RECOMMENDATIONS REGARDING REGULATORY RESPONSES

TO THE MARKET EVENTS OF MAY 6, 2010

Summary Report of the Joint CFTC-SEC Advisory Committee

on Emerging Regulatory Issues

This report was produced by the members of the Joint Advisory Committee on Emerging Regulatory Issues (the "Committee") for consideration by the Commodity Futures Trading Commission (the "CFTC") and the Securities and Exchange Commission (the "SEC," and collectively the "Commissions"). The views and recommendations expressed in this report do not necessarily reflect positions or regulatory agenda of the Commissions or their staff. Chairman Schapiro of the SEC and Chairman Gensler of the CFTC serve as administrative chairs of the Committee, but did not participate in the drafting of this report and, accordingly, it does not necessarily reflect their views.

Introduction

The events of May 6, 2010 and the subsequent investigation, analysis, and reporting by the staffs of the Commodity Futures Trading Commission ("CFTC") and the Securities and Exchange Commission ("SEC" and together with the CFTC, the "Commissions") have highlighted many important policy and practice issues in today's securities and futures market environment. In this Summary Report, the CFTC-SEC Joint Advisory Committee on Emerging Regulatory Issues focuses on recommendations targeted at the most important and pervasive issues affecting investors and the markets, rather than attempting to address all of the topics that have been raised in the course of our work.

One additional, specific point of background is appropriate to mention at the outset. The broad, visible, and often controversial, topic of High Frequency Trading (HFT)— including the definition of the practice, its impact on May 6, and potentially systemic benefits and problems that arise from the growing volume of HFT participants in all of our markets—has been pervasive in our discussions and in comments received from others. Rather than detail specific recommendations about HFT in this report, steps to address issues associated with this practice are evident throughout our report.

We cannot overstate the importance of addressing the most pressing issues highlighted here. While many factors led to the events of May 6, and different observers place different weights on the impact of each factor, the net effect of that day was a challenge to investors' confidence in the markets. The quick actions of the Commissions and Self Regulatory Organizations that addressed several glaring issues were an excellent start to restoring confidence. We believe the recommendations that follow will accentuate that progress and we offer them to the Commissions in that spirit.

I. Volatility

The Committee believes that the September 30, 2010 Report of the CFTC and SEC Staffs to our Committee provides an excellent picture into the new dynamics of the electronic markets that now characterize trading in equity and related exchange traded derivatives. While these changes have increased competition and reduced transaction costs, they have also created market structure fragility in highly volatile periods. In the present environment, where high frequency and algorithmic trading predominate and where exchange competition has essentially eliminated rule-based market maker obligations, liquidity problems are an inherent difficultly that must be addressed. Indeed, even in the absence of extraordinary market events, limit order books can quickly empty and prices can crash simply due to the speed and numbers of orders flowing into the market and due to the ability to instantly cancel orders. Liquidity in a high-speed world is not a given: market design and market structure must ensure that liquidity provision arises continuously in a highly fragmented, highly interconnected trading environment.

Because of the speed of trading, uncertainty becomes a major factor in influencing the behavior of the market. If traders are uncertain, some high frequency and algorithmic traders simply withdraw until they feel more certain while others sell to get out of the market altogether. The Committee believes that this trader uncertainty is increased by the speed of volatility and the absence of clear stopping points, and it is exacerbated by lack of clarity as to the point at which trades will be broken. In this regard, the Committee heard substantial testimony and the Report notes that delays in data dissemination of consolidated trade and quote information, while not actually impacting execution prices, were a factor in many electronic traders withdrawing from the market.

In this new trading environment, market structures and regulation have to be more forward looking, with rules and regulations designed on an ex ante basis rather than an ex post basis. Moreover, because markets are fragmented and inter-connected, regulatory attention must also focus on the linkages between and across markets, recognizing that coordination issues are fundamental to the efficient functioning of both equity and equity derivative markets.

