

Market timing and capital structure for baker and wurgler

[Business](#), [Industries](#)



The results suggest the theory that capital structure is the cumulative outcome of past attempts to time the equity market. "Equity market timing" refers to the practice of issuing shares at high prices and repurchasing shares at low prices. Equity market timing appears to be an important aspect of real corporate financial policy. In this paper, ask how equity market timing affects capital structure and whether it has a short-run or long-run impact. The variation in market-to-book ratio is a proxy for managers' perceptions of installation.

The main finding is that low leverage firms are those that raised funds when their market valuations were high (measured by the book-to-market ratio), while high leverage firms are those that raised funds when their market valuations were low. The influence of past market valuations on capital structure is economically significant and statistically robust. The influence of past market valuations on capital structure is also quite persistent, this means that they have a long-run impact.

The tradeoff theory predicts that temporary fluctuations in the market-to-book ratio or any other variable should have temporary effects. The evidence however indicates long-term effects as well. The standard pecking-order theory implies that periods of high investment will push leverage higher toward a debt capacity, not lower as the results in this paper suggest. The theory of entrenched managers suggests that managers exploit existing investors ex post by not refinancing the capital structure with debt, this may be an explanation of the findings in this paper. . Capital structure and past market valuations Individual financing decisions depend on market-to-book

ratios. Does market-to-book affects capital structure through net equity issues as market timing implies? And does market-to-book has persistent effects that help to explain the cross section of average? Data and summary statistics Table I shows that book leverage decreases sharply following the PIP_ Over the next 10 years, it rises slightly, while market value leverage rises more strongly. The book leverage trend is an age effect, not a survival effect.

Most notable is the sharp switch activity, the change in assets is equal to the sum of net debt issues, net equity issues, and newly retained earnings. The concurrent increase in equity issues is suggestive of market timing.

Determinants of annual changes in leverage B&W document the net effect of market-to-book on the annual change in leverage. Then they decompose the change in leverage to examine whether the effects comes through net equity issues, as market timing implies. Three control variables are used that have been found to be correlated to leverage: Asset tangibility, profitability, and firm size.

B&W regress each component (equity issues, debt issues, and newly retained earnings) of changes in leverage on the market-to-book ratio and other independent variables. This allows them to determine whether market-to-book affects leverage through net equity issues, as market timing implies. The effect of market-to-book on hanged in leverage does indeed come through equity issues. Panel C shows that market-to-book is not strongly related to retained earnings, ruling out the possibility that market-to-book affects leverage because it forecasts earnings.

The effect of profitability on changes in leverage arises primarily because of retained earnings. Firm size plays an important role at the time of the PIP.

Determinants of leverage If managers do not rebalanced to some target leverage ratio, market timing may have persistent effects, and historical valuations will help to explain why leverage ratios differ. The relevant historical variation in market valuations is measured by the "external finance weighted-average" market-to-book ratio. This variable takes high values for firms that raised external finance when the market-to-book ratio was high and vice-versa.

The intuitive motivation for this weighting scheme is that external financing events represent practical opportunities to change leverage. It therefore gives more weight to valuations that prevailed when significant external financing decisions were being made, whether those decisions ultimately went toward debt or equity. This weighted average is better than a set of lagged market-to-book ratios because it picks out, for each firm, precisely which lags (intervals) are likely to be the most relevant. Intuitively the weights correspond to times when capital structure was most likely to be changed.

When firms go public, their capital structure reflects a number of factors, including market-to-book, asset tangibility, size, and research and development intensity. As firms age, the cross-section of leverage is more and more explained by past financing opportunities, as determined by the market-to-book ratio, and past opportunities to accumulate retained earnings, as determined by profitability. Historical within-firm variation in

market-to-book, not current cross-firm variation, is more important in explaining the cross section of leverage.

The results from Table III and IV show that effects documented in prior literature. Persistence So far two main results have been documented. First, high market valuations reduce leverage in the short run. Second, historically high market valuations are associated with lower leverage in the cross section. By measuring changes from the leverage prevailing in the year before the PIP, the dependent variable includes the effect of the PIP itself. This is useful because the PIP is a critical financing event known to be connected to market value.

Historical market valuations have large and very persistent effects on capital structure. This effect is independent of various control variables. 2.

Discussion Tradeoff theory In perfect and efficient markets capital structure is irrelevant. Some of the imperfections that lead to an optimal tradeoff are as follows: Higher taxes on dividends indicate more debt, higher non-debt tax shields indicate less debt, higher costs of financial distress indicate more equity, agency problems can call for more or less debt.

The market-to-book ratio can be connected to several elements of the tradeoff theory but it is most commonly attached to costly financial distress. The key testable prediction of the tradeoff theory is that capital structure eventually adjusts to changes in the market-to-book ratio. However, evidence indicated that variation in the market-to-book ratio has a decades-long impact on capital structure. B&W's results make the point that a

considerable fraction of cross-sectional variation in average has nothing to do with an optimal leverage ratio.

Pecking order theory In the pecking order theory there is no optimal capital structure. The static model predicts that managers will follow a pecking-order (internal, debt, equity). The pecking order theory regards the market-to-book ratio as a measure of investment opportunities. Periods of high investment opportunities will tend to push leverage higher toward a debt capacity. However, to the extent that high past market-to-book actually coincides with high past investments, B's results suggest that such periods tend to push leverage lower.

The dynamic version predicts a relationship between leverage and future investment opportunities. B&W's results control for current market-to-book and show that leverage is much more strongly determined by past values of market-to-book. **Managerial entrenchment theory** High valuations and good investment opportunities facilitate equity finance, but at the same time allow managers to become entrenched. They may then refuse to raise debt to be rebalanced in later periods. Capital structure evolves as the cumulative outcome of past attempts to time the equity market. There are two versions of equity market timing.

The first is a dynamic form with rational managers and investors and adverse selection costs that vary across firms or across time. Temporary fluctuations in the market-to-book ratio measure variations in adverse selection (information asymmetry). The second version of equity market timing

involves irrational investors or managers and time-varying mispricing. If managers try to exploit too-extreme expectations, net equity issues will be positively related to market-to-book. The critical assumption is that markets need not be inefficient, managers may simply believe that they can time the market.