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Ask the Professor: What Is Margin And How Is It (Or Should Be) Determined?

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at http://agriculture.house.gov/testimony/110/h91120/Radhakrishnan.pdf, at 3. The MOU itself is available at http://www.ustreas.gov/press/releases/reports/finalmou.pdf.

18. *See* House Agriculture Committee Hearings and Senate Agriculture Committee Hearings, *supra* note 4.
19. *See* CME's Dec. 8, 2008 written testimony submitted to the House Agriculture Committee at http://agriculture.house.gov/testimony/110/h81208/Duffy.doc, at 2.
20. Id. at 6.
21. *See* ICE's Dec. 8, 2008 written testimony submitted to the House Agriculture Committee at http://agriculture.house.gov/testimony/110/h81208/Short.doc, at 1.
22. Id. at 4.
23. Id.
24. Id. at 5.
25. *See* NYSE Euronext's Dec. 8, 2008 written testimony, *available at* http://agriculture.house.gov/testimony/110/h81208/ONeill.doc, at 2-3 and 5.
26. Id. at 5.
27. *See* Eurex Clearing's Dec. 8, 2008 written testimony, *available at* http://agriculture.house.gov/testimony/110/h81208/Book.pdf, at 1-2.
28. Id. at 3-4.
29. *See* CRMPG III Report, *supra* note 6, at 125.
30. Id. at 1.
31. Id. at 31-36.
32. Id. at 102.
33. The Oct. 31, 2008 letter from ISDA and others to the to the Federal Reserve Bank of New York is *available at* http://www.newyorkfed.org/newsevents/news/markets/2008/regulators_letter.pdf [hereinafter October 31 Letter].
34. *See* PWG's March 2008 Report, *supra* note 3.
35. The "Senior Oversight Group" or "SOG", an industry leadership group of operations professionals representing a number of major OTC derivatives dealers, was formed in late 2005 to lead an effort to strengthen the operational infrastructure underlying the OTC derivatives market. In December 2007, the Operations Management Group (the "OMG") was created to succeed the work of the SOG. Further information on the OMG is *available at* https://www.isda.org/c_and_a/oper_commit-omg.html.
36. *See* October 31 Letter, *supra* note 33, at 2.
37. Id.
38. Id. at 4.
39. *See* October 31 Letter, *supra* note 33, at 4.
40. Id. at 4-5.
41. Id. at 7.
42. Id.
43. *See* October 31 Letter, *supra* note 33, at 4.
44. Id.
45. Id. at 9.
46. Id.
47. *See* October 31 Letter, *supra* note 33, at 9.
48. Id., p. 10.
49. Id.
50. Id.
51. Id. at 12.
52. *See* October 31 Letter, *supra* note 33, at 12.
53. Id.
54. Id., at 13.
55. *See* October 31 Letter, *supra* note 33, at 15.
56. Id.
57. Id.
58. *See* October 31 Letter, *supra* note 33, at 16.
59. Id. at 17.
60. Id. at 18.
61. Id. at 20.
62. Id. at 20-21.
63. *See, e.g.*, February 3 and 4, 2009 House Agriculture Committee Hearings to discuss the Derivatives Markets Transparency and Accountability Act of 2009, available at http://agriculture.house.gov/hearings/index.html.

Ask The Professor — What Is Margin And How Is It (Or Should Be) Determined?

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"Margin" for futures contracts is such a strange and complex term. Whoever first called minimum exchange-traded futures deposits "margin" should be shot in my opinion as it has created much confusion over the past many years. The term "margin" for futures, which implies a performance bond or surety bond concept, is entirely different from the term "margin" for securities, which reflects a stock loan arrangement. I will try and explain the concept of margin, and its purpose, in this column.

