Endogenous Tick Sizes by Dr. Tanachote Boonvorachote


## ABSTRACT

This paper shows that the various tick sizes used by the Stock Exchange of Thailand (SET) are generally the binding constraints on the quoted bid-ask spreads. Consequently, when stock prices move upwards, investors will be forced to get higher spreads by market design. However, when stock prices move downwards, investors are still happy to quote mainly in one-tick spreads. In addition, the wider (narrower) bid-ask spread due to the larger (smaller) tick size encourages (discourages) liquidity providers to display more (fewer) orders which lead to the thicker (thinner) depths. The wider (narrower) bid-ask spread due to the larger (smaller) tick size discourages (encourages) trading volume.

Evidences that minimum price increments in SET are strong binding constraints on its quoted bid-ask spreads report that SET might have too large tick sizes. Moreover, we also find that if the various tick sizes are between 0.01 and 1.00 Baht, they would, in general, enhance the market liquidity by improving displayed depths, not impose too high trading costs on trading. All findings recommend that SET can implement a small numbers of ticks and pricing grids. A decrease in tick size by a half in price range above 200 Baht cause trivial changes in quoted depths and trading volumes while it decreases quoted bid-ask spreads substantially. The reduction in tick sizes for stock prices above 200 Baht by using 1 Baht as the largest tick size also has a trivial effect on investors' order submission strategy in SET. Future researches should be done to explore the effect of a tick size reduction on hidden depths in SET.