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Subcommittee on Capital Markets, Securities, and Investment

Thank you Chairman Huizenga and Ranking Member Maloney for the opportunity to testify today on "U.S. Equity Market Structure Part 1: A review of the Evolution of Today's Equity Market Structure and How We Got Here." I applaud the hard work of this Subcommittee over the last several years to help bolster our public markets. As you know Mr. Chairman, Nasdaq recently launched an initiative to promote ideas that we think will enhance the public markets and revitalize the pathway for IPOs and improve the public company experience. This effort is built upon outreach to our customers, including listed companies and market participants, and other experts to produce actionable recommendations for the SEC, Congress and the new Administration. We recently released our proposals to reconstruct the regulatory framework, enhance market structure and promote long-termism and they can be reviewed at: http://business.nasdaq.com/revitalize. We also ask that our Revitalize Blue Print be added to the Committee record as Attachment I in our testimony.

Let me begin by stating a few observations about the U.S. marketplace for equity securities:

1) Our markets are the strongest and fairest capital markets around the globe. They are the envy of the world.
2) U.S. equities are unmatched in liquidity, depth and transparency. We should be careful not to tip the balance. Regulation NMS is not perfect, but it has achieved its intended target of

enhanced competition among exchanges, improved resiliency and lowered the overall cost of trading. Only data driven analysis should underpin potential changes.

3) Self-Regulation remains critical to investors and the US equities market. Investors must have confidence that markets are fair and well-regulated. SROs make a critical contribution to fair and well-regulated markets by investing heavily in state-of-the-art technology and well-trained people dedicated to real-time market surveillance and enforcement. The modern exchange self-regulatory model is a necessary and effective partner to the SEC to add a real-time view and years of regulatory expertise. Without SROs, the SEC would face serious challenges to protect investors and ensures a fair and transparent market is available to all. Without SROs, the SEC would have to grow significantly.

4) The SEC's Equity Market Structure Advisory Committee (EMSAC) does not have listing exchange membership, online retail broker membership or public company membership beyond financial services. This lack of key viewpoints has led to recommendations that are not representative of some of the broader and deeper issues – such as the lack of capital formation.

5) Speaking of capital formation, it is the central issue facing the markets today! The focus of all market structure discussions should be centered on one issue: How do we improve the liquidity and trading experience of small public companies? The trading environment for public companies fails to take into account the size and needs of smaller public companies. Market structure has real, and at times unintended, impact. A small regional bank in your district is expected to attract liquidity and trading volume under the same rules that apply to trading Apple, Google and Amazon. The smallest companies have their trading spread among 12 exchanges and about 40 dark pools. CEOs and CFOs see the trading characteristics of small issues and are dismayed to observe that price discovery is scattered over 50 venues in order to comply with a national standard designed for the trading of billion

dollar plus companies. Simply put, regulation that applies a one-size-fits-all market structure does not serve a diverse set of issuers or investors well.

6) Market Structure is evolving to better serve investors without regulatory or legislative action: For example, the last time Nasdaq testified before this subcommittee, the speed and resilience of market data was discussed often. Since then, Nasdaq has enhanced the Nasdaq Securities Information Processor (SIP) with state-of-the-art technology that simultaneously strengthened resiliency and reduced processing time by over 90 percent, a technological advancement that Nasdaq is especially proud to deliver to the markets. The consolidated data feed is now one of the fastest in the industry; in fact it is faster than several direct markets direct feeds.
7) The duty to provide fair and equal access should be harmonized across all platforms to protect investors from unfair discrimination, avoid two-tiered markets, and unify liquidity that is fragmented across over 50 execution venues. Regulators must consider the structural advantages of off-exchange trading when considering new layers of regulation that could push additional trading off exchanges.

Nasdaq's perspective on market structure is unique; we operate closer to the intersection of capital formation and market structure than any market participant. Across its global exchanges, Nasdaq lists more than 3,700 companies from 35 countries, representing more than $10 trillion in total market value. $10 Trillion dollars is very significant; that is $10 Trillion dollars that not only supports corporations that make jobs around the globe but that also leads to growth in millions of US Citizens savings and retirement accounts. Nasdaq serves issuers through all stages of growth, in all phases of their operations, and on every continent. From liquidity events on the Nasdaq Private Market through initial public offerings and secondary trading to fixed income issuance and derivatives hedging, Nasdaq lives at the heart of capital allocation. Nasdaq issuers, in turn, are the engine of the U.S. and global economy, spurring innovation, creating jobs, and driving economic growth.

