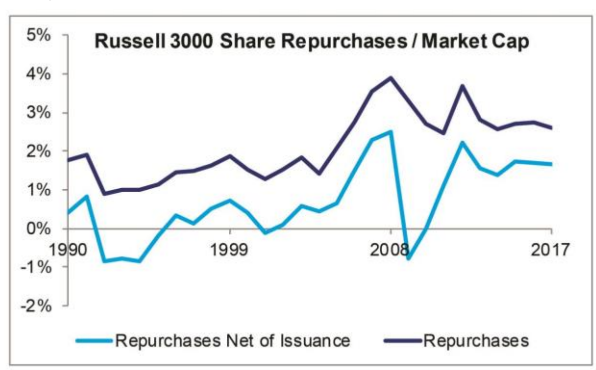


Source: AQR Capital, Compustat, Russell and MSCI.

If we adjust for the changing size of companies and therefore measure how large a part of companies is bought back in share purchase programs over time, we end up with a far less dramatic development since 1990.

So, the current "historically high" buybacks are actually not historic nor particularly high if we put them into proper perspective.

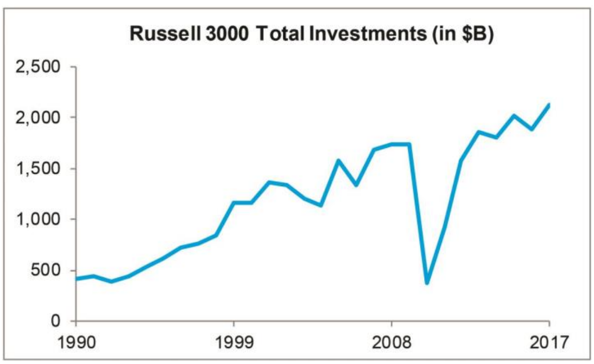
Figure 2. *Share repurchases in percentage of market capitalization.*



Source: AQR Capital, Compustat, Russell and MSCI.

What about the potential crowding out effect that share buyback programs has been accused of? Critics say that repurchases makes companies invest less in their business and is hence not in the owner's long-term interest.

Figure 3. *Total investment, USD billions.*

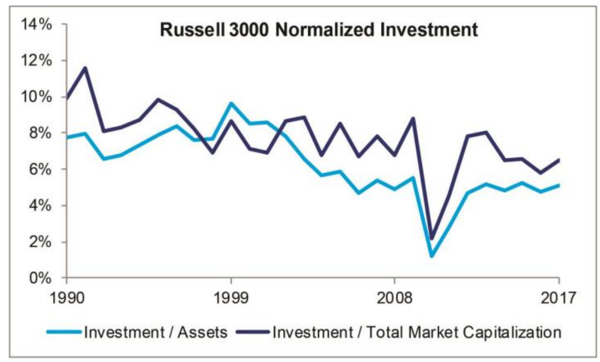


Statistics tells us that investments is nominally moving upwards with a rather stable trend, interrupted by the US sub-prime crisis 2008 of course, as seen in *Figure* 3.

If we put the investments into perspective relative to either market cap or companies' assets, we see a very stable trend during the last 10-15 years. Investments fell relative to assets 1990-2005 but has since stabilised around the 5% level.

Investments fell relative to market cap from 1990-1998 but has then stabilised around the 7-8% level. Both series interrupted by the US sub-prime crisis 2008 of course. But all in all, it is hard to find any overwhelmingly strong evidence that investments has been particularly depleted by higher buybacks.

Figure 4 *Normalized investments by market cap and assets, USD billions.*



Return effects

Now, if we take a closer look at the behavior of stock prices around the time of stock buy backs there are some evidence to support abnormal returns. Quite a few studies have been done on the subject.

For example, an INSEAD paper by Arne Uekoetter and Theodoros Evgeniou who used data from Reuters, Datastream, CRSP and Bloomberg on the US stock market form 1999-2014. During this period there were 5057 companies making 6053 different buybacks. Penny stocks and companies below 200M USD in market cap were excluded, as were companies with P/B<0 or P/B>1000.

