

becomes one party to all purchase and sale contracts, thereby providing greater security of contract and also enabling the fulfillment of contract by offset. The trading so organized becomes so convenient that nearly all contracts are offset, ordinary merchandising contracts being still used for nearly all transfers of ownership. Under these circumstances most transfers of commodity ownership entail a double transaction; the hedging transaction in commodity futures and the subsequent merchandising transaction for which it has substituted. Since transactions costs are important in the bulk commodity trade, where large volumes and small profit margins prevail, it is very important that the substitute transaction in commodity futures be accomplished at minimum cost—low enough to justify the common practice of making two transactions instead of one. The major benefit of futures markets to the commodity trade is the provision of continuous competitive prices at which they can buy or sell with confidence; sparing them the necessity of costly shopping and negotiations. Also, because the substitute transaction is undertaken in conjunction with a purchase or sale of the actual commodity, their risk is in "basis" changes rather than flat price changes. That is to say, their only prospect of profit or loss from price change is in the divergence or convergence of spot and futures prices. For this reason, financial institutions are able to lend them considerably more money than would otherwise be warranted.

The very great economy of futures trading is important from two standpoints. If more capital had to be tied up in futures contracts, then the very advantage which futures trading achieves, of increasing capital availability to commodity firms, would be eliminated. Secondly, the economy with which speculators can trade helps induce them to broaden the market. Without their participation, commodity firms find futures markets little different from ordinary markets, and are required to resort to costly shopping and negotiation. Markets which enjoy higher levels of speculative participation provide more reliable price estimates at lower transactions cost than markets which attract less speculation.

The purpose of margins

The clearing house, as a party to all futures contracts, needs to insure the validity of all contracts. By requiring that all members deposit margin against their net (long or short) contractual position, the clearing house protects itself, and thereby protects all who have contracts with it. The clearing house establishes margins for this purpose, and occasionally changes the margin requirements in furtherance of this purpose. In so doing, another purpose may be incidentally served. When the clearing house raises margins because the possibility of wider price movements is anticipated and hence more protection is deemed necessary, it may incidentally discourage public participation in the trading which could contribute to excessive price change.

Given the purpose of margin requirements, the appropriate margin level is one which is geared to (1) prospective price changes and (2) prospective basis changes. The margin requirements for speculators, whose risk is in price change, should be geared to prospective changes in the price level. Margin requirements for hedging firms, whose risk is limited to basis changes, is more appropriately geared to the prospect of change in this relationship.

No precise margin levels can be derived from these considerations, as the prospective price change is inherently uncertain, but guideposts which suggest the correct order of magnitude are readily available, and margin levels can be established on the safe side of such guideposts without impairing the usefulness of the markets.

The determination of proper margin levels is comparable, in its concept, to the determination of life insurance premiums on an actuarial basis. The probability of price changes of any given magnitude can be estimated from recorded experience in the various commodities. The relevant factors to be taken into account are (1) daily price change (close to close) (2) continuity of price change from day to day, and (3) the speed and efficacy of margin calls. In practice, these factors enter into the judgment of the exchange governors who establish margins, but statistical estimates of the probabilities are not computed. Data are readily available from which such estimates could be made, however, and the Commodity Exchange Authority (or the exchanges) could make such analyses at modest cost, particularly if the information were punched onto IBM cards.

Since limitations on daily price changes are already in existence, a reasonable expedience would be to establish margin levels directly in terms of those limits.