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Margins: Their Role in the Regulatory Debate Between the Commodities Futures Trading Commission and the Securities Exchange Commission

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by

Amy E. Wolatz

DeKalb, Illinois

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Approved: [Signature]

Department of: [Department]

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AUTHOR: Amy E. Wolatz

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Much of the research was done through the use of government publications and congressional hearings. The purpose of this paper is to provide guidance concerning the various issues raised by the margin requirement debate. The scope of this paper is limited to published information.

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ABSTRACT

The Securities Exchange Commission and the Commodities Futures Trading Commission are contending in Congress over the issue of which commission should have regulatory control over the stock index futures contracts. Margins requirements are a topic of major concern in the debate. This paper focuses on the margin topic. A definition of margins and their functions is provided. A conclusion is reached that margins are currently at a level which is sufficient for prudential purposes.

Much of the research was done through the use of government publications on the Congressional hearings. The purpose of this paper is to provide guidance concerning the various issues raised by the margin requirement debate. The scope of the paper is limited to published information.
The stock market crash on October 19, 1987, has had a ripple effect on the regulatory units of the American stock and futures markets. The post crash studies have brought many important issues to the surface of the American public's concern. The words of Nicholas Brady, when delivering the report of the Brady Commission on the stock market crash were harsh and threatening. Brady's words begged reform. "We are looking down the barrel of a gun, and it's loaded (Market Reform Act 1989, 115)." Secretary Brady's report is only one of the many studies that evaluated the crash during the four days of confusion and panic. The reports are an attempt to discover possible solutions that would prevent such a drastic decline in the market value again. These reports were measures taken to restore the individual investor's confidence as to also regain his lost business.

The topic of margins is among the many issues of concern in the aftermath of the crash studies. There has been a recent uproar in the futures markets about margin requirements which has caused much friction between the Securities Exchange Commission (SEC) and the Commodities Futures Trading Commission (CFTC). The CFTC regulates the country's futures exchanges, while the SEC watches over the stock exchanges. The regulation debate is to decide who should regulate stock index futures. Stock Index Futures are a fairly new hybrid product that combine features of both the stock market and the futures industry. The CFTC and the SEC are in Congress both trying to defend their jurisdiction over the indices.

Because the futures industry has its' home in Chicago and
the stock industry is located in New York City, it has been suggested that the debate is simply a battle between the two rival cities. The friction is about more than just a battle between the two prominent financial cities of America. It is about the foundation of the regulatory future and competitive health of our markets on an international scale. Currently our markets are among the most efficient and busiest markets in the world. The advantage we currently have should not be taken for granted but instead it should be nurtured to flourish into the most productive markets now and into the future.

In the hearings before the Subcommittee on securities and the Committee on Banking, Housing, and Urban Affairs Of the United States Senate on The Market Reform Act of 1989, Senator Gramm of Texas described our American markets. He called the markets, "...the world's greatest wealth creating machine. Our capital markets are the envy of the world. They turn the wheels of industry and agriculture in this country. They make us the richest, freest and happiest people on earth...(Market Reform Act 1989, 7)." The regulation of the markets is not solely the concern of the government, the investment bankers nor the private investor, but it is an issue vital to every citizen of the United States of America. The individual citizen may not realize its' importance as it relates to the well being of our economy. Lost foreign business and lost investor confidence can further hurt our already repressed economy.

Stock indices are at the center of debate between the CFTC and the SEC. Stock indices started being traded in February 1982
at the Kansas City Board of Trade. The first market based stock index futures contract was the Value Line Average Stock Index. Value Line Average Stock Index is a composite of over 1,700 stocks representing 96% of the dollar value of U.S. equities (Chicago Board of Trade 1985, 297-300). Stock indices have been around since 1928 when Standard & Poor’s started the first daily publication of a stock index. Indices are used to evaluate the price performance of individual stocks and groups of stocks compared with the movement of the total stock market. Stock index futures allow an investor to bet on the direction of a group of stocks rather than just on the individual stocks themselves (Chicago Board of Trade 1985, 297-300). The indices have the same effect on a portfolio as if the investor had bought a portion of each stock in the index. The indices allow the investor to spread his risk over many stocks without incurring large transaction costs. There are several indices today, each with a specific set of stocks that it tracks.

The indices allow investors to hedge entire portfolios against systematic risk by taking an opposite position in the index that most closely matches their portfolio’s stocks or types of stocks. Unsystematic risk is the risk associated with the individual firms and their problems with earnings, unions or other specific factors. Systematic risk is the market risk as a whole and is effected by the macro economic factors. The indices have brought in an enormous amount of business and have been much more popular than ever expected (Chicago Board of Trade 1985, 297-300).