The Board of Governors of the Federal Reserve System ("FED") has adopted Regulation T ("Reg. T") which states, in essence, that a broker-dealer may not lend its customers more than 50%, nor extend credit in an amount greater than 50%, of the value of the securities acquired in a securities account.[1] Reg. T thus governs the amount of margin that a broker-dealer must collect and maintain in the customer's securities account whenever securities are bought or sold short. It also governs the amount of customer funds that may be withdrawn if that customer has opened a margin account with that broker-dealer.[2] These so-called margin accounts are also governed by securities SROs, such as the New York Stock Exchange ("NYSE"). NYSE Rule 431, in particular, establishes a minimum maintenance margin requirement of 25% for long positions and 30% for short positions held in the underlying margin account. Accordingly, margin in a securities account, in essence, reflects a loan arrangement between the broker-dealer and the customer, the amount of the loan being the difference between the respective stock purchase amount and the current equity value in the account. This is real debt that is incurred. For example, if Customer A buys 100 shares of XYZ stock @ $50.00 per share, Customer A would need to deposit a minimum of $2,500.00 with the broker-dealer and borrow the balance.

Pursuant to the standard Stock Margin Agreement, if the customer does not maintain the minimum maintenance margin requirements established by that broker-dealer for its margin account, then the broker-dealer may take certain actions against the customer, including the liquidation of some or all of the open securities positions in the margin account which, in effect, transforms the equity in the margin account to cash. The customer is nevertheless liable for any outstanding indebtedness still owed by that customer to the broker-dealer following such liquidation or close-out. So, even though the concept of "margin" is so dramatically different between a futures account and a securities margin account, this concept of permissible actions that may be taken by a broker-dealer or futures commission merchant ("FCM") is a constant, as explained below.

In futures, margin takes on a different meaning. Margin, or "initial margin" ("IM")[3] as it is often called, reflects a performance bond or surety bond, whereby the customer of an FCM agrees, pursuant to the Futures Customer Agreement, to deposit and maintain, at all times, the initial margin required by the FCM for that customer's account. Typically, for most large institutional futures customers, the IM requirement represents the minimum margin requirement set by the respective exchange for that particular futures product but the FCM may, pursuant to the Futures Customer Agreement, reserve the contractual right to require the futures customer to maintain an amount of initial margin greater (but never lower) than the minimum amount set by the exchange.[4] As in a securities margin account, the futures customer must maintain an amount of equity, often called the net liquidating value ("NLV"), in its account that equals or exceeds the initial margin requirements.[5] And if a futures customer does not meet this minimum amount requirement each day, the FCM may exercise its contractual right by claiming that the customer's account has resulted in an Event of Default, as defined in the Futures Customer Agreement, and may thus liquidate any and all of the open futures positions.[6]

With respect to futures, the amount of margin required by an exchange is normally calculated based on an historical price basis, typically a one day, two standard deviation methodology. This mathematical analysis rationalizes that the minimum margin requirement for that particular futures product should cover, historically, approximately 95% of the underlying price changes that occurred over a certain period of time, typically the past 30 to 60 days, depending on the formula used by that clearing house. FCMs may, or even should, evaluate their large futures customers in a different light, applying a higher standard, such as a three day or even a five day, two or more standard deviation test, especially if such customers are engaged in a prime brokerage arrangement with that firm, as other products involved in the prime brokerage arrangement apply a different margin payment obligation. For example, the payment for stock purchases is T+3 whereas the payment for futures is typically T+1. Thus, unlike securities which, as noted above, involves a loan arrangement, margin in a futures account takes on a more credit risk feature as no loan exists.

However, while the end game is the same, that is, the broker-dealer and/or FCM may protect itself by contract by claiming that an Event of Default has occurred, thus initiating the contractual right to take further action (e.g., liquidate some or all of the open positions), the amount of futures margin required to be paid may vary by each firm depending on the creditworthiness of the client and by the product traded. In a securities margin account, for example, FED and Reg. T rules set the requirements for the minimum amount of equity that must be maintained at all times in the margin account. However, in a futures account, exchange rules normally dictate the minimum amount of initial margin that must be maintained but the FCM may impose margin requirements greater than the amount set by the respective exchange. Certain CFTC rules also impact the margin requirements.[7]