Accordingly:

1. The Committee concurs with the steps the SEC (working with the Exchanges and FINRA) has taken to
    a. Create single stock pauses/circuit breakers for the Russell 1000 stocks and actively traded ETFs[1]
    b. Enact rules that provide greater certainty as to which trades will be broken when there are multi stock aberrant price movements, and

[1] In June 2010, as a result of coordinated effort between the SEC, the exchanges and FINRA, a framework for market-wide, stock-by-stock circuit-breaker rules and protocols was established and implemented on a pilot basis. Under these pilot rules (the “Pause”), a single stock circuit breaker is triggered if the price of a security changes by 10 percent or more (a “percentage parameter”) within a rolling five-minute period between 9:45 a.m. and 3:35 p.m. If triggered, all markets pause trading in the security for at least 5 minutes and then the primary listing market employs its standard auction process to determine the opening print after the five-minute pause period.

The pilot commenced with securities included in the S&P 500 Index and then was expanded in September 2010 to the securities included in the Russell 1000 Index and to certain Exchange Traded Products. Where there is extreme volatility in a stock, this solution provides for a pause in trading that will allow market participants to better evaluate the trading that has occurred, correct any erroneous "fat finger" orders and to allow a more transparent, organized opportunity to offset the order imbalances that may have caused the volatility.

c. Implement minimum quoting requirements by primary and supplemental market makers that effectively eliminate the ability of market makers to employ "stub quotes"

The Committee remains concerned, however, with the limited applicability of the pauses now in place. While coverage of the Russell 1000 stocks and many ETFs likely address many of the systemic concerns raised by extreme short-term, market wide price movements, it does not address the potential of extreme price movements of numbers of less liquid, smaller securities. While the Committee recognizes that the market capitalization, price and trading characteristics may require wider percentage parameters for many of these securities, we do believe stock specific market pauses should be expanded to, at least, all but the most inactively traded listed equity securities and ETFs and related derivatives.

Accordingly:

2. The Committee recommends that the Commissions require that the pause rules of the Exchanges and FINRA be expanded to cover all but the most inactively traded listed equity securities, ETFs, and options and single stock futures on those securities.

While the adoption of the pause rules represent a critical interim step to provide a more effective process to address instances of extreme market or sector-wide volatility, operating alone they do have a number of drawbacks. Specifically, their five minute duration completely restricts trading in a security even if contra-side liquidity has returned to the market. This has been particularly problematic in a number of situations in which a single erroneous trade triggered the Pause. Similarly, Pauses do not fully address the impact of an erroneous trade because they do not prevent the execution and reporting of that initial triggering trade, allowing potential trade prices to be reported considerably below or above the price that triggered the Pause. The Committee notes that there have been public indications from Chairman Schapiro that the SEC is considering the desirability of replacing or supplementing Pauses with market-wide "limit up/limit down" procedures. Such procedures would require that the market enter a "limit state" if a stock moves a set percentage over a rolling five minute period. During the "limit state," executions could not take place outside of a specified price band. Unlike a Pause, however, the market could naturally exit the "limit state" at any time that contra-side liquidity appears at a price above the limit price. The "limit up/limit down" price bands would be set based on a "reference price" that would reflect VWAP or other similar average price calculations over the preceding rolling five minutes (or shorter period in the first five minutes after the open).

The Committee believes that this approach is highly desirable if it operates as a supplement to the present process. In other words, if a security first became subject to a limit up/limit down (as the case may be) and then only moved to a Pause if contra-side liquidity did not appear during a relatively short set timeframe, it would address many of the adverse impacts of the Pause described above. The Committee also believes that there should be further clarification as to whether securities options exchanges and futures exchanges trading single stock futures should continue to trade during any equity limit up/down periods.

Accordingly:

3. The Committee recommends that the SEC work with the Exchanges and FINRA to implement a "limit up/limit down" process to supplement the existing Pause rules and that the Commissions clarify whether securities options exchanges and single stock futures exchanges should continue to trade during any equity limit up/down periods.

