Attachment B

Stock Buybacks and Company Performance

- Researchers at the leading international business school INSEAD, led by Emeritus Professor Robert Ayres, analyzed 6,516 stock buybacks at 1,839 US firms.

  They found that "the more capital a business invests in buying its own stock … the less likely that company is to experience long-term growth in overall market value."

  "We show that the more the company spends on buybacks, the less it is likely to grow, over a five year time-scale," they wrote. "Companies that have spent a large fraction of their current market cap on buybacks are virtually guaranteed to decline in the coming years. Exxon Mobil (88.7% of market cap is buybacks), Xerox (119.2%), IBM (107.4%) and HP (271.7%) are all in this category."

  "Firms that have 'invested' in buybacks (to support the price of the stock and to keep the senior executives happy) have actually wasted swallowed money that should probably have been invested in the business, especially in R&D," the authors conclude.[1]

- A Boston Consulting Group study showed that companies that make large capital investments, rather than buying back their own stock, are better investments. "Our analysis shows that outperformers—companies in the top third of stock market valuation relative to their peers—invest approximately 50% more in capex than their peers and achieve approximately 55% higher returns on assets and approximately 65% higher sales growth," the authors wrote.[2]

- Heitor Almeida, Vyacheslav Fos, and Mathias Kronlund show that repurchases that are motivated by the desire to beat earnings-per-share forecasts lead to reductions in employment and investment, and a fall in cash holdings.[3]

- Another study by Paul A. Griffin and Ning Zhu concluded that investors experience "reliably negative stock returns over the six months around the [buyback] announcement, other than a positive 1.78 percent three-day announcement return." [4]

- On February 4, 2015, the investment management firm SPDR launched an exchange-traded-fund to invest in the 100 companies in the S&P 500 with the highest stock buyback ratios. Since inception, the fund has underperformed the S&P 500.

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[1] Robert Ayres and Michael Olenick, "Secular Stagnation (Or Corporate Suicide?)," (INSEAD Working Paper, July 11, 2017), https://ruayres.wordpress.com/2017/07/.

[2] Ulrich Pidun, and Sebastian Stange, "The Art of Capital Allocation," The Boston Consulting Group, March 27, 2017, https://www.bcg.com/publications/2017/corporate-development-finance-function-excellence-art-of-capital-allocation.aspx.

[3] Heitor Almeida, Vyacheslav Fos, and Mathias Kronlund, "The Real Effects of Share Repurchases," *Journal of Financial Economics* 119, no. 1 (January 2016), https://doi.org/10.1016/j.jfineco.2015.08.008.

[4] Paul A. Griffin and Ning Zhu, "Accounting Rules? Stock Buybacks and Stock Options: Additional Evidence," December 31, 2009, https://gsm.ucdavis.edu/sites/main/files/file-attachments/ssrn-id1316623.pdf.

- Perhaps most revealing when a professor of finance defended share buybacks in an article in *Harvard Business Review*, the only evidence he could present that shareholders benefited came from a study of buybacks between 1980 and 1990 when share prices were low and buybacks miniscule.[5]

[5] Alex Edmans, "The Case for Stock Buybacks," *Harvard Business Review*, September 15, 2017, https://hbr.org/2017/09/the-case-for-stock-buybacks.