PROMOTING TRANSPARENCY:

Nasdaq Market Data Proposals

Oliver Albers,
Head of Global Partnerships,
Nasdaq Global Information Services

In 2005, in response to changing market dynamics and technology advancements, the Securities and Exchange Commission made major changes to the 1970s-era investor-protection rules that knit U.S. stock exchanges into a National Market System. This year, as one of several announced roundtables, the SEC is convening a discussion to consider the impact of technological advances in more recent years, with a focus on equity market access and market data.

While Nasdaq recognizes the SEC has other, urgent priorities—such as standards for investment advisers, fixed-income market reform, and treatment of new asset classes such as cryptocurrencies—we welcome the thoughtful discourse on exchange market data being convened by regulators in coordination with market participants and the investing public. Nasdaq operates the world's second-largest stock exchange and is the global pioneer in using technology to strengthen and expand access to the equity markets both for companies and investors.

Beyond our heritage of technological innovation, Nasdaq is sensitive to the responsibilities of regulated exchanges. Exchanges are the neutral meeting grounds, trusted by participants for establishing fair, safe, efficient, transparent, and reliable markets. Exchanges provide constant and proven surveillance against fraud and abuse—and are essential guarantors of the public confidence that makes U.S. capital markets the envy of the world.

To be sure, there remains room for improvement, and Nasdaq is grateful for the opportunity to participate in this discussion. This document offers a summary of Nasdaq's perspective and our proposed reforms for addressing important issues raised by market participants as it relates to the governance and regulatory framework for the consolidated data feeds, commonly called the "SIP feeds" or the "consolidated tape." Our proposed enhancements to that framework build on our 2017 Blueprint to Revitalize Capital Markets, which embraces the role of the U.S. equities market as a fundamental engine of innovation, economic growth, and prosperity, and lays out a vision to create a healthier environment for more companies to access the public markets and improve trading activity.[1]

Our vision for the U.S. market data future covers three areas:

- Enhancing stakeholder participation in SIP governance
- Encouraging better price discovery via the consolidated feeds
- Clarifying the Vendor Display Rule to give broker-dealers clarity, choice, and flexibility on their use of SIP feeds and alternative data products

Our analysis finds that the regulatory scheme for U.S. stock market data—both consolidated feeds and proprietary feeds—is currently accomplishing its primary goals: It produces a reliable, industry-standard reference price for every stock at low or no cost to retail investors, while encouraging innovation and competition among exchanges and market participants. It also has been a catalyst for a flourishing and innovative market data industry that provides more choice and value every day to the retail and institutional investor alike. The reforms proposed by Nasdaq would enhance the current system and strengthen the quality of markets for the investing public, while continuing to foster innovation and competition among market participants.

This document also addresses the broader question of whether we should embark upon more foundational changes to the SIPs (CTA, CQ, and UTP plans) themselves—such as either eliminating them altogether or proliferating them through a "distributed SIP" or "multiple competing SIPs."

Our conclusion is that such tectonic changes to U.S. equity market infrastructure would raise risky operational complexities, legal and regulatory questions, and possible unintended consequences—with little upside. Those who would fundamentally alter our national system must also ensure that such alterations would not produce perverse outcomes or be harmful to investors.

Specifically, while any consortium-led construct introduces complexity in governance and management, there are fundamental benefits that market participants and investors receive from having a single-source-of-truth for core best-quote and trade data coming from the intricately networked and fragmented U.S. equity market ecosystem that the SEC created with Regulation NMS. Given the routing obligations that Regulation NMS establishes, it is critical to have a single source of data to serve as the regulatory basis of broker-dealer and exchange routing obligations. This system ensures an investor can be confident that her order will automatically route to the venue with the best quoted price based on the SIP feed. This is a critical element of creating a sense of fairness and confidence in the U.S. capital markets. We respectfully suggest that before proposing changes to today's regulated market data model, it is incumbent upon the SEC to consider the significant potential consequences and risks to the broader capital markets ecosystem that has been created through Regulation NMS.