The trading on May 6 also highlighted the interconnectedness of the equities and derivatives markets. The Staff Report describes in considerable detail the impact of one institutional algorithmic order on the CME's E-mini market and direct reaction to the E-mini price movements on the markets for large numbers of equities securities and ETFs. In this instance, the CME's pre-set stop logic which provided a five second circuit breaker worked effectively and provided an opportunity for contra-side electronic orders to be entered leading to an immediate price rebound in the futures contract. While the Committee believes that the CME should be credited with implementing this stop-logic process, the Committee remains concerned as to whether the five second period would be sufficient to address different "news driven" fact scenarios. The Staff Study discussed in some detail how the extreme nature of the price movements and accompanying data issues resulted in many computer-based high frequency strategies shutting down pending review and manual reset by senior staff. While the pre-set stop logic provides for situations in which the extreme buy or sell imbalances don't reverse by re-disseminating the stop with broader execution parameters, this still creates the risk of "cascading limits" with no opportunity for anything but electronic algorithmic responses. The Committee is concerned that, notwithstanding the exceptional liquidity characterizing the E-mini, a similar withdrawal could potentially occur in the futures market that would require a longer timeframe to successfully attract contra-side liquidity.

Accordingly:

4. The Committee recommends that the CFTC and the relevant derivative exchanges evaluate whether a second tier of pre-trade risk safeguards with longer timeframes should be instituted when the "five second limit" does not attract contra-side liquidity.

The Committee also believes that the demonstrated interconnectedness of the trading on May 6, as well as the Committee's conclusions regarding the fragility of electronic equity markets during periods of extreme price volatility, underlines the need to review the present operation of the system-wide circuit breakers now in place. Presently, each Stock and Options Exchange and Futures Exchange offering securities index or single stock products have rules in place providing for coordinated circuit breakers.

The current market wide circuit breakers are keyed to declines in the Dow Jones Industrial Average. When percentage declines are reached, the New York halts or closes. Other exchanges, by agreement, also close. If the Dow declines 10% before 2:00 p.m., the markets halt for one hour; between 2:00 and 2:30 p.m. they halt for 30 minutes; after 2:30 p.m. there is no halt. If the Dow declines 20% before 1:00 p.m., the markets halt for two hours; between 1:00 and 2:00 p.m. they halt for one hour; after 2:00 p.m. the markets close for the day.

Suggestions for re-configured market halts should consider whether the S&P 500 Index should be substituted for the Dow Jones Industrial Average as the triggering mechanism for the halts. Use of the S&P 500 Index would lead to easier coordination with halts in the E-Mini and the SPY. In any event, FINRA Rule 6121, which provides that FINRA shall halt all trading in NMS stocks otherwise than on an exchange in the event of market-wide trading halts, should be continued.

While the Committee makes no recommendation on this point, we believe that consideration should also be given to whether the 10%, 20%, and 30% percentage triggers should be re-considered. In particular, the Commissions should evaluate what effect high-frequency trading has on the percentage declines that should lead to market closure as well as the impact of the institution of the single stock pauses and limits.

Finally, Consideration should also be given as to whether the lengths of halts should be changed. In part the length of the halts as established in 1987 and continued as late as 1998 reflected the time needed to conduct re-openings at the New York Stock Exchange. Given the dramatic changes in the speed of trading it would seem appropriate to recommend that the length of the trading halts be reduced to a time period consistent with the electronic trading environment of today. If the length of the halt is reduced, the Commissions should also consider allowing the initial halt to be triggered up to 3:30 pm.

While the Committee believes that the Commissions should have further dialogue with market participants, we are concerned that the present circuit breakers are unnecessarily lengthy for the present electronic market place, and might, inadvertently, feed the potential market uncertainty.

Accordingly:

5. The Committee recommends that

   The Commissions evaluate the present system-wide circuit breakers and consider:

   i. reducing, at least, the initial trading halt to a period of time as short as ten minutes
   ii. allowing the halt to be triggered as late as 3:30 pm **and**
   iii. using the S&P 500 Index as the triggering mechanism.

II. Restrictions on Co-location and Direct Access

One of the most notable developments which has greatly facilitated the growth and evolution of HFT has been the ability of individual firms, even if they are not registered broker-dealers or FCMs, to co-locate their routing technology with the market and limit book technology of the Exchanges. The Committee recognizes that there have always been participants who have had "time" advantages in the securities markets as a result of being a registered participant of an exchange floor or through the investment of technology. Nevertheless, the explosion of "naked access" participants who are sponsored by an executing and clearing broker but do not use the technology or real-time compliance screens of that broker raise novel control issues.

