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# NASDAQ, INC.

## FORM 10-K
(Annual Report)

Filed 02/26/16 for the Period Ending 12/31/15

| | |
|---|---|
| Address | ONE LIBERTY PLAZA<br>NEW YORK, NY 10006 |
| Telephone | 2124018700 |
| CIK | 0001120193 |
| Symbol | NDAQ |
| SIC Code | 6200 - Security & Commodity Brokers, Dealers, Exchanges & Services |
| Industry | Investment Services |
| Sector | Financial |
| Fiscal Year | 12/31 |

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# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION

**Washington, D.C. 20549**

# FORM 10-K

**☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the fiscal year ended December 31, 201 5**

**OR**

**☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the transition period from to**

**Commission file number: 000-32651**

# Nasdaq, Inc.

**(Exact name of registrant as specified in its charter)**

| **Delaware** | **52-1165937** |
|---|---|
| **(State or Other Jurisdiction of Incorporation or Organization)** | **(I.R.S. Employer Identification No.)** |
| **One Liberty Plaza, New York, New York** | **10006** |
| **(Address of Principal Executive Offices)** | **(Zip Code)** |

**Registrant's telephone number, including area code: +1 212 401 8700**

**Securities registered pursuant to Section 12(b) of the Act:**

| **Title of each class** | **Name of each exchange on which registered** |
|---|---|
| Common Stock, $.01 par value per share | The NASDAQ Stock Market |

**Securities registered pursuant to Section 12(g) of the Act: None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

| | | | |
|---|---|---|---|
| Large accelerated filer | ☒ | Accelerated filer | ☐ |
| Non-accelerated filer | ☐ (Do not check if a smaller reporting company) | Smaller reporting company | ☐ |

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of June 30 , 201 5 , the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately $5.8 billion (this amount represents approximately 1 18.0 million shares of N asdaq , Inc.'s common stock based on the last reported sales price of $ 48 . 81 of the common stock on The NASDAQ S tock Market on such date).

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

| **Class** | **Outstanding at February 17 , 201 6** |
|---|---|
| Common Stock, $.01 par value per share | 163 , 887 , 649 shares |

**DOCUMENTS INCORPORATED BY REFERENCE**

| **Document** | **Parts Into Which Incorporated** |
|---|---|
| Certain portions of the Definitive Proxy Statement for the 201 6 Annual Meeting of Stockholders | Part III |

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**About This Form 10-K**

Throughout this Form 10-K, unless otherwise specified:

- "Nasdaq," "we," "us" and "our" refer to Nasdaq, Inc.
- "The NASDAQ Stock Market" and "NASDAQ" refer to the registered national securities exchange operated by The NASDAQ Stock Market LLC.
- "Nasdaq Nordic" refers to collectively, Nasdaq Clearing AB, Nasdaq Stockholm AB, Nasdaq Copenhagen A/S, Nasdaq Helsinki Ltd, and Nasdaq Iceland hf.
- "Nasdaq Baltic" refers to collectively, Nasdaq Tallinn AS, Nasdaq Riga, AS, and AB Nasdaq Vilnius.
- "Nasdaq Clearing" refers to the clearing operations conducted by Nasdaq Clearing AB.

* * * * * *

The following is a non-exclusive list of registered trademarks, registered service marks, or trademarks or service marks of Nasdaq or its subsidiaries, in the United States and/or other countries or jurisdictions:

E MARKET®, CANADIAN DIVIDEND ACHIEVERS®, CCBN®,CLICK XT®, CONDICO®, DATAXPRESS®, D.A.L.I®, DATAXPRESS®,DEFENSE OF INTERNATIONAL MARKETS AND EXCHANGES SYMPOSIUM®, DIMES®, DIRECTORS DESK®, DIRECTORSDESK®, DIVIDEND ACHIEVERS®, DORSEY WRIGHT®, DREAM IT. DO IT.®, DWA®, DWA MATRIX®, DX®, EQQQ, E (design), E-SPEED®, E SPEED (device),ESPEED EXCHANGE®, E-SPEED FILING®, ESPEED®, ESPEED ELITE®, EVI®, EXIGO, FINQLOUD®, FINQLOUD REGULATORY RECORDS RETENTION® FIRST NORTH®, FONDSBØRSEN®, FTEN®, GENIUM®, GLOBE NEWSWIRE®, GX®, IGNITE YOUR AMBITION®, INET®, INVESTOR WORLD, IPOWORLD, ISSUERWORLD®, ITCH®, KFX®, KFXAKTIEINDEX®, KLEOS®, LIQUIDITYXPRESS®, MARKET INTELLIGENCE DESK®, MARKET LINQUIDITY,MARKET MECHANICS®, MARKETSITE®, MICROMARKET®, MY CCBN®, MYMEDIAINFO®, NASDAQ®, NASDAQ - FINANCIAL®, NASDAQ - FINANCIAL INDEX®, NASDAQ BIOTECHNOLOGY INDEX®, NASDAQ CANADA®, NASDAQ CANADA COMPOSITE INDEX®, NASDAQ CANADA INDEX®, NASDAQ CAPITAL MARKET®, NASDAQ COMPOSITE®, NASDAQ COMPOSITE INDEX®, NASDAQ COMPUTER INDEX®, NASDAQ DIVIDEND ACHIEVERS®, NASDAQ DUBAI®, NASDAQ DUBAI®, NASDAQ EUROPE®, NASDAQ EUROPE COMPOSITE INDEX®, NASDAQ FINANCIAL-100 INDEX®, NASDAQ GLOBAL MARKET®, NASDAQ GLOBAL SELECT MARKET®, NASDAQ INDUSTRIAL INDEX®, NASDAQ INTERACT®, NASDAQ INTERNET INDEX®, NASDAQ IQ FUND®, NASDAQ JAPAN®, NASDAQ MARKET ANALYTIX®, NASDAQ MARKET CENTER®, NASDAQ MARKET FORCES®, NASDAQ MARKET VELOCITY®, NASDAQ MARKETSITE®, NASDAQ MAX®, NASDAQ MAX MARKET ANALYTIX®, NASDAQ NATIONAL MARKET®, NASDAQ OMX®, NASDAQ OMX ADVANTAGE®, NASDAQ OMX ALPHA INDEXES®, NASDAQ OMX BX®, NASDAQ OMX FUTURES EXCHANGE®, NASDAQ OMX GREEN ECONOMY INDEX®, NASDAQ OMX GROUP®, NASDAQ OMX NORDIC®, NASDAQ PRIVATE MARKET®, NASDAQ Q-50 INDEX®, NASDAQ TELECOMMUNICATIONS INDEX®, NASDAQ TOTALVIEW®, NASDAQ TRADER®, NASDAQ TRANSPORTATION INDEX®, NASDAQ US ALL MARKET®, NASDAQ VOLATILITY GUARD®, NASDAQ WORKSTATION®, NASDAQ WORKSTATION II®, NASDAQ WORLD®, NASDAQ-100®, NASDAQ-100 EUROPEANFUND®, NASDAQ-100 EUROPEAN TRACKER®, NASDAQ-100 EUROPEAN TRACKER FUND®, NASDAQ-100 INDEX®, NASDAQ-100 INDEX EUROPEAN TRACKER FUND®, NASDAQ-100 INDEX TRACKING STOCK®, NDX®, NFX WORLD CURRENCY FUTURES®, NFX XL®, NLX®, NOIS®, NORDIX®, OMX COPENHAGEN 20®, OMX HELSINKI 25®, OMX STIBOR FUTURE®, OMX STOCKHOLM 30®, OMXH25®, OMXS30®, OMXS3FUT®, OMX TECHNOLOGY®, ON THE WIRE®, OTW® , OVERUNDER®, PHILADELPHIA STOCK EXCHANGE®, PHLX®, PHLX XL®, PIXL®, PORTAL ALLIANCE®, PRF®, PRIVATE COMPANY MARKET®, Q THE NEXT GREAT THING®, QQQ®, QTARGET®, QVIEW®, R3®, RE-THINK®, RISKWAY®, RISKWRAPPER®, RISKXPOSURE®, RX®, S.A.X.E.S®, SDW®, SECONDMARKET®, SECONDMARKET ECOSYSTEM®, SIDECAR®, SIGNALXPRESS®, SIGNALXPRESS SX®, SMARTS®, SMARTSONLINE®, STINA®, STRUCTURED LIQUIDITY PROGRAM®, SX®, THE NASDAQ STOCK MARKET®, THE STOCK MARKET FOR THE NEXT 100 YEARS®, TOTAL EQUITY SOLUTION®, TRADE REPORTING DATA STORAGE®, TRADEGUARD®, TRADEXAMINER®, TRDS®, TX®, ULL®, ULTRA LOW LATENCY®, ULTRAFEED®, UNITED CURRENCY OPTIONS MARKET®, VX PROXY®, WIZER®, XDE®, XO DORSEY WRIGHT & ASSOCIATES®, ÖVERUNDER®

To the extent a name, logo or design does not appear on the above list, such lack of appearance does not constitute a waiver of any intellectual property rights that Nasdaq has established in its product or service names or logos, or in product configurations or designs, all of which rights are expressly reserved.

FINRA® and TRADE REPORTING FACILITY® are registered trademarks of the Financial Industry Regulatory Authority, or FINRA.

All other trademarks and service marks used herein are the property of their respective owners.

* * * * * *

This Annual Report on Form 10-K includes market share and industry data that we obtained from industry publications and surveys, reports of governmental agencies and internal company surveys. Industry publications and surveys generally state that the information they contain has been obtained from sources believed to be reliable, but we cannot assure you that this information is accurate or complete. We have not independently verified any of the data from third-party sources nor have we ascertained the underlying economic assumptions relied upon therein. Statements as to our market position are based on the most currently available market data. For market comparison purposes, The NASDAQ Stock Market data in this Annual Report on Form 10-K for initial public offerings, or IPOs, is based on data generated internally by us, which includes best efforts underwritings; therefore, the data may not be comparable to other publicly-available IPO data. Data in this Annual Report on Form 10-K for new listings of equity securities on The NASDAQ Stock Market is based on data generated internally by us, which includes best efforts underwritings, issuers that switched from other listing venues, closed-end funds and exchange traded products, or ETPs. Data in this Annual Report on Form 10-K for IPOs and new listings of equities securities on the Nasdaq Nordic and Nasdaq Baltic exchanges also is based on data generated internally by us. IPOs and new listings data is presented as of period end. While we are not aware of any misstatements regarding industry data presented herein, our estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed in “Item 1A. Risk Factors” in this Annual Report on Form 10-K.

## Forward-Looking Statements

*The U.S. Securities and Exchange Commission, or SEC, encourages companies to disclose forward-looking information so that investors can better understand a company's future prospects and make informed investment decisions. This Annual Report on Form 10-K contains these types of statements. Words such as "may," "will," "could," "should," "anticipates," "estimates," "expects," "projects," "intends," "plans," "believes" and words or terms of similar substance used in connection with any discussion of future expectations as to industry and regulatory developments or business initiatives and strategies, future operating results or financial performance identify forward-looking statements. These include, among others, statements relating to:*

- *our 2016 outlook;*
- *the scope, nature or impact of acquisitions, divestitures, investments or other transactional activities;*
- *the integration of acquired businesses, including accounting decisions relating thereto;*
- *the effective dates for, and expected benefits of, ongoing initiatives, including strategic, restructuring, technology, de-leveraging and capital return initiatives;*
- *our products, order backlog and services;*
- *the impact of pricing changes;*
- *tax matters;*
- *the cost and availability of liquidity; and*
- *any litigation or regulatory or government investigation or action to which we are or could become a party.*

*Forward-looking statements involve risks and uncertainties. Factors that could cause actual results to differ materially from those contemplated by the forward-looking statements include, among others, the following:*

- *our operating results may be lower than expected;*
- *loss of significant trading and clearing volume, market share, listed companies or other customers;*
- *economic, political and market conditions and fluctuations, including interest rate and foreign currency risk, inherent in U.S. and international operations;*
- *government and industry regulation;*
- *our ability to keep up with rapid technological advances and adequately address cybersecurity risks;*
- *the performance and reliability of our technology and technology of third parties;*
- *our ability to successfully integrate acquired businesses, including the fact that such integration may be more difficult, time consuming or costly than expected, and our ability to realize synergies from business combinations and acquisitions;*
- *our ability to continue to generate cash and manage our indebtedness; and*
- *adverse changes that may occur in the securities markets generally.*

*Most of these factors are difficult to predict accurately and are generally beyond our control. You should consider the uncertainty and any risk related to forward-looking statements that we make. These risk factors are discussed under the caption "Item 1A. Risk Factors," in this Annual Report on Form 10-K. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this report. You should carefully read this entire Annual Report on Form 10-K, including "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations," and the consolidated financial statements and the related notes. Except as required by the federal securities laws, we undertake no obligation to update any forward-looking statement, release publicly any revisions to any forward-looking statements or report the occurrence of unanticipated events. For any forward-looking statements contained in any document, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.*

# Part I

## Item 1. Business

### Overview

We are a leading provider of trading, clearing, exchange technology, regulatory, securities listing, information and public company services across six continents. Our global offerings are diverse and include trading and clearing across multiple asset classes, access services, data products, financial indexes, capital formation solutions, corporate solutions and market technology products and services. Our technology powers markets across the globe, supporting equity derivatives trading, clearing and settlement, cash equity trading, fixed income trading and many other functions.

### History

Nasdaq was founded in 1971 as a wholly-owned subsidiary of FINRA. Beginning in 2000, FINRA restructured and broadened ownership in Nasdaq by selling shares to FINRA members, investment companies and issuers listed on The NASDAQ Stock Market.

In connection with this restructuring, Nasdaq applied to the SEC to register The NASDAQ Stock Market as a national securities exchange. FINRA fully divested its ownership of Nasdaq in 2006, and The NASDAQ Stock Market became fully operational as an independent registered national securities exchange in 2007. In 2006, Nasdaq also reorganized its operations into a holding company structure. As a result, most of our businesses are operated by our subsidiaries.

On February 27, 2008, Nasdaq and OMX AB combined their businesses. This transformational combination resulted in the expansion of our business from a U.S.-based exchange operator to a global exchange company offering technology that powers our own exchanges and markets as well as many other marketplaces around the world.

Also in 2008, we expanded our business through the acquisitions of the Philadelphia Stock Exchange, Inc. and the Boston Stock Exchange, Incorporated. These acquisitions allowed us to extend our presence in the U.S. derivatives markets and we currently operate three separate U.S. options markets. In addition, we have used the licenses acquired in these acquisitions to launch two additional U.S. cash equity markets. Most recently, in February 2016, we acquired Chi-X Canada ATS Limited, a leading alternative market in Canada for the trading of Canadian-listed securities.

We also have expanded into the business of trading and clearing commodities products in recent years. In 2008, we acquired the clearing, international derivatives and consulting subsidiaries of Nord Pool ASA. As a result of this acquisition, we launched Nasdaq Commodities, which offers energy and emission allowance derivatives products. In July 2012, we acquired NOS Clearing ASA, a leading Norway-based clearinghouse primarily for over-the-counter, or OTC, traded derivatives for the freight and fuel oil market, iron ore and seafood derivatives market.

In August 2010, we acquired SMARTS Group Holdings Pty Ltd, or SMARTS, a leading technology provider of surveillance solutions to exchanges, regulators and brokers. In two separate transactions in 2012 and 2014, we acquired a 100.0% ownership interest in BWise Beheer B.V. and its subsidiaries, or BWise, a Netherlands-based service provider that offers enterprise governance, risk management and compliance software and services to help companies track, measure and manage key organizational risks. These acquisitions have expanded our Market Technology business.

In recent years, we have significantly grown our Corporate Solutions business, which provides customer support services, products and programs to companies including companies listed on our exchanges, through organic growth and numerous acquisitions. Most recently, in 2013, we acquired the Investor Relations, Public Relations and Multimedia Solutions businesses of Thomson Reuters, or the TR Corporate businesses.

In 2013, we further expanded our Market Services and Information Services businesses by acquiring from BGC Partners, Inc. and certain of its affiliates, or BGC, certain assets and assumed certain liabilities of the eSpeed business, or eSpeed, including the eSpeed brand name and various assets comprising the fully electronic portion of BGC's benchmark U.S. Treasury brokerage, data and co-location service businesses.

