**Data Appendix to "Stock Buybacks and Corporate Cashouts"**

**Speech by Commissioner Robert Jackson at the Center for American Progress**

**June 11, 2018**

*A.1     Sample Description*

The initial sample of buybacks consists of all transactions in the Securities Data Company (SDC) transactions dataset labeled as repurchases with announcements in the year 2017 and the first 3 months of 2018. There are 708 repurchase announcements by 601 companies between January 2017 and March 2018. Figure A.0 shows the number of buybacks in each month in this period. The figure shows there may be something of an uptick in the rate of repurchases in 2018.

From the initial sample of 708 repurchases between January 2017 and March 2018, we retain only the first repurchase from each company, leaving 601 repurchases.

We use data on insider trading from the Thomson Reuters Insiders Table 1 (non-derivatives) database. We retain only those executives for whom at least one of their role codes is that of an officer, committee member, or director of the company. We retain only those transactions coded as a disposition or sale.

From CRSP, we collect daily trading data including daily holding period returns and value weighted index returns.

We require that each repurchase matches with daily trading data from CRSP and insider transaction data from Thomson Reuters for the period beginning 20 days prior to and ending 20 days following the repurchase announcement, leaving a final dataset of 385 repurchases.

*A.2     Empirical Analysis*

We calculate the daily market-adjusted abnormal return of a company as its return minus the value weighted index return. Figure A.1. shows the abnormal returns leading up to and following the time of the repurchase announcement. Stocks tend to underperform the market in the days leading up to

the repurchase announcement, but the day of and immediately following the announcement the stock performs well above the market. We test whether the cumulative abnormal return of the buyback companies significantly differs from that of the market with an event study, with results reported in Table A.1. We find a negative 1.39% abnormal return in the days leading up to the repurchase and a positive 2.47% abnormal return in the 30 days following the repurchase announcement, consistent with Vermaelen (1981), Comment and Jarrell (1991), Ikenberry et al. (1995), Fried (2000), and Chan et al. (2012), among others.

Next, we look at sales reported on Form 4 by insiders in the period near the buyback announcement. With respect to insider trading, we calculate transaction value of sales as the price of shares multiplied by the number of shares sold.

Figures A.2 and A.3 show insider sales around the time of the repurchase.[1] These figures show a pronounced spike in both the number of insider sales and the total transaction value of insider sales. Figure A.2 shows that roughly 3-4% of insiders sell stock each day in the days prior to the repurchase, and, on the day of and in the eight days following the repurchase announcement, more than 8% of insiders sell stock each day—a 2-fold increase. Figure A.3 shows that insiders from these 385 companies total roughly $100,000 in daily sales transaction value in the days prior to the repurchase, and total roughly $500,000 in daily sales transaction value on the day of and the eight days following the repurchase announcement—a 5-fold increase.

Figure A.4 shows the results of a regression on percent of insiders selling. The graph shows that the increase in insider sales following repurchases is highly significant. This is consistent with Bonaimé and Ryngaert (2013)'s finding that repurchases tend to occur in the same quarter as insider net sales and broadly consistent with Cziraki et al. (2017)'s finding that insiders tend to purchase shares prior to repurchase announcements, Kamma, Kantas, and Raymar (1992) (as discussed in Fried (2000); Li and

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[1] Our methodology, which uses an event study around the time of the repurchase announcement, differs from that of Bonaimé and Ryngaert (2013), who use Compustat quarterly repurchase data to examine the association between repurchases and insider trading in the same quarter to ask similar questions. Our results are broadly consistent; by using an event study, we believe we better identify the relationship between the timing of the repurchase and the insider trading.

McNally (2003)'s finding that repurchases are more likely when executives hold more equity; and Chan et al. (2012).

To estimate the total gains by insiders trading following repurchases, we use the following methodology. First, we choose two days before the repurchase announcement as our base day. We subtract the price on day -2 from the price on the day of the insider sale, and multiply this difference by the number of shares sold. Using this methodology, we calculate that the insiders from these 385 companies gained $75.1 million dollars on shares sold due to the repurchase agreement price bump in the thirty-day period following the repurchase agreement announcement. The total transaction value of such sales was $1.83 billion, as compared to a total transaction value of $576 million in the thirty days prior to the repurchase announcement.