The confusion about the regulation of the indices started
when the SEC approved these contracts to be traded on its’ stock exchanges. Prior to that time, the indices were thought to be under the jurisdiction of the CFTC which would allow them to be traded on futures exchanges only. The Shadd-Johnson Accord generally gives the SEC oversight for contracts that help raise capital and the CFTC contracts that hedge against price changes. According to the Act, the jurisdiction of the stock index futures rightfully belongs to the CFTC (Greesing 1989, 94). Because the index futures do not raise capital for companies but are an instrument designed to allow investors to bet on the direction that a particular set of stocks will go in the future, they are considered to be contracts that hedge against price change.

The case of who had control over the indices went to the Federal Court in Chicago where it was ruled that the indices did belong to the CFTC and could no longer be traded on the stock exchanges. On June 18, 1990, the Supreme Court let that decision stand by refusing to review it (Taylor 1990, 1948).

In the debate to decide who will regulate the indices there is much discussion of the index’s margins. A margin is the minimum amount of money that must be paid in order to have ownership of a security or commodity. Any security can be paid for in full, however, the margin sets the minimum amount of money that must paid up front. A complete examination of margins is necessary in an attempt to discover why they are important in the regulatory debate. First, margins will be defined. The next step will be to determine their function in the different markets. Finally, margins will be discussed as they pertain to
the regulatory argument.

As explained earlier, margins determine the amount of money it takes to hold a position. Margins also determine the amount leverage available to the investor. Leverage means that the investor controls more stocks than he purchased. It is this leverage that causes concern among SEC advocates. In the stock market margins allow the investor to control more investment value than he physically purchased by borrowing the balance of the purchase. The broker, in this situation, would lend the balance of the purchase and keep the stock as collateral. The broker then barrows the money from his bank and charges the clients a percentage rate plus a service fee for the loan. Even though the broker keeps possession of the stocks the purchaser still receives the dividends and voting rights.

The maximum amount that can be borrowed is determined by the Federal Reserve Board under Regulations T and U. These regulations were enacted with the Securities Exchange Act of 1934. It was contended that the excessive credit allowed for the acquisition of stocks during the 1920's was one of the reasons for the stock market collapse of 1929 (Rose 1989, 598-599). Since the enactment of the regulation, the maximum loan value is expressed as a percentage of the market value of the securities at the time they are used as loan collateral. The margin requirement is the amount that must be posted to gain control of the specific investment. The margin requirement will equal the difference between the market value and the and the maximum loan value of the security. The percentage of margin is defined by the equity, which is the amount of cash in the account, divided
by the value of collateral (Cohen 1987, 67).

Margin requirements have varied from 40% to 100% (no money down). The current margin requirement on stock is 50% (Cohen 1987, 67). The requirements do not change very often. Between June 8, 1968 and November 24, 1972 they fluctuated from 80% to 65% finally settling on their current 50% in January 1974 (Rose 1989, 599).

The concept of buying stock on margin is fairly straightforward. Assuming a 50% margin requirement an investor can buy 100 shares of stock in ABC Corporation at $100 a share, a $10,000 value, for $5,000 down. The balance of $5,000 is then borrowed from the broker. The equity of the investment is the market value minus the amount of the loan. Ignoring the percentage charged to the loan and assuming a $100 service fee, the equity is $10,000 - ($5,000 + $100) = $4,900.

The discussion so far has been of the initial margin which is the margin determined at the time of purchase. There is also a maintenance margin which is monitored throughout the life of the investment. The maintenance margin is to insure that in the case of the stock value falling, the investment value will not dip below the equity value. Falling below the equity value would mean that the value of the stock is no longer sufficient collateral to cover the loan from the broker. A minimum maintenance margin is set by the Federal Reserve Board. As of August 1985, the maintenance margin is 25% (Chicago Board of Trade 1985, 297-300). However, as with the initial margin, the individual brokerage house reserves the right to exceed the
margin requirement with their own specifications.

Suppose that the maintenance level at this particular brokerage house is 30%. The lowest the broker would let the stock value fall to can be found by taking the number of shares times a estimated market value minus the amount of the loan and dividing it by the number of shares times the estimated market value. When this equation equals 30% (.3), the estimated value is the minimum stock price the investment can fall to while staying above the maintenance margin. The previous example can be solved by the following equation: 100P - 5,000 / 100P = 30%, assuming P = Stock Price. In this case P = $71.43 per share (Reilly 1986, 87).

