August 15, 1977

MEMORANDUM

To: Andrew M. Klein, Director
Roger Blanc, Chief Counsel
John Ketels, Attorney
Division of Market Regulation

From: J. Richard Zecher, Director
Susan M. Phillips, Economic Fellow
Richard Morrisey, Special Counsel
Directorate of Economic and Policy Research

Re: Economic Analysis of Net Capital and
Margin Credit Requirements Governing Options
Market Makers

It is one of the Directorate's particular responsibilities to analyze the economic impact of existing and proposed regulatory initiatives. Because of our concern in this regard with the current state of net capital and margin credit requirements, members of this Office met on Thursday, August 11, 1977, with representatives of the Division of Market Regulation. As a result of that meeting, this Office and the Division of Market Regulation are undertaking a joint venture to analyze the regulations, particularly as they relate to the market-making function in today's options and equity marketplaces.

There have been an increasing number of encorcement proceedings with respect to net capital and margin regulation violations in the options area and the history of interpretative positions under both regulations has led to some confusion. Since standardized options are a relatively new trading instrument, we continue to face a steep learning curve which is compounded by the sophisticated techniques used by options market makers and options clearing firms to hedge their positions and allocate credit.

Underlying our concerns, and our perceptions of the regulatory confusion to date, is the belief that neither the extension of margin credit nor the financial responsibility regulations have been adjusted to the realities of the market-making function in the evolving equity and option

markets. The time has come to identify and address some very fundamental questions related to the evolving role of the specialist/market maker. We believe that this study will be of use to the Commission, the Commission's staff and the staff of the Federal Reserve System in meeting their ongoing regulatory responsibilities.

The study will address the following general issues:

1. Comparative descriptions of the credit and financial responsibility regulations governing various market participants.

2. Economic incentives relating to market making in the option and underlying stock which are directly attributable to the regulatory environment.

3. Market-making trading practices and pricing inefficiencies which may be attributable to net capital or credit regulations and the impact of these trading practices and inefficiencies on public customers.[1]

4. Economic functions of the option market maker that may provide an appropriate basis for extending margin relief and functions of different market participants which provide an appropriate basis for differential credit extensions between, for example, broker-dealers, customers or various types of broker-dealers.

5. Use of the delta factor[2] as a means of defining hedges and as a method of assessing aggregate option and stock portfolio risk.

Structurally, for initial developmental purposes, the study will be organized into two parts. Part I, which will be staffed by Susan Phillips and Rich Morrisey from the Directorate and John Ketels of the Division, will address the question of possible unequal regulation and the related economic incentives attributable to those regulations (issues 1-4 above). Part II, which will be initiated in the Directorate (although we welcome input from other interested staff), will be an educational "primer" on the use of the delta factor for hedging purposes, as a credit allocation technique and as a possible enforcement tool (issue 5 above).

In addition, the Directorate will examine a sample of market maker positions under the current regulatory structure and the structure which existed prior to December 15, 1976, utilizing data to be supplied by the CBOE (see Exhibit A attached). We will analyze the relationships among risk exposure as measured by delta, net capital haircuts and margin requirements under varying assumptions of market price movements and regulatory structures.

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[1] For example, since stock positions by options market makers are only afforded partial margin credit relief, positions by such professionals in near in-the-money options may be greater than expected in the absence of such margin credit restrictions.

[2] The delta factor is a measure of the sensitivity of the option premium to underlying stock price movements.

We would welcome any input and suggestions from the rest of your staff and look forward to working closely with you on this project.

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cc: The Commission
Stanley Sporkin
Shelly Rappaport
Marty Moskowitz
Nelson Kibler
Ira Pearce

EXHIBIT A

Data to be Supplied by the CBOE Relating to
Net Capital and Margin Requirements

I. Representative options market maker position information under the current regulatory structure in which Reg. T limits credit to finance market makers' stock positions.

A. Three days of data from First Options of Chicago, Inc, a major CBOE clearing firm, giving the following information by market maker for each of the three days (before, during and after the 20 point drop in the Dow Jones on July 26-28, 1977)

a. Closing option or stock position (number of shares or contracts)
b. Price (close) for each position
c. Delta for each stock or option series
d. Delta position (by option class)
e. Net and absolute market maker delta exposure (per class)
f. Percentage delta exposure
g. Net capital haircuts

B. Margin requirements for closing positions of these market makers (supplied by James Brucki, CBOE Vice President for Compliance)

II. Similar data as I. above relating to the regulatory structure during the period when Reg. T did not limit credit extended to finance stock positions. Simulation provided by the CBOE of sample market makers positions for a period in October, 1976.

A. A sample of 120 positions was developed by CBOE to test the effects of the amendments to 15c3-1(c)(2)(x) which went into effect January 1, 1977. Approximately thirty of these 120 positions which involved stock will be used for the simulation to produce the following:

a. Haircuts
b. Margin
c. Delta positions
d. Net capital if net capital rule is changed to allow exempt hedges in order of decreasing deltas (stock hedges included) and net capital charged against the residual

B. Assume market goes up or down 10 percent and perform the above simulations.