In addition to our role as the owner and operator of 35 markets, clearinghouses in central securities depositories in the U.S. and Europe, we also are the market infrastructure technology supplier to 85 markets, clearinghouses, and regulators, across the globe. Therefore, Nasdaq is uniquely focused on the value of liquidity that is instantaneously accessible to global investors.

For over 400 years, governments and institutions have recognized that well-functioning public markets are the backbone of effective capital formation. Initial public offerings depend upon readily available secondary markets, which in turn depend upon public price discovery and displayed liquidity. Displayed bids and offers, which are immediately accessible help form the public reference price that millions of investors rely on, not only for valuing individual stocks, but also for valuing trillions of dollars of equities exchange traded funds and mutual funds, not to mention the larger pool of options, futures, and other derivatives tied to that reference price. And, for small issuers, that reference price is not being cultivated according to their specific needs.

A key ingredient in our Revitalize Blue Print was enhancing the market structure for small public companies. Our Revitalize recommendations center on items this committee has already considered as part of the Financial CHOICE Act, H.R. 10, which Nasdaq supported publicly and has hopes that the U.S. Senate will use as its guidepost as it crafts its own plan.

As you will see in our plan, Nasdaq recommends that policy-makers reconstruct the regulatory framework for public companies (through changes to tax policy, litigation policy, reforming the proxy process and ease the burdens of corporate disclosure), modernize securities market structure to help the trading experience of small public companies and promote long-termism to protect a critical sector of investors in our public markets. In many ways, today's markets bear little resemblance to those of just a decade ago. The old images of brokers fielding telephone calls and floor traders hollering orders has long since given way to a profoundly interconnected, technology-driven marketplace that transacts across an astonishing array of exchanges and trading venues. As a pioneer in the development of electronic trading, Nasdaq views market innovation as a tremendous force for good, unlocking competition and unleashing the flow of capital to catalyze economic activity. Yet, as markets have advanced, the fundamental structure that underpins them has not evolved to benefit all market segments equally. While efficient markets benefit both issuers and investors, inefficient markets can choke the flow of capital, become a drain on growth, and block companies—particularly small and medium growth companies—from reaching their fullest potential.

The key regulations that form the foundation of today's markets—including Reg. NMS and Reg. ATS—were developed and implemented more than a decade ago. Despite improvements to markets after implementation of these regulations, liquidity and the trading experience for small and medium growth companies and investors in these companies still lag far behind that of larger issuers. As such, policy makers should be hyper-focused on addressing the one-size-fits-all regulatory regime. For small and medium growth companies—those with a market capitalization below $1 billion, particularly when the lower market cap is accompanied by low daily trading volume— relatively small orders can create dramatic price movements. This increases costs for both the companies and their investors. For example, regardless of the listing market that a company may choose, small and medium growth companies have shown a worsening incidence of high-volatility days, which increases investor confusion and undermines confidence in our markets.

This liquidity dilemma stems from a long-term trend towards fragmentation, where liquidity has spread across an increasing number of trading venues. As recently as 15 years ago, more than 90% of liquidity was often concentrated in a single exchange with the small remainder spread over an additional eight to ten other exchanges and electronic communications networks. Today, liquidity in small and medium growth companies is spread thinly across fifty or more venues (there are 12 exchanges alone), and no single market controls even 25% of trading. As a result, every venue has a very thin crust of liquidity for small and medium growth companies, a crust that can be broken by a single large order. When the liquidity crust is broken, the order can quickly impact the market's ability to efficiently absorb it, resulting in a poor experience for investors. Compounding that trend, liquidity has also moved off exchanges and onto alternative trading venues, making it more difficult to find latent liquidity. Nearly half of U.S. publicly traded small and medium growth companies have more than 50% of their trading occurring off-exchange, away from the benefits of price formation and transparency offered by U.S. exchanges.