We also note that cumulative abnormal returns across companies that make repurchase announcements are not uniform. To explore further whether insider sales reflect insider information about low valuation, we regress the cumulative abnormal returns in days 2 through 10 after the buyback announcement on a dummy variable for whether an insider sold shares on days 0 or 1. We find that the cumulative abnormal returns are significantly lower in days 2 through 10 when an insider sold shares on days 0 or 1, with a coefficient of -.015 and a t-statistic of -2.60 across the 385 companies. Of course, these reduced returns could be due to either insiders selling on companies that they suspect have lower valuations; reduced valuations as a consequence of the disclosure of the sales by insiders; or some combination of both.

*A.3    Robustness*

As a robustness check, we use net insider sales (defined as shares sold minus shares purchased) rather than gross insider sales. We find substantially similar results—Figure A.5 repeats Figure A.3 using net sales rather than gross sales.

We also test varying estimation windows in our event study, with substantially similar results.

*A.4    Conclusions*

The findings demonstrate that firms experience abnormal returns immediately following repurchase announcements and that insiders increase their sales of shares—a 5-fold increase in value. The total gain on those sold shares based on the repurchase-related price increase for insiders in 2017 and first quarter of 2018 was roughly $75 million.

## References

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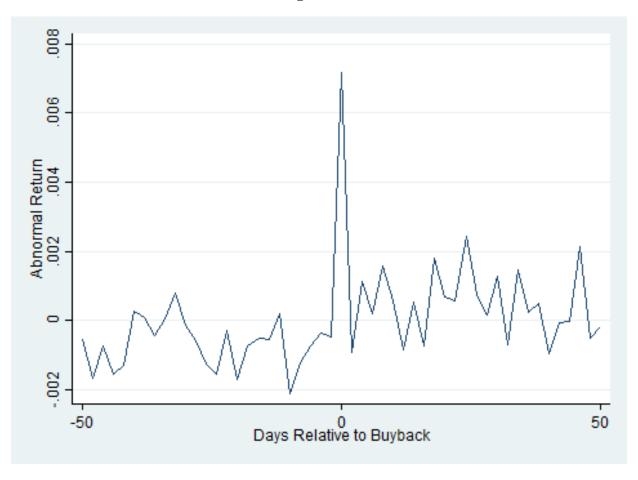
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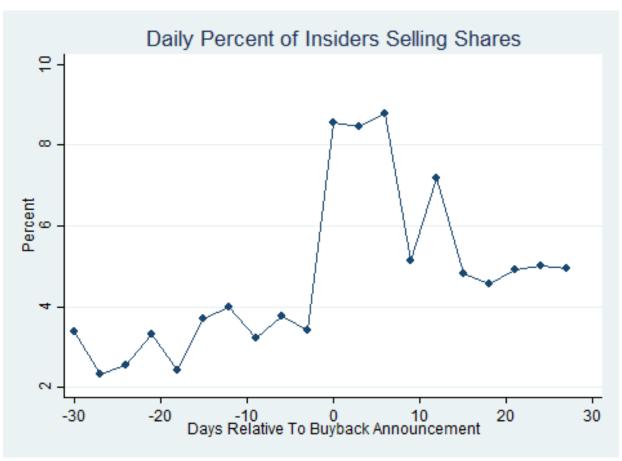
**Figure A.0**



The x-axis represents the calendar month. The y-axis represents the number of buybacks in that month, according to the SDC dataset.
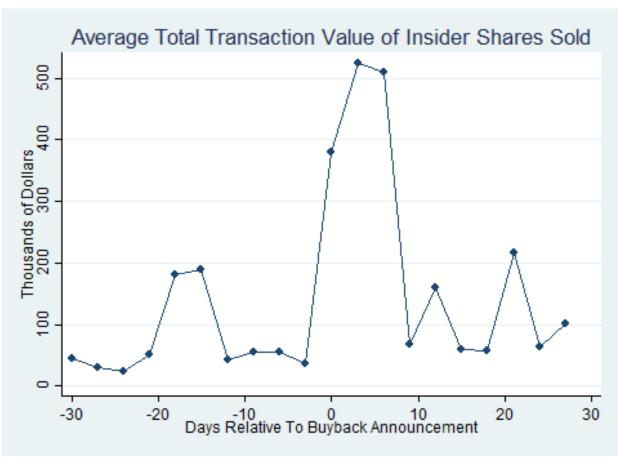
**Figure A.1**



The x-axis represents the day relative to the announcement date of the repurchase, as reported by SDC. The y-axis represents the abnormal return, consisting of the one-day holding period return minus the value weighted index return from CRSP. Data is smoothed at the two-day level, so that each point represents the two-day average abnormal return.