With that in mind, Nasdaq is proposing some important but measured modifications to the construct that exists today, founded on the principles and context laid out below.

[1] Nasdaq, "The Promise of Market Reform: Reigniting America's Economic Engine" (2018), available at https://business.nasdaq.com/media/Nasdaq_Blueprint_to_Revitalize_Capital_Markets_April_2018_tcm5044-43175.pdf.

Principles

In recent remarks on market structure and market data, the SEC's chairman and the head of its Division of Trading and Markets reaffirmed key principles that should be preserved and protected when contemplating changes to the regulatory apparatus governing the National Market System.

Among these principles are ensuring fair, orderly, and efficient markets; focusing on the long-term interests of retail investors; leveraging transparency to energize competitive forces that are more productive than prescriptive regulations; and taking a holistic and collaborative approach to the market structure discussion.

We strongly endorse these principles. As a self-regulatory organization, or SRO, Nasdaq has an essential role in ensuring fair and orderly securities markets and in protecting the interests of investors. The strength of our exchange depends on our ability to serve all sides of the market as a fair and honest market steward. Core to Nasdaq's mission is the belief that markets are stronger when they are transparent and create a level playing field for investors.

To the list of principles enumerated by SEC leadership in the context of this discussion, we would respectfully add one more issue that is critical to any discussion about market structure and market data: Our financial system is stronger when our exchanges are vibrant, when competition between and among exchanges and other financial information providers is robust, and when more trading happens in public rather than in "dark" venues, where investors do not benefit from proper price discovery.[2]

[2] As former SEC Chair Mary Jo White said in 2015, "Transparency has long been the hallmark of the U.S. securities markets, and I have been concerned by the lack of it in these dark venues." See Kevin Dugan, "SEC chief takes aim at predatory traders in 'dark pools,'" New York Post, March 25, 2015, available at https://nypost.com/2015/03/25/sec-chief-takes-aim-at-predatory-traders-in-dark-pools/.

The Role of Vibrant Exchanges in the U.S. Equity Markets

Beyond bringing buyers and sellers together, exchanges in the U.S. stock market perform a variety of other publicly valuable functions. Market structure reforms should be careful to preserve or enhance these benefits to the investing public.

Exchanges bring issuers to investors and police markets for manipulation. They incentivize market makers to provide continuous two-sided quotes so that investors have constant access to liquidity, which, in turn, provides a transparent market with tight spreads and a detailed record of trades. The U.S. system of an interlinked network of actionable quotes ensures buyers and sellers trade at the best prices available—and it creates benchmarks for all other trades, including those that take place off-exchange.

Exchanges also provide independent official market opening and closing auctions, which are important events that allow ETFs, mutual funds, and other investment instruments to thrive by trading large amounts of stock with minimal impact on the market in a transparent, safe, and efficient way. Closing prices are widely used as benchmarks throughout the industry. The market close therefore draws liquidity across the entire market ecosystem, driven in part by growth in passive funds that seek to align their performance with the underlying index they aim to match. Exchanges advertise imbalances between supply and demand at the close to encourage investors to correct the imbalance and improve true price discovery.

The benefits that exchanges bring to the equity capital markets greatly reduce transaction costs for investors, lower the cost of capital, and enable growth for the thousands of companies that underpin our economy. Most importantly, they create confidence in our market system as a core element of our free-market society. These benefits are critical to the success of our economy, and therefore underpin the need for the U.S. stock exchanges to be fundamentally sound and strong. Strong exchanges in a competitive market invest more in functionality, resilience, and security to give investors fairer and faster access to the market, resulting in greater confidence and more accurate price discovery. Strong exchanges invest in innovations that enhance trading efficiencies, help drive down retail investor costs, democratize market access, and enable more accurate price discovery. Strong exchanges invent and deploy sophisticated electronic surveillance tools that uncover market abuse and manipulation. Strong exchanges integrate the latest and best security capabilities to create a safe and secure trading experience.