If the equity dips below the maintenance margin, the investor will receive a margin call. A margin call is a warning from the broker that the maintenance margin needs to be replenished with cash or the position will be liquidated with the proceeds used to pay off enough of the loan to bring the margin to an acceptable level.

By operating with borrowed money the leverage results in magnifying the effect of profit or loss. The leverage factor is equal to 1 divided by the percent margin. If the margin is 50% then the leverage factor is 2 (1/.5). The leverage factor reflects the effect a price swing will have on the investors equity level. If the stock with a leverage factor of 2 had a rate of return of + or - 10%, the return on equity for the investor would be + or - 20%. It is easy to see that wide price movements can effect an individual’s portfolio very quickly when investments are leveraged (Reilly 1986, 93).
So far the discussion of margins has been described for the equity securities only. In the futures markets margins have the same characteristics, but they are used for a different purpose. In the futures markets margins are not used as a down payment but it is simply a monetary promise to make good on a contract. A margin is a guarantee required of both sellers and buyers that they will respectively make and take delivery of the commodity represented by the contract unless obligation to do so is offset through an opposite transaction.

The futures margins are not set by a federal agency, but they are monitored and periodically updated by the exchanges. Margins are determined on the basis of probable risk of loss (Chicago Board of Trade 1985, 11).

The clearinghouse of each exchange is the entity in charge of matching every seller to a buyer and vise versa at the end of each day. As they clear each separate transaction, they tally up each member firm’s position. If price movements have resulted in a loss, the clearing member is required to make an additional deposit prior to the opening of the market on the next business day. In the case of high volatility, margin calls may be made during a market session requiring immediate posting of additional margin money. This form of immediate funding is known as a variation margin call and the member must pay the amount called for by wire transfer of funds within one hour (Chicago Board of Trade 1985, 11).

If the clearing member has excess money in their margin account, the amount over the requirement can be withdrawn on a
nightly basis. These excess funds can also be left in the account as a reserve against future adverse price movements. Most futures margin levels fluctuate between 5% and 15% (Chicago Board of Trade 1985, 11). This is quite a bit lower than the stock margins of 50%.

The difference between margins in the stock market and margins in the futures markets can be clearly identified when the CFTC's definition of margins is compared to the SEC's definition. In the book entitled "What Every Investor Should Know - A Handbook from the U.S. Securities and Exchange Commission" the glossary provides the following definition for a Margin Account: A type of account with a broker/dealer, in which the broker agrees to lend the customer part of the amount due for the purchase of securities.

The definition that the CFTC has in their glossary in the handbook entitled, "Before Trading Commodities-Get the Facts", has a much different meaning than the SEC definition. The CFTC definition is as follows: The amount of money or collateral deposited by a client with his broker, or by a broker with the clearinghouse, for the purpose of insuring the broker or clearinghouse against loss on open futures contracts. The margin is not a partial payment on a purchase. 1) Original or initial margin is the total amount of margin per contract required by the broker when a futures position is opened. 2) Maintenance margin is a sum which must be maintained on deposit at all times. If a customer's equity in any futures position drops to or under the maintenance margin level because of adverse price moves, the broker must issue a margin call to restore the customer's equity.
to the original margin level. If a customer cannot meet the required margin call, the broker has the right to liquidate the account by offsetting the original transaction.

It is important that the proper definitions and functions of margins be understood before a discussion of the regulatory debate can be examined objectively.

One of the main topics in the regulatory debate between the CFTC and the SEC is related to the setting of margins. An initial concern is that the percent of margins and the given leverage that they allow in the futures markets compared to the equity markets causes the markets to be vulnerable to manipulation. The lower futures margins allows the stock index user to control more stock with less money down. It is feared that large amounts of stock index futures being bought or sold could effect the underlying stocks. If this is the case, low margins may allow a large investor to manipulate stock prices by giving him access to large blocks of stock index futures with a relatively small amount of capital.

After the Stock Market Crash of October 1987, several government studies were conducted in an effort to reveal causes of the crash and establish guidelines to prevent another one. The Brady Report was among the most well known of the reports. It was the product of a Presidential Task Force specifically created to investigate the crash, headed by Mr. Nicholas Brady. The report recommended that margins should be made consistent across marketplaces to control volatility and financial leverage. The report did not indicate that margins should be identical but
only that the amount of leverage available in the various markets should be consistent. Performance and maintenance margins should be set at levels to equate to the leverage relative to the risk of these securities (Market Reform Act 1989, 67).