Nasdaq believes concentrating liquidity for small and medium growth companies onto a single exchange will allow investors to better source liquidity. The introduction of Unlisted Trading Privileges (UTP) gave rise to fragmentation, combined with a proliferation of alternative trading systems. In 1975, Congress determined that investors would benefit from greater competition if securities listed on one exchange were available for trading on all other exchanges and in over-the-counter trading venues. In 1998, determining that further steps were necessary to foster competition, the Securities and Exchange Commission enacted Regulation ATS, which lowered the bar for the launch of alternative trading systems. Advances in technology and further regulatory changes, most notably Regulation NMS, enacted in 2006, then led to an explosion of ATSs and exchanges, culminating in the current environment in which we have 50-plus active trading venues.

While these changes have spurred competition that has brought benefits to larger issuers, they have proven extremely challenging for less liquid companies. When it comes to UTP, the law of diminishing marginal returns applies—and we have far exceeded the point at which the benefit outweighs the costs.

Give issuers choice: To consolidate liquidity and improve trading quality, Nasdaq recommends permitting issuers to choose to trade in an environment with consolidated liquidity. By creating a market for smaller issuers that is voluntary for issuers to join and that is largely exempt from the UTP obligations—subject to key exclusions—we can concentrate liquidity to reduce volatility, preserve choice improve the trading experience, and spur market innovation that supports smaller issuers.

Eliminating UTP for small and medium growth companies would allow liquidity to develop, and for supply and demand to find one another. Without the rigidity of Regulation NMS which was enacted to cater to a UTP market model, the new markets would also create natural opportunities for other market structures to innovate – for example, intraday auctions to bring together supply and demand for the benefit of all. The net effect our recommendations will be a substantial "thickening" of the liquidity crust on the exchange that lists the security.

Nasdaq has learned from experience that for small and medium sized issuers, consolidation offers significant benefits to investors. On Nasdaq's First North market in Sweden, which lists small and medium stocks, liquidity is concentrated on a single market rather than distributed over many markets. When comparing the trading characteristics of the securities on the un-fragmented First North market with the corresponding stocks in the fragmented U.S. markets, spreads are 37% better and volatility is also lower on First North, even though the stocks listed are smaller than those listed in the U.S. In addition to the potential benefits to specific issuers and their investors, consolidation in this segment of the market could reduce the level of complexity arising from the interconnections of multiple exchanges. Furthermore, order types designed specifically to accommodate market fragmentation can be removed, increasing simplicity and decreasing risk.

Reducing fragmentation does not have to come at the cost of reduced resilience. The listing exchange should ensure that a robust backup system is in place—as well as a named backup exchange—to ensure resiliency for the trading of these securities. For example, Nasdaq has a proud history of maintaining resiliency in markets, including robust testing and geographically diverse systems. In sum, these changes would result in a "net" benefit to small and medium growth companies and their investors.

Deploy intelligent tick sizes: Every company listed on U.S. markets trades with the same standard tick sizes, but advancements in technology make this standardization completely unnecessary. Nasdaq's experience and research demonstrates that a one-size-fits-all approach to tick size is suboptimal, particularly small and medium growth companies. Nasdaq believes that these companies should have the ability to trade on sub-penny, penny, nickel, or even dime increments. Transparent and standardized methodologies can and should be used to accurately determine the optimal tick size to increase liquidity and reduce trading costs. Both Nasdaq and the NYSE petitioned the SEC for this reform many years ago and to date nothing has happened on those petitions.

Implement an intelligent rebate/fee structure that promotes liquidity and avoids market distortions: Over the last decade, technological advancements and competition have dramatically lowered the cost of executing trades. This trend obscures the fact that fees and rebates, particularly rebates, are critically important for listed companies too, and not just a factor for traders. Nasdaq relies on liquidity rebates to motivate market makers to enter aggressive quotations which in turn ensures that price discovery is accurate and reliable. For active securities with strong order flow competition, these rebates may be less material, but for illiquid securities rebates can be critically important to a sound market.

Nasdaq believes that any study that looks at fee or rebate levels must be well-designed to help develop an intelligent fee and rebate regime, which would align with the Intelligent Tick Size regime Nasdaq has long recommended. We firmly believe that a blunt access fee pilot that does not consider the impact on liquidity could harm smaller company stocks that already face liquidity head-winds. Additionally, issuers should be given a choice as to their stock's participation in any pilot that is developed, in recognition of the potential impact to their shares and shareholders. We need to be very careful about policies that would eliminate or significantly reduce liquidity incentives such as rebates in the context of less liquid stocks where the gain or loss of market making will have the most impact.