In 2015, we completed the acquisition of Dorsey, Wright & Associates, LLC, or DWA, a market leader in data analytics, passive indexing and smart beta strategies. DWA is part of our Information Services segment.

In 2015, we also acquired full ownership of The NASDAQ Private Market, LLC, or NPM, following the acquisition of the minority stake that was previously held by a third party. In addition, through NPM, we acquired SecondMarket Solutions, Inc., or SecondMarket, a recognized innovator in facilitating liquidity for private company securities . NPM and SecondMarket are part of our Listing Services segment.

In September 2015, we changed the name of our holding company from The NASDAQ OMX Group, Inc. to Nasdaq, Inc.

**Products and Services**

We manage, operate and provide our products and services in four business segments: Market Services, Listing Services, Information Services and Technology Solutions.

Of our 2015 total revenues less transaction-based expenses of $2,090 million, 36.9% was from our Market Services segment, 12.6% was from our Listing Services segment, 24.5% was from our Information Services segment and 26.0% was from our Technology Solutions segment. Of our 2014 total revenues less transaction-based expenses of $2,067 million, 38.5% was from our Market Services segment, 11.5% was from our Listing Services segment, 22.9% was from our Information Services segment and 27.1% was from our Technology Solutions segment. Of our 2013 total revenues less transaction-based expenses of $1,895 million, 39.9% was from our Market Services segment, 12.0% was from our Listing Services segment, 23.0% was from our Information Services segment and 25.1% was from our Technology Solutions segment.

See Note 1, " Organization and Nature of Operations ," and Note 19, "Business Segments," to the consolidated financial statements for additional financial information about our reportable segments and geographic data.

**Market Services**

Our Market Services segment includes our equity derivative trading and clearing, cash equity trading, fixed income, currency and commodities trading and clearing, or FICC, and access and broker services businesses. We operate multiple exchanges and other marketplace facilities across several asset classes, including derivatives, commodities, cash equity, debt, structured products and ETPs. In addition, in some countries where we operate exchanges, we also provide broker services, clearing, settlement and central depository services. Our transaction-based platforms provide market participants with the ability to access, process, display and integrate orders and quotes. The platforms allow the routing and execution of buy and sell orders as well as the reporting of transactions, providing fee-based revenues.

***Equity Derivative Trading and Clearing***

In the U.S., we operate three options exchanges, The NASDAQ Options Market, Nasdaq PHLX and Nasdaq BX Options, for the trading of equity options, exchange traded fund, or ETF, options, index options and foreign currency options. During the year ended December 31, 2015, our options markets had an average combined market share of approximately 25.2% in the U.S. equity options market, consisting of approximately 16.7 % at Nasdaq PHLX, 7.7% at The NASDAQ Options Market and 0.8% at Nasdaq BX Options. Together, our combined market share represented the largest share of the U.S. equity and ETF options market. Our options trading platforms provide trading opportunities to both retail investors, algorithmic trading firms and market makers, who tend to prefer electronic trading, and institutional investors, who typically pursue more complex trading strategies and often trade on the floor.

In Europe, Nasdaq offers trading in derivatives, such as stock options and futures, index options and futures and fixed-income options and futures. Nasdaq Clearing offers clearing services for fixed-income options and futures, stock options and futures, index options and futures, and interest rate swaps by serving as the central counterparty, or CCP. Nasdaq Clearing also operates a clearing service for the resale and repurchase agreement market.

***Cash Equity Trading***

In the U.S., we operate three cash equity exchanges, The NASDAQ Stock Market, Nasdaq BX and Nasdaq PSX. The NASDAQ Stock Market is the largest single venue of liquidity for trading U.S.-listed cash equities, matching an average of approximately 15.8% of all U.S. cash equity volume for 2015. In 2015, Nasdaq BX matched an average of approximately 2.0% and Nasdaq PSX matched an average of approximately 1.0% of all U.S. cash equity volume.

Our U.S. cash equity exchanges offer trading of both NASDAQ-listed and non-NASDAQ-listed securities. Market participants include market makers, broker-dealers, alternative trading systems, or ATSs, and registered securities exchanges.

In Europe, Nasdaq operates exchanges in Stockholm (Sweden), Copenhagen (Denmark), Helsinki (Finland), and Iceland. The Nasdaq Nordic exchanges offer trading in Nordic securities such as cash equities and depository receipts, warrants, convertibles, rights, fund units and ETFs. Our platform allows the exchanges to share the same trading system, which enables efficient cross-border trading and settlement, cross membership and a single source for Nordic data products. Settlement and registration of cash equity trading takes place in Sweden, Finland, Denmark and Iceland via the local central securities depositories.

Nasdaq Baltic operates exchanges in Tallinn (Estonia), Riga (Latvia) and Vilnius (Lithuania). Nasdaq owns Nasdaq Tallinn and has a majority ownership in Nasdaq Vilnius and Nasdaq Riga. In addition, Nasdaq Tallinn owns the central securities depository in Estonia, Nasdaq Riga owns the central securities depository in Latvia, and Nasdaq Helsinki and Nasdaq Vilnius jointly own the central securities depository in Lithuania.

***Fixed Income, Currency and Commodities Trading and Clearing***

Our FICC business includes fixed income activities in the Nordic region, our eSpeed business, Nasdaq NLX, Nasdaq Futures,

Inc., or NFX, and Nasdaq Commodities.

Nasdaq Nordic provides a wide range of products and services, such as listing, trading, and clearing, for fixed income products in Sweden, Denmark, Finland and Iceland. Nasdaq Stockholm is the largest bond listing venue in the Nordics, with more than 5,000 listed retail and institutional bonds. In addition, Nasdaq Nordic facilitates the trading and clearing of Nordic fixed income derivatives in a unique market structure. Buyers and sellers agree to trades in fixed income derivatives through bilateral negotiations and then report those trades to Nasdaq Clearing markets for CCP clearing. Nasdaq Clearing acts as the counterparty to both the buyer and seller.

In June 2013, we acquired eSpeed, an electronic platform for trading U.S. Treasuries. The electronic trading platform provides real-time institutional trading of benchmark U.S. Treasury securities. Through eSpeed, we provide trading access to the U.S. Treasury securities market with an array of trading instruments to meet various investment goals across the fixed income spectrum.

Nasdaq NLX is a London-based multilateral trading venue that launched in 2013. Nasdaq NLX offers a range of both short-term interest rate and long-term interest rate euro-and sterling-based listed derivative products.

In the third quarter of 2015, we launched NFX, which is our U.S. based energy derivatives market. NFX offers cash settled energy derivatives based on key energy benchmarks including oil, natural gas and U.S. power.

Nasdaq Commodities is the brand name for Nasdaq's worldwide suite of commodity-related products and services. Nasdaq Commodities' offerings include power, natural gas and carbon emission markets, tanker and dry cargo freight, fuel oil, seafood derivatives, iron ore, electricity certificates and clearing services. Nasdaq Oslo ASA, which is authorized by the Norwegian Ministry of Finance and supervised by the Norwegian Financial Supervisory Authority, is the commodity derivatives exchange for Nasdaq Commodities. In addition, all trades with Nasdaq Commodities are subject to clearing with Nasdaq Clearing, which is a CCP authorized under the European Market Infrastructure Regulation, or EMIR, by the Swedish Financial Supervisory Authority, or SFSA, to conduct clearing operations. Nasdaq Commodities has approximately 400 members across a wide range of energy producers and consumers, as well as financial institutions.

***Access and Broker Services***

*Access Services.* We provide market participants with a wide variety of alternatives for connecting to and accessing our markets for a fee. Shifting connectivity from proprietary networks to third-party networks has significantly reduced technology and network costs and increased our systems' scalability while maintaining performance and reliability.

Our marketplaces may be accessed via a number of different protocols used for quoting, order entry, trade reporting, DROP functionality and connectivity to various data feeds. We also offer the NASDAQ Workstation, a browser-based, front-end interface that allows market participants to view data and enter orders, quotes and trade reports. In addition, we offer a variety of add-on compliance tools to help firms comply with regulatory requirements.

We provide co-location services to market participants, whereby firms may lease cabinet space and power to house their own equipment and servers within our data center. These participants are charged monthly fees for cabinet space, connectivity and support. Additionally, we offer a number of wireless connectivity routes between select data centers using millimeter wave and microwave technology. We also earn revenues from annual and monthly exchange membership and registration fees.

*Broker Services.* Our broker services operations offer technology and customized securities administration solutions to financial participants in the Nordic market. Broker services provides services through a registered securities company that is regulated by the SFSA. Services primarily consist of flexible back-office systems, which allow customers to entirely or partly outsource their company's back-office functions.

We offer customer and account registration, business registration, clearing and settlement, corporate action handling for reconciliations and reporting to authorities. Available services also include direct settlement with the Nordic central securities depositories, real-time updating and communication via the Society for Worldwide Interbank Financial Telecommunication to deposit banks.

**Listing Services**

We operate a variety of listing platforms around the world to provide multiple global capital raising solutions for private and public companies. Companies listed on our markets represent a diverse array of industries including, among others, health care, consumer products, telecommunication services, information technology, financial services, industrials and energy. Our main listing markets are The NASDAQ Stock Market and the Nasdaq Nordic and Nasdaq Baltic exchanges.

Companies seeking to list securities on The NASDAQ Stock Market must meet minimum listing requirements, including specified financial and corporate governance criteria. Once listed, companies must meet continued listing standards. The NASDAQ Stock Market currently has three listing tiers: The NASDAQ Global Select Market, The NASDAQ Global Market and The NASDAQ Capital Market. All three market tiers maintain rigorous listing and corporate governance standards (both initial and ongoing).

As of December 31, 2015, a total of 2,859 companies listed securities on The NASDAQ Stock Market, with 1,526 listings on The NASDAQ Global Select Market, 674 on The NASDAQ Global Market and 659 on The NASDAQ Capital Market.

We aggressively pursue new listings from companies, including those undergoing IPOs as well as companies seeking to switch from alternative exchanges. In 2015, The NASDAQ Stock Market attracted 274 new listings. Included in these listings were 143 IPOs, 73% of U.S. IPOs in 2015. The new listings were comprised of the following:

| | |
|---|---|
| Switches from the New York Stock Exchange, or NYSE, and NYSE MKT . | 27 |
| IPOs ..... | 143 |
| Upgrades from OTC ..... | 48 |
| ETPs and Other Listings ..... | 56 |
| ..... **Total** | 274 |

In 2015, a total of 27 NYSE- or NYSE MKT-listed companies switched to The NASDAQ Stock Market, representing approximately $83.5 billion in market capitalization. Notable switches included T - Mobile US, Inc., CSX Corporation, Pinnacle Entertainment, Inc. and TD Ameritrade Holding Corporation.

We also offer listings on the exchanges that comprise Nasdaq Nordic and Nasdaq Baltic. For smaller companies and growth companies, we offer access to the financial markets through the Nasdaq First North alternative marketplaces. As of December 31, 2015, a total of 852 companies listed securities on our Nordic and Baltic exchanges and Nasdaq First North.

Our European listing customers include companies, funds and governments. Customers issue securities in the form of cash equities, depository receipts, warrants, ETFs, convertibles, rights, options, bonds or fixed-income related products. In 2015, a total of 91 new companies listed on our Nordic and Baltic exchanges and Nasdaq First North.

Our Listing Services segment also includes NPM and SecondMarket, which are marketplaces for private growth companies.

**Information Services**

Our Information Services segment includes our Data Products and our Index Licensing and Services businesses.

***Data Products***

Our data products enhance transparency and provide critical information to professional and non-professional investors. We collect, process and create information and earn revenues as a distributor of our own, as well as select, third-party content. We provide varying levels of quote and trade information to market participants and to data distributors, who in turn provide subscriptions for this information. Our systems enable distributors to gain direct access to our market depth, index values, mutual fund valuation, order imbalances, market sentiment and other analytical data. Revenues from data products are subscription-based and are generated primarily based on the number of data subscribers and distributors of our data.

We distribute this proprietary market information to both market participants and non-participants through a number of proprietary products, including NASDAQ TotalView, our flagship market depth quote product. TotalView shows subscribers quotes, orders and total anonymous interest at every price level in The NASDAQ Stock Market for NASDAQ-listed securities and critical data for the opening, closing, halt and IPO crosses. We also offer TotalView products for our Nasdaq BX and Nasdaq PSX markets.

We operate several other proprietary services and data products to provide market information, including Nasdaq Basic, a low cost Level 1 feed and Ultrafeed, a normalized high speed feed of North American equity, DWA's web-based advisor tools, options, futures, indexes and mutual fund data. In addition, eSpeed delivers U.S. Treasury data.

Our Data Products business also includes revenues from U.S. tape plans. The NASDAQ Stock Market acts as the administrator for the Joint Self-Regulatory Organization Plan Governing the Collection, Consolidation, and Dissemination of Quotation and Transaction Information for NASDAQ-Listed Securities Traded on Exchanges on an Unlisted Trading Privileges Basis, or the UTP

Plan. In this role, NASDAQ sells quotation and last sale information for all transactions in NASDAQ-listed securities, whether traded on The NASDAQ Stock Market or other exchanges, to market participants and to data distributors, who then provide the information to subscribers. After deducting costs, as permitted under the revenue sharing provision of the UTP Plan, we distribute the tape revenues to the respective UTP Plan participants, including The NASDAQ Stock Market, Nasdaq BX and Nasdaq PSX, based on a formula required by Regulation National Market System, or Regulation NMS, that takes into account both trading and quoting activity. In addition, all quotes and trades in NYSE- and NYSE MKT-listed securities are reported and disseminated in real-time, and as such, we share in the tape revenues for information on NYSE- and NYSE MKT-listed securities.

The Nasdaq Nordic and Nasdaq Baltic exchanges, as well as Nasdaq Commodities, also offer data products and services. These data products and services provide critical market transparency to professional and non-professional investors who participate in European marketplaces and, at the same time, give investors greater insight into these markets.

European data products and services are based on trading information from the Nasdaq Nordic and Nasdaq Baltic exchanges, as well as Nasdaq Commodities, for the following classes of assets: cash equities, bonds, derivatives and commodities. We provide varying levels of quote and trade information to market participants and to data distributors, who in turn provide subscriptions for this information.

Significant European data products include Nordic Equity TotalView, Nordic Derivative TotalView, and Nordic Fixed Income TotalView, Level 2, Analytics and Fixings.

Finally, we provide index data products based on Nasdaq indexes. Index data products include our Global Index Data Service, which delivers real-time index values throughout the trading day, and Global Index Watch/Global Index File Delivery Service, which delivers weightings and components data, corporate actions and a breadth of additional data.

***Index Licensing and Services***

Our Index Licensing and Services business is a leading index provider that develops and licenses Nasdaq branded indexes, associated derivatives and financial products. We also provide custom calculation services for third-party clients. License fees for our trademark licenses vary by product based on a percentage of underlying assets, dollar value of a product issuance, number of products or number of contracts traded. We also license cash-settled options, futures and options on futures on our indexes.

Nasdaq indexes are now the basis for 222 ETPs with $114 billion in assets under management. Our flagship index, the NASDAQ-100 Index, includes the top 100 non-financial securities listed on The NASDAQ Stock Market.

We also operate the NASDAQ Global Index Family, which includes more than 40,000 indexes. The NASDAQ Global Index Family represents more than 98% of the global equity investable marketplace. The family consists of global securities broken down by market segment, region, country, size and sector. The NASDAQ Global Index Family covers 45 countries and approximately 9,000 securities.

In 2015, we completed the acquisition of DWA, a market leader in data analytics, passive indexing and smart beta strategies. DWA added to Nasdaq's robust index portfolio, bringing model-based strategies and analysis to support the financial advisor community, and further strengthened Nasdaq's position as a leading smart beta index provider in the U.S.

**Technology Solutions**

Our Technology Solutions segment includes our Corporate Solutions and Market Technology businesses.

***Corporate Solutions***

Our Corporate Solutions business serves corporate clients, including companies listed on our exchanges. We help organizations manage the two-way flow of information with their key constituents, including their board members and investors, and with clients and the public through our suite of advanced technology, analytics, and consultative services.

In 2013, we acquired the TR Corporate businesses which were integrated into our Corporate Solutions business.

We provide Corporate Solutions products and services in the following key areas:

- *Investor Relations* . We offer investor relations content, analytics, advisory services and communications tools, including investor relations webcasting and websites. Our solutions make it easier for companies to interact and communicate with analysts and investors while meeting corporate governance and disclosure requirements. In early 2016, we launched Nasdaq IR Insight, our new investor relations platform.