Specifically, the direct access to the market of large numbers of unregulated, and in many ways, unsupervised entities create risks of erroneous trades or manipulative or other violative strategies. We believe that it was absolutely correct for the the SEC to have imposed and adopted rule requirements in this area. According to the SEC: "The new rule prohibits broker-dealers from providing customers with 'unfiltered' or 'naked' access to an Exchange or ATS. It also requires brokers with market access – including those who sponsor customers' access to an Exchange or ATS – to put in place risk management controls and supervisory procedures to help prevent erroneous orders, ensure compliance with regulatory requirements, and enforce pre-set credit and capital thresholds."[2]

We believe that the SEC was correct in requiring that all direct access order routing occur through a registered broker-dealer. In this way, the SEC, FINRA and the Exchanges can more effectively assure that the sponsoring broker has put in place effective trading screens to reduce the occurrence of erroneous orders and manipulative activity and can implement effective continuing surveillance of both the firm's customer order flow and firm proprietary trading activity.

Accordingly:

6. The Committee supports the SEC's "naked access" rulemaking and urges the SEC to work closely with FINRA and other Exchanges with examination responsibilities to develop effective testing of sponsoring broker-dealer risk management controls and supervisory procedures.

The CFTC also has been active in addressing the concerns of disruptive or ineffectively supervised trading. In Section 747 of the Dodd-Frank, Congress amended the CFA to expressly prohibit certain trading and quoting practices that it determined were disruptive of fair and equitable trading. Section 747 also amends Section 4c(a) of the Commodity Exchange Act to provide the CFTC with rulemaking authority to prohibit "any other trading practice that is disruptive of fair and equitable trading." Subsequently, the CFTC has issued an Advanced

[2] SEC Press Release 2010-210, November 3, 2010.

Notice of Rulemaking in which it requests comment on a number of questions relating to, among other things, whether the CFTC should specify as a disruptive trading practice the disorderly execution of particularly large orders at any time during the trading day. Additionally, the CFTC questioned whether it should articulate specific duties of supervision relating to the trading practices prohibited in Section 747, as well as whether the CFTC should promulgate rules more generally regulating the supervision and monitoring of algorithmic or automated trading systems to prevent disruptive trading. The Committee strongly believes that the CFTC should impose supervisory provisions, similar to what the SEC has imposed, on any FCM sponsoring algorithmic orders to an Exchange. This would ensure that algorithmic firms would have to demonstrate that there had been a careful evaluation of how an algorithm would operate in a number of scenarios that engender high market volatility.

We also applaud the CFTC requesting comment regarding whether it is appropriate to restrict large order execution design that results in disruptive trading. In particular, we believe there are questions whether it is ever appropriate to permit large order algorithms that employ unlimited use of market orders or that permit executions at prices which are a dramatic percentage below the present market price without a pause for human review.

Accordingly:

7. The Committee recommends that the CFTC use its rulemaking authority to impose strict supervisory requirements on DCMs or FCMs that employ or sponsor firms implementing algorithmic order routing strategies and that the CFTC and the SEC carefully review the benefits and costs of directly restricting “disruptive trading activities “with respect to extremely large orders or strategies.

III. Liquidity Enhancement Issues

While the steps taken by the SEC and CFTC and the recommendations made by this Committee would meaningfully improve the ability of the equity and related derivative markets to handle an event like May 6, there remain legitimate concerns over the absence of present incentives for market participants to provide liquidity in the present market structure. Accordingly, the Committee focused on four areas that might positively impact liquidity.

Liquidity Pricing and Liquidity Rebates

The rising proportion of equity transactions that trade without publicly displaying liquidity has been of concern to many market participants and economists. Price discovery depends upon the interaction of all types of market participants. The liquidity of these markets is valuable to society in general as well as to the financial markets. This concern was expressed in the SEC Concept Release on Equity Market Structure in January 2010.

HFT in decimals has dramatically changed the ways in which liquidity is provided to our markets. In the flash crash, the lack of liquidity on public Exchanges was the proximate cause of the trades that were subsequently broken. Market orders in some cases found no limit orders to execute against. We observe that incentives to display liquidity may be deficient in normal market, and are seriously deficient in turbulent markets.