All market structure policies must emanate from data driven policy analysis. Any reform of our powerful equity markets should be approached prudently. Those calling for reforms must present *compelling* empirical evidence to demonstrate that our world-class system has a problem or problems that need fixing before producing a solution in search of a problem. Reformers must state clear policy goals, and proposed reforms should be closely tied to those policies and designed to avoid harming the markets in unanticipated ways. Any data driven analysis must be accompanied by meaningful reform of the metrics used to evaluate the behaviors and successes of the U.S. Equities Markets. Metrics must evolve with the markets to support ongoing, meaningful disclosure. Investors must be able to easily and accurately assess the performance of their agents, brokers, and exchanges alike; regulators and policy makers must be able to apply meaningful regulatory scrutiny. Today's metrics fall short on both measures. For example, based on Nasdaq's review, Rule 605 reports for three major markets now cover only 29 to 54 percent of total trading activity, and virtually all covered orders fall into a single time-measurement category because the rules' speed measurements are so far out of date.

Therefore, Nasdaq recommends a substantial modernization of Rules 605 and 606 before or at least simultaneous with revisions to other components of the Regulation NMS. Time measurements and quality metrics must be updated to reflect the vast improvements in technology that occurred after the adoption of Regulation NMS. With this enhanced data set, other metrics and analytics could be developed to guide the evolution of market structure while preserving the many benefits investors currently enjoy. The Commission has already released the Order Handling Disclosure proposal which recommends enhancements to Rule 605 and 606. The proposal includes customer-specific disclosures that are designed to enable customers to assess their broker-dealers' services, including the handling of potential conflicts of interest, risks of information leakage, and best execution. The proposal includes disclosure of fees, rebates, payment for order flow, and other incentives that might impact the execution and routing of orders by broker-dealers and ATSs.

Market participants also need a clearer statement of the Duty of Best Execution. While Best Execution and Rule 611 both ensure order protection, their interaction is not well defined or understood. Rule 611 is the exchange-centric mechanism that ensures that, with limited exceptions, the best-priced orders are executed and not bypassed in favor of orders entered at worse prices. The Duty of Best Execution is the brokers-dealer centric regime administered by FINRA that governs the handling of customer orders and their execution on and off exchanges. The Order Protection Rule more narrowly governs the treatment of displayed quotations of automated market centers within the national market system. Market participants must understand the role Best Execution is intended to play, and how it interacts with the version of Rule 611 that emerges from this debate.

For example, European regulators recently enhanced and clarified the equivalent Duty of Best Execution under MiFID II, Article 27. MiFID II establishes a new standard requiring brokers to take "all sufficient steps" to achieve the best possible results for clients. In addition, policy makers enumerated and clarified multiple factors brokers must evaluate when attempting to comply with the new standard, including speed, price, costs, settlement, size, and many others. Such restatement and modernization is highly beneficial to investors and market professionals.

Once metrics are in place and the Duty of Best Execution is modernized, Nasdaq could support an access fee pilot provided that it is well constructed and properly adopted. In adopting Regulation

NMS, particularly Rules 610 and 611, the Commission was concerned that imposing strong order protection necessitated a corresponding cap on access fees, lest venues with protected quotes raise access fees unreasonably. Since 2005, competition for order flow has further constrained access fees, and increased the use of rebates as incentives for displaying liquidity. Thus, high access fees generally persist only where accompanied by high rebates, and the highest access fees correlate strongly with the highest rebates. Since transactions always involve both an access fee and a fee rebate, the issue of access fees is not about gross fee revenue but access fee revenue net of rebates.

The questions then become whether the combination of fees and rebates supports or undermines public policy goals, such as the promoting the display of liquidity, protecting orders, or protecting investors. These questions have broad implications for any proposed access fee pilot. First, if the Commission were to eliminate the Order Protection Rule (which Nasdaq opposes), there becomes no justification for Commission-determined fee cap. Likewise, if the Commission were simply to weaken the Order Protection Rule, the justification for a fee cap would also be weakened.