- *Public Relations*. We offer solutions to help clients identify, reach, monitor and measure their public relations program. We provide traditional and social media contacts databases, backed by over 100 research analysts. Our press release distribution network allows clients to reach global audiences cost-effectively. Our suite of technology solutions and expert

analysts help clients monitor key news media for their brand, reputation, products, as well as industry competitors, and measure the success of their communications programs.

- *Multimedia Solutions.* We offer a platform and services which enable our customers to produce webcasts for a wide range of applications, including investor relations, public relations, marketing and internal communications. Our differentiators include global scale, application expertise, actionable analytics and content distribution.

- *Governance.* We offer a secure collaboration platform for boards of directors or any team collaborating on confidential initiatives. Our solutions protect sensitive data and facilitate productive collaboration, so board members and teams can work faster and more effectively.

We currently have over 9,500 Corporate Solutions clients.

***Market Technology***

Powering more than 70 marketplaces in 50 countries, our Market Technology business is a leading global technology solutions provider and partner to exchanges, clearing organizations, central securities depositories, regulators, banks, brokers and corporate businesses. Our Market Technology business is the sales channel for our complete global offering to other marketplaces.

Market Technology provides technology solutions for trading, clearing, settlement, surveillance and information dissemination to markets with wide-ranging requirements, from the leading markets in the U.S., Europe and Asia to emerging markets in the Middle East, Latin America and Africa. Our marketplace solutions can handle a wide array of assets, including cash equities, equity derivatives, currencies, various interest-bearing securities, commodities and energy products.

Our trading and data solutions are utilized by exchanges, alternative-trading venues, banks and securities brokers with marketplace offerings of their own. In the post-trade stage, we offer integrated systems solutions for clearing (risk management) and settlement (settlement and delivery) of both cash equities and derivatives to clearing organizations around the world.

Nasdaq's market technology is utilized by, among others, the Australian Securities Exchange, or ASX Limited, ICAP, Bolsa de Valores de Colombia, Borsa Istanbul, Egyptian Exchange, Hong Kong Exchanges and Clearing Limited, SIX Swiss Exchange, Singapore Exchange, Tokyo Commodity Exchange, Japan Exchange Group, Bursa Malaysia and SBI Japannext.

A central part of many projects is facility management and systems integration. Through our integration services, we can assume responsibility for projects involving migration to a new system and the establishment of entirely new marketplaces. We also offer operation and support for the applications, systems platforms, networks and other components included in a turn-key information technology solution, as well as advisory services.

We also offer broker services through SMARTS. SMARTS is a managed service designed for brokers and other market participants to assist them in complying with market rules, regulations and internal market surveillance policies.

Finally, through BWise, we offer enterprise governance, risk management and compliance software and services to help companies track, measure and manage key organizational risks.

In addition to the four business segments described above, the areas described below are significant to an understanding of our business.

**Technology**

Technology plays a key role in ensuring the growth, reliability and regulation of financial markets. In 2014, we established a technology risk program to consider the resiliency of critical systems. This program is focused on identifying areas for improvement in systems and implementing changes and upgrades to technology and processes to minimize future risk. During 2015, we established additional programs focused on improving the security of our technology with an emphasis on employee awareness through training, targeted phishing campaigns, and new tool deployment for our securities operations team.

*Core Technology.* The foundation for Nasdaq's core technology is INET. The INET technology is used across our U.S. and European markets. INET is also a key building block of our Market Technology offerings, Genium INET and X-stream INET. Genium INET and X-stream INET both combine innovative functionality with a modular approach to manage change and create new advantages for existing and new customers.

We continuously improve our core technology with a focus on improving capacity, reliability, resiliency and market integrity .

*Data Centers* . Nasdaq utilizes data center facilities in key global regions to support our markets, technology services, disaster recovery capabilities and operations centers. In 2015, we expanded our facilities to include Chicago and we will continue to add new locations to support our growth and new services.

*Blockchain Initiatives* . In May 2015, we announced plans to leverage blockchain technology as part of an enterprise-wide initiative. As an initial application, we have been developing Nasdaq Linq, an NPM solution based on blockchain-enabled technology, that may be used to expand and enhance issuers' and investors' equity management capabilities. In November 2015, we also announced a project to explore the application of blockchain technology to proxy voting in Estonia.

**Intellectual Property**

We own or have licensed rights to trade names, trademarks, domain names and service marks that we use in conjunction with our operations and services. We have registered many of our most important trademarks in the U.S. and in foreign countries. For example, our primary "NASDAQ" mark is a registered trademark in the U.S. and in over 50 other countries worldwide.

To support our business objectives and benefit from our investments in research and development, we actively seek protection for our innovations by filing patent applications to protect inventions arising from investments in products, systems, software and services. We believe that our patents and patent applications are important for maintaining the competitive differentiation of our products, systems, software and services, enhancing our ability to access technology of third parties and maximizing our return on research and development investments.

Over time, we have accumulated a robust portfolio of issued patents in the U.S., Europe and in other parts of the world. We currently hold rights to patents relating to certain aspects of products, systems, software and services, but we primarily rely on the innovative skills, technical competence and marketing abilities of our personnel. Hence, no single patent is in itself essential to us as a whole or any of our principal business areas.

We also maintain copyright protection in our Nasdaq-branded materials.

**Competition**

***Market Services***

*Equity Derivative Trading and Clearing.* In derivatives trading and clearing, competition comes in the form of trading and clearing that takes place OTC, usually through banks and brokerage firms, or through trading and clearing competition with other exchanges.

Our principal competitors for trading options in the U.S. include the Chicago Board Options Exchange, Inc., or CBOE, the International Securities Exchange Holdings, Inc., or ISE, NYSE ARCA, NYSE Amex, BATS Options, EDGE Options, The MIAX Options Exchange, C2 Options Exchange, the BOX Options Exchange Group, LLC and ISE Gemini. ISE and Miami International Holdings, Inc. each announced the launch of new options exchanges expected in 2016. Competition is focused on providing market participants with greater functionality, trading system stability, customer service, efficient pricing and speed of execution. The intense competition for exchange traded options results in the need to continuously review our technology offerings and pricing.

Exchange based competition for trading in European derivatives continues to occur mainly where there is competition in trading for the underlying equities and our primary competitors for options on European equities are EUREX Group ICE Futures Europe, Turquoise and, to a limited extent, the U.S. options exchanges. Such competition is limited to options on a small number of equity securities although these securities tend to be among the most active. In addition to exchange-based competition in derivatives, we continue to face competition from OTC derivative markets.

The competitive significance in Europe of varied alternative trading venues is likely to increase in the future, with the regulatory environment in Europe becoming more favorable to alternative trading venues as a result of the reforms required by the update to Markets in Financial Instruments Directive, or MiFID II, and a broader effort to increase competition in financial services. As trading in Europe evolves, competition for trading volumes in derivatives will likely increase. Both current and potential competition require us to constantly reassess our pricing and product offerings in order to remain competitive.

Regulations such as MiFID II, the Markets in Financial Instruments Regulation, or MiFIR, and the EMIR are altering competition in the clearing business in Europe. MiFID II and MiFIR will both affect our trading business as they are implemented over the next several years. The EMIR requirements are changing the way we structure and operate our clearing business today as implementation is ongoing and will continue into 2015.

*Cash Equity Trading.* The cash equity securities markets are intensely competitive. As a result of the conditions in the U.S. and Europe, we experience competition in our core trading activities such as execution services, quoting and trading capabilities, and reporting services. We compete in the U.S. against ICE, BATS Global Markets, Inc., regional exchanges and ATSs. In addition, other competitors have recently applied to register as a national securities exchange or resumed trading. Competition also comes from broker-dealers and from OTC trading in the U.S. and elsewhere. The U.S. marketplace continues to evolve as less heavily regulated broker-owned trading systems and ATSs, known collectively as dark pools, expand in number and activity. While many of the new entrants may have limited liquidity, some may attract significant levels of cash equity order volume through aggressive pricing, interconnections with other systems, and volume originating with broker-dealer owners and investors.

In Europe, our major competitors include BATS Chi-X Europe, Euronext, Deutsche Börse AG, the London Stock Exchange Group plc, or LSE, and multilateral trading facilities, or MTFs, such as Turquoise. The European landscape is continuing to adapt to the proposals in MiFID II. Throughout Europe, new MTFs have been created with the most prominent MTFs based in the United Kingdom and attracting a significant share of electronically matched volume. MTFs continue to grow their business in shares listed on our Nordic exchanges. Electronic trading systems interested in pursuing block business also remain active in Europe. While the state of competition in Europe remains evolutionary, the level of competition faced by incumbent national exchanges remains intense.

*Fixed Income, Currency and Commodities Trading and Clearing.* Today, many U.S. fixed-income instruments enjoy some form of electronic trading, but the move to electronify the fixed income space is still developing with some products still trading almost exclusively among voice brokers. Competition in the fixed income space includes the voice broker community and other new electronic platform operators. Currently, other competitors in electronic U.S. Treasury benchmark trading are ICAP's BrokerTec platform and Dealerweb. For new entrants into the market, building a U.S. Treasury benchmark trading business is complex, time-consuming and expensive. However, the current level of competition is significant and the operating environment remains challenging.

***Listing Services***

Our primary competitor for larger company listings in the U.S. is NYSE. The NASDAQ Stock Market also competes with NYSE MKT for listing of smaller companies. In addition, BATS competes for ETP listings and has announced an intention to list corporate equities, and currently another potential competitor has an exchange license application pending with the SEC. The NASDAQ Stock Market also competes with local and international markets for listings by both U.S. and foreign companies that choose to list outside of their home country. For example, we compete for listings with exchanges in Europe and Asia, such as LSE and the Hong Kong Stock Exchange.

The listings business in Europe is characterized by the large number of exchanges competing for new or secondary listings. Each country has one or more national exchanges which are often the first choice of companies in each respective country. For those considering an alternative, the European exchanges that attract the most overseas listings are LSE, Euronext, Deutsche Börse and the Nasdaq Nordic exchanges. In addition to the larger exchanges, companies are able to consider smaller markets and quoting facilities.

***Information Services***

*Data Products.* Our Data Products business in the U.S. includes both proprietary and consolidated data products. Proprietary data products are made up exclusively of data derived from each exchange's systems. Consolidated data products are distributed by SEC-mandated consolidators (one for NASDAQ-listed stocks and another for NYSE and other-listed stocks) that share the revenue among the exchanges that contribute data. In Europe, all data products are proprietary as there is no official data consolidator. Competition in the data business is intense and is influenced by rapidly changing technology and the creation of new product and service offerings.

The sale of our proprietary data products in both the U.S. and Europe is under competitive threat from alternative exchanges and trading venues that offer similar products. Our data business competes with other exchanges and third party vendors in providing information to market participants. Some of our major competitors for proprietary data products are ICE, BATS, ICAP, Standard & Poor's, or S&P, and Dow Jones.

The consolidated data business is under competitive pressure from other securities exchanges that trade NASDAQ-listed securities. Current SEC regulations permit these regional exchanges and FINRA's Alternative Display Facility to quote and trade NASDAQ-listed securities. The UTP Plan entitles these exchanges, FINRA's Alternative Display Facility, and the trade reporting facilities to a share of UTP Plan tape fees, based on the formula required by Regulation NMS that takes into account both trading and quoting activity. In addition, The NASDAQ Stock Market similarly competes for the tape fees from the sale of information on NYSE, NYSE MKT, and BATS-listed securities for those respective tape plans. In recent years, the operations of the consolidated tape plans have received heightened scrutiny from the industry, regulators and policy makers, including calls for competing tape plans.

*Index Licensing and Services.* Our Index Licensing and Services business faces competition from indexes created by a large number of providers. For example, there are a number of indexes that aim to track the technology sector and thereby compete with the NASDAQ-100 Index and the NASDAQ Composite Index. We face competition from investment banks, dedicated index providers, markets and other product developers in designing products that meet investor needs.

***Technology Solutions***

*Corporate Solutions.* The landscape of corporate solutions competitors is varied and highly fragmented. In the investor relations sector, there are many regional competitors with few global providers. However, other exchanges have recently begun to partner or buy assets in order to provide investor relations services to customers alongside their core listing services. The competitive landscape for public relations services includes large providers of traditional wire services, full-service providers that span distribution and targeting, monitoring and analytics, and a large number of regional or niche providers. In multimedia solutions, competition is highly fragmented and served by a number of firms who address various needs for enterprise buyers and typically offer managed or self-service capabilities. In governance, the competitive landscape is bifurcated with few competitors who serve corporate boards and deal

teams. We believe customers are increasingly looking for single source providers who can address a broad range of needs within a single platform.

*Market Technology.* The traditional model, where each exchange or exchange-related business developed its own technology internally sometimes aided by consultants, is evolving as many operators recognize the cost savings made possible by buying technology. Two types of competitors are emerging: other exchanges providing solutions, including ICE and LSE, and pure technology providers focused on the exchange industry. These organizations offer a range of off-the-shelf technology including trading, clearing, market surveillance, settlement, depository and information dissemination. They also offer customization and operation expertise. In the market for governance, risk and compliance solutions, there is a wide range of providers addressing the market. Often, solutions are part of larger suites, such as those related to information technology management or general business management. The market needs are evolving rapidly, which makes continuous investment a necessity to stay relevant.

**Regulation**

We are subject to extensive regulation in the U.S. and Europe.

***U.S. Regulation***

U.S. federal securities laws establish a system of cooperative regulation of securities markets, market participants and listed companies. Self-regulatory organizations, or SROs, conduct the day-to-day administration and regulation of the nation's securities markets under the close supervision of, and subject to extensive regulation, oversight and enforcement by, the SEC. SROs, such as national securities exchanges, are registered with the SEC.

This regulatory framework applies to our U.S. business in the following ways:

- regulation of our registered national securities exchanges; and
- regulation of our U.S. broker-dealer subsidiaries.

The rules and regulations that apply to our business are focused primarily on safeguarding the integrity of the securities markets and of market participants and investors generally. Accordingly, our board of directors, officers, and employees must give due regard to the preservation of the independence of the self-regulatory function of each of our SROs and to their obligations to investors and the general public, and may not take any actions that would interfere with the effectuation of decisions by the boards of directors of any of our SROs relating to their regulatory functions, or that would interfere with the ability of any of our SROs to carry out their responsibilities under the Securities Exchange Act of 1934, or Exchange Act. Although the rules and regulations that apply to our business are not focused on the protection of our stockholders, we believe that regulation improves the quality of exchanges and, therefore, our company. U.S. federal securities laws and the rules that govern our operations are subject to frequent change.

*National Securities Exchanges.* SROs in the securities industry are an essential component of the regulatory scheme of the Exchange Act for providing fair and orderly markets and protecting investors. The Exchange Act and the rules thereunder, as well as each SRO's own rules, impose on the SROs many regulatory and operational responsibilities, including the day-to-day responsibilities for market and broker-dealer oversight. Before it may permit the registration of a national securities exchange as an SRO, the SEC must determine, among other things, that the exchange has a set of rules that is consistent with the requirements of the Exchange Act. Moreover , an SRO is responsible for enforcing compliance by its members, and persons associated with its members, with the provisions of the Exchange Act, the rules and regulations thereunder, and the rules of the SRO, including rules and regulations governing the business conduct of its members.

Nasdaq currently operates three cash equity and three options markets in the U.S. We operate The NASDAQ Stock Market and The NASDAQ Options Market pursuant to The NASDAQ Stock Market's SRO license; Nasdaq BX and Nasdaq BX Options pursuant to Nasdaq BX's SRO license; and Nasdaq PSX and the Nasdaq PHLX options market pursuant to Nasdaq PHLX's SRO license. As SROs, each entity has separate rules pertaining to its broker-dealer members and listed companies. Broker-dealers that choose to become members of The NASDAQ Stock Market, Nasdaq PHLX, and/or Nasdaq BX are subject to the rules of those exchanges.

All of our U.S. national securities exchanges are subject to SEC oversight, as prescribed by the Exchange Act, including periodic and special examinations by the SEC. Our exchanges also are potentially subject to regulatory or legal action by the SEC or other interested parties at any time in connection with alleged regulatory violations. We also are subject to Section 17 of the Exchange Act, which imposes record-keeping requirements, including the requirement to make records available to the SEC for examination. We have been subject to a number of routine reviews and inspections by the SEC or external auditors in the ordinary course, and we have been and may in the future be subject to SEC enforcement proceedings. To the extent such actions or reviews and inspections result in regulatory or other changes, we may be required to modify the manner in which we conduct our business, which may adversely affect our business.

