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Causes and Consequences of Margin Levels in Futures Markets

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Working Paper

After studying a novel set of market data, the author concludes that imposing higher margins drives both hedgers and speculators from the market, adversely affects liquidity and volatility, and that regulation of margins can make trading more costly for all market participants.

Using a Freedom of Information Act request, the author obtained a data set on margin requirements for 16 commodity futures contracts over the period 2000–2011, and used it to explore how margins are set and to test the existing theories on the implications of changing margin levels.

He concludes that margins have been set systematically by the CME Group based on the volatility of the individual contracts, and that, on average, margins are set as 2.5 times the daily volatility of a given contract. In addition, the exchange also considers contract-specific tail risk.

Margins are important for liquidity, and margin increases are followed by a drop in open interest, and both hedgers and speculators reduce their positions.

This suggests that margin increases force hedgers to reduce their open positions. Contrary to conventional wisdom and prior research by others, the author failed to find evidence that margin changes affect futures prices, even when controlling for speculator positions.

His conclusion is consistent with the finding that speculators hold both long and short positions, and that they do not alter the ratio of long-short positions following margin changes. However, margin increases do affect realized volatility, which increases by about 50% on average on the day of a margin increase.