



## Regulation NMS Impact and Summary Analysis

### Background

Next-generation trading technologies, emerging market centers, and new investment instruments are testing the capacity of the National Market System to fulfill its mission—providing efficient, competitive, fair, and orderly equity markets that operate in the public interest and protect investors.

On June 9<sup>th</sup> 2005, the SEC released an approved version of Regulation NMS (“Reg NMS”), which included input from the financial industry. The main purposes of the rules are to strengthen and modernize the regulatory structure of the U.S. equity markets. Reg NMS is composed of four main rules: Order Protection, Access Rule, Sub-Penny Rule, and Market Data Rules and Plan.

### Overview

#### Order Protection Rule (Rule 610)

The Trade-Through Rule, renamed the Order Protection Rule, aims to create a level playing field for all investors by providing equal access to prices and mandating that trades be executed at the best price. If the best price is a displayed price, it cannot be “traded through,” or, in other words, it cannot be ignored. Orders that are in reserve, or hidden, are not protected and can be ignored, even if the prices are better than the displayed price. Manual quotes - those that are not published via an electronic trading system, can also be ignored. The proposed Order Protection Rule applies to exchange-listed stocks, as does the existing Trade-Through Rule, but also adds Nasdaq-listed securities to its jurisdiction. In addition, the new proposal will also govern block trades and smaller orders,

often called 100-share orders, which can be bypassed under the existing rule.

#### Access Rule (Rule 611)

In tandem with the Trade-Through Rule, the Access Rule has been proposed to prevent market centers from executing orders at a price that is inferior to one displayed by another marketplace. The rule is designed to promote access to quotations in three ways:

- Enables the use of private linkages offered by a variety of connectivity providers, rather than mandating a collective linkage facility such as ITS, to facilitate the necessary access to quotations.
- Generally limits the fees that any trading center can charge (or allow to be charged) for accessing its protected quotations to no more than \$0.003 per share.
- Requires SROs to establish, maintain, and enforce written rules that, among other things, prohibit their members from engaging in a pattern or practice of displaying quotations that lock or cross the protected quotations of other trading centers.

#### Sub-Penny Rule (Rule 612)

The Sub-Penny Rule prohibits market participants from displaying, ranking, or accepting quotations in NMS stocks that are priced in an increment of less than \$0.01, unless the price of the quotation is less than \$1.00. If the price of the quotation is less than \$1.00, the minimum increment is \$0.0001. The rule targets the practice of “stepping ahead” of displayed limit orders — buy or sell orders displayed at a price that is better than the price the market is offering, by trivial amounts. The Sub-Penny Pricing Rule aims to prevent hedge funds and other active traders from

gaining execution priority by improving the price of another limit order by an economically insignificant amount. This occurs when hedge funds, active traders and buy and sell-side participants that use algorithmic trading have sub-penny pricing built into their models. The models can generate orders that step ahead of limit orders priced at a full penny.

### Market Data Rules and Plans (Rules 601 & 603)

The Market Data Rules and Plans update the formula for allocating revenues generated by market data fees to self-regulatory organizations (SROs) that produce the data for investors. The new formula would allocate revenues to markets based on the value of their quotes and trades. In other words, it would allocate revenues to those market centers that generate quotes with the best prices and the largest orders. The goal is to avoid manipulative behavior such as wash sales and shredding. The new rule would also give market centers and their members (broker-dealers) the freedom to distribute their own data independently, with or without fees. However, market centers would still be required to provide their best quotes and trades for consolidated dissemination through the joint-industry plans. There are three plans: the CTA Plan, operated by the Consolidated Tape Association, which disseminates data for exchange-listed securities; the CQ Plan, which disseminates consolidated quote information for exchange-listed securities; and the Nasdaq UTP (Unlisted Trading Privileges) Plan, which disseminates consolidated transaction and quotation information for Nasdaq-listed securities.

### Timeline

The implementation of Reg NMS will occur in various phases according to each sub-rule.

Date	Phase
10/6/06	Publication of trading specifications for trade-through protection
3/5/07	Full operation of trading centers that intend to utilize trade-through protection
7/9/07	Start of full industry compliance with Rules 610 and 611 with 250 NMS stocks
8/20/07	Start of full industry compliance with Rules 610 and 611 for remaining stocks
10/8/07	Completion of phased in compliance for Rules 610 and 611

## Impact Analysis

### Order Protection Rule

**Who's Impacted:** Trading Centers (Exchanges, SROs, Automated Trading Systems (ATS's), OTC Market Makers, Broker-dealers that internally cross orders) and Broker-dealers.