Section 19 of the Exchange Act provides that our exchanges must submit to the SEC proposed changes to any of the SROs' rules, practices and procedures, including revisions to provisions of our certificate of incorporation and by-laws that constitute SRO rules. The SEC will typically publish such proposed changes for public comment, following which the SEC may approve or disapprove the proposal, as it deems appropriate. SEC approval requires a finding by the SEC that the proposal is consistent with the requirements of the Exchange Act and the rules and regulations thereunder. Pursuant to the requirements of the Exchange Act, our exchanges must file with the SEC, among other things, all proposals to change their pricing structure.

Pursuant to regulatory services agreements between FINRA and our SROs, FINRA provides certain regulatory services to the markets operated or regulated by The NASDAQ Stock Market, Nasdaq PHLX and Nasdaq BX, including the regulation of trading activity and surveillance and investigative functions. Nevertheless, we have a direct regulatory role in conducting certain real-time market monitoring, certain equity surveillance not involving cross-market activity, most options surveillance, most rulemaking and some membership functions through our MarketWatch department. We refer suspicious trading behavior discovered by our regulatory staff to FINRA for further investigation. Our SROs retain ultimate regulatory responsibility for all regulatory activities performed under regulatory agreements by FINRA, and for fulfilling all regulatory obligations for which FINRA does not have responsibility under the regulatory services agreements.

In addition to its other SRO responsibilities, The NASDAQ Stock Market, as a listing market, also is responsible for overseeing each listed company's compliance with NASDAQ's financial and corporate governance standards. Our Listing Qualifications department evaluates applications submitted by issuers interested in listing their securities on NASDAQ to determine whether the quantitative and qualitative listing standards have been satisfied. Once securities are listed, the Listing Qualifications department monitors each issuer's on-going compliance with NASDAQ's continued listing standards.

*Regulatory Audit.* Prior to our acquisition of Boston Stock Exchange, or BSE, BSE was issued an administrative order by the SEC in September 2007. Pursuant to the order, BSE agreed to comply with certain undertakings, one of which was to retain a third-party auditor to conduct a comprehensive audit of BSE's surveillance, examination, investigation and disciplinary programs. BSE also undertook to include the audit opinion in its annual report. Since neither BSE nor its successor entity NASDAQ BX prepares an annual report, the report of the regulatory auditor, Crowley Labovitz Consulting LLC, which was dated March 24, 2015, is included below.

"NASDAQ OMX the Exchange, Inc. (the "Exchange") retained Crowley Labovitz Consulting LLC ("CLC") as a third - party auditor to fulfill an undertaking with the Securities and Exchange Commission (the "Commission"), pursuant to an administrative order (the "Order") originally issued against the Boston Stock Exchange ("BSE") in September 2007. The Order requires the third - party auditor to provide an assessment of the Exchange's surveillance, examination, investigation and disciplinary programs. We are writing at this time to provide our audit opinion as required by the Order.

As noted above, the Order was originally issued against the BSE. The Order describes violations of customer priority rules by specialist participant firms on the BSE trading floor between 1999 and 2004 on the now- - defunct BEACON trading system prior to The NASDAQ OMX Group, Inc.'s 2008 acquisition of the Exchange.

CLC conducted the second of two third - party comprehensive audits of the surveillance, investigation, examination and disciplinary programs of the Exchange, as required by the Order. The third - party auditor is also required to evaluate: the adequacy of resources (including staffing and compensation) that the Exchange has devoted to its surveillance, investigation, examination and disciplinary programs; the adequacy of the Exchange's rules in place to prevent and deter unlawful trading practices; whether the Exchange's practices are in compliance with (i) its policies and procedures, (ii) any outstanding commitments made by the Exchange in relation to written recommendations made by the Commission's Office of Compliance Inspections and Examinations ("OCIE") or Division of Trading and Markets ("Trading and Markets") concerning trading surveillance, and (iii) any undertakings contained in the Order; and the Exchange's live testing processes of its automated surveillance systems to analyze the effectiveness of such surveillance systems.

We conducted fieldwork for the audit between July 2014 and February 2015 and today issued our confidential report on the audit to the Exchange's Board of Directors and to the Directors of OCIE and Trading and Markets, and to the Director of the Commission's Boston Regional Office (collectively, the "Commission Officials"). This audit opinion is also being provided to the Commission Officials today.

Based on the scope of our audit and considerations of the assessments set forth in this Report, and such other matters as we have deemed appropriate, we have concluded that during the audit period, notwithstanding certain observations and recommendations for

improvement that we have identified, including those set forth in this Report, (a) the Exchange's policies and procedures were reasonably designed and effective to ensure compliance with, and to detect and deter violations of the

applicable federal securities laws and Exchange rules relating to trading on the Exchange; and (b) the Exchange was in compliance with (i) its policies and procedures in these areas, (ii) any outstanding commitments by the Exchange in connection with written recommendations made by OCIE or Trading and Markets concerning trading surveillance, and (iii) any undertakings contained in the Order. In addition, we concluded that, during the audit period, (a) the Exchange devoted adequate resources (including staffing and compensation) to its surveillance, investigation, examination and disciplinary programs; (b) the Exchange's rules in place were adequate to prevent and deter unlawful trading practices; (c) the Exchange's practices were in compliance with (i) its policies and procedures in these areas, (ii) any outstanding commitments by the Exchange in connection with written recommendations made by OCIE or Trading and Markets concerning trading surveillance, and (iii) any undertakings contained in the Order; and (d) the Exchange's live testing processes of its automated surveillance systems to analyze the effectiveness of such surveillance systems.

We note that the continued reasonableness of design and effectiveness of the Exchange's policies and procedures in future periods is subject to the risk that such policies and procedures may become inadequate or ineffective because of changes in business or regulatory conditions or that the degree of compliance with such policies and procedures may deteriorate. That said, we also note that, because of its inherent limitations, no regulatory program or audit can provide absolute assurance that violations of federal securities laws and Exchange rules relating to trading will not occur or go undetected.

The conclusions expressed in this letter are as of the date hereof. We assume no obligation to update, revise, or supplement this letter, nor to communicate further with or advise you with respect to a matter covered herein or any change, development, occurrence, circumstance, or condition with respect of any matter. This letter is furnished solely to you in connection with the matters covered herein. This letter may not be used, relied upon, disclosed , circulated, published, communicated, made available, quoted or referred to, by or to any other person, for any other purpose, or in connection with any other agreement, document, transaction or matter without the prior written consent of the undersigned."

*Broker-dealer regulation.* Nasdaq's broker-dealer subsidiaries are subject to regulation by the SEC, the SROs and the various state securities regulators. Nasdaq Execution Services, LLC currently operates as our routing broker for sending orders from Nasdaq's U.S. cash equity and options exchanges to other venues for execution. Execution Access LLC operates as the broker-dealer for our fixed income business, including eSpeed's electronic trading platform for U.S. Treasuries. NPM Securities, LLC operates an ATS involving primary and secondary transactions in unregistered securities (i.e., securities not listed on a registered securities exchange and not registered under Section 12 of the Exchange Act), including acting as the buyer's and seller's agent to facilitate private placement transactions on the ATS. SMTX, LLC operates as the broker-dealer for SecondMarket. Finally, NASDAQ Options Services, LLC, which previously served as the routing broker for our U.S. options exchanges, became non-operational and terminated its exchange and clearinghouse memberships in March 2014, although it is still subject to certain regulatory requirements.

Nasdaq Execution Services is registered as a broker-dealer with the SEC and in all 50 states, the District of Columbia and Puerto Rico. It is also a member of The NASDAQ Stock Market, Nasdaq BX, Nasdaq PHLX, BATS-Y Exchange, BATS-Z Exchange, Chicago Stock Exchange, EDGA Exchange, EDGX Exchange, FINRA, National Stock Exchange, NYSE, NYSE MKT and NYSE Arca.

Execution Access is registered as a broker-dealer with the SEC and in 22 states and the U.S. Virgin Islands based on business requirements. Additionally, Execution Access is a FINRA member organization. Execution Access operates a transparent central limit order book known as eSpeed to trade in U.S. Treasury securities. Execution Access is an introducing broker for trades matched on the eSpeed trading platform. The trades, once matched, are submitted to our fully disclosed clearing broker for clearance and settlement.

NPM Securities is registered as a broker-dealer with the SEC and in all 50 states, the District of Columbia, Puerto Rico and the U.S. Virgin Islands. Additionally, NPM Securities is a FINRA member organization. NPM Securities does not hold funds or securities. Funds may be delivered by the buyer to the issuer directly or wired into an escrow account, depending on the requirements of the offering. The issuer or its transfer agent (or other corporate recordkeeper) will provide the buyer with a stock certificate in either physical or book entry form.

SMTX is registered as a broker-dealer with the SEC and in 48 states and the District of Columbia based on business requirements. Additionally, SMTX is a FINRA member organization. SecondMarket provides the technological tools and website hosting on the SecondMarket platform that issuers may use for administrative purposes, document execution, handling and storage, and to facilitate communications with participants of tender offers and merger and acquisition transactions. SMTX's role is to act as information agent with regard to onboarding potential participants, a depositary agent to receive tender of securities and transaction closing funds, and a paying agent to wire funds to participants at the closing.

The SEC, FINRA and the exchanges adopt rules and examine broker-dealers and require strict compliance with their rules and regulations. The SEC, SROs and state securities commissions may conduct administrative proceedings which can result in censures, fines, the issuance of cease-and-desist orders or the suspension or expulsion of a broker-dealer, its officers or employees. The SEC and state regulators may also institute proceedings against broker-dealers seeking an injunction or other sanction. The SEC and SRO rules

cover many aspects of a broker-dealer's business, including capital structure and withdrawals, sales methods, trade practices among broker-dealers, use and safekeeping of customers' funds and securities, record-keeping, the financing of customers' purchases, broker-dealer and employee registration and the conduct of directors, officers and employees. All broker-dealers have an SRO that is assigned by the SEC as the broker-dealer's designated examining authority, or DEA. The DEA is responsible for examining a broker-dealer for compliance with the SEC's financial responsibility rules. FINRA is the current DEA for Nasdaq Execution Services , Execution Access, NPM Securities and SMTX.

As registered broker-dealer subsidiaries, Nasdaq Execution Services, Execution Access, NPM Securities and SMTX are subject to regulatory requirements intended to ensure their general financial soundness and liquidity, which require that they comply with certain minimum capital requirements. The SEC and FINRA impose rules that require notification when net capital falls below certain predefined criteria, dictate the ratio of debt to equity in the regulatory capital composition of a broker-dealer and constrain the ability of a broker-dealer to expand its business under certain circumstances. Additionally, the SEC's Uniform Net Capital Rule and FINRA rules impose certain requirements that may have the effect of prohibiting a broker-dealer from distributing or withdrawing capital and requiring prior notice to the SEC and FINRA for certain withdrawals of capital.

As of December 31, 2015, Nasdaq Execution Services, Execution Access, NPM Securities and SMTX were in compliance with all of the applicable capital requirements.

*Regulatory contractual relationships with FINRA .* The NASDAQ Stock Market, Nasdaq PHLX and Nasdaq BX have signed a series of regulatory service agreements covering the services FINRA provides to the respective SROs. Under these agreements, FINRA personnel act as our agents in performing the regulatory functions outlined above, and FINRA bills us a fee for these services. These agreements have enabled us to reduce our headcount while ensuring that the markets for which we are responsible are properly regulated. However, our SROs retain ultimate regulatory responsibility for all regulatory activities performed under these agreements by FINRA.

Exchange Act Rule 17d-2 permits SROs to enter into agreements, commonly called Rule 17d-2 agreements, approved by the SEC with respect to enforcement of common rules relating to common members. Our SROs have entered into several such agreements under which FINRA assumes regulatory responsibility for specifics covered by the agreement, including:

- agreements with FINRA covering the enforcement of common rules, the majority of which relate to the regulation of The NASDAQ Stock Market, Nasdaq BX and the members of these exchanges;
- joint industry agreements with FINRA covering responsibility for enforcement of insider trading rules;
- joint industry agreement with FINRA covering enforcement of rules related to cash equity sales practices and certain other non-market related rules; and
- joint industry agreement covering enforcement of rules related to options sales practices.

*Regulation NMS and Options Intermarket Linkage Plan.* We are subject to Regulation NMS for our cash equity markets, and our options markets have joined the Options Intermarket Linkage Plan. These are designed to facilitate the routing of orders among exchanges to create a national market system as mandated by the Exchange Act. One of the principal purposes of a national market system is to assure that brokers may execute investors' orders at the best market price. Both Regulation NMS and the Options Intermarket Linkage Plan require that exchanges avoid trade-throughs, locking or crossing of markets and provide market participants with electronic access to the best prices among the markets for the applicable cash equity or options order.

In addition, Regulation NMS requires that every national securities exchange on which an NMS stock is traded and every national securities association act jointly pursuant to one or more national market system plans to disseminate consolidated information, including a national best bid and national best offer, on quotations for transactions in NMS stocks, and that such plan or plans provide for the dissemination of all consolidated information for an individual NMS stock through a single plan processor.

The UTP Plan was filed with and approved by the SEC as a national market system plan in accordance with the Exchange Act and Regulation NMS to provide for the collection, consolidation and dissemination of such information for NASDAQ-listed securities. NASDAQ serves as the processor for the UTP Plan pursuant to a contract that was extended for a five-year term beginning in October 2015. NASDAQ also serves as the administrator for the UTP Plan . As the processor , NASDAQ performs and discharges regulatory functions and responsibilities that are necessary for the members of the UTP Plan to discharge the regulatory functions related to the operation of a national market system that have been delegated to them under the Exchange Act and Regulation NMS. To fulfill its obligations as the processor, NASDAQ has designed, implemented, maintained, and operated a data processing and communications system, hardware, and software and communications infrastructure to provide processing for the UTP Plan. As the administrator, NASDAQ manages the distribution of market data, the collection of the resulting market data revenue, and the dissemination of that revenue to plan members.

*Regulation SCI.* Effective as of November 20 15 , Regulation Systems Compliance and Integrity, or Regulation SCI, is a set of rules designed to strengthen the technology infrastructure of the U.S. securities markets. Regulation SCI applies to national securities

exchanges, operators of certain ATSs, market data information providers and clearing agencies, subjecting these entities to extensive new compliance obligations, with the goals of reducing the occurrence of technical issues that disrupt the securities markets and improving recovery time when disruptions occur. We implemented an inter-disciplinary program to ensure compliance with Regulation SCI. New Regulation SCI policies and procedures were created, internal policies and procedures were updated, and an information technology governance program was rolled out to ensure compliance.

*CFTC Regulation.* We also operate NFX , a designated contract market under the Commodity Exchange Act that is subject to regulatory oversight by the U.S. Commodity Futures Trading Commission, or CFTC, an independent agency with the mandate to regulate commodity futures and options markets in the U.S.

The Dodd-Frank Wall Street Reform and Consumer Protection Act, or Dodd-Frank Act, also resulted in increased CFTC regulation of our use of certain regulated derivatives products, as well as the operations of some of our subsidiaries outside the U.S. and their customers.

***European Regulation***

Regulation of our markets in the European Union and European Economic Area focuses on issues relating to financial services, listing and trading of securities, clearing and market abuse. In mid-2012, EMIR, a regulation relating to CCP services and OTC derivatives transactions, was adopted. As a consequence of EMIR, Nasdaq Clearing, like other European CCPs, applied to reauthorize its CCP operations. Nasdaq Clearing was the first European CCP to be authorized as EMIR-compliant when the SFSA approved its application as a CCP under EMIR in 2014.

MiFID II and MiFIR were adopted in 2014. These regulations will primarily affect our European trading businesses as they are implemented over the next few years. Many of the provisions of MiFID II and MiFIR will be implemented through technical standards to be drafted by the European Securities and Markets Authority and approved by the European Commission. Implementation is ongoing and both MiFID II and MiFIR will apply to the European Union member states by early 2018. As the regulatory environment continues to change and related opportunities arise, we intend to continue product development, and ensure that the exchanges and clearinghouses that comprise Nasdaq Nordic and Nasdaq Baltic maintain favorable liquidity and offer efficient trading.