Another important concept involving margin is the amount that an FCM or BD must pay their respective clearing houses based on margin amounts due for their customer accounts. Most global clearing houses require the underlying clearing member firm to deposit an amount equal to the margin required for all positions on a "net" clearing basis. Thus, if one customer is long 10 CBOT Treasury Bond futures contracts and another customer of that FCM is short 10 CBOT Treasury Bond futures contracts, the FCM must still collect the required margin from both customers but would not be required to deposit any required margin amounts with the CME Clearing House. Conversely, if the clearing house requires margin to be paid on a "gross" clearing basis, then the FCM would deposit the full amount of the IM due on all futures contracts, the aggregate amount of both the long and short positions, cleared by that respective clearing house. This concept of "net" vs. "gross" clearing dramatically impacts the obligations due customers of a defaulting clearing member firm.[8]

The concept of "margin" also plays a role in the litigation of disputes arising when a customer files a claim alleging that the BD or FCM improperly liquidated its open positions after notifying the customer that an event of default has occurred. Case law typically supports the actions taken by the brokerage firm when such liquidations occur, taking the position that margin is principally designed to protect the interests of the brokerage firm, and not those of the underlying customer whose positions were liquidated.[9] In other words, compulsory sell-outs or liquidations of open positions are generally permissible once an Event of Default occurs to protect the respective FCM. Otherwise, the underlying net capital of the FCM may be at risk, perhaps creating systemic implications.

In summary, the margin requirements for both securities and futures have worked fairly well during the current financial crisis. It will be interesting to observe whether any fundamental changes will occur.

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NOTES

1. See C.F.R. Parts 220, 221 and 224.
2. See C.F.R. Section 220.3(c).
3. Initial margin is also referred to as "original margin" ("OM")
4. Initial margin is different than the concept of "maintenance margin". Exchange rules require that the futures account's equity equals or exceeds the maintenance margin amount set for each underlying futures contract after the IM is first deposited. The maintenance margin amount is typically based on a percentage discount to the initial margin amount requirement. Most large FCMs do not base the required margin amount on the maintenance margin level but require that the futures account maintain an equity value equity to the required IM requirement.
5. Net Liquidating Value ("NLV") is the key determinate. NLV is the presumed equity account balance in the account assuming that all of the open positions are liquidated based on a particular settlement price for each product in the account. In the case of futures, the NLV is based on the previous day's closing or settlement price. Obviously, when the NLV is analyzed the next business morning, the underlying market value may have changed from the previous

day's settlement price. Also, keep in mind that the underlying value of the collateral deposited to satisfy the IM requirements is based on the discounted value of that collateral as determined by CFTC Rule 1.17 or SEC Rule 15c3-1 but the broker-dealer or FCM may apply a greater "haircut" than the haircuts set pursuant to these regulations.

6. Note that some case law has upheld the concept that a promise by a customer to pay the required margin, even though no actual funds have yet been received by the FCM, may constitute satisfaction of the margin call order issued by the FCM. However, most Futures Customer Agreements today actually require receipt of the funds, and failure to pay the required margin amounts constitutes an Event of Default as defined in the Agreement.
7. CFTC Rule 1.56 states, in essence, that no FCM may guarantee against loss in a futures account. Therefore, the FCM must collect and maintain the minimum margin required for each account.
8. A clearing house may only protect customers of an insolvent clearing member firm based on the actual amounts that the clearing house may hold on behalf of the customers of the insolvent clearing member firm. Thus, if the clearing house applies a "net" clearing arrangement, in theory, it may not hold any customer funds of that clearing member firm assuming the total long and short positions of all customers of that firm are equal in number, or will only hold the margin required based on the net long or net short positions so held. The clearing member firm would, in turn, be required to maintain such excess margin amounts that it has collected from its customers in its "Customer Segregated Account" as required by CFTC Rule 1.20. Most global futures clearing houses apply this "net" margin clearing arrangement. Two exchanges, the Chicago Mercantile Exchange and the New York Mercantile Exchange, apply a "gross" clearing arrangement whereby the clearing member firm is required to deposit the full amount of the initial margin required for all of the "long" and "short" positions held by the clearing member firm that are traded on these two exchanges with their clearing house.
9. Many of these cases were filed following the stock market crash of October 1987.