An equal weighted market neutral portfolio, was created going long all companies that announced a share buyback program within the past month, and short the market via an ETF, rebalanced daily, using a rolling Beta estimated from the 250 last trading days.

This strategy gave an annualized return of 11,6% with a Sharpe of 1,29.

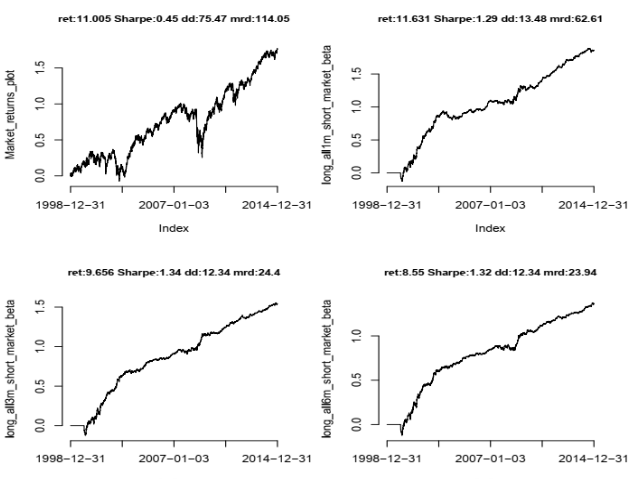
Further, there were some quite interesting intra-sample trends. One of these were that smaller value stocks, that has been underperforming the market prior to the buyback announcement, outperform larger growth stocks that have outperformed pre buyback.

Table 1. *Monthly development of a market hedged portfolio with all companies that announced a buyback program within the last month.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
1998	-	-	-	-	-	-	-	-	-	-	-	0.0	**0.0**
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
2000	-8.2	-2.7	11.6	7.4	0.1	-4.8	2.7	7.9	4.3	-1.7	-2.3	4.4	**18.4**
2001	8.1	-4.6	4.8	10.9	0.2	1.6	2.1	3.0	4.3	4.4	2.7	3.5	**48.5**
2002	2.3	2.5	-0.2	-0.9	2.4	5.0	1.3	6.8	0.5	7.3	1.4	-0.6	**31.1**
2003	-1.2	3.7	2.2	1.1	-2.4	-0.2	-0.2	-1.8	-1.1	-3.5	0.1	-0.8	**-4.1**
2004	0.0	3.4	-0.9	-2.8	1.3	-1.2	2.1	0.2	0.4	2.7	1.5	1.8	**8.7**
2005	-0.6	0.6	0.9	1.8	-0.1	1.5	-3.9	-0.3	1.8	1.9	1.2	0.4	**5.0**
2006	-0.0	-0.2	-0.7	-0.8	0.0	1.8	0.6	2.0	2.0	5.8	1.4	0.8	**13.2**
2007	-0.4	-1.2	1.2	-0.2	1.0	-0.3	-2.6	1.4	-0.9	0.1	-0.4	-1.0	**-3.4**
2008	1.8	1.3	-0.3	0.5	1.3	-3.2	0.7	-1.1	-1.7	8.5	1.1	-5.1	**3.3**
2009	8.9	6.8	-1.0	6.8	-1.1	-2.9	2.8	0.3	-3.7	0.9	1.2	0.5	**20.2**
2010	3.7	-0.9	-1.0	-1.8	-1.2	1.6	1.9	-0.2	6.0	0.3	0.7	3.1	**12.6**
2011	3.7	-1.3	0.6	0.9	2.4	-0.1	-0.3	3.9	0.8	1.9	-0.4	2.3	**15.1**
2012	1.5	2.4	1.9	-0.3	-0.5	0.2	2.8	1.2	1.4	4.0	1.9	-1.6	**15.8**
2013	0.4	1.3	-1.1	0.5	0.7	2.5	2.0	0.2	-0.6	-0.0	4.1	1.3	**11.8**
2014	-0.6	1.3	1.3	-0.5	2.4	1.0	1.0	1.0	-2.0	-1.6	0.8	0.2	**4.3**

Source: Arne Uekoetter and Theodoros Evgeniou

Figure 5. *Return, Sharpe, Drawdowns of market, and the strategy over 1, 3 and 6 month horizon, as presented by Uekoetter and Evgeniou.*



"ret" - Return.
"Sharpe" - Sharpe Ratio.
"dd" - Draw down.
"mrd" - Maximum number of reversion days.

