



## Expected Stock Market Returns and Business Investment

Most financial economists would agree that expected stock returns vary somewhat across time. Of course, this variation in expected returns explains only a small fraction of the variation in actual returns. Consequently, attempting to time the market remains a risky endeavor and many risk-averse investors favor buy-and-hold investing. Business investment projects, on the other hand, are unavoidably “lumpy” by nature and firms have strong incentives to wait for the most profitable periods to invest in irreversible, large-scale projects. Do we see any evidence that business investment keys off expected stock market returns, and, if so, what is the current outlook for business investment?

Recently, Lettau and Ludvigson (2001) showed that the deviation of consumption from aggregate wealth, which they label as the consumption-wealth ratio, is a useful indicator of expected stock returns, especially long-lasting shifts in expected returns.<sup>1</sup> Their measure of aggregate wealth includes both financial assets and the present value of labor income. The predictive ability of the consumption-wealth ratio is consistent with the economic theory that views consumption as a forward-looking variable. If investors foresee higher stock returns in the future, they will boost their consumption now to smooth consumption. Therefore, a high (low) level of the consumption-wealth ratio indicates high (low) expected stock returns in the future.

Like consumption decisions, business investment is also forward-looking with respect to expected returns to capital. If expected returns shift upward, new capital put in place now is expected to garner those high returns. It follows that movements in the consumption-wealth ratio should presage movements in business investment because the consumption-wealth ratio contains information about expected stock returns. Lettau and Ludvigson (2002) show that this relationship is present in the post-World War II data.<sup>2</sup> The accompanying chart demonstrates their main results. The thin dashed line is the consumption-wealth

ratio and the thick solid line is the average growth rate of fixed, private nonresidential investment in the three subsequent years. In general, a high level of the consumption-wealth ratio is associated with high rates of future investment and the coefficient of correlation between these two variables is about 0.40. The business cycle, highlighted with recession bars in the chart, appears to be a significant source of variation in expected stock market returns.

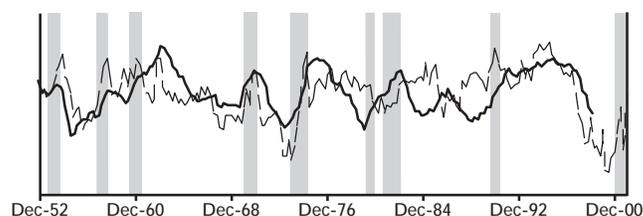
The correlation between the consumption-wealth ratio and business investment appears particularly strong in the last decade. Relatively high levels of the consumption-wealth ratio in the early 1990s preceded dramatic increases in both stock market prices and business investment in the subsequent years. Later in the 1990s, however, consumption did not rise at the same pace that financial wealth increased and the consumption-wealth ratio fell to an unusually low level. With this signal of low expected returns, investment and stock prices began to retreat in early 2000 and the economy eventually went into recession in the first quarter of 2001. At present, the consumption-wealth ratio is substantially above its recent trough, but it is still not at a level that suggests that business investment will be a strong driver of a new economic expansion.

—Hui Guo

<sup>1</sup>Lettau, Martin and Ludvigson, Sydney. “Consumption, Aggregate Wealth, and Expected Stock Returns.” *Journal of Finance*, June 2001, 56(3), pp. 815-49.

<sup>2</sup>Lettau, Martin and Ludvigson, Sydney. “Time-Varying Risk-Premia and the Cost of Capital: An Alternative Implication of the q Theory of Investment.” *Journal of Monetary Economics*, January 2002, 49(1), pp. 31-66.

Consumption-Wealth Ratio and Forward 3-Year Moving Average of Investment Growth Rate



NOTE: The last observation of investment (thick solid line) is 1999:Q1, which is the average growth rate over the period from 1999:Q2 to 2002:Q1. The last observation of the consumption-wealth ratio (thin dashed line) is 2001:Q4.