**Figure A.2**
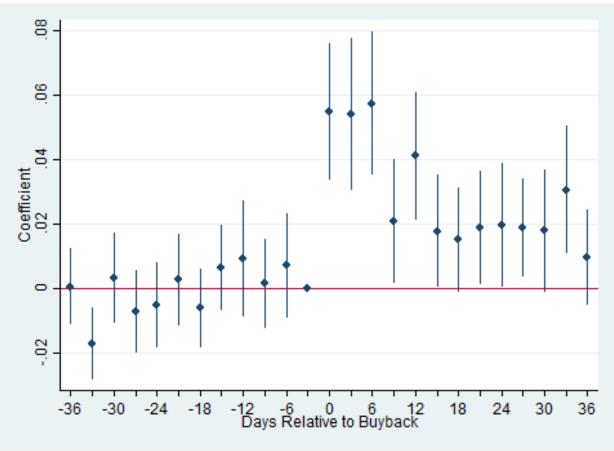


**Daily Percent of Insiders Selling Shares**

The x-axis represents the day relative to the announcement date of the repurchase, as reported by SDC. The y-axis represents the percentage of insiders who make at least one disclosed sale. Data is smoothed at the three-day level, so that each point represents the three-day average.
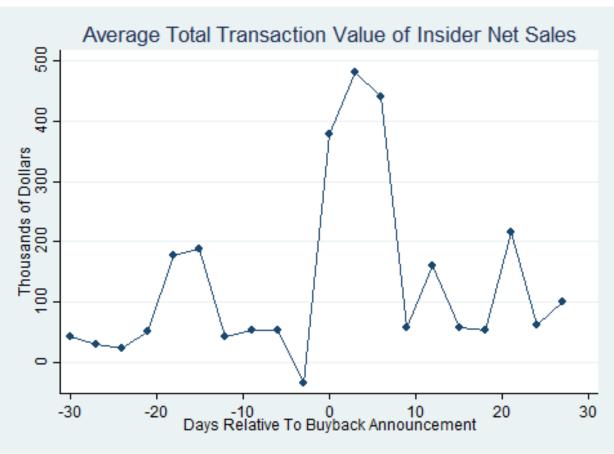
**Figure A.3**



The x-axis represents the day relative to the announcement date of the repurchase, as reported by SDC. The y-axis represents the per-company average transaction value of insider sales, consisting of the number of shares sold by company insiders multiplied by the price of the shares as reported by CRSP. Data is smoothed at the three-day level, so that each point represents the three-day average.

**Figure A.4**



This figure represents the results of a regression of a binary variable for insider transactions on dummy variables representing three-day periods relative to the date of the buyback. The x-axis represents the day relative to the announcement date of the repurchase, as reported by SDC. Error bands represent 95% confidence intervals. The three-day period ranging from -3 to -1 is the omitted period.

**Figure A.5**



The x-axis represents the day relative to the announcement date of the repurchase, as reported by SDC. The y-axis represents the average net transaction value of insider sales, consisting of the number of shares sold minus the quantities of shares purchased by insiders of the company, multiplied by the price of the shares as reported by CRSP. Data is smoothed at the three-day level, so that each point represents the three-day average.

**Table A.1**

| Days | N | Mean Cumulative Abnormal Return | Precision Weighted CAAR | Positive: Negative | Patell Z | Portfolio Time-Series (CDA) t | Generalized Sign Z |
|---|---|---|---|---|---|---|---|
| (-20,-2) | 379 | -1.39% | -0.87% | 177:202 | -2.481** | -2.544** | -1.268 |
| (-1,+3) | 379 | 1.17% | 1.04% | 223:156 | 5.822** | 4.171*** | 3.457*** |
| (-1,+20) | 379 | 2.20% | 1.50% | 221:158 | 4.000*** | 3.760*** | 3.252*** |
| (-1,+30) | 379 | 2.47% | 1.85% | 219:160 | 4.209*** | 3.496*** | 3.046** |

Event study results.  The symbols *,**, and *** denote statistical significance at the 0.05, 0.01 and 0.001 levels, respectively, using a generic one-tail test. "Days" column contains the event window.  Event study estimated using 60 day estimation window.  For column definitions, refer to the Eventus guide, available at http://library.unist.ac.kr/sites/default/files/eventus_version_8.0_user_s_guide.pdf.