Robust and effective regulation by exchanges has been proven to play a crucial role in the creation and distribution of safe and reliable market data. The number-one job for Nasdaq and other SROs is maintaining fair and orderly securities markets and protecting the interests of investors, including enforcing compliance with the Exchange Act by our broker-dealer members and listed companies.

Nasdaq directly invests millions of dollars each year to meet and exceed these responsibilities. Currently, Nasdaq technology runs dozens of algorithms across servers that process more than 4 billion messages per day to detect potential market abuse or manipulation. Nasdaq also employs a large team of analysts who dissect the information that emanates from our technology to identify and eliminate market fraud. The initial listing and continued listing functions are similarly characterized by constant exchange monitoring and surveillance using innovative, often proprietary technology. The end result of this careful monitoring and regulation are quotes and trades that investors can safely rely on when making crucial investment decisions. Nasdaq's self-regulatory

functions are critical; if SROs did not perform them, then the SEC would be forced to hire hundreds of new staff to replace them to continue protecting investors.

Ultimately, vibrant exchanges are essential to maintaining and increasing public confidence in the U.S. capital markets, making them the most trusted and accessible in the world. Today, the United States has a multiplicity and growing number of licensed exchanges—more than any other major economy—which promotes competition and innovation. As we consider reforms to the rules that address market structure and market data, we should proceed with a shared goal of strengthening U.S. exchanges and preserving their competitive incentives to improve, adapt, and innovate in ways that help the investor and the economy. This is a goal of many other advanced economies around the world.

Market Data in Context

A simplistic view of exchange market data defines it merely as the collection of buy and sell orders communicated on stock-trading platforms by market participants.

But that daily collection of billions of individual data points is also the essential fuel for the entire market. The efficient, systematic processing of market data makes accurate price discovery possible. The digitization of market data enables self-service online trading that has empowered hundreds of millions of retail investors and slashed transaction fees to historical lows. The engineering of market data powers investment vehicles such as ETFs that further drive down retail costs and drive up market access and investments. The merging of market data with other datasets enables and inspires innovative startups around the world. The mining of market data produces insights for investors and intelligence for regulators. And the consolidation of core market data via the SIPs allows the United States to combine the stability of a national market with the dynamism of a competitive one.

Moreover, these uses of market data would be inconceivable in the absence of efficient, reliable stock exchanges, the most successful of which make constant investments in data-processing infrastructure, cybersecurity, and fraud prevention, and new services and products that attract and retain market participants in an intensely competitive business. In this light, market data is not properly understood as a raw material, but as a value-added product resulting from decades of refinement and from billions in investment and innovation across the capital markets ecosystem.

Like all structured data in the age of the internet, Big Data, and AI, the rise in value of market data has accelerated in recent years. Market participants clamor for more inputs, more efficient delivery, and smarter versions to provide ways to reduce their risk or compete more effectively. In addition to the core quotation and trade data that are fed into the consolidated SIP "tapes," exchanges and securities industry participants—as well as other financial information companies—have developed proprietary data businesses that produce myriad other data-based products. The proprietary data sector is intensely competitive and incentivizes companies to derive new, more useful, and more affordable ways to present market data to their customers.

Despite this acceleration in market data's value and utility, it remains remarkably and persistently affordable. The vast majority of retail investors can get core market data from the SIPs in real time as part of the low-cost service they get from an online brokerage account or financial app. Meanwhile, the competitive proprietary data market (which, depending on product, offers data feeds that can be more limited or even more comprehensive than SIP data, depending on investor needs) produces additional value and choice.

With innovation and competition, the share of revenue that exchanges derive from the SIPs has declined over the past 10 years, while total SIP revenue has stayed flat (revenue to off-exchange trading venues, notably large banks and electronic brokers, has increased).[3] Flat revenue has come even as exchanges have invested millions in technology and cybersecurity improvements in the SIPs to provide the data at ever-smaller fractions of a millisecond and increase overall market resiliency. Meanwhile, the landscape for proprietary market data is so intensely competitive that Nasdaq is reducing fees on products, especially those geared toward retail investors.[4]

The persistent affordability of market data comes as companies and consumers are spending much more on other data and information services, driven by cybersecurity and infrastructure imperatives. Overall corporate-sector costs associated with cybersecurity have doubled since 2009. Corporate IT costs are expected to reach $3.7 trillion in 2018, an increase of 6.2 percent from 2017.[5]

This analysis suggests that the current market for U.S. stock market data is efficient and competitive. That does not lead us to conclude it is perfect, however, and Nasdaq appreciates that in a data-driven economy, companies are naturally scrutinizing all data costs and looking for efficiencies.

