

Cost Accounting Methodology for Nordic and Baltic Market Data Feed

Purpose and Scope

The Markets in Financial Instruments Directive II (2014/65/EU, "MiFID II") and The Markets in Financial Instruments Regulation (EU 600/2014, "MiFIR") entered into force on January 3rd, 2018. With that came, among other regulations, new provisions for trading venues, which are further specified in level II-regulation such as Delegated Regulation EU 600/2014, EU 2017/567, and EU 2017/565. These regulatory requirements have been supplemented by ESMA's Final Guidelines on the MiFID II/MiFIR obligations on market data. These guidelines apply from January 1, 2022, and are applicable to national competent authorities, trading venues, approved publication arrangements, consolidated tape providers and systematic internalisers.

The provisions of this European regulation stipulate that the price of market data shall be based on the cost of producing and disseminating such data and may include a reasonable margin. Also, the costs of producing and disseminating market data may include an appropriate share of joint costs for other services provided by market operators or investment firms operating a trading venue or by systematic internalisers. As the Commission notes in the Delegated Regulation, specifying the exact cost is very complex. Therefore, cost allocation and cost apportionment methodologies should be specified instead.

The purpose of this document is to describe the methodology Nasdaq uses to calculate costs for the purpose of determining Nordic and Baltic market data fees, respectively.

Company Overview – Nasdaq, Inc.

Nasdaq, Inc. is a leading provider of trading, clearing, exchange technology, regulatory services, securities listing, information, and public company services. Nasdaq's global offerings are diverse and include trading and clearing across multiple asset classes, trade management services, data products, financial indexes, capital formation solutions, corporate solutions, and market technology products and services. Nasdaq's technology powers markets across the globe, supporting equity derivative trading, clearing and settlement, cash equity trading, fixed income trading and many other functions.

In Europe, Nasdaq operates trading venues in Stockholm (Sweden), Copenhagen (Denmark), Helsinki (Finland) and Reykjavik (Iceland). Nasdaq also operates trading venues in Tallinn (Estonia), Riga (Latvia) and Vilnius (Lithuania). Nasdaq owns Nasdaq

Tallinn and has a majority ownership in Nasdaq Vilnius and Nasdaq Riga¹. In addition to the Nordic and Baltic trading venues mentioned above, Nasdaq operates a commodity derivatives trading venue for European products in Oslo (Norway). Besides operating trading venues, Nasdaq Stockholm also operates an Approved Publication Arrangement (APA) in Sweden. Furthermore, Nasdaq operates a central counterparty (CCP) in Sweden and Norway for clearing of derivatives and owns a central securities depository, Nasdaq CSD, that provides notary, settlement, central maintenance, and other services in the Baltic countries and in Iceland.

Collectively, the Nasdaq Nordic and Nasdaq Baltic trading venues offer trading in cash equities and depository receipts, warrants, convertibles, rights, fund units and exchange traded funds. Nasdaq's platform allows the trading venues to share the same trading system, which enables efficient cross-border trading and settlement, cross membership, and a single source for Nordic and Baltic data products.

Data Products

The market data offering is a product which comprises all the market information generated in the Nordic and Baltic Nasdaq trading venues and APA respectively. The market data consists of information relating to the instruments traded at the local trading venues and reported to the APA and consists of the following classes of assets: cash equities, bonds, derivatives, and commodities.

Nasdaq's European data products business sells and distributes historical and real-time quote and trade information to market participants and data distributors on behalf of the trading venues and APA. European data products and services are based on trading information from the Nasdaq Nordic and Nasdaq Baltic trading venues and APA. These products are sold by Nasdaq Nordic Oy on behalf of the Nasdaq Nordic and Nasdaq Baltic trading venues and APA, respectively. However, certain data products relating to the Nasdaq Baltic trading venues are sold directly by the relevant trading venue. Nasdaq Nordic and Nasdaq Baltic provide varying levels of quote and trade information to market participants and to data distributors, who in turn provide subscriptions for this information.

Costs Considered when Evaluating Nordic and Baltic Market Data Fees

General

Market Data prices are set to cover costs, including a reasonable margin. The cost accounting methodology accounts for:

¹Nasdaq Copenhagen, Nasdaq Helsinki, Nasdaq Iceland, Nasdaq Riga, Nasdaq Stockholm, Nasdaq Tallinn, and Nasdaq Vilnius are respectively brand names for Nasdaq Copenhagen A/S, Nasdaq Helsinki Ltd, Nasdaq Iceland hf., Nasdaq Riga AS, Nasdaq Stockholm AB, Nasdaq Tallinn AS and AB Nasdaq Vilnius. Nasdaq Nordic represents the common offering by Nasdaq Copenhagen, Nasdaq Helsinki, Nasdaq Iceland and Nasdaq Stockholm. Nasdaq Baltic represents the common offering by Nasdaq Tallinn, Nasdaq Riga and Nasdaq Vilnius.

- **Direct Costs:** Solely attributable to the administration and distribution of market data
- **Joint Costs:** Resulting from the joint production of market data and market trading services
- **Common Costs:** Shared with other products and services

All costs, described in more detail below, are included in the financial statements of the specific and relevant legal entities in accordance with Nasdaq's statutory reporting requirements.