The entities that operate trading venues in the Nordic and Baltic countries are each subject to local regulations. In Sweden, general supervision of the Nasdaq Stockholm exchange is carried out by the SFSA, while Nasdaq Clearing's role as CCP in the clearing of derivatives is overseen by the SFSA and the Swedish central bank (Riksbanken). Additionally, as a function of the Swedish two-tier supervisory model, certain surveillance in relation to the exchange market is carried out by us, acting through our surveillance division.

Nasdaq Stockholm's exchange activities are regulated primarily by the Swedish Securities Markets Act 2007:528, or SSMA, which sets up basic requirements regarding the board of the exchange and its share capital, and which also outlines the conditions on which exchange licenses are issued. The SSMA also provides that any changes to the exchange's articles of association following initial registration must be approved by the SFSA. Nasdaq Clearing holds the license as a CCP under EMIR.

With respect to ongoing operations, the SSMA requires exchanges to conduct their activities in an honest, fair and professional manner, and in such a way as to maintain public confidence in the securities markets. When operating a regulated market, an exchange must apply the principles of free access (i.e., that each person which meets the requirements established by law and by the exchange may participate in trading), neutrality (i.e., that the exchange's rules for the regulated market are applied in a consistent manner to all those who participate in trading) and transparency (i.e., that the participants must be given speedy, simultaneous and correct information concerning trading and that the general public must be given the opportunity to access this information). Additionally, the exchange operator must identify and manage the risks that may arise in its operations, use secure technical systems and identify and handle the conflicts of interest that may arise between the exchange or its owners' interests and the interest in safeguarding effective risk management and secure technical systems. Similar requirements are set up by EMIR in relation to clearing operations.

The SSMA also contains the framework for both the SFSA's supervisory work in relation to exchanges and clearinghouses and the surveillance to be carried out by the exchanges themselves. The latter includes the requirement that an exchange should have "an independent surveillance function with sufficient resources and powers to meet the exchange's obligations." That requires the exchange to, among other things, supervise trading and price information, compliance with laws, regulations and good market practice, participant compliance with trading participation rules, financial instrument compliance with relevant listing rules and the extent to which issuers meet their obligation to submit regular financial information to relevant authorities.

The regulatory environment in the other Nordic and Baltic countries in which a Nasdaq entity has a trading venue is broadly similar to the regulatory environment in Sweden. Since 2005, there has been cooperation between the SFSA and the main supervisory authorities in Iceland, Norway, Denmark and Finland, which looks to safeguard effective and comprehensive supervision of the exchanges comprising Nasdaq Nordic and the systems operated by it, and to ensure a common supervisory approach.

Confidence in capital markets is paramount for trading to function properly. Nasdaq Nordic carries out market surveillance through an independent unit that is separate from the business operations. The surveillance work is organized into two functions: one for the listing of instruments and surveillance of companies (issuer surveillance) and one for surveillance of trading (trading surveillance). The real-time trading surveillance for the Finnish, Icelandic, Danish and Swedish markets has been centralized to Stockholm. In addition, there are special personnel who carry out surveillance activities at each of the three Baltic exchanges. In Denmark and Finland, decisions to list new companies are made by the president of the exchange, a duty delegated by the board of each exchange.

If there is suspicion that a listed company or member has acted in breach of exchange regulations, the matter is dealt with by the market regulation division. Serious breaches are considered by the respective disciplinary committee in Sweden and Finland. In Denmark, all matters are dealt with by the surveillance department. In Iceland, enforcement committees handle all breaches of exchange regulations, while disciplinary committees handle the determination of fines. Suspected insider trading is reported to the appropriate authorities in the respective country or countries.

**Employees**

As of December 31, 2015, Nasdaq had 3,824 employees, including staff employed at consolidated entities where we have a controlling financial interest.

**Nasdaq Website and Availability of SEC Filings**

We file periodic reports, proxy statements and other information with the SEC. The public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC (such as us). The address of that site is http://www.sec.gov.

Our website is www.business.nasdaq.com . Information on our website is not a part of this Form 10-K. We make available free of charge on our website, or provide a link to, our Forms 10-K, Forms 10-Q and Forms 8-K and any amendments to these documents, that are filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. To access these filings, go to Nasdaq's website and click on "Investor Relations," then under "Financial Information" click on "SEC Filings."

We use our website, www.business.nasdaq.com, as a means of disclosing material non-public information and for complying with disclosure obligations under Regulation FD.

**Item 1A . Risk Factors.**

*The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business. If any of the following risks actually occur, our business, financial condition, or operating results could be adversely affected.*

**Risks Relating to our Business**

***Economic conditions and market factors, which are beyond our control, may adversely affect our business and financial condition.***

Our business performance is impacted by a number of factors, including general economic conditions in both the U.S. and Europe, market volatility and other factors that are generally beyond our control. To the extent that global or national economic conditions weaken, our business is likely to be negatively impacted. Adverse market conditions could reduce customer demand for our services and the ability of our customers, lenders and other counterparties to meet their obligations to us. Poor economic conditions may result in a decline in trading volume, deterioration of the economic welfare of our listed companies and a reduction in the demand for our products, including our data, index, corporate solutions and market technology products. Trading volume is driven primarily by general market conditions and declines in trading volume may affect our market share and impact our pricing. In addition, our Market Services businesses receive revenues from a relatively small number of customers concentrated in the financial industry, so any event that impacts one or more customers or the financial industry in general could impact our revenues.

The number of listings on our markets is primarily influenced by factors such as investor demand, the global economy, available sources of financing, and tax and regulatory policies. Adverse conditions may jeopardize the ability of our listed companies to comply with the continued listing requirements of our exchanges.

Data products revenues also may be significantly affected by global economic conditions. Professional subscriptions to our data products are at risk if staff reductions occur in financial services companies, which could result in significant reductions in our professional user revenue. In addition, adverse market conditions may cause reductions in the number of non-professional investors with investments in the market.

A reduction in trading volumes, market share of trading, the number of our listed companies, or demand for data products or technology products due to economic conditions or other market factors could adversely affect our business, financial condition and operating results.

***Our industry is highly competitive.***

We face intense competition from other exchanges and markets for market share of trading activity and listings. In addition, our data products, index licensing, corporate solutions and market technology businesses face significant competition from other market participants. This competition includes both product and price competition. Increased competition may result in a decline in our share of trading activity, listings and demand for the products we offer, thereby adversely affecting our operating results.

The liberalization and globalization of world markets has resulted in greater mobility of capital, greater international participation in local markets and more competition. As a result, both in the U.S. and in other countries, the competition among exchanges and other execution venues has become more intense. In the last several years, many marketplaces in both Europe and the U.S. have demutualized to provide greater flexibility for future growth. The securities industry also has experienced consolidation, creating a more intense competitive environment. Regulatory changes, such as MiFID, also have facilitated the entry of new participants in the EU that compete with our European markets. The regulatory environment, both in the U.S. and in Europe, is structured to maintain this environment of intense competition. In addition, a high proportion of business in the securities markets is becoming concentrated in a smaller number of institutions and our revenue may therefore become concentrated in a smaller number of customers.

We also compete globally with other regulated exchanges and markets, ATSs, MTFs and other traditional and non-traditional execution venues. Some of these competitors also are our customers. Competitors may develop market trading platforms that are more competitive than ours. Competitors may enter into strategic partnerships, mergers or acquisitions that could make their trading, listings, clearing, data or technology businesses more competitive than ours.

If we are unable to compete successfully in this environment, our business, financial condition and operating results will be adversely affected.

***Price competition has affected and could continue to affect our business.***

We face intense price competition in all areas of our business. In particular, the trading industry is characterized by intense price competition. We have in the past lowered prices, and in the U.S., increased rebates for trade executions to attempt to gain or maintain market share. These strategies have not always been successful and have at times hurt operating performance. Additionally, we have also been, and may once again be, required to adjust pricing to respond to actions by competitors, which could adversely impact operating results. We are also subject to potential price competition from new competitors and from new and existing competitors. We also compete with respect to the pricing of data products and with respect to products for pre-trade book data and for post-trade last sale data. In the future, our competitors may offer rebates for quotes and trades on their systems. In addition, our listing, index licensing and technology solutions pricing is subject to competitive pressures. If we are unable to compete successfully in respect to the pricing of our services and products, our business, financial condition and operating results may be adversely affected.

***System limitations or failures could harm our business.***

Our businesses depend on the integrity and performance of the technology, computer and communications systems supporting them. If our systems cannot expand to cope with increased demand or otherwise fail to perform, we could experience unanticipated disruptions in service, slower response times and delays in the introduction of new products and services. These consequences could result in trading outages, lower trading volumes, financial losses, decreased customer service and satisfaction and regulatory sanctions. Our markets have experienced systems failures and delays in the past and could experience future systems failures and delays.

Although we currently maintain and expect to maintain multiple computer facilities that are designed to provide redundancy and back-up to reduce the risk of system disruptions and have facilities in place that are expected to maintain service during a system disruption, such systems and facilities may prove inadequate. If trading volumes increase unexpectedly or other unanticipated events occur, we may need to expand and upgrade our technology, transaction processing systems and network infrastructure. We do not know whether we will be able to accurately project the rate, timing or cost of any increases, or expand and upgrade our systems and infrastructure to accommodate any increases in a timely manner.

While we have programs in place to identify and minimize our exposure to vulnerabilities and work in collaboration with the technology industry to share corrective measures with our business partners, we cannot guarantee that such events will not occur in the future. Any system issue that causes an interruption in services, decreases the responsiveness of our services or otherwise affects our services could impair our reputation, damage our brand name and negatively impact our business, financial condition and operating results.

***We must continue to introduce new products, initiatives and enhancements to maintain our competitive position .***

We intend to launch new products and initiatives and continue to explore and pursue opportunities to strengthen our business and grow our company. We may spend substantial time and money developing new products and initiatives. If these products and initiatives are not successful, we may not be able to offset their costs, which could have an adverse effect on our business, financial condition and operating results.

In our technology operations, we have invested substantial amounts in the development of system platforms and in the rollout of our platforms. Although investments are carefully planned, there can be no assurance that the demand for such platforms will justify the related investments and that the future levels of transactions executed on these platforms will be sufficient to generate an acceptable return on such investments. If we fail to generate adequate revenue from planned system platforms, or if we fail to do so within the envisioned timeframe, it could have an adverse effect on our results of operations and financial condition. In addition, clients may delay purchases in anticipation of new products or enhancements.

***A decline in trading and clearing volume and market share will decrease our trading and clearing revenues.***

Trading and clearing volumes are directly affected by economic, political and market conditions, broad trends in business and finance, unforeseen market closures or other disruptions in trading, the level and volatility of interest rates, inflation, changes in price levels of securities and the overall level of investor confidence. In recent years, trading and clearing volumes across our markets have fluctuated significantly depending on market conditions and other factors beyond our control. Current initiatives being considered by regulators and governments could have a material adverse effect on overall trading and clearing volumes. Because a significant percentage of our revenues is tied directly to the volume of securities traded and cleared on our markets, it is likely that a general decline in trading and clearing volumes would lower revenues and may adversely affect our operating results if we are unable to offset falling volumes through pricing changes. Declines in trading and clearing volumes may also impact our market share or pricing structures and adversely affect our business and financial condition.

If our total market share in securities continues to decrease relative to our competitors, our venues may be viewed as less attractive sources of liquidity. If growth in overall trading volume of these securities does not offset continued declines in our market share, or if our exchanges are perceived to be less liquid, then our business, financial condition and operating results could be adversely affected.

Since some of our exchanges offer clearing services in addition to trading services, a decline in market share of trading could lead to a decline in clearing revenues. Declines in market share also could result in issuers viewing the value of a listing on our exchanges as less attractive, thereby adversely affecting our listing business. Finally, declines in market share of NASDAQ-listed securities could lower NASDAQ's share of tape pool revenues under the consolidated data plans, thereby reducing the revenues of our data products business.

***Our role in the global marketplace may place us at greater risk for a cyberattack or other security incidents.***

Our systems and operations are vulnerable to damage or interruption from security breaches, hacking, data theft, denial of service attacks, human error, natural disasters, power loss, fire, sabotage, terrorism, computer viruses, intentional acts of vandalism and similar events. Given our position in the global securities industry, we may be more likely than other companies to be a direct target, or an indirect casualty, of such events.

While we continue to employ resources to monitor our systems and protect our infrastructure, these measures may prove insufficient depending upon the attack or threat posed. Any system issue, whether as a result of an intentional breach or a natural disaster, could damage our reputation and cause us to lose customers, experience lower trading volume, incur significant liabilities or otherwise have a negative impact on our business, financial condition and operating results. Any system breach may go undetected for an extended period of time. We also could incur significant expense in addressing any of these problems and in addressing related data security and privacy concerns.

***The success of our business depends on our ability to keep up with rapid technological and other competitive changes affecting our industry. Specifically, we must complete development of, successfully implement and maintain electronic trading platforms that have the functionality, performance, capacity, reliability and speed required by our business and our regulators, as well as by our customers.***

The markets in which we compete are characterized by rapidly changing technology, evolving industry and regulatory standards, frequent enhancements to existing products and services, the adoption of new services and products and changing customer demands. We may not be able to keep up with rapid technological and other competitive changes affecting our industry. For example, we must continue to enhance our electronic trading platforms to remain competitive as well as to address our regulatory responsibilities, and our business will be negatively affected if our electronic trading platforms or the technology solutions we sell to our customers fail to function as expected. If we are unable to develop our electronic trading platforms to include other products and markets, or if our electronic trading platforms do not have the required functionality, performance, capacity, reliability and speed required by our business and our regulators, as well as by our customers, we may not be able to compete successfully. Further, our failure to anticipate or respond adequately to changes in technology and customer preferences, especially in our technology solution businesses, or any significant delays in product development efforts, could have a material adverse effect on our business, financial condition and operating results.

***Technology issues relating to our role as exclusive processor for NASDAQ-listed stocks could affect our business.***

On August 22, 2013, we experienced an outage in the exclusive processor system we maintain and operate on behalf of all exchanges that trade NASDAQ stocks that resulted in a market-wide trading halt lasting approximately three hours. Following this system outage, the SEC and others evaluated all infrastructure that is critical to the national market system, including the processor systems. Nasdaq, as technology provider to the UTP Operating Committee, proposed, received approval for, and implemented measures to enhance the resiliency of the existing processor system. Additionally, the UTP Operating Committee recently approved Nasdaq's proposal to transfer the processor technology from its current enhanced platform to Nasdaq's INET platform. The migration, which is scheduled for completion in late 2016, will further enhance the resiliency of the processor systems. If, despite these improvement measures, future outages occur or the processor systems fail to function properly while we are operating the systems, it could have an adverse effect on our business, reputation, financial condition or operating results.

***We may not be able to successfully integrate acquired businesses, which may result in an inability to realize the anticipated benefits of our acquisitions.***

We must rationalize, coordinate and integrate the operations of our acquired businesses. This process involves complex technological, operational and personnel-related challenges, which are time-consuming and expensive and may disrupt our business. The difficulties, costs and delays that could be encountered may include:

- difficulties, costs or complications in combining the companies' operations, including technology platforms, which could lead to us not achieving the synergies we anticipate;
- incompatibility of systems and operating methods;
- reliance on a deal partner for transition services, including billing services;
- inability to use capital assets efficiently to develop the business of the combined company;
- the difficulty of complying with government-imposed regulations in the U.S. and abroad, which may be conflicting;
- resolving possible inconsistencies in standards, controls, procedures and policies, business cultures and compensation structures;
- the diversion of management's attention from ongoing business concerns and other strategic opportunities;
- difficulties in operating acquired businesses in parallel with similar businesses that we operated previously;
- difficulties in operating businesses we have not operated before;
- difficulty of integrating multiple acquired businesses simultaneously;
- the retention of key employees and management;
- the implementation of disclosure controls, internal controls and financial reporting systems at non-U.S. subsidiaries to enable us to comply with U.S. generally accepted accounting principles, or U.S. GAAP, and U.S. securities laws and regulations, including the Sarbanes Oxley Act of 2002, required as a result of our status as a reporting company under the Exchange Act;
- the coordination of geographically separate organizations;
- the coordination and consolidation of ongoing and future research and development efforts;
- possible tax costs or inefficiencies associated with integrating the operations of a combined company;

- pre-tax restructuring and revenue investment costs;
- the retention of strategic partners and attracting new strategic partners; and
- negative impacts on employee morale and performance as a result of job changes and reassignments.

