



CFM-DP2021-14

Size Discount and Size Penalty: Trading Costs in Bond Markets

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How the cost of a financial market transaction depends on the size of the given transaction continues to be a main question in financial economics. There has been evidence showing that larger trades incur lower trading costs ("size discount") in various over-the-counter markets. The size discount is consistent with theories of bilateral trading with imperfect competition, which predict that larger trades get more favourable prices because dealers' bargaining power decreases in trade size. However, theories of information asymmetry and inventory imbalances predict "size penalty", in that larger trades would be executed at less favourable prices because of dealers' fear of adverse selection or higher inventory costs.

We reconcile this tension in the literature by decomposing the size-cost relationship into *cross-client* and *within-client* variations, finding size discount in the cross section and size penalty in the time series. We further analyse the drivers of the size penalty by applying differences-in-differences methods. The evidence points to an independent role of information-based theories (controlling for inventory- and liquidity-based explanations) in driving the size penalty. By studying the size-cost relationship, this paper illustrates the effects of different market frictions on trading costs.

As a theoretical contribution, we present a bilateral trading model with bargaining and information asymmetry to rationalise the co-existence of the size discount and size penalty. This model could be a building block for analysing strategic bilateral trading under asymmetric information in decentralised markets."