Costs Considered

- **Direct Costs:** Nasdaq considers all costs for the distribution and administration of the Nordic and Baltic market data products, including costs for:
 - Technology and Communications Infrastructure
 - Product developments
 - Example costs include:
 - IT Development Costs
 - Testing
 - Creation and distribution of documentation
 - Related marketing
 - Operations of the data distribution system and associated infrastructure
 - Example costs include:
 - Costs for Genium Consolidated Feed
 - Costs for File Delivery System
 - Connectivity costs
 - Technical services
 - Example costs include:
 - Infrastructure (Servers, Switches etc.)
 - Maintenance/set-up/changes, network topology, technical troubleshooting of issues/questions
 - Video conferencing
 - Compensation and Benefits & Occupancy
 - Example costs include:
 - Salaries
 - Sales incentive compensation
 - Employee social benefits
 - Taxes
 - Equity grants and occupancy costs.
 - Roles Related to Compensation and Benefits Costs
 - Example costs include:
 - Product development for Nordic products
 - Team of product managers looking after regulated products

- Customer support
 - Support team dealing with troubleshooting issues, answering questions on product functionality, creating Frequently Asked Question documentation, basic first line support
 - Team of sales and account management personnel dealing with relationship management, prospecting, qualifying, nurturing customers, creating marketing materials, follow-up/follow-through on client satisfaction, speaking engagements to sell products
 - Management
 - Billing administration and client onboarding
 - Operations team dealing with second line billing and invoicing issues
 - Marketing
 - Communications
- Professional and Contract Services
- Marketing and Advertising
 - Example costs include:
 - Marketing materials
 - Advertising
 - Email notification system
 - Handouts & documentation
 - Marketing campaigns
 - Events
- Regulatory costs
- General Administrative and other costs
 - Example costs include:
 - Travel expenses
 - Telephone and supplies
 - IT costs relating to direct personnel
- **Joint Costs:** Joint costs are defined as costs of trading systems and infrastructure other associated costs, as they jointly contribute to trading execution and generation of market data. These costs include costs related to:
 - Compensation and Benefits
 - Occupancy
 - Professional and Contract Services
 - Marketing and Advertising
 - Technology and Communication Infrastructure
 - Example costs include:
 - Requirements analysis, planning, design, build, testing, deploying, bug fixing, product architecture.
 - Costs of market operations
 - Depreciation and Amortization

- Provision for Bad Debts
- General Administrative and other costs
- **Common Costs:** The operating costs of common functions borne by the legal entity are taken into account when determining Nordic and Baltic market data fees as these costs represent functions critical to the overall operation and delivery of Nordic and Baltic market data. More specifically, the common costs include the Nordic and Baltic market data share of common functions shared by every revenue business unit residing in the respective legal entity. Functions include:
 - Technology
 - Finance
 - Finance Infrastructure
 - Corporate Compensation & Benefits and People@Nasdaq
 - Legal and Regulation
 - Marketing and Communication
 - Treasury Services
 - Global Real Estate
 - Example costs include:
 - Insurance
 - Office space
 - Management Services
 - Info Security Services
 - Internal Audit
 - Corporate IT and Corporate Systems
 - Compliance

The common costs include for the above functions:

- Compensation and Benefits
- Occupancy
- Professional and Contract Services
- Marketing and Advertising
- Technology and Communication Infrastructure
- Depreciation and Amortization
- Regulatory
- General Administrative and other costs

Additional Information

In addition to the above operating costs, Nasdaq considers interest costs, intangible amortization, and applicable corporate taxes:

- Due to the cross utilization of functions and assets between various revenue business units, a share of legal entity interest costs and amortization of intangible assets is attributed to the EU Market Data operations.

- Taxes are considered as relevant costs to the extent they are not refundable or reclaimable. In this regard, Nasdaq considers standard local tax rates on reported Nordic and Baltic market data fee profits.

Cost Allocation Principles and Allocation Keys

- **Direct Costs:** Direct costs are directly attributable to the production and distribution of Market data and are fully (100%) allocated to Market Data.
- **Joint Costs:** As market data is the joint product of trading services, joint costs are shared equally between Nasdaq Nordic and Baltic Market Data and Market Services businesses.
- **Common Costs:** Common costs are distributed among all of Nasdaq's revenue business units on the basis of a cost-based allocation. Specific expenses have been allocated using different allocation keys so as to most accurately reflect costs attributable to Market Data. These allocation keys include headcount, compensation, and direct and joint expenses in addition to measures of estimated effort and use of resources.

Costs not attributable to Market Data have been identified and are excluded.

Intercompany costs are based on Nasdaq's transfer pricing policy, which is designed to ensure that all entities providing services that are for the benefit of other legal entities are remunerated properly and in line with the arm's length principle, using allocation keys that best reflect the use of resources.

Margin

A margin is applied on top of estimated costs. Nasdaq considers various factors when determining what constitutes a reasonable margin, both internal and external. These factors include, among other things, the estimated need for investment in hardware and software to enhance client experience, technical security or for compliance purposes. Among relevant external reference points are the profit margins of companies in related sectors.

Concluding Remarks

This document has described the costs Nasdaq takes into account when determining Nordic and Baltic market data fees, including applicable cost allocation and cost apportionment methodologies. It is Nasdaq's view that all the above costs are relevant for the production and dissemination of Nordic and Baltic market data and consequently also relevant to consider when evaluating Nordic and Baltic market data fees. Thus, in Nasdaq's view the document provides a fair view of how market data is provided on a reasonable commercial basis.