For these reasons, we may not achieve the anticipated financial and strategic benefits from our acquisitions and initiatives. Any actual cost savings and synergies may be lower than we expect and may take a longer time to achieve than we anticipate, and we may fail to realize the anticipated benefits of acquisitions.

***We will need to invest in our operations to maintain and grow our business and to integrate acquisitions, and we may need additional funds, which may not be readily available.***

We depend on the availability of adequate capital to maintain and develop our business. Although we believe that we can meet our current capital requirements from internally generated funds, cash on hand and available borrowings under our revolving credit facility, if the capital and credit markets experience volatility, access to capital or credit may not be available on terms acceptable to us or at all. Limited access to capital or credit in the future could have an impact on our ability to refinance debt, maintain our credit rating, meet our regulatory capital requirements, engage in strategic initiatives, make acquisitions or strategic investments in other companies or react to changing economic and business conditions. If we are unable to fund our capital or credit requirements, it could have an adverse effect on our business, financial condition and operating results.

In addition to our debt obligations, we will need to continue to invest in our operations for the foreseeable future to integrate acquired businesses and to fund new initiatives. If we do not achieve the expected operating results, we will need to reallocate our cash resources. This may include borrowing additional funds to service debt payments, which may impair our ability to make investments in our business or to integrate acquired businesses.

Should we need to raise funds through issuing additional equity, our equity holders will suffer dilution. Should we need to raise funds through incurring additional debt, we may become subject to covenants even more restrictive than those contained in our revolving credit facility, the indentures governing our notes and our other debt instruments. Furthermore, if adverse economic conditions occur, we could experience decreased revenues from our operations which could affect our ability to satisfy financial and other restrictive covenants to which we are subject under our existing indebtedness.

***We operate in a highly regulated industry and may be subject to censures, fines and enforcement proceedings if we fail to comply with regulatory obligations.***

We operate in a highly regulated industry and are subject to extensive regulation in the U.S. and Europe. The securities trading industry is subject to significant regulatory oversight and could be subject to increased governmental and public scrutiny in the future in response to global conditions and events. In the U.S., our markets and broker-dealer subsidiaries are regulated by the SEC, FINRA and/or CFTC and, in the Nordics, Baltics and U.K., our markets are subject to local and/or European Union regulation. As a result, our regulated markets are subject to audits, investigations, administrative proceedings and enforcement actions relating to compliance with applicable rules and regulations. Regulators have broad powers to impose fines, penalties or censure, issue cease-and-desist orders, prohibit operations, revoke licenses or registrations and impose other sanctions on our exchanges, broker-dealers and markets for violations of applicable requirements.

We became a party to several legal and regulatory proceedings in 2012 and 2013 relating to the Facebook IPO that occurred on May 18, 2012 . In 2013, the SEC completed an investigation into the Facebook matter and accepted our offer of settlement which included a monetary penalty and an agreement to implement certain measures aimed at preventing future violations of the Exchange Act and the rules and regulations promulgated thereunder. In the future, we could be subject to SEC or other regulatory investigations or enforcement proceedings that could result in substantial sanctions, including revocation of our operating licenses. Any such investigations or proceedings, whether successful or unsuccessful, could result in substantial costs, the diversion of resources, including management time, and potential harm to our reputation, which could have a material adverse effect on our business, results of operations or financial condition. In addition, our exchanges could be required to modify or restructure their regulatory functions in response to any changes in the regulatory environment, or they may be required to rely on third parties to perform regulatory and oversight functions, each of which may require us to incur substantial expenses and may harm our reputation if our regulatory services are deemed inadequate.

***The regulatory framework under which we operate and new regulatory requirements or new interpretations of existing regulatory requirements could require substantial time and resources for compliance, which could make it difficult and costly for us to operate our business.***

Under current U.S. federal securities laws, changes in the rules and operations of our securities markets, including our pricing structure, must be reviewed and in many cases explicitly approved by the SEC. The SEC may approve, disapprove, or recommend changes to proposals that we submit. In addition, the SEC may delay either the approval process or the initiation of the public comment process. Any delay in approving changes, or the altering of any proposed change, could have an adverse effect on our business, financial condition and operating results. We must compete not only with ATSs that are not subject to the same SEC

approval process but also with other exchanges that may have lower regulation and surveillance costs than us. There is a risk that trading will shift to exchanges that charge lower fees because, among other reasons, they spend significantly less on regulation.

In addition, our registered broker-dealer subsidiaries are subject to regulation by the SEC, FINRA and other SROs. These subsidiaries are subject to regulatory requirements intended to ensure their general financial soundness and liquidity, which require that they comply with certain minimum capital requirements. The SEC and FINRA impose rules that require notification when a broker-dealer's net capital falls below certain predefined criteria, dictate the ratio of debt to equity in the regulatory capital composition of a broker-dealer and constrain the ability of a broker-dealer to expand its business under certain circumstances. Additionally, the SEC's Uniform Net Capital Rule and FINRA rules impose certain requirements that may have the effect of prohibiting a broker-dealer from distributing or withdrawing capital and requiring prior notice to the SEC and FINRA for certain withdrawals of capital. Any failure to comply with these broker-dealer regulations could have a material adverse effect on the operation of our business, financial condition and operating results.

Our non-U.S. business is subject to regulatory oversight in all the countries in which we operate regulated businesses, such as exchanges, clearinghouses or central securities depositories. The countries in which we currently operate or share ownership in regulated businesses include Sweden, Finland, Denmark, Iceland, Estonia, Lithuania, Latvia, Norway, Armenia, the Netherlands and the United Kingdom. In all the aforementioned countries, we have received authorization from the relevant authorities to conduct our regulated business activities. The authorities may revoke this authorization if we do not suitably carry out our regulated business activities. The authorities are also entitled to request that we adopt measures in order to ensure that we continue to fulfill the authorities' requirements.

Furthermore, certain of our customers operate in a highly regulated industry. Regulatory authorities could impose regulatory changes that could impact the ability of our customers to use our exchanges. The loss of a significant number of customers or a reduction in trading activity on any of our exchanges as a result of such changes could have a material adverse effect on our business, financial condition and operating results.

***Regulatory changes and changes in market structure could have a material adverse effect on our business.***

Regulatory changes adopted by the SEC or other regulators of our markets, and regulatory changes that our markets may adopt in fulfillment of their regulatory obligations, could materially affect our business operations. In recent years, there has been increased regulatory and governmental focus on issues affecting the securities markets, including market structure and technological oversight. The SEC, FINRA and the national securities exchanges have introduced several initiatives to ensure the oversight, integrity and resilience of markets.

In 2015, the SEC created an Equity Market Structure Advisory Committee to consider and opine on market structure issues relevant to Nasdaq's three U.S. equities markets. Within the past year, the Advisory Committee held three meetings and discussed a wide range of issues, including order routing, best execution, access fees and maker-taker pricing, market data fees, and securities information processors. While these discussions may impact Nasdaq's business in the future, it is too early to determine what if any market structure changes the Advisory Committee will recommend, and which if any of those recommendations the Commission will propose, adopt and implement.

Future MiFID II and MiFIR rules could affect our operations in Europe. In addition, actions on any of the specific regulatory issues currently under review in the U.S. and Europe could have a material impact on our business. In the U.S., the CFTC and SEC also will continue to take actions to fully implement the Dodd-Frank Act, a comprehensive banking and financial services reform package.

While we support regulatory efforts to review and improve the structure, resilience and integrity of the markets, the adoption of these proposed regulatory changes and future reforms could impose significant costs and obligations on the operation of our exchanges and processor systems and have other impacts on our business.

***Regulatory changes or future court rulings may have an adverse impact on our revenue from proprietary data products.***

Regulatory and legal developments could reduce the amount of revenue that we earn from our proprietary data products. In the U.S., we generally are required to file with the SEC to establish or modify the fees that we charge for our data products. In recent years, certain industry groups have objected to the ability of exchanges to charge for certain data products. We have defeated two challenges in federal appeals court but an additional challenge is currently pending at the SEC. If the results of that challenge are detrimental to our U.S. exchanges' ability to charge for data products, there could be a negative impact on our revenues. We cannot predict whether, or in what form, any regulatory changes will be implemented, or their potential impact on our business. A determination by the SEC, for example, to link data fees to marginal costs, to take a more active role in the data rate-setting process, or to reduce the current levels of data fees could have an adverse effect on our data products revenues.

Our European exchanges currently offer data products to customers on a non-discriminatory and reasonable commercial basis. It is expected that the future MiFID II rules will result in a definition of the term "reasonable commercial basis." There is a risk that the final wording of this definition may influence the fees for European data products adversely. In addition any future actions by the

European Commission or European court decisions could affect our ability to offer data products in the same manner that we do today thereby causing an adverse effect on our data products revenues.

***Stagnation or decline in the IPO market could have an adverse effect on our revenues.***

The market for IPOs is dependent on the prosperity of companies and the availability of risk capital. Although the market for initial public offerings over the past couple of years was strong, stagnation or decline in the initial public offering market will impact the number of new listings on The NASDAQ Stock Market and the Nasdaq Nordic and Nasdaq Baltic exchanges, and thus our related revenues. We recognize revenue from new listings on The NASDAQ Stock Market on a straight-line basis over an estimated six-year service period. As a result, a stagnant market for IPOs could cause a decrease in deferred revenues for future years. Furthermore, as initial public offerings are typically actively traded following their offering date, a prolonged decrease in the number of initial public offerings could negatively impact the growth of our transactions revenues.

***Any reduction in our credit rating could increase the cost of our funding from the capital markets.***

Our long-term debt is currently rated investment grade by two of the major rating agencies. These rating agencies regularly evaluate us and their ratings of our long-term debt are based on a number of factors, including our financial strength as well as factors not entirely within our control, including conditions affecting the financial services industry generally. There can be no assurance that we will maintain our current ratings. Our failure to maintain those ratings could adversely affect the cost and other terms upon which we are able to obtain funding and increase our cost of capital. A reduction in credit ratings would also result in increases in the cost of our outstanding debt as the interest rate on the outstanding amounts under our revolving credit facility, our 5.25% senior notes due 2018, our 3.875% senior notes due 2021, and our 4.25% senior notes due 2024 fluctuates based on our credit ratings.

***Damage to our reputation or brand name could have a material adverse effect on our businesses.***

One of our competitive strengths is our strong reputation and brand name. Various issues may give rise to reputational risk, including issues relating to:

- our ability to maintain the security of our data and systems;
- the quality and reliability of our technology platforms and systems;
- the ability to fulfill our regulatory obligations;
- the ability to execute our business plan, key initiatives or new business ventures and the ability to keep up with changing customer demand;
- the representation of our business in the media;
- the accuracy of our financial statements and other financial and statistical information;
- the accuracy of our financial guidance or other information provided to our investors;
- the quality of our corporate governance structure;
- the quality of our products, including the reliability of our transaction-based business, the accuracy of the quote and trade information provided by our data products business and the accuracy of calculations used by our Global Index Group for indexes and unit investment trusts;
- the quality of our disclosure controls or internal controls over financial reporting, including any failures in supervision;
- extreme price volatility on our markets;
- any negative publicity surrounding our listed companies; and
- any misconduct, fraudulent activity or theft by our employees or other persons formerly or currently associated with us.

Damage to our reputation could cause some issuers not to list their securities on our exchanges, as well as reduce the trading volume on our exchanges or cause us to lose customers in our data products, index, corporate solutions or market technology businesses. This, in turn, may have a material adverse effect on our business, financial condition and operating results.

***We may be required to recognize impairments of our goodwill, intangible assets or other long-lived assets in the future.***

Our business acquisitions typically result in the recording of goodwill and intangible assets, and the recorded values of those assets may become impaired in the future. As of December 31, 2015, goodwill totaled approximately $5.4 billion and intangible assets, net of accumulated amortization, totaled approximately $2.0 billion. The determination of the value of such goodwill and intangible assets requires management to make estimates and assumptions that affect our consolidated financial statements.

We assess goodwill and intangible assets, as well as other long-lived assets, including equity and cost method investments, and property and equipment for impairment on an annual basis or more frequently if indicators of impairment arise. We estimate the fair value of such assets by assessing many factors, including historical performance, capital requirements and projected cash flows. Considerable management judgment is necessary to project future cash flows and evaluate the impact of expected operating and macroeconomic changes on these cash flows. The estimates and assumptions we use are consistent with our internal planning process. However, there are inherent uncertainties in these estimates.

As discussed in "Intangible Asset Impairment Charges," of Note 5, "Goodwill and Acquired Intangible Assets," to the consolidated financial statements , we recorded a n indefinite-lived intangible asset impairment charge of $119 million in 2015 . In addition, we recorded asset impairment charges of $49 million in 2014 and $14 million in 2013.

We may experience future events that may result in asset impairments. Future disruptions to our business, prolonged economic weakness or significant declines in operating results at any of our reporting units or businesses, may result in impairment charges to goodwill, intangible assets or other long-lived assets. A significant impairment charge in the future could have a material adverse effect on our operating results.

For additional discussion of our goodwill, indefinite-lived intangible assets and other long-lived assets, including related impairment, s ee "Goodwill and Related Impairment," "Indefinite-Lived Intangible Assets and Related Impairment," and "Other Long-Lived Assets and Related Impairment," of " Critical Accounting Policies and Estimates ," of Item 7. " Management's Discussion and Analysis of Financial Condition and Results o f Operations," and "Goodwill and Indefinite-Lived Intangible Assets," and "Valuation of Other Long-Lived Assets," of Note 2, "Summary of Significant Accounting Policies , " and Note 5, "Goodwill and Acquired Intangible Assets," to the consolidated financial statements.

***We may experience fluctuations in our operating results, which may adversely affect the market price of our common stock.***

The financial services industry is risky and unpredictable and is directly affected by many national and international factors beyond our control, including:

- economic, political and geopolitical market conditions;
- natural disasters, terrorism, war or other catastrophes;
- broad trends in industry and finance;
- changes in price levels and volatility in the stock markets;
- the level and volatility of interest rates;
- changes in government monetary or tax policy;
- other legislative and regulatory changes;
- the perceived attractiveness of the U.S. or European capital markets; and
- inflation.

Any one of these factors could have a material adverse effect on our business, financial condition and operating results by causing a substantial decline in the financial services markets and reducing trading volumes. In particular, our U.S. business operations are heavily concentrated on the East Coast, and our European business operations are heavily concentrated in Stockholm. Any event that affects either of those geographic areas could potentially affect our ability to operate our businesses.

Additionally, since borrowings under our revolving credit facility bear interest at variable rates, any increase in interest rates on debt that we have not fixed using interest rate hedges will increase our interest expense and reduce our cash flow. Other than variable rate debt, we believe our business has relatively large fixed costs and low variable costs, which magnifies the impact of revenue fluctuations on our operating results. As a result, a decline in our revenue may lead to a relatively larger impact on operating results. A substantial portion of our operating expenses will be related to personnel costs, regulation and corporate overhead, none of which can be adjusted quickly and some of which cannot be adjusted at all. Our operating expense levels will be based on our expectations for future revenue. If actual revenue is below management's expectations, or if our expenses increase before revenues do, both revenues less transaction-based expenses and operating results would be materially and adversely affected. Because of these factors, it is possible that our operating results or other operating metrics may fail to meet the expectations of stock market analysts and investors. If this happens, the market price of our common stock may be adversely affected.

***We are exposed to credit risk from third parties, including customers, counterparties and clearing agents.***

We are exposed to credit risk from third parties, including customers, counterparties and clearing agents. These parties may default on their obligations to us due to bankruptcy, lack of liquidity, operational failure or other reasons.

We clear or stand as riskless principal to a range of equity-related and fixed-income-related derivative products, commodities and resale and repurchase agreements. We assume the counterparty risk for all transactions that are cleared through our markets and guarantee that our cleared contracts will be honored. We enforce minimum financial and operational criteria for membership eligibility, require members and investors to provide collateral, and maintain established risk policies and procedures to ensure that the counterparty risks are properly monitored and pro-actively managed; however, none of these measures provides absolute assurance against experiencing financial losses from defaults by our counterparties on their obligations. No guarantee can be given that the collateral provided will at all times be sufficient. Although we maintain clearing capital resources to serve as an additional layer of protection to help ensure that we are able to meet our obligations, these resources may not be sufficient.

