# Does Accounting Measurement Impact Markets: A Laboratory Market Efficiency Perspective

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# Choice of accounting regimes can contribute to price bubbles and subsequent collapses

Investors need to be aware that accounting choices can both impact their perceptions and also contribute to market bubbles and their subsequent collapse, according to recent research.

## Researcher Matthew Sooy, assistant professor, managerial accounting and control, at Ivey Business School at Western University, found that traders treat otherwise identical assets differently, depending on whether they were reported following mark-to-market (MTM) versus historical cost (HC) accounting.

Using a mark-to-market regime, traders perceive a stronger link to market price changes, and a weaker link to asset fundamentals. This led to greater mispricing under MTM – bubbles were more frequent and higher magnitude – than under the HC regime.

**The Study**

There has long been a debate in academic circles about the impact that MTM has on market volatility compared to other systems, such as HC, or whether MTM is merely a “bystander” during a market crisis that simply reports economic reality without influencing it.

However, there have been limited opportunities to isolate and test the incremental effects of different accounting measurement regimes on market behaviour.

Sooy’s research addresses that by examining asset mispricing between the two regimes in three controlled laboratory experiments.

Business students were given cash to trade in their respective markets and were told that the assets would pay one of two possible constant dividends (known as contract payments) at the conclusion of every 15 periods of activity.

Each trader was given a simplified financial income statement to track earnings, and a balance sheet to track holdings. They used these to self-assess their performance.

In the first two experiments, participants were assigned a specific accounting regime, either HC or MTM, and their financial statements reflected that. In the third experiment, traders could toggle between regimes to assess information.

By controlling the real economic incentives, in this case the dividends paid as contract payments, and making them identical under the MTM and HC treatments, Sooy could isolate the effect of the different accounting regimes on participants and markets.

He reviewed a range of accounting research examining pricing bubbles and the fight between fair market value versus mark-to-market accounting and hypothesized that mispricing will increase under MTM compared to HC because traders under MTM increasingly emphasize market prices in their trading strategies, which tends to increase mispricing.

**The Results**

The study contributes to accounting research and practice in a number of manners, including the influence of accounting regimes on market dynamics.

It also contributes to accounting literature by “providing insight into the role of accounting measurement on market dynamics prior to the formation of market bubbles” and examining “the effects of accounting measurement not only during, but also preceding and following an asset pricing bubble.”

Sooy found that, as he hypothesized, traders using MTM systemically linked their perceived performance to market value changes and preferred information about future market prices, rather than dividends.

On the other hand, as expected, HC traders saw a stronger link between their perceived performance and the assets’ cash flows (in the forms of dividends and amortization), and they preferred information about future dividends over future market prices.

His study found that MTM traders had greater market-level mispricing because they used trading strategies that focused on managing the “performance consequences of market price changes by anticipating and trading against future market price.” By increasingly emphasizing market prices in their trading strategies, it led to increased mispricing. As well, the “individual trading strategies aggregate to influence market dynamics, contributing to even greater price bubbles under MTM.”

“We also observe that traders in MTM regimes preferred information about future market prices that could advantage them individually in timing the bubble, but which could also draw more traders into the bubble. This may suggest the presence of underlying regulatory tensions between providing information that is individually desired versus information that promotes orderly and efficient markets.”

**Implications**

Sooy notes that one implication of the study is that traders in the two regimes learn differently about the market because they rely on the different accounting information to understand what inputs influence performance.

The study notes that to the extent that MTM traders focus on market prices rather than asset fundamentals, their assessments “may reflect more information related to the size and timing of bubbles rather than computing the expected cash flow values.” That may make them “more prone to experiencing subsequent bubbles using MTM accounting, rather than HC.”

He suggests that future research could investigate alternative accounting regimes, or the ability of additional accounting information disclosure to mitigate mispricing risks.

He says the study highlights the need to be cautious about the information that is brought into a market and then being fed back into the market for assessment and analysis as it relates to performance, as that can fan the flames that underlie mispricing.

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