Mr. Brady and his task force believe that low margins increase volatility by increasing the leverage involved. They feel that increased leverage would allow less money to move larger quantities of securities leaving the markets open to manipulation. The concern is that the stock index futures, with a margin of less than 10%, would allow investors to sway the prices of the underlying stocks, thus creating volatility. Index arbitrage is the strategy in which an investor would buy futures and sell the stocks, or vice versa, in order to take advantage of a price difference between the two markets. It is this arbitrage that worries regulators because the investor is able to use the two markets to create price swings by buying or selling large blocks of the futures.

Because of these concerns, the SEC is asking for control over the stock index futures. The SEC believes that the Brady Report proves the imbalance of leverage between the stock and futures industry is detrimental to the markets. If the SEC gains control of the indices, they would propose that the margins be raised. The CFTC sees no reason for the indices to be taken from their jurisdiction because they believe the margins to be at a sufficient level.

There are three very important points to consider when deciding if the margins for the indices should be equated to their stock counterparts. The first point has been revealed
already. It is the fact that margins play a different role in the stock market than in the futures market. The second issue is to consider if there is proof that would point to the low futures margins as a significant depressing force on the markets. The third point is that task force intends to use the margins for a purpose other than their prudential function.

As previously discussed, the stock margins are the down payment of 50% of the value of the purchased stock price. In the futures market, however, the margins represent a goodwill commitment to pay the opposing trader the amount upon delivery of the goods.

The two sets of margins that the Brady Report is referring to are completely different safety measures. Mr. Brady does recognize the unique functions of the separate margins as he stated in the congressional hearings on "Black Monday." Mr. Brady said, "While serving separate intermarket functions on the stock and futures exchanges, margin requirements dictate the amount of overall leverage available to a market participant in any financial instrument ("Black Monday" 1988, 37)." The Brady Commission is of the opinion that even though the index margins serve a different purpose than the stock margins they still should be equated. The CFTC believes that because the margins serve two different purposes the suggestion to equate them is irrational.

Besides increasing margin requirements in an attempt to make the available leverage similar in both markets, the SEC believes the margins of 10% or less to have been a significant factor in
the October 1987 stock market crash. On October 19, 1987 the margin for the stock index traded on the Chicago Board of Trade had a margin of $4,500 per contract which had been set on September 22, 1987. The approximate market value of the contract at the close of October 18, 1987 was $130,745. This figure is reached by multiplying the trading price of $522.98 by the number of lots in a single contract which is 250. The margin of $4,500 is only 3.4% of the total contract value. On October 20, 1987 the margin was raised to $7,000 per contract (Turk 1991). If these margin requirements are in fact too low, they could cause potential instability in the markets as mentioned earlier.

Although the Brady report declared the low margins a contributing factor, not every investigation conducted on the crash had the same conclusions. In a commentary article by Roger Kormendi and Stanley J. Kon on August 6, 1990 in Pensions and Investments entitled, "Standoff in regulation of stock-index futures", it states that both the CFTC and the SEC prepared reports on their analysis of the relationship between stock index futures and the stock market. In preparing the reports both agencies agreed to use the same data and then ended up centering around the same issues, however, they had very different conclusions. The SEC is of the view that the combination of index futures and program trading can be destabilizing to the underlying stock market. It believes that the index arbitrage in a period of rapidly falling prices can add to destabilizing pressures. The CFTC, on the other hand, says that both the futures and the stock market work reasonably well, they admit that in an age of rapid information dissemination both markets
will be subjected occasionally to sharp price and volume swings. The futures market provides an efficient price discovery mechanism and index arbitrage serves the productive role of keeping futures and stock markets closely linked.

A study done by the "Blue Ribbon Panel" reinforced the point that the markets work well and price fluctuations can be expected in the report released on June 12, 1990. The Market Volatility and Investor Confidence Panel released the results of its six-month, broad based study of sharp movements in stock prices and their effect on investors confidence in the market. The panel was headed by Roger B. Smith, Chairman and CEO of General Motors, and New York Stock Exchange Chairman and CEO John J. Phelan Jr.. The report states, "The panel found that market fluctuations are inevitable; there is no way to prevent major news events or changes in market sentiment from moving markets, sometimes by significant amounts. However, markets seem well-equipped to handle such moves (The Congressional Record 1990, S8418)."