[3] In 2018, the UTP and CTA published trade and quote revenue distributed to participants for Tapes A, B and C, beginning in 2007. This data shows the general growth of revenue associated with off-exchange trading. This growth is more pronounced when former alternative trading systems, or ATSs, that later became exchanges are removed from the calculation. This variance results from the inclusion of ATSs in the 2007 data that have since become exchanges and are categorized as such in the later data sets. See UTP Plan Administration, "2018–Q1" (2018), available at http://utpplan.com/DOC/UTP_Revenue_Disclosure.pdf; New York Stock Exchange, "Consolidated Tape Association" (n.d.), available at https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/Q1%202018%20CTA%20Financial%20Disclosure.pdf.

[4] In 2016, Nasdaq lowered the price of Nasdaq Basic Enterprise Cap. Nasdaq Basic has saved the industry $202 million since its 2009 launch and is projected to save the industry $242 million by the end of 2018. For many market participants, this proprietary data is a valuable substitute for more expensive, consolidated offerings. Moreover, Nasdaq Basic provides customers with more choices in circumstances where they determine that they do not need more data.

[5] Gartner, "Gartner Says Global IT Spending to Reach $3.7 Trillion in 2018," Press Release, January 16, 2018, available at https://www.gartner.com/newsroom/id/3845563.

Policy Reforms to Improve the Market Data Ecosystem

Nasdaq recommends that a stakeholder conversation about market data explore three areas for reform:

ENHANCE MULTI-STAKEHOLDER PARTICIPATION IN SIPS GOVERNANCE

Nasdaq shares the securities industry's view that the SIPs are a public good and should be governed through a partnership between the exchanges and the industry, with appropriate government oversight and extensive public transparency. To that end, we recommend building on the transparency advances of recent years and expanding the authority and responsibilities of the advisory committees, particularly on fee and policy-related matters.[6]

The Securities Information Processors, or SIPs, are entities mandated by the government with collecting and disseminating consolidated core market data feeds—thus allowing investors to see the National Best Bid and Offer prices of any stock at any time, regardless of the exchange on which it is being traded.

Under the current governance structure, the SIPs are operated by a committee of SROs, which are intensely regulated by the SEC, that contribute their data into the public data feeds. These operating committees are, in turn, advised by advisory committees composed of other securities industry stakeholders. The operating committees and advisory committees meet quarterly with the SEC, which exercises oversight authority over the SIPs. The SEC reviews for consistency with existing law the rationale for any new data product or fee increase.

When the SIPs were established, an important rationale for limiting operating responsibility to self-regulatory organizations was to focus SIPs on the SROs' statutory obligation to create a fair marketplace. A stakeholder who was a "consumer" of market data and not a "provider" of it might be less focused on or less aware of the need to invest in the infrastructure, oversight, and surveillance that creates the high-quality market data product than would an exchange, given the heightened legal obligations borne by SROs to maintain a fair and efficient market.

[6] Among SIP transparency advances in recent years has been the transfer of almost all governance items into the general operating committee session, publishing an easy-to-read Reg NMS formula document, adding three advisors to the now-11-member SIP Advisory Committee, reducing confidential treatment of SIP governance documents, publishing minutes on the open website, increasing visibility into latency figures, and publishing the executive committee agenda.

But given that the operating committee sets the revenues, fees, and investments made by the SIPs, it has naturally long been a goal of certain broker-dealers, asset managers, and other securities industry professionals to have a more prominent voice in those decisions—although it should be kept in mind that the SEC, representing the public, is always present and must approve all major actions of the SIPs.