In addition, one of our broker-dealer subsidiaries, Execution Access, has a clearing arrangement with Cantor Fitzgerald & Co. As of December 31, 2015, we have contributed $19 million of clearing deposits to Cantor Fitzgerald in connection with this clearing arrangement. Some of the trading activity in Execution Access is cleared by Cantor Fitzgerald through the Fixed Income Clearing Corporation. Execution Access assumes the counterparty risk of clients that do not clear through the Fixed Income Clearing Corporation. Counterparty risk of clients exists for Execution Access between the trade date and settlement date of the individual transactions, which is one business day. All of Execution Access' obligations under the clearing arrangement with Cantor Fitzgerald are guaranteed by Nasdaq. Counterparties that do not clear through the Fixed Income Clearing Corporation are subject to a credit due diligence process and may be required to post collateral, provide principal letters, or provide other forms of credit enhancement to Execution Access for the purpose of mitigating counterparty risk. Although w e believe that the potential for us to be required to make payments under these arrangements is mitigated through the pledged collateral and our risk management policies, no guarantee can be provided that these arrangements will at all times be sufficient.

We also have credit risk related to transaction and subscription-based revenues that are billed to customers on a monthly or quarterly basis, in arrears.

Credit losses such as those described above could adversely affect our consolidated financial position and results of operations.

***Our leverage limits our financial flexibility, increases our exposure to weakening economic conditions and may adversely affect our ability to obtain additional financing.***

Our indebtedness as of December 31, 2015 was approximately $2.4 billion. We also may borrow up to an additional $490 million under our revolving credit facility.

Our leverage could:

- reduce funds available to us for operations and general corporate purposes or for capital expenditures as a result of the dedication of a substantial portion of our consolidated cash flow from operations to the payment of principal and interest on our indebtedness;
- increase our exposure to a continued downturn in general economic conditions;
- place us at a competitive disadvantage compared with our competitors with less debt; and
- affect our ability to obtain additional financing in the future for refinancing indebtedness, acquisitions, working capital, capital expenditures or other purposes.

In addition, we must comply with the covenants in our revolving credit facility. Among other things, these covenants restrict our ability to grant liens, incur additional indebtedness, pay dividends and conduct transactions with affiliates. Failure to meet any of the covenant terms of our revolving credit facility could result in an event of default. If an event of default occurs, and we are unable to receive a waiver of default, our lenders may increase our borrowing costs, restrict our ability to obtain additional borrowings and accelerate all amounts outstanding. Our revolving credit facility allows us to pay cash dividends on our common stock as long as certain leverage ratios are maintained.

***We are subject to litigation risks and other liabilities.***

Many aspects of our business potentially involve substantial liability risks. Although under current law we are immune from private suits arising from conduct within our regulatory authority and from acts and forbearances incident to the exercise of our regulatory authority , this immunity only covers certain of our activities in the U.S., and we could be exposed to liability under national and local laws, court decisions and rules and regulations promulgated by regulatory agencies.

Some of our other liability risks arise under the laws and regulations relating to the tax, intellectual property, anti-money laundering, technology export, foreign asset controls and foreign corrupt practices areas. Liability could also result from disputes over the terms of a trade, claims that a system failure or delay cost a customer money, claims we entered into an unauthorized transaction or claims that we provided materially false or misleading statements in connection with a securities transaction. As we intend to defend any such litigation actively, significant legal expenses could be incurred. Although we carry insurance that may limit our risk

of damages in some cases, we still may sustain uncovered losses or losses in excess of available insurance that would affect our financial condition and results of operations.

***We have self-regulatory obligations and also operate for-profit businesses, and these two roles may create conflicts of interest.***

We have obligations to regulate and monitor activities on our markets and ensure compliance with applicable law and the rules of our markets by market participants and listed companies. In the U.S., some have expressed concern about potential conflicts of interest of "for-profit" markets performing the regulatory functions of an SRO. Although our U.S. cash equity and options exchanges outsource a substantial portion of their market regulation functions to FINRA, we do perform regulatory functions and bear regulatory responsibility related to our listed companies and our markets. Any failure by us to diligently and fairly regulate our markets or to otherwise fulfill our regulatory obligations could significantly harm our reputation, prompt SEC scrutiny and adversely affect our business and reputation.

Our Nordic and Baltic exchanges also monitor trading and compliance with listing standards. They monitor the listing of cash equities and other financial instruments. The prime objective of such monitoring activities is to promote confidence in the exchanges among the general public and to ensure fair and orderly functioning markets. The monitoring functions within the Nasdaq Nordic and Nasdaq Baltic exchanges are the responsibility of the surveillance departments or other surveillance personnel. The surveillance departments or personnel are intended to strengthen the integrity of and confidence in these exchanges and to avoid conflicts of interest. Any failure to diligently and fairly regulate the Nordic and Baltic exchanges could significantly harm our reputation, prompt scrutiny from regulators and adversely affect our business and reputation.

***Failure to protect our intellectual property rights, or allegations that we have infringed on the intellectual property rights of others, could harm our brand-building efforts and ability to compete effectively.***

To protect our intellectual property rights, we rely on a combination of trademark laws, copyright laws, patent laws, trade secret protection, confidentiality agreements and other contractual arrangements with our affiliates, clients, strategic partners and others. The protective steps that we take may be inadequate to deter misappropriation of our proprietary information. We may be unable to detect the unauthorized use of, or take appropriate steps to enforce, our intellectual property rights.

We have registered, or applied to register, our trademarks in the United States and in over 50 foreign jurisdictions and have pending U.S. and foreign applications for other trademarks. We also maintain copyright protection on our branded materials and pursue patent protection for software products, inventions and other processes developed by us. We also hold a number of patents, patent applications and licenses in the United States and other foreign jurisdictions. Effective trademark, copyright, patent and trade secret protection may not be available in every country in which we offer our services. Failure to protect our intellectual property adequately could harm our brand and affect our ability to compete effectively. Further, defending our intellectual property rights could result in the expenditure of significant financial and managerial resources.

Third parties may assert intellectual property rights claims against us, which may be costly to defend, could require the payment of damages and could limit our ability to use certain technologies, trademarks or other intellectual property. Any intellectual property claims, with or without merit, could be expensive to litigate or settle and could divert management resources and attention. Successful challenges against us could require us to modify or discontinue our use of technology or business processes where such use is found to infringe or violate the rights of others, or require us to purchase licenses from third parties, any of which could adversely affect our business, financial condition and operating results.

***We rely on third parties to perform certain functions, and our business could be adversely affected if these third parties fail to perform as expected.***

We rely on third parties for regulatory, data center and other services. For example, we have a contractual arrangement with FINRA pursuant to which FINRA performs certain regulatory functions on our behalf. We also are highly reliant on third-party data centers provided by Verizon. To the extent that FINRA, Verizon or any other vendor or third-party service provider experiences difficulties, materially changes their business relationship with us or is unable for any reason to perform their obligations, our business or our reputation may be materially adversely affected.

We also rely on members of our trading community to maintain markets and add liquidity. To the extent that any of our largest members experiences difficulties, materially changes its business relationship with us or is unable for any reason to perform market making activities, our business or our reputation may be materially adversely affected.

***We are a holding company that depends on cash flow from our subsidiaries to meet our obligations, and any restrictions on our subsidiaries' ability to pay dividends or make other payments to us may have a material adverse effect on our results of operations and financial condition.***

As a holding company, we require dividends and other payments from our subsidiaries to meet cash requirements. Minimum capital requirements mandated by regulatory authorities having jurisdiction over some of our regulated subsidiaries indirectly restrict the amount of dividends paid upstream. If our subsidiaries are unable to pay dividends and make other payments to us when needed,

we may be unable to satisfy our obligations, which would have a material adverse effect on our business, financial condition and operating results.

***Future acquisitions, investments, partnerships and joint ventures may require significant resources and/or result in significant unanticipated losses, costs or liabilities.***

Over the past several years, acquisitions have been significant factors in our growth. Although we cannot predict our rate of growth as the result of acquisitions with complete accuracy, we believe that additional acquisitions and investments or entering into partnerships and joint ventures will be important to our growth strategy. Many of the other potential purchasers of assets in our industry have greater financial resources than we have. Therefore, we cannot be sure that we will be able to complete future acquisitions on terms favorable to us.

We may finance future acquisitions by issuing additional equity and/or debt. The issuance of additional equity in connection with any such transaction could be substantially dilutive to existing shareholders. The issuance of additional debt could increase our leverage substantially. In addition, announcement or implementation of future transactions by us or others could have a material effect on the price of our common stock. We could face financial risks associated with incurring additional debt, particularly if the debt results in significant incremental leverage. Additional debt may reduce our liquidity, curtail our access to financing markets, impact our standing with credit agencies and increase the cash flow required for debt service. Any incremental debt incurred to finance an acquisition could also place significant constraints on the operation of our business.

Furthermore, any future acquisitions of businesses or facilities could entail a number of additional risks, including:

- problems with effective integration of operations;
- the inability to maintain key pre-acquisition business relationships;
- increased operating costs;
- the diversion of our management team from other operations;
- problems with regulatory bodies;
- exposure to unanticipated liabilities;
- difficulties in realizing projected efficiencies, synergies and cost savings; and
- changes in our credit rating and financing costs.

***Changes in tax laws, regulations or policies could have a material adverse effect on our financial results.***

Like other corporations, we are subject to taxes at the federal, state and local levels, as well as in non-U.S. jurisdictions. Changes in tax laws, regulations or policies could result in us having to pay higher taxes, which would in turn reduce our net income.

In addition, some of our subsidiaries are subject to tax in the jurisdictions in which they are organized or operate. In computing our tax obligation in these jurisdictions, we take various tax positions. We cannot assure you that upon review of these positions the applicable authorities will agree with our positions. A successful challenge by a tax authority could result in additional tax imposed on our subsidiaries.

***Our non-U.S. business operates in various international markets, particularly emerging markets that are subject to greater political, economic and social uncertainties than developed countries.***

The operations of our non-U.S. business are subject to the risk inherent in international operations, including but not limited to, risks with respect to operating in Iceland, the Baltics, the Middle East, Africa and Asia. Our actual and planned expansion into lower cost locations, such as Lithuania, India and the Philippines, may increase operational risk and raises resiliency challenges. Some of these economies may be subject to greater political, economic and social uncertainties than countries with more developed institutional structures. Political, economic or social events or developments in one or more of these countries could adversely affect our operations and financial results.

***Because we have operations in several countries, we are exposed to currency risk.***

We have operations in the U.S., the Nordic and Baltic countries, the U.K., Australia and many other foreign countries. We therefore have significant exposure to exchange rate movements between the Euro, Swedish Krona and other foreign currencies towards the U.S. dollar. Significant inflation or disproportionate changes in foreign exchange rates with respect to one or more of these currencies could occur as a result of general economic conditions, acts of war or terrorism, changes in governmental monetary or tax policy or changes in local interest rates. These exchange rate differences will affect the translation of our non-U.S. results of operations and financial condition into U.S. dollars as part of the preparation of our consolidated financial statements.

***If our risk management methods are not effective, our business, reputation and financial results may be adversely affected.***

We have methods to identify, monitor and manage our risks, including oversight of risk management by Nasdaq's Global Risk Steering Committee, which is comprised of employees of Nasdaq. However, these methods may not be fully effective. Some of our risk management methods may depend upon evaluation of information regarding markets, customers or other matters. That information may not in all cases be accurate, complete, up-to-date or properly evaluated. If our methods are not effective or we are not successful in monitoring or evaluating the risks to which we are or may be exposed, our business, reputation, financial condition and operating results could be materially adversely affected.

***Charges to earnings resulting from acquisition, restructuring and integration costs may materially adversely affect the market value of our common stock.***

In accordance with U.S. GAAP, we are accounting for the completion of our acquisitions using the acquisition method of accounting. We are allocating the total estimated purchase prices to net tangible assets, amortizable intangible assets and indefinite-lived intangible assets, and based on their fair values as of the date of completion of the acquisitions, recording the excess of the purchase price over those fair values as goodwill. Our financial results, including earnings per share, could be adversely affected by a number of financial adjustments required by U.S. GAAP including the following:

- we may incur additional amortization expense over the estimated useful lives of certain of the intangible assets acquired in connection with acquisitions during such estimated useful lives;
- we may have additional depreciation expense as a result of recording acquired tangible assets at fair value, in accordance with U.S. GAAP, as compared to book value as recorded;
- to the extent the value of goodwill or intangible assets becomes impaired, we may be required to incur material charges relating to the impairment of those assets; and
- we may incur certain adjustments to reflect the financial condition and operating results under U.S. GAAP and U.S. dollars.

**Risks Relating to an Investment in Our Common Stock**

***Decisions to declare future dividends on our common stock will be at the discretion of our board of directors based upon a review of relevant considerations. Accordingly, there can be no guarantee that we will pay future dividends to our stockholders.***

Since 2013, our board of directors has declared quarterly cash dividend payments on our outstanding common stock. Future declarations of quarterly dividends and the establishment of future record and payment dates are subject to approval by Nasdaq's board of directors. The board's determination to declare dividends will depend upon our profitability and financial condition, contractual restrictions, restrictions imposed by applicable law and other factors that the board deems relevant. Based on an evaluation of these factors, the board of directors may determine not to declare future dividends at all or to declare future dividends at a reduced amount. Accordingly, there can be no guarantee that we will pay future dividends to our stockholders.

***Provisions of our certificate of incorporation, by-laws, exchange rules (including provisions included to address SEC concerns) and governing law could delay or prevent a change in control of us and entrench current management.***

Our organizational documents place restrictions on the voting rights of certain stockholders. The holders of our common stock are entitled to one vote per share on all matters to be voted upon by the stockholders except that no person may exercise voting rights in respect of any shares in excess of 5% of the then outstanding shares of our common stock. Any change to the 5% voting limitation would require SEC approval.

In response to the SEC's concern about a concentration of our ownership, the rules of our U.S. exchanges include a rule prohibiting any member or any person associated with a member of the exchange from beneficially owning more than 20% of our outstanding voting interests. SEC consent would be required before any investor could obtain more than a 20% voting interest in us. The rules of our U.S. exchanges also require the SEC's approval of any business ventures with one of our members, subject to exceptions.

Our organizational documents contain provisions that may be deemed to have an anti-takeover effect and may delay, deter or prevent a change of control of us, such as a tender offer or takeover proposal that might result in a premium over the market price for our common stock. Additionally, certain of these provisions make it more difficult to bring about a change in the composition of our board of directors, which could result in entrenchment of current management.

Our certificate of incorporation and by-laws:

- do not permit stockholders to act by written consent;

- require certain advance notice for director nominations and actions to be taken at annual meetings; and
- authorize the issuance of undesignated preferred stock, or "blank check" preferred stock, which could be issued by our board of directors without stockholder approval.

Section 203 of the Delaware General Corporation Law imposes restrictions on mergers and other business combinations between us and any holder of 15% or more (or, in some cases, a holder who previously held 15% or more) of our common stock. In general, Delaware law prohibits a publicly held corporation from engaging in a "business combination" with an "interested stockholder" for three years after the stockholder becomes an interested stockholder, unless the corporation's board of directors and stockholders approve the business combination in a prescribed manner.

Finally, many of the European countries where we operate regulated entities require prior governmental approval before an investor acquires 10% or greater of our common stock.

**Item 1B. Unresolved Staff Comments.**

None.

**Item 2. Properties .**

The following is a description of our principal properties.

| Location | Use | Size (approximate, in square feet) | Type of possession |
|---|---|---|---|
| New York, New York | Location of MarketSite | 25,000 | Lease |
| New York, New York | U.S. headquarters | 115,000 | Subleased from FINRA with 17,931 square feet leased back to FINRA |
| New York, New York | General office space | 53,000 | Lease; 28,162 square feet subleased |
| Philadelphia, Pennsylvania | Location of Nasdaq PHLX | 94,000 | Lease |
| Rockville, Maryland | General office space | 48,000 | Lease |
| Shelton, Connecticut | General office space | 29,000 | Lease |
| Stockholm, Sweden | European headquarters | 296,000 | Lease |
| London, England | General office space | 71,000 | Subleased |
| London, England | General office space | 30,600 | Lease |
| Helsinki, Finland | General office space | 19,800 | Lease |
| Copenhagen, Denmark | General office space | 23,900 | Lease |

We also maintain local headquarters in each of the other countries where we operate an exchange and office space in countries in which we conduct sales and operations, including Australia, Belgium, Canada, China, Estonia, France, Germany, Hong Kong, Iceland, India, Italy, Japan, Latvia, Lithuania, Netherlands, Norway, Philippines, Singapore, South Korea, Spain and Turkey.