The Committee suggests that the Commissions consider incentives to supply liquidity that vary with market conditions. Until recently, the fluctuations in the bid ask spread regulated the demand and supply of liquidity in financial markets. Now, it appears that in a world of HFT, bid ask spreads no longer provide sufficient incentives to offer liquidity in periods of high volatility. Such difficulties in equilibrating supply and demand have counterparts in some markets, where "peak load" pricing strategies of charging higher fees for traffic at peak hours have proven successful at stabilizing demand and supply.

In many Exchanges, the pricing structures for executing trades involve maker/taker pricing. Under this pricing system, resting limit orders that are available for execution by others receive rebates for providing liquidity (liquidity "maker" rebates). Orders sent to Exchanges that are executed immediately are charged "taker" access fees. The taker fees will typically be larger than the maker rebates, providing the Exchanges with profits. Adjustments to maker/taker pricing could alter these incentives. The Exchanges compete on access fees and rebates but the SEC in Regulation NMS limits access fees but not rebates. A peak load pricing solution to encouraging liquidity could have both access fees and rebates rise in turbulent markets. If one Exchange has a higher access fee than another, then it will get fewer aggressive liquidity demanding trades. If an Exchange has a higher rebate, it will get a disproportionate share of liquidity supplying limit orders to fill out its book. In order for "peak load" pricing to be effective it would be important to disseminate changes in rates on a real-time basis to permit high frequency market makers to redesign their algorithms to take advantage of this information. Accordingly, the Committee recognizes that the SEC and the Exchanges would have to carefully evaluate the most effective way to implement any "peak load" pricing changes to avoid unnecessary technology message traffic impacts.

The Committee emphasizes that this pricing model would not replace circuit breakers or rolling limits. We recognize that in many periods of sudden and extreme volatility trading uncertainties may result in active traders withdrawing no matter what the incentives. Nevertheless, such peak load liquidity incentives would be initiated before either of the other events occur and might encourage sufficient liquidity in some scenarios that thresholds are not hit and stops are not triggered.

Counter arguments can be made. High access fees will only encourage trades to go to internalizing firms. However, high rebates will reduce the value of internalizing trades. Moreover, in turbulent times such as the Flash Crash, it appears that most internalizing firms sent their trades to the Exchanges.

The Committee also notes that the trade through rule of Regulation NMS does not take access fees or rebates into consideration in determining the NBBO. This appears to be another area that might benefit from review and adjustment.

Accordingly:

8. The Committee recommends that the SEC evaluate the potential benefits which might be gained by changes in maker/taker pricing practices, including building in incentives for the Exchanges to provide for "peak load" pricing models.

Market Maker Obligations

The traditional model of addressing excessive price volatility during the time prior to the enactment of Regulation NMS was specific market making obligations imposed by the then dominant primary Exchanges. The NYSE and the Amex dictated "affirmative" and "negative" obligations for specialists. The NASDAQ had imposed fewer obligations, but instead required each market maker's quotes to be reasonably related to the market. The increased market competition and dramatic market fragmentation which has occurred subsequent to Regulation NMS, however, have effectively eliminated much of the profitability of the registered market maker function and therefore, eliminated the ability for the Exchanges to impose significant quoting or trading obligations.

The Committee is chary of overdependence on market maker obligations as a solution to market liquidity for a number of reasons. First, even historically, these obligations were of only limited effectiveness during times of extreme volatility because the risks were simply too great. Second, given the present market maker fragmentation, we are unclear how to provide sufficient incentives to encourage meaningful change in behavior of registered market makers.

Nevertheless, market making does take place today, albeit through the activities of High Frequency Traders. Such traders often engage in multi-market arbitrage activities that essentially result in liquidity provision to and across markets. As has been widely reported, such high frequency market making is a significantly profitable activity. As reported by the Staff Study, however, some of these traders chose to withdraw on May 6 as a reaction to the level of uncertainty. Under our current rules and regulation, the benefits from making markets in good times do not come with any corresponding obligations to support markets in bad times.