Source: Arne Uekoetter and Theodoros Evgeniou.

However, if we don't just buy all companies that announced a buyback program blindly, but try to be a bit more selective, we might end up with better statistics for the portfolio. By only buying those companies who ranked in the bottom third historical return-wise, was in the bottom third market cap-wise, and a P/B-multiple that was in the bottom third, we are ending up with 382 buy back events.

Portfolios was formed as before, i.e. equal weighted with the market hedge, and the result was quite Impressive as seen below in Table 2. The portfolio had an annualized return of 16,3% and a Sharpe of 0,75. Hence, by using this selection criteria the return increased quit dramatically, compared to include all companies that have buyback programs, but standard deviation also went up, giving a Sharpe of "only" 0,75.

Table 2. *Monthly development of an equally weighted market hedged portfolio, with the sub-set of small value companies that has underperformed prior to the announcement of a buyback program, within the last month.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
1998	-	-	-	-	-	-	-	-	-	-	-	0.0	**0.0**
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
2000	-13.0	-5.7	11.3	10.7	-1.7	5.5	-1.3	4.2	6.8	7.5	-3.3	8.7	**30.3**
2001	9.4	-11.9	0.2	6.2	-8.9	16.4	-6.7	10.0	-13.2	28.4	-6.6	24.7	**44.8**
2002	4.9	-1.5	0.0	0.0	0.0	5.4	-10.9	13.2	5.3	34.2	5.1	-10.8	**45.4**
2003	-4.9	0.0	-5.1	0.5	-6.7	0.0	-1.4	13.7	0.0	6.2	-1.0	2.5	**2.3**
2004	0.0	0.0	0.1	-4.7	0.0	0.0	8.3	2.3	4.3	14.9	-0.5	6.8	**34.7**
2005	-8.9	0.0	-0.2	-6.6	3.0	7.5	0.5	-4.0	-0.6	-2.3	-1.7	3.4	**-10.5**
2006	-5.0	4.0	-0.3	0.0	-0.6	0.4	-0.6	1.5	4.3	-0.8	2.3	1.3	**6.4**
2007	-0.2	-3.7	-1.0	-7.4	-1.5	-3.5	-13.0	8.2	-1.8	-6.0	-0.5	-2.4	**-29.4**
2008	7.1	8.7	6.3	-0.6	7.7	-0.7	8.3	15.7	0.9	17.7	-11.9	-14.3	**47.8**
2009	3.6	20.9	-1.5	7.7	-11.8	6.2	-9.5	-5.7	-12.4	4.5	-6.2	2.2	**-6.7**
2010	0.0	-1.3	-6.7	0.0	0.0	-3.3	10.7	-5.6	13.1	0.9	0.8	10.6	**18.5**
2011	0.3	-4.7	3.7	0.0	2.1	-4.0	5.4	7.6	3.4	5.4	-6.1	1.1	**14.1**
2012	-7.6	-1.1	-4.2	0.0	1.6	8.8	7.7	11.6	-0.2	0.0	-1.1	1.6	**16.6**
2013	8.9	2.3	-4.6	0.8	-0.3	0.6	0.0	0.0	1.7	1.7	6.3	0.2	**18.2**
2014	0.0	8.3	2.1	-2.0	15.5	-4.7	1.2	2.1	-5.0	-0.7	-0.8	3.3	**19.2**

Source: Arne Uekoetter and Theodoros Evgeniou

The researchers found evidence that small value-stocks that underperformed prior to the buyback announcement, actually outperform on average in the coming period after the buyback announcement. Hence there seems to be some abnormal price moves around the buyback events, which of course could be exploited by asset managers.

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