**Business Impact:** Brokers will need to update their order-management systems to conform to the requirements of the re-proposed Trade-Through Rule, such as executing inter-market sweep orders, which route orders to multiple marketplaces to execute them against liquidity at several price points.

The proposed rule jeopardizes the role of the NYSE's floor brokers, who are given large institutional orders to work in reserve; under the new rule, hidden reserves — better-priced orders that are not exposed — will not be protected.

The proposal prevents brokers from committing capital outside the spread and, if an exemption for block trades is not made, agency block trading will decline and the market will move toward slicing orders via algorithms.

This would hurt the NYSE, whose hybrid-market plan does not have DOB features.

**What's Required:** Develop and implement written policies and procedures on how the Firm will supervise and survey trade through and exception compliance. Firms need to programmatically code the trade through rules within their order management and execution systems. They should create private linkages to ensure that all protected quotes can be accessed.

### Access Rule

**Who's Impacted:** Broker-dealers and Trading Centers

**Business Impact:** Those firms lacking private linkages will need to invest in third-party providers, such as NYFIX, Radianz, SAVVIS and TNS, among others, rather than independently establish and maintaining the connections.

ECNs and Nasdaq have already addressed access fees. Most already charge less than three-tenths of a cent to access their quotes.

Regarding linkages, ECNs and Nasdaq are already connected via private linkages. The NYSE has used ITS, but the network was built in the 1970s and

needs to be modernized to cope with automated executions. Currently, ITS gives manual markets 30 seconds to respond to incoming orders.

**What's Required:** Firms lacking private linkages will likely outsource to third-party providers, such as NY-FIX, Radianz, SAVVIS and TNS.

### **Sub-Penny Rule**

**Who's Impacted:** Broker-dealers

**Business Impact:** Traditional mutual funds and buy-side firms are likely to be in favor of this proposal because many believe that quoting in sub-pennies is used to jump ahead of their limit orders, rather than for reasons of legitimate price improvement.

Broker-dealer order entry systems not coded to validate for the sub-penny rule may experience a larger number of rejected orders.

**What's Required:** Modifications to order entry systems are needed to reject sub-penny orders prior to order routing for execution.

### **Market Data Rule and Plans**

**Who's Impacted:** Broker-dealers, Trading Centers, and Network Processors

**Business Impact:** Broker-dealers that provide quotes to customers (and vendors) would be relieved of the burden to display a complete montage of quotes from all market centers trading a particular security.

More depth-of-book information could be made available to investors as a result of the rule, allowing SROs and their members (broker-dealers) to distribute their own data independently.

Self-regulatory organizations (SROs) will be rewarded for the value of the quote and trade information they provide.

Network processors (SIAC and Nasdaq) would incur costs for calculating the new allocation formulas based on quotes and trades, which Reg NMS estimates at \$1 million a year. Such costs may be passed on to SROs, which will incur additional costs of setting up new advisory committees for plan governance.

**What's Required:** Modifications to allocation formulas.

## How Westwater Can Help

Financial firms will need to analyze the impact to their businesses. Westwater can provide the insight necessary to evaluate a firm's current situation whether that firm is a sell-side or an execution venue. The following services can be performed by Westwater to help financial institutions develop a clear plan on how to conform to Reg NMS.

### Order Protection Rule

For firms that currently employ best execution tools, Westwater can ensure that the criteria used will meet the Reg NMS strict guidelines. For firms that do not employ best execution tools, Westwater can assist in establishing and implementing criteria for best executions supporting both written and programmatic policies. In order for firms to prove to the regulating bodies that best executions are being provided, Westwater can architect and deploy a database that will house three days of market data as requested by the SEC along with a firm's executed order flow for best execution verification. Westwater can manage connectivity projects to enable sell-side firms to connect to a wide range of execution venues to access best execution prices.

### Order Access Rule

Firms will need to connect to various market centers to ensure best execution is provided to customers. Westwater has connected many clients to various dark books, ATS, ECNs, and exchanges. Connectivity projects have been configured as point-to-point or through third party managed network providers.

### Market Data Rules and Plans

Various financial institutions will need to assess how to handle the increase in market-data volumes. Westwater can assist with issues relating to data storage, archiving, retrieving, and security.

## About Westwater

Westwater is a management and technology consulting company that dedicates every resource we have to giving our clients an edge over their competition. We are extraordinary thinkers with deep insight into the financial services industry. We believe in the power of collaborative intelligence – marrying our



experience and thinking with our clients' to develop the right strategy for their successful growth.

Whether we are helping to solve business issues or are creating innovative solutions to operational or technology challenges, we always aim to exceed expectations. Our goal is to enable our clients to turn strategy into business results quickly, helping them to become and remain industry leaders.

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