Nasdaq believes an enhanced SIP governance model should be developed in consultation with all stakeholders and the SEC, and should adhere to the following principles:

- SIP governance should be structured in a way that reflects a true public interest partnership between exchanges and the industry, while also reflecting the differing legal obligations among market participants.
- Increased authority for the advisory committees should be coupled with increased obligations to promote public transparency.
- Expanding the powers of the advisory committees could magnify potential conflicts of interest among advisory committee members, so those conflicts need to be acknowledged and mitigated.
  - For example, market participants that operate their own "dark pools" are simultaneously SIP customers and SIP revenue recipients, as well as SRO competitors, complicating their interests.
- The general investing public should also have a voice on the advisory committees, as the SIPs are designed for public benefit.

Nasdaq would also welcome a conversation about how to increase public transparency of SIP operations, including requiring more public visibility into general session meetings of the operating committees—and continuing to limit time spent in executive session.

ENCOURAGE BETTER PRICE DISCOVERY VIA MARKET DATA FEEDS

Under the current SIP system, equity exchanges and other trading platforms provide quote and trade data to the SIPs, which turn them into consolidated feeds of stock market activity. Market participants pay a subscription fee to access to the feeds. The subscription fees pay for the operation of the SIPs, and any leftover funds are distributed to the participants according to a revenue formula that proportionately allocates revenue based on the quotes and trades each exchange or platform reports.

The SIP revenue formula presents a policy opportunity to incentivize the improvement of public quotes and hold all trading platforms accountable for best execution, whether they are "lit" or "dark."

Quotes on public, or "lit," exchanges form the benchmarks for ETFs and mutual funds that account for the clear majority of activity by retail investors and managers of passively managed products, as well as the reference prices from which derivatives compute their value. Best execution of "lit" quotes is the most transparent form of price discovery and saves investors from trade-throughs. If the goal of the consolidated feed is to improve the quality of the market, then the revenue formula should aim to improve the quality of quotes on public exchanges, where available liquidity is always on display.

Policymakers and stakeholders today should consider anew how to allocate SIP revenues in a way that strengthens “lit” quotes and rewards behavior that increases market quality, tightens spreads, deepens quotes, and holds accountable for best execution the nearly 40 percent of trades that occur off-exchange.[7]

CLARIFY THE VENDOR DISPLAY RULE TO GIVE BROKER-DEALERS CLARITY, CHOICE, AND FLEXIBILITY ON THEIR USE OF SIPS AND ALTERNATIVE DATA PRODUCTS

While this may seem an arcane and technical question, it has significant implications for the market data discussion. Clarity on this rule could reduce even further the already-low market data costs for retail brokerages.

The Vendor Display Rule is shorthand for a provision in SEC regulations that requires broker-dealers to show the “consolidated display” of a stock to investors, in a “context in which a trading … decision can be implemented.” Effectively, it means broker-dealers must display SIPs data to an investor—rather than data from a single exchange such as Nasdaq or NYSE—in circumstances covered by the rule.

Before 2015, industry participants had a very good general understanding of the Vendor Display Rule and how to apply it. That year, a no-action letter was issued by the SEC in response to a question from BATS Global Markets. Specifically, this new guidance raised more questions than it answered because it referred to the rule covering circumstances where a trading decision is “made” rather than “implemented.”[8]

While it is obviously a matter of significant public interest for broker-dealers to execute a customer’s trade request at the national best price using SIP data as the most reliable reference point, it is not at all self-evident that the investor’s interest is harmed by displaying quotes from a single large exchange when she is merely contemplating a trade or assessing the market. Indeed, the investor’s interests may well be advanced by making it clear that his broker-dealer has flexibility to choose lower-cost proprietary market data products in that assessment context.

The forthcoming market data discussion convened by the SEC is a welcome opportunity to provide the industry with additional clarity about the Vendor Display Rule. We might also take up the related but broader question about whether “display” of SIP data is still something that needs to be regulated or whether the public interest is sufficiently served by requiring that trades are executed using SIP data as the reference price.

