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Summary of “Asset Growth and the Cross-Section of Stock Returns”¹

Growing evidence identifies biases in the market’s capitalization of corporate asset investment and disinvestment. Asset expansion events, such as acquisitions, public equity and debt offerings, and loan initiations, tend to be followed by abnormally low stock returns, while asset contraction events, such as spinoffs, share repurchases, debt repayments, and dividend initiations, tend to be followed by abnormally high returns.

This paper investigates the return predictive power of a comprehensive expansion-contraction measure: the total asset growth. Based on a sample from 1968 to 2003, a strong negative relation is uncovered between asset growth and subsequent stock returns. Sorting stocks annually into deciles by year-on-year asset growth rate, the authors find the value-weighted portfolio of firms in the lowest decile delivers an average annual return of 18%, while the return to the highest growth decile is only 5%. A long-short strategy that buys the lowest decile and sells the highest decile generates annual Sharpe ratio of 1.07, which is much higher than the Sharpe ratio of size (0.13), book-to-market (0.37), and momentum (0.73) factors over the sample period.² After controlling for the Fama-French three factors, the long-short strategy has an alpha of 8% per year.³

The asset growth rate has large cross-sectional dispersion. The median growth rate in the top decile is 84%. It is -21% in the bottom decile. Asset growth is also a persistent characteristic. Over the 4 years prior to the decile portfolio formation, the spread of average growth rate between top and bottom deciles is 21.5% (year -2), 8.1% (year -3), 4.7% (year -4), and 2.6% (year -5). Therefore, the turnover of asset-growth-sorted portfolios tends to be moderate, and sorting stocks by five-year average asset growth gives very similar results. As already documented in the literature, high growth firms tends to have lower book-to-market ratio, but still, the significant three-factor alpha supports asset growth as a return predictor of its own significance.

The asset growth effect is consistent throughout the sample period. The returns of low asset growth stocks exceed those of high asset growth stocks in 71% of the years if the decile portfolios are value-weighted, and 91% of the years if the portfolios are equal-weighted. The asset growth effect persists well beyond the first year after sorting. The difference in cumulative returns between high and low growth, value-weighted decile portfolios is -49.67% over the 5 years after portfolio formation; and, for the equal-weighted decile portfolios, the spread is -87.99%.

The authors decompose total asset growth to relate to other stock return predictors associated with corporate investment and disinvestment. On the asset side of corporate balance sheet, asset growth can be attributed to growth in cash, noncash current assets, PPE (property, plant, and equipment), and other assets. Except cash, all these components predict future stock returns. On the liability side, asset growth comes from changes in retained earnings, equity financing, debt financing, and other liabilities. Consistent with the corporate issuance literature, equity and debt financing strongly predict returns.

Controlling for these individual components, asset growth is still the strongest return predictor, because it synergistically benefits from the predictability of all the growth components.⁴ While some components' predictive power varies across different size groups, total asset growth predicts stock returns for firms of both small and large capitalization. After controlling other firm characteristics, the authors find total asset growth remains one of the most statistically significant predictors.⁵

A leading risk-based explanation for the asset growth effect focuses on the time-varying mix of firms' growth options and assets in place.⁶ As firms invest (exercising growth options), the importance of growth options relative to existing assets declines, which reduces overall risk and expected return on capital, and thus, induces a negative relation between investment and expected stock returns. However, this theory does not predict a negative average premium for the high asset growth stocks. Over the sample period, the average return of the high growth firms is even lower than the average risk-free rate. Moreover, given the persistence of corporate investment, the theory predicts a pattern of decreasing future returns for high growth firms, but the evidence shows increasing returns in years 1 through 5 after sorting by asset growth.

Another explanation is based on mispricing. Outperformance (underperformance) in profitability drives corporate investment (disinvestment). If investors over-extrapolate firms' past performance into the future, they will be constantly surprised by subsequent underperformance (outperformance), which leads to abnormally low (high) future returns. Consistent with this theory, the authors find that the operating margin (i.e., EBITDA/sales) of high (low) growth firms tends to decrease (increase) after the formation of decile portfolios. Moreover, if mispricing is the explanation, high (low) growth firms' earnings announcement day (EAD) returns will tend to be lower (higher) than the other days, because EAD is the time when investors are negatively (positively) surprised. The data confirms this implication. Overall, the asset growth effect is most consistent with this mispricing interpretation.

¹ Cooper, Michael J., Huseyin Gulen, and Michael J. Schill, 2008, *Journal of Finance* 63, 1609-1651.

² For details of the factors, please refer to: Fama, Eugene F., and Kenneth R. French, 1993, Common risk factors in the returns on stocks and bonds, *Journal of Financial Economics* 33, 3-56; Carhart, Mark M., 1997, On persistence in mutual fund performance, *Journal of Finance* 52, 57-82.

³ When the decile portfolios are equal-weighted, the long-short alpha is 20% per year. The average return spread between low and high growth firms and the long-short alpha are larger among small firms but statistically significant for both small (bottom 30% by market cap), medium and large firms (top 30% by market cap).

⁴ The only exception: Among the large cap firms, equity issuance has stronger return predictive power than asset growth.

⁵ The authors consider other firm characteristics that predict the cross-sectional difference in average stock returns: book-to-market ratio, market cap (size), 6-month lagged cumulative return, 36-month lagged cumulative return, other growth measures of sales, capital investment, cumulative accruals, and net operating assets.

⁶ For a rigorous theoretical analysis, please refer to: Berk, Jonathan, Richard Green, and Vasant Naik, 1999, Optimal investment, growth options, and security returns, *Journal of Finance* 54, 1153-1608.