Firm Fundamental Valuation and Behavioural Finance

Valuation metrics based on dividends, cash flows, and relative valuation ratios like price-to-earnings come and go in popularity, depending on how badly they have failed us recently. (This is evidence of the recency effect, a behavioural bias whereby people put more weight on recent information, even if the newer information is no more relevant than older information.) The popularity of different valuation metrics also depends on whether, at any given time, they are consistent with our "gut" and on plain old herding. Following your gut is often a cover for other behavioural biases that lead to the use of misattribution, representativeness, and availability in place of hard facts and research, and herding was likely responsible for much of the whiplash of the dot-com era. The existence of behavioural biases is a subject that fascinates me, in particular the ways in which these biases interact with market pricing. Individuals may be subject to biases, but do individual biases aggregate up to the macro level to influence market prices? Are there biases that might affect market valuations in a predictable and time-varying way?

To answer these questions, we need a good valuation metric as a baseline. Recently, I have extended my own research on valuation metrics (see references 1 and 2 listed below) to consider individual firms rather than just indices like the TSX 60. My original valuation method leans on dividend payments, and I have extended the method to exploit other metrics of income-producing capacity in order to create a proxy for future cash flows to shareholders (i.e., to conduct valuation). The basic premise is simple and it is an old idea: set up a rule to sell a fraction of a firm, as though you were a shareholder. The income flow from holding shares is then augmented by an amount generated from this sale of shares, and future income flow will be reduced as shareholdings are lower. Setting a liquidation rule allows us to estimate future income flows and discount them to estimate the value of the firm, but importantly, theoretical derivations I have performed indicate that the rule must be calibrated to a firm-specific financial quantity like the earnings. (A payout untethered to firm fundamentals, such as a fixed dollar payout, will not work). This approach has the advantage that it can be applied to firms regardless of their cash flow history or dividend policies. Preliminary research shows that this approach works fairly well and can be easily extended to negative earnings per share firms as well, by considering other financial quantities, like sales.

The next step is to identify a behavioural bias that synchronizes the entire market, so that it shows up in market prices. A bias like anchoring to the stock purchase price, which makes investors reluctant to sell at a loss (known as loss aversion), does not easily impact overall market demand (or prices) because shareholders buy stocks at different prices and hence there is likely no synchronized impact on the market arising from loss aversion. This is where my work on the impact of Seasonal Affective Disorder (SAD) comes in; SAD synchronizes a substantial fraction of market participants each autumn (with onset of SAD leading to depression, risk aversion, and downward price pressure on risky assets) and each spring (with recovery from SAD). See references 3, 4, and 5 below for more details on my research about the influence of SAD on markets.

So now that all the pieces are in place, I will next determine whether the valuation metric (which suffers from no behavioural biases) over-values equities in the fall and winter when SAD-affected investors flee risky assets. Money for nothing? This is a computationally intensive exercise, and will take time to complete. What I have so far suggests that "rational" valuations in the fall will strike many as too aggressive, and may even scuttle deals in the making. Make deals in the spring!

1. "A New Dividend Forecasting Procedure that Rejects Bubbles in Asset Prices: The Case of 1929's Stock Crash," (with R. Glen Donaldson) Review of Financial Studies, 9, 333-383, 1996.
2. "Estimating the Equity Premium," (with R. Glen Donaldson and Lisa Kramer) Journal of Financial and Quantitative Analysis, 45(4), 813-846, 2010.
3. "Winter Blues: A SAD Stock Market Cycle," (with Lisa Kramer and Maurice Levi), 2003, American Economic Review, March, 93(1), 324-343.
4. "Seasonal Asset Allocation: Evidence from Mutual Fund Flows," (with Lisa Kramer, Maurice Levi, and Russ Wermers), Journal of Financial and Quantitative Analysis, accepted and forthcoming, 2016.
5. "Does Risk Aversion Vary During the Year? Evidence from Bid-Ask Spreads" (with Lisa A. Kramer and Ramon P. DeGennaro), working paper.

MARK KAMSTRA

BIOGRAPHY

MARK KAMSTRA is a Professor of Finance with the Schulich School of Business at York University in Toronto Canada, holding the Canadian Securities Institute Research Foundation Term Professor of Finance Chair. Prior to joining the Schulich School in 2004, he was a financial economist and associate policy adviser at the Federal Reserve Bank of Atlanta from 2001 to 2004, and prior to this an assistant then associate professor at Simon Fraser University in Canada.

Dr. Kamstra has published extensively in top-ranked peer-reviewed economics and finance journals, including the *American Economic Review* and the *Review of Financial Studies*. His current research interests revolve around the equity risk premium and empirical asset pricing. One current research interest of note seeks to establish evidence supporting the existence of time-varying risk premia in international markets associated with physiologically based changes in individuals' tolerance for risk. The research is based on links between human sentiment and financial risk tolerance which are well supported by many studies in the medical, psychology, and economics literatures.

A native of Ontario, Canada, Dr. Kamstra received his bachelor of arts degree in economics from Queen's University at Kingston, his master's degree in economics at the University of British Columbia, and his doctorate in economics at the University of California in San Diego (where he is spending the current academic year as a visiting scholar).

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The funding from the CSI Research Foundation has been of great benefit to me, facilitating research projects that will, I hope, shape our understanding of the way mood and sentiment influence financial markets. This funding has made feasible a year-long sabbatical at UC San Diego, a center for empirical and theoretical research into economics and behavioural finance, as well as visits to nearby universities including University of Southern California, UC Irvine, Arizona State University, and more. The opportunity to interact face-to-face with some of the leaders in my chosen research areas is invaluable. As an individual who appreciates the myriad ways in which mood and behaviour impact outcomes, I understand that there is no substitute for a face-to-face conversation and feedback on my ideas and research program.