[7] Off-exchange dark trading has increased by roughly 82 percent between January 2007 and January 2018. Nearly 40 percent of U.S. equity trading volume today takes place in off-exchange venues

[8] To understand why, consider the analogy to a car-buying transaction. A consumer can “make a decision” to buy a car after seeing a TV advertisement, but she does not actually “implement the decision” until the point of sale. In the car-buying context, consumer protection rules are more rigorous at the dealership than on television because regulators recognize a clear distinction between the two scenarios. Similar clarity would be welcome in the context of the Vendor Display Rule.

Conclusion

As we can see from the above discussion, a conversation in the United States about the regulation of stock market data—and access to that data—naturally tends to discussion of the Securities Information Processors.

On the one hand, U.S. financial markets are envied around the world for their ability to instantly and reliably generate a "best price" for any stock at any time, while allowing for competition among exchanges and all the benefits that competition creates: efficiency, service, value, innovation. That's a win-win for investors and for the U.S. economy, which also benefits from the public confidence and institutional integrity that the SIPs engender. The SIPs are a valuable part of our equity market infrastructure and deserve to be preserved and strengthened.

On the other hand, the SIPs are an anomaly in that they are government-mandated entities that convene competing private entities into collectives that set prices for a government-mandated product: consolidated core market data.

This anomaly naturally creates interest among stakeholders to critique the foundational structure of the SIPs. From time to time, market participants will question whether we need the SIPs at all—or whether there should be many more of them competing with one another.

We expect the roundtable convened by the SEC to again surface these critiques and broad questions. And while we agree with stakeholders that foundational questions about the SIPs are important and worthwhile topics of discussion, we believe raising them also raises the risk of distracting and derailing a more focused and more productive conversation.

For example, the idea of a "distributed" SIP or multiple competing SIPs would introduce new operational complexities, legal and regulatory questions, and possible unintended consequences—even as it is unclear that competing SIPs would satisfactorily resolve concerns about issues such as geographic latency. (For example, at any point in time, the National Best Bid and Offer snapshot for a stock could differ among distributed SIPs because the data still has to travel from exchanges, which are themselves not individually "distributed.")

The contemporaneous debate about the SEC's proposed Transaction Fee Pilot provides a timely cautionary tale about embarking on a reform path without clearly establishing that there is actually a problem to fix or establishing that the existing infrastructure is insufficient to fix the problem. This market-altering "pilot," which is, in fact, a real-time experiment on the critical infrastructure of the U.S. economy, risks undermining the public reference price and harming public companies and their investors—all in a manner that is potentially contrary to statutory norms—and in pursuit of a solution to a problem that has not been established.

With respect to structural experimentation with the SIPs, we would urge the SEC to consider a distributed SIP using the same approach we have argued for the Transaction Fee Pilot.[9] In other words, the SEC should establish whether investors or public companies are actually harmed by any structural problem. Next, it should exhaust existing tools before undertaking major changes—the SIPs, after all, have dramatically increased processing speeds in recent years, accomplishing in tens of microseconds what used to take several milliseconds. As important is exploring potential unintended consequences to investors and the markets and whether the proposal is a pretext for other commercial motivations. At a minimum, we should not subject investors and the capital markets to multiple risky experiments simultaneously.

Ultimately, our analysis suggests that the regulatory scheme for U.S. stock market data is accomplishing its goals: It produces a reliable national reference price for every stock at low or no cost to retail investors, while also providing the data at a very reasonable cost to market participants. It encourages innovation and competition among exchanges and market participants. And it allows for an innovative market data industry that provides even more choice and value to the retail and specialist investor alike. Those are the foundations of a healthy equities market, and they are the reason ours is the crown jewel of the global system. To be sure, there remains room for improvement, and Nasdaq is grateful for the opportunity to suggest the above reforms and to participate in the broader discussion.

[9] Letter from Nasdaq to the Securities and Exchange Commission, May 25, 2018, available at https://www.sec.gov/comments/s7-05-18/s70518-3718533-162485.pdf.