We therefore believe that the Commission should consider encouraging, through incentives or regulation, persons who regularly implement marker maker strategies to maintain best buy and sell quotations which are "reasonably related to the market." While the Committee does not believe it is competent to identify all of the measures which could be applied to create incentives to accepting such an obligation, these measures could certainly include differential pricing and might include preferential co-location provisions. We recognize that many High Frequency Traders are not even broker-dealers and therefore their compliance with quoting requirements would have to be addressed primarily through pricing incentives. We note that these incentives might be effectively interconnected with the peak load pricing discussed above.

Accordingly:

9. The Committee recommends that the SEC evaluate whether incentives or regulations can be developed to encourage persons who engage in market making strategies to regularly provide buy and sell quotations that are "reasonably related to the market."

The SEC and CFTC should also consider addressing the disproportionate impact that HFT has on Exchange message traffic and market surveillance costs. The Committee notes that in some concentrated market structures, individual markets often impose costs on participants who have a large ratio of order cancellations to actual transactions. Because U.S. equity markets are so fragmented, it is impractical for any individual Exchange to impose such a fee. Yet the technology costs and possible capacity limitations imposed by such activity are undesirable. The Committee recognizes that there are valid reasons for algorithmic strategies to drive high cancellation rates, but we believe that this is an area that deserves further study. At a minimum, we believe that the participants of those strategies should properly absorb the externalized costs of their activity. While trading is concentrated in the stock index and single stock futures markets, we also believe that the CFTC should evaluate whether a similar fee initiative would be appropriate.

Accordingly:

10. The Committee recommends that the SEC and CFTC explore ways to fairly allocate the costs imposed by high levels of order cancellations, including perhaps requiring a uniform fee across all Exchange markets that is assessed based on the average of order cancellations to actual transactions effected by a market participant.

Preferencing, Internalization, and Routing Protocols

A third area which has impacted the displaced liquidity of Exchange markets is the substantial expansion of order flow that is executed by individual broker-dealer firms through "internalizing" their customer's order flow or as a result of agreements with order routing firms "preferencing" their order flow to a particular broker-dealer, usually as a result of a payment for order flow agreement. The percentages of order flow executed in this manner has sharply risen and is believed to account for over 20% of the share volume in listed equity securities.

In total, approximately one third of share volume is executed on dark trading venues. In focusing attention on this activity, the Committee emphasizes two points. First, we do not focus concerns on the relatively small part this activity which involves trading systems that attempt to provide a matching system for "block sized" executions (e.g. ITG, Liquidnet and Pipeline). These systems provide a variety of technology innovations aimed at reducing "information leakage" that has plagued classic block positions. This activity has always operated primarily in the "dark" with limited interaction with public markets, and has provided important opportunities for large trades to be executed efficiently. Second, we note that this internalizing and preferencing activity is subject to Regulation NMS and indeed often involves provisions for price improvement. Therefore, the activity does not appear to raise legal "best execution" issues.

We believe, however, that the impact of the substantial growth of internalizing and preferencing activity on the incentives to submit priced order flow to public exchange limit order books deserves further examination. While the SEC has properly concluded in the past that permitting internalization and preferencing, even accompanied by payment for order flow agreements, increases competition and potentially reduces transaction costs, we believe the dramatic growth argues for further analysis. Notable in the trading activity of May 6 was the redirection of order flow by internalizing and preferencing firms to Exchange markets during the most volatile periods of trading. While these firms provide significant liquidity during normal trading periods, they provided little to none at the peak of volatility.

Accordingly:

11. The Committee recommends that the SEC conduct further analysis regarding the impact of a broker-dealer maintaining privileged execution access as a result of internalizing its customer's orders or through preferencing arrangements. The SEC's review should, at a minimum, consider whether to (i) adopt its rule proposal requiring that internalized or preferenced orders only be executed at a price materially superior (*e.g.*, 50 mils for most securities) to the quoted best bid or offer, and/or (ii) require firms internalizing customer order flow or executing preferenced order flow to be subject to market maker obligations that requires them to execute some material portion of their order flow during volatile market periods.