Second, as discussed earlier, the pilot should study the impact on issuers of liquidity rebates. Limiting fees is an ineffective way to study the impact pricing models would have on liquidity and on issuers; it would be wrong to assume that capping fees would effectively illustrate the most suitable liquidity incentives for issuers that need them most. A well-designed study might also be useful in assessing the impact of rebates on locked markets behavior, also a regular topic of discussion. Technological limitations that once supported the rule against locked and crossed markets no longer exist. The Commission could consider studying both liquidity rebates and also a relaxation of that prohibition, at least for some groups of securities if not all. Third, the pilot should harmonize the fees and incentives permitted in both on-exchange and off-exchange trading to maintain a healthy balance of Exchange and OTC trading. Access fees and rebates are each a component of that balance. Limiting fees and rebates on one segment of the market could tilt trading into the other. This could result in a higher percentage of orders executing in venues that are not required to provide fair and equal access under Regulation NMS, or to comply with the resiliency requirements of Regulation SCI.

Putting aside the relative merits and drawbacks of the current system of access fees and rebates, it is clear that the one-size-fits-all approach is sub-optimal. The interplay among access fees, liquidity rebates, minimum tick increments and the locked/crossed markets rule impacts different stocks differently, and is particularly detrimental for low-priced, low-liquidity stocks

Markets and market structure are interconnected: In Nasdaq's experience, the building blocks of market structure are fundamentally interconnected; they cannot be separated and they cannot be examined in isolation. Nasdaq, therefore, supports only a broad and integrated approach to market structure revisions, one that re-examines all related elements and that analyzes the costs and benefits of changing one element, and the ways in which that change may affect other elements.

Establish regulatory harmony to protect more investors. Investor orders should be equally and well protection wherever executed. The Commission must explain why the 60 percent of orders are executed on exchanges merit a higher level of protection than the 40 percent of orders that are executed off exchange. In times of stress or crisis, the Commission naturally turns to exchanges add safety nets and protections; circuit breakers, limit-up-limit-down, Reg SCI, Reg SHO and many other regulations rely disproportionately on exchange effort. Investors would be better served by a unified regulatory model that treats multi-lateral trading systems according to their function rather than their status, the approach taken by European regulators under MiFID II.

The duty to provide fair and equal access should be harmonized across platforms to protect investors from unfair discrimination, eliminate burgeoning elements of a two-tiered market, and unify liquidity that is fragmented across over 50 execution venues. Permitting execution venues to capture significant liquidity for the benefit of a select few can no longer be justified as sound policy, any more than can the unfettered ability to segment prices by some execution venues and not others. Can policy makers continue to ignore the reality that off-exchange payment for order flow has the same economic impact as exchange rebates in determining where orders are touted and ultimately executed? Investors deserve at least the same visibility into fees and rebates on and off exchange, to promote not only fairness but also competition.

One Size Does Not Fit All. Well-functioning markets require a mix of markets, participants, issuers, and investors. The system must accommodate passive investing, high frequency trading, and business models in between. Rational regulations must simultaneously preserve the value of Exchange and OTC liquidity, maintain an appropriate balance between them, and limit regulatory arbitrage that harms investors. And, perhaps most importantly, the markets must work effectively for all issuers, from a market capitalization of $50 million to $750 billion; from average daily share volume of 50,000 to 50 million; from start-up to a centuries-old mature company.

Conclusion: The U.S. equities markets are the envy of the world because they are singularly effective at attracting and allocating capital to innovative companies that create millions of jobs and trillions of dollars of shareholder value, companies like Apple, Google, Facebook, Amazon, Cisco

Systems, Gilead, and thousands of other Nasdaq issuers. We believe Congress could enhance the experience in the marketplace and restore the attractiveness of our capital markets if the policy debate centered on:

1) Revoking unlisted trading privileges (UTP) for small and medium size company shares to allow more concentration of the liquidity in the market – giving the company some choice over the market structure in which they would be subjected.
2) Adopt Intelligent Tick sizes that will allow companies to trade in the most efficient and liquid manner.
3) And, approach the rebate discussion with the liquidity needs of the smallest issues in mind and approach the other end of the debate with data driven facts. Our markets are too important to job creation and economic vitality to take unjustified risks to the system.
4) Protect issuers and investors from increasing fragmentation in the market by requiring fair and equal access on all trading platforms.

We look forward to working with the Subcommittee on these important issues and appreciate the opportunity to present our views.