The margins on the stock index futures were also discussed in the hearings of the Market Reform Act of 1989. The question was asked why the stock index futures maintenance margin requirements of the S&P Index were currently at a level below the where they were at before the crash of October 1987 (Market Reform Act 1989, 129). The question is asked because after the crash the Merchantile exchange raised margin requirements on stock index futures, indicating they had been too low. This question was posed by Chairman Riegle and directed at the
Chairman of the Chicago Merchantile exchange, Mr. Melamed. The response stated that of the seventy-seven or so studies that were conducted after the crash, none of them, including the Brady Report, presented evidence which would lead to the conclusion that futures margin had been a depressing force in the crash.

A study was done and published in October of 1990 which will serve the purpose of a statistical analysis in regards to the setting of margins. Let us first examine the five factors which a member of the margin committee of the Chicago Board of Trade referred to as most important in setting margins. These five factors are as follows: price volatility, special circumstances, daily price limits, price of the contract, and open interest and volume. Initially the margin is set as 3 to 6 percent of the contract value and covers 90% of all daily price changes. In developing a model the study eliminates volume from the list of factors because it is highly correlated with the open interest and therefore one of the two is sufficient to represent the movement. Special circumstances are eliminated because they are unpredictable. The daily price limits are highly correlated with the margins themselves so we can expect to see a directly related relationship between the two of them which makes them unnecessary to examine. The experiment was done at the 5% and 1% significance level using a two-tailed test. The results provide "...almost no support for the proposals to have the government establish margin requirements on futures contracts. It is shown that the margins are currently set in accordance with the stated intentions of industry officials and that these also coincide with a theoretically proper role for margins...In addition, it is shown
that the negative relationship between margin changes and price volatility, hypothesized by advocates of government intervention, does not appear to exist. The lack of a consistent relationship would appear to undermine any efforts by the government to alter trading behavior by adjusting margin levels." (Fishe 1990, 541-553). The stated intentions of the industry referred to above are those of prudential purposes.

The SEC's determination to equate the margins rests on the assumption that the low margins increase the leverage which in turn increases the volatility in the market place. Their position is controversial because, as Mr. Melamed declared, there is little proof that the low margins have a increasing effect of the volatility during the market crash. Another reason is because the stated function of margins is that of "prudential purposes."

Mr. Greenspan, the chairman of the Federal Reserve Board states that, "The Board remains skeptical, however, of whether setting margins on stock index futures at levels higher that necessary for prudential purpose will reduce excessive stock price volatility." Prudential purposes that are referred to by Mr. Greenspan are the previously mentioned purposes to protect the equity in the stock market and to serve as a goodwill commitment in the futures market. Mr. Greenspan is unsure that increased margins will reduce the volatility as the SEC is proposing. Obviously proof that using margins for the purpose of decreasing volatility will be effective, would be a preliminary concern when considering raising them (Greenspan 1990, 519-523).
George S. Bissell is the Chairman and Chief Executive Officer of the Keystone Group Inc. which manages mutual fund assets of approximately $10 billion. Mr. Bissell, who served as chairman of the Institute’s Task Force on Market Reform, also has the view that there should be one regulator agency among all the equity securities. He states the function of margins as "to provide the credit-extending party with a reasonable protection against a sharp decline in the value of the collateralized security. This prudential function of margins would make their levels dependent on the financial characteristics of the collateralized security, in particular on its expected price volatility. There is no controversy about the necessity of setting margin requirements at levels which comfortably assure the completion of a transaction. The second, more controversial, function for margins has been to regulate permissible leverage in order to dampen speculative excesses. Whether margin regulation is effective to achieve this goal without unduly interfering with market efficiency is questionable (Market Reform Act 1989, 173)."

The arguments for raising margin levels on the stock index futures have not been substantially proven. The SEC and CFTC have given reasons both for and against the proposed increase in margin requirements. As was mentioned earlier, the insufficient margins is a main reason why the SEC wants control of the stock index futures. Aside from margins, both sides have been accusing each other of not responding to other market factors well enough. These accusations are supposed to serve as an indication that the stock index futures would be better regulated under the accuser’s supervision.
The question of who will gain regulation rights over the indices is still being debated in Congress. Whether or not margins are high enough to protect the markets from manipulation is not clear. Nor is it clear if margins are even able to serve this purpose.

This paper has found that to equate margins with conflicting purposes would defeat their separate functions. There is lack of substantial proof that low margins had a detrimental effect on the markets during the crash. Finally, there is lack of evidence that margins would serve a dual purpose of controlling volatility.

In conclusion the margin levels for stock index futures are at sufficient levels for prudential purposes. The SEC has presented no evidence that would make a switch in regulation necessary nor desirable. With concern to the stock index futures, they are under the supervision of their rightful regulators and no proof has been presented that would suggest reason to sever them from the CFTC.
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