A related concern has to do with the effects of the current routing protocols on the overall incentive to place orders providing liquidity in the public markets. Under the current Regulation NMS routing rules, venues cannot "trade through" a better price displayed on another market. Rather than route the order to the better price, however, a venue can retain and execute the order by matching the current best price even if it has not displayed a publicly accessible quote order at that price. While such a routing regime provides order execution at the current best displayed price, it does so at the expense of the limit order posting a best price which need not receive execution. An alternative framework is a "trade at" regime in which orders must be routed to one or more markets with the best displayed price. Note that in such a "trade at" regime venues would be able to retain and execute any order by improving the current price. Such a regime reinforces the incentive to post displayed limit orders and hence encourages the liquidity and price discovery roles of the market. We note, however, that such a change in routing may entail substantial costs with respect to technology and implementation and may adversely impact some forms of competition. Nevertheless, the Committee is concerned that present quote matching strategies when combined with the siphoning of much of the non-directional retail order flow from the publicly accessible Exchange markets can substantially reduce the attractiveness of either professional traders or the public placing priced orders on Exchange limit order books.

Moreover, the current Regulation NMS rules also only require top of book protection. During the crash, orders routed to the top of book were then free to move unfettered and execute at the bottom (or top) of the price range on the book if underlying orders were not present on the book. While the Committee is aware that many firms design their order routing algorithms to search for the best priced orders at each of the Exchanges, we are concerned that this may not be true for other programs. One possibility is to provide protection to greater levels of the book. This would require the receiving venue to "route back" any remaining order that would execute at a price below currently displayed prices at other markets. The Committee recognizes, however, that this approach may impose technological difficulties and significant expense. As an alternative, the Committee believes that greater information provision on the state of the book might provide valuable information to market participants as to the location, or lack thereof, of liquidity in a fragmented market. Specifically, while the most active traders access full book information from each market many firms and investors depend solely on top of the book consolidated information. We believe that it would be valuable for the Commission to evaluate as to whether summary information researching the depth of each exchange book would be a valuable addition to core quotation information.

Accordingly:

12. The Committee recommends that the SEC study the costs and benefits of alternative routing requirements. In particular, we recommend that the SEC consider adopting a "trade at" routing regime. The Committee further recommends analysis of the current "top of book" protection protocol and the costs and benefits of its replacement with greater protection to limit orders placed off the current quote or increased disclosure of relative liquidity in each book.

Information Provision

The events of May 6 demonstrated that even in a single market setting such as a futures market liquidity problems can arise from unexpected imbalances in the book of orders. Given the speed of order placement and cancellation, these imbalances can arise quickly, and their impact can be far-reaching. Yet the speed that allows liquidity to dissolve also allows it to accumulate. Opportunities to provide liquidity provide opportunities to profit for market participants if they are aware of the underlying imbalance. The Committee believes that information provision on variables related to the state of the book and market may provide a basis for market-generated responses to liquidity imbalances. Such information, which may more naturally attach to exchange settings, could include statistics on the current buy/sell ratio of orders on the book, flow rates of orders to the respective sides of the book, or other metrics related to the current state of liquidity in the market. The Committee believes enhanced information provision is consistent with the long-standing view of the SEC and CFTC that market-based solutions play a preferential role in the efficient functioning of markets.

Accordingly:

13. The Committee recommends that the Commissions consider reporting requirements for measures of liquidity and market imbalance for large market venues.

Regulators' Access to Information

As stated in the SEC press release announcing its rule proposal for a Consolidated Audited Trail, "A consolidated audit trail system would help regulators keep pace with new technology and trading patterns in the markets. Currently, there is no single database of comprehensive and readily accessible data regarding orders and executions. Stock market regulators tracking suspicious market activity or reconstructing an unusual event must obtain and merge an immense volume of disparate data from a number of different markets and market participants. Regulators are seeking more efficient access to data through a far more robust and effective cross-market order and execution tracking system." The Committee agrees.

Accordingly:

14. The Committee recommends that the SEC proceed with a sense of urgency, and a focus on meaningful cost/benefit analysis, to implement a consolidated audit trail for the US equity markets and that the CFTC similarly enhance its existing data collection regarding orders and executions.

Conclusion

There are, of course, other important issues that we could have highlighted in this report and we encourage the Commissions to continue to use the events of May 6 and the subsequent analysis in their future market structure discussions and rulemaking. That said, we believe these 14 points are the most important ones upon which to focus to ensure the integrity of the markets and to maximize investor confidence in the aftermath of the many market disruptions over the past several years. We appreciate the opportunity to be of service in this effort.