In addition to the above, we currently lease administrative, sales and disaster preparedness facilities in California, Colorado, Illinois, Massachusetts, Missouri, Oregon, Texas, Washington, DC and Lithuania.

Generally, our properties are not earmarked for use by a particular segment. Instead, most of our properties are used by two or more segments. We believe the facilities we occupy are adequate for the purposes for which they are currently used and are well-maintained. As of December 31, 2015, approximately 241,295 square feet of space was available for sublease.

**Item 3. Legal Proceedings.**

As previously disclosed, we became a party to several legal and regulatory proceedings in 2012 and 2013 relating to the Facebook , Inc. IPO that occurred on May 18, 2012. As described in our Annual Report on Form 10-K for the year ended December 31, 2012, we were named as a defendant in a consolidated matter captioned In re Facebook, Inc., IPO Securities and Derivative Litigation, MDL No. 2389 (S.D.N.Y.). On May 22, 2015, the parties executed a stipulation of settlement, and on November 9, 2015, the trial court entered an order approving the settlement. Facebook and other defendants in a separate class action alleging securities fraud intervened in the proceeding relating to the settlement for the purpose of clarifying its potential effect on their own case, and have appealed one aspect of the court's order. We and the class plaintiffs with whom we have settled had informed the trial court that either the approved settlement language or the alternative language being advocated by the Facebook defendants is acceptable to the settling parties.

In our Quarterly Report on Form 10-Q for the period ended March 31, 2013, we identified a demand for arbitration from a member organization seeking indemnification for alleged losses associated with the Facebook IPO. In April 2015, we reached an agreement to settle the claims asserted by the member organization by allowing it to file a claim under the accommodation plan that had been established for claims by other members .

We established a reserve of $31 million to cover the costs of these settlements. During the second half of 2015, we recorded an insurance recovery which offset the loss reserve.

As previously disclosed, we are a defendant in a putative class action, Rabin v. NASDAQ OMX PHLX LLC, et al., No. 15-551 (E.D. Pa.) filed February 5, 2015 in the United States District Court for the Eastern District of Pennsylvania. Our motion to dismiss the complaint is currently pending with the court. We believe the claims to be without merit and intend to litigate them vigorously.

We also are named as one of many defendants in City of Providence v. BATS Global Markets, Inc., et al., 14 Civ. 2811 (S.D.N.Y.), which was filed on April 18, 2014 in the United States District Court for the Southern District of New York. The district court appointed lead counsel, who filed an amended complaint on September 2, 2014. The amended complaint names as defendants seven national exchanges, as well as Barclays PLC, which operated a private alternative trading system. On behalf of a putative class of securities traders, the plaintiffs allege that the defendants engaged in a scheme to manipulate the markets through high-frequency trading; the amended complaint asserts claims against us under Section 10(b) of the Exchange Act and Rule 10b-5, as well as under Section 6(b) of the Exchange Act. We filed a motion to dismiss the amended complaint on November 3, 2014. In response, the plaintiffs filed a second amended complaint on November 24, 2014, which names the same defendants and alleges essentially the same violations. We then filed a motion to dismiss the second amended complaint on January 23, 2015. The district court heard oral argument on the motion on June 18, 2015. On August 26, 2015, the district court entered an order dismissing the second amended complaint in its entirety with prejudice, concluding that most of the plaintiffs' theories were foreclosed by absolute immunity and , in any event , that the plaintiffs failed to state any claim. The plaintiffs have appealed the judgment of dismissal to the United States Court of Appeals for the Second Circuit. Given the preliminary nature of the proceedings, we are unable to estimate what, if any, liability may result from this litigation. However, we believe the claims to be without merit and intend to litigate them vigorously.

In addition, we are named as one of many exchange defendants in Lanier v. BATS Exchange Inc., et al., 14 Civ. 3745 (S.D.N.Y.), Lanier v. BATS Exchange Inc., et al., 14 Civ. 3865 (S.D.N.Y.), and Lanier v. Bats Exchange Inc., 14 Civ. 3866 (S.D.N.Y.), which were filed between May 23, 2014 and May 30, 2014 in the United States District Court for the Southern District of New York. The plaintiff is the same in each of these cases, and the three complaints contain substantially similar allegations. On behalf of a putative class of subscribers for market data provided by national exchanges, the plaintiff alleges that the exchanges provided data more quickly to certain market participants than to others, supposedly in breach of the exchanges' plans for dissemination of market data and subscriber agreements executed under those plans. The complaint asserts contractual theories under state law based on these alleged breaches. On September 29, 2014, we filed a motion to dismiss the complaints . The district court heard oral argument on the motion on January 16, 2015. On April 28, 2015, the district court entered an order dismissing the complaints in their entirety with prejudice, concluding that they are foreclosed by the Exchange Act and , in any event , do not state a claim under the contracts. The plaintiff has appealed the judgment of dismissal to the United States Court of Appeals for the Second Circuit. The Second Circuit has scheduled oral argument for March 3, 2016. Given the preliminary nature of the proceedings, we are unable to estimate what, if any, liability may result from this litigation. However, we believe the claims to be without merit and intend to litigate them vigorously.

Except as disclosed above and in prior reports filed under the Exchange Act, we are not currently a party to any litigation or proceeding that we believe could have a material adverse effect on our business, consolidated financial condition, or operating results. However, from time to time, we have been threatened with, or named as a defendant in, lawsuits or involved in regulatory proceedings.

**Item 4. Mine Safety Disclosures.**

Not applicable.

## Part II

**Item 5 . Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.**

**Market Information**

Our common stock has been listed on The NASDAQ Stock Market since February 10, 2005, under the ticker symbol "NDAQ."

The following chart lists the quarterly high and low sales prices for shares of our common stock for fiscal years 2015 and 2014. These prices are between dealers and do not include retail markups, markdowns or other fees and commissions and may not represent actual transactions.

| | High | Low |
|---|---|---|
| *Fiscal 2015* | | |
| Fourth quarter | $ 59.70 | $ 52.39 |
| Third quarter | 53.81 | 47.42 |
| Second quarter | 51.88 | 47.58 |
| First quarter | 50.22 | 44.27 |
| *Fiscal 2014* | | |
| Fourth quarter | $ 49.71 | $ 38.43 |
| Third quarter | 44.33 | 38.31 |
| Second quarter | 39.24 | 33.49 |
| First quarter | 41.25 | 36.36 |

As of February 17 , 201 6 , we had approximately 379 holders of record of our common stock. As of February 17 , 201 6 , the closing price of our common stock was $ 62 . 96 .

**Dividends**

In each of the second, third and fourth quarters of 2015, the Company paid a quarterly cash dividend of $0.25 per share and in the first quarter of 2015 the Company paid a quarterly cash dividend of $0.15 per share on our outstanding common stock. In each of the second, third and fourth quarters of 2014, the Company paid a quarterly cash dividend of $0.15 per share and in the first quarter of 2014 the Company paid a quarterly cash dividend of $0.13 per share on our outstanding common stock. We expect to pay quarterly cash dividends in the future, subject to approval by the board of directors.

**Issuer Purchases of Equity Securities**

***Share Repurchase Program***

See “Share Repurchase Program,” of Note 13, “Nasdaq Stockholders’ Equity,” to the consolidated financial statements for further discussion of our share repurchase program.

***Employee Transactions***

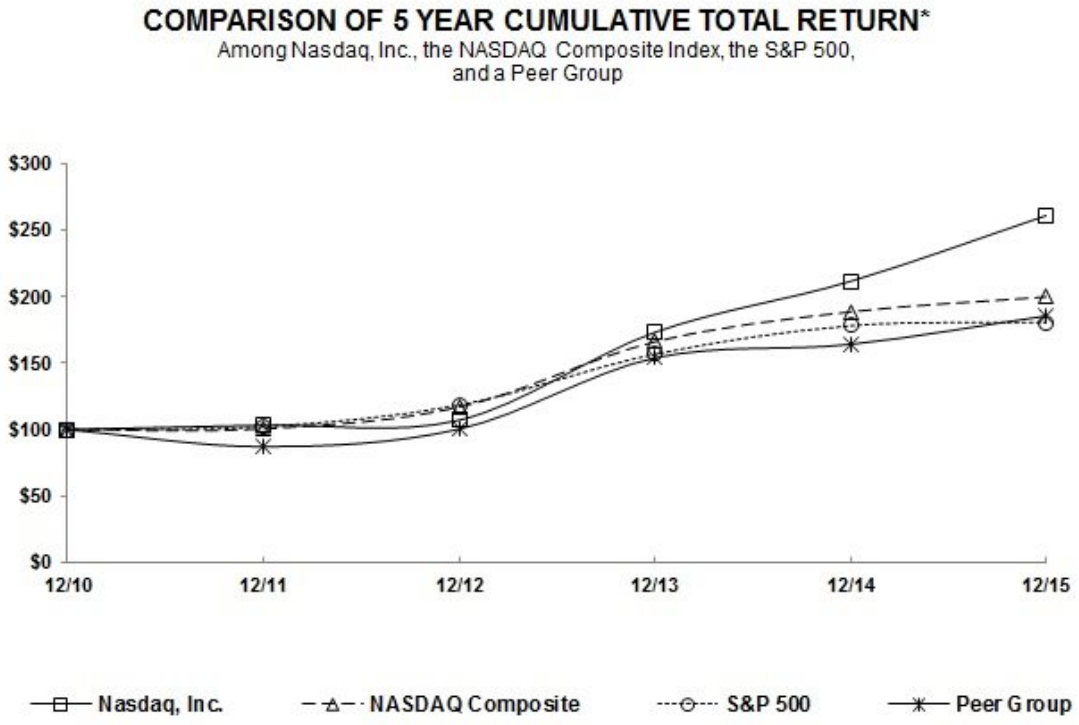
During the fiscal quarter ended December 31, 2015, we purchased shares from employees in connection with the settlement of employee tax withholding obligations arising from the vesting of restricted stock .

The table below represents repurchases made by or on behalf of us or any “affiliated purchaser” of our common stock during the fiscal quarter ended December 31, 2015:

| Period | (a) Total Number of Shares Purchased | (b) Average Price Paid Per Share | (c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs | (d) Maximum Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (in millions) |
|---|---|---|---|---|
| **October 2015** | | | | |
| Share repurchase program | - | $ - | - | $ 226 |
| Employee transactions | 1,342 | $ 53.74 | N/A | N/A |
| **November 2015** | | | | |
| Share repurchase program | - | $ - | - | $ 226 |
| Employee transactions | 2,071 | $ 58.39 | N/A | N/A |
| **December 2015** | | | | |
| Share repurchase program | 1,182,351 | $ 56.58 | 1,182,351 | $ 159 |
| Employee transactions | 97,990 | $ 58.17 | N/A | N/A |
| **Total Quarter Ended December 31, 2015** | | | | |
| Share repurchase program | 1,182,351 | $ 56.58 | 1,182,351 | $ 159 |
| Employee transactions | 101,403 | $ 58.12 | N/A | N/A |

**PERFORMANCE GRAPH**

The following graph compares the total return of our common stock to the Nasdaq Composite Stock Index and the S&P 500 Stock Index, or S&P 500, and a selected peer group for the past five years. The peer group includes ASX Limited, CBOE, CME Group Inc., Deutsche Börse, ICE, LSE, and TMX Group Limited. Information for the indices and the peer group is provided from December 31, 2010 through December 31, 2015. The figures represented below assume an initial investment of $100 in the common stock or index at the closing price on December 31, 2010 and the reinvestment of all dividends.




| | 12/10 | 12/11 | 12/12 | 12/13 | 12/14 | 12/1 5 |
|---|---|---|---|---|---|---|
| Nasdaq, Inc. | $100.00 | $103.29 | $107.10 | $173.27 | $211.77 | $261.33 |
| Nasdaq Composite | 100.00 | 100.53 | 116.92 | 166.19 | 188.78 | 199.95 |
| S&P 500 | 100.00 | 102.11 | 118.45 | 156.82 | 178.29 | 180.75 |
| Peer Group | 100.00 | 87.09 | 100.34 | 153.96 | 164.31 | 185.66 |

**Item 6. Selected Financial Data.**

The following table sets forth selected financial data on a historical basis for Nasdaq. The following information should be read in conjunction with the consolidated financial statements and notes thereto of Nasdaq included elsewhere in this Form 10-K.

**Selected Financial Data**

| | Year Ended December 31, | | | | |
|---|---|---|---|---|---|
| | 2015 [1] | 2014 | 2013 [1] | 2012 [1] | 2011 [1] |
| | (in millions, except share and per share amounts) | | | | |
| **Statements of Income Data:** | | | | | |
| Total revenues [2] | $ 3,403 | $ 3,500 | $ 3,211 | $ 3,120 | $ 3,438 |
| Transaction-based expenses [2] | (1,313) | (1,433) | (1,316) | (1,446) | (1,748) |
| Revenues less transaction-based expenses | 2,090 | 2,067 | 1,895 | 1,674 | 1,690 |
| Total operating expenses | 1,370 | 1,313 | 1,207 | 984 | 994 |
| Operating income | 720 | 754 | 688 | 690 | 696 |
| Net income attributable to Nasdaq | 428 | 414 | 385 | 352 | 387 |
| Per share information: | | | | | |
| Basic earnings per share | $ 2.56 | $ 2.45 | $ 2.30 | $ 2.09 | $ 2.20 |
| Diluted earnings per share | $ 2.50 | $ 2.39 | $ 2.25 | $ 2.04 | $ 2.15 |
| Cash dividends declared per common share [3] | $ 0.90 | $ 0.58 | $ 0.52 | $ 0.39 | $ - |
| Weighted-average common shares outstanding for earnings per share: | | | | | |
| Basic | 167,285,450 | 168,926,733 | 166,932,103 | 168,254,653 | 176,331,819 |
| Diluted | 171,283,271 | 173,018,849 | 171,266,146 | 172,587,870 | 180,011,247 |

| | December 31, | | | | |
|---|---|---|---|---|---|
| | 2015 | 2014 | 2013 | 2012 | 2011 |
| | (in millions) | | | | |
| **Balance Sheets Data:** | | | | | |
| Cash and cash equivalents and financial investments | $ 502 | $ 601 | $ 587 | $ 720 | $ 785 |
| Total assets [4] | 11,861 | 12,071 | 12,563 | 9,122 | 14,078 |
| Total long-term liabilities | 3,308 | 3,297 | 3,579 | 2,895 | 3,054 |
| Total equity | 5,609 | 5,794 | 6,184 | 5,209 | 4,986 |

[1] We completed several acquisitions during the years ended December 31, 2015, 2013, 2012 and 2011 and included the financial results of such acquisitions in our consolidated financial statements from the respective acquisition dates.

[2] We record transaction-based revenues on a gross basis as revenues and record related expenses as transaction-based expenses.

[3] Cash dividends declared per common share of $0.90 for 2015, $0.58 for 2014, $0.52 for 2013 and $0.39 for 2012 reflect quarterly dividends per share on our outstanding common stock. See “Cash Dividends on Common Stock,” of Note 13, “Nasdaq Stockholders’ Equity,” to the consolidated financial statements for further discussion of the dividends.

[4] At December 31, 2011, total assets included resale agreements, at contract value of $3.7 billion. Total assets decreased $5.0 billion at December 31, 2012 compared with December 31, 2011, primarily due to our new clearing structure which significantly changed the nature and extent of the risk of loss to Nasdaq Clearing in the event of a member default. As a result, we no longer record derivative positions or resale and repurchase agreements in the Consolidated Balance Sheets. Total assets increased $3.4 billion at December 31, 2013 compared with December 31, 2012, primarily due to an increase in default funds and margin deposits, reflecting the implementation of our collateral management process for our Nasdaq Clearing business in 2013, and an increase in goodwill and intangible assets associated with the acquisitions of the TR Corporate businesses and eSpeed in 2013.

**Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.**

The following discussion and analysis of the financial condition and results of operations of Nasdaq should be read in conjunction with our consolidated financial statements and related notes included in this Form 10-K, as well as the discussion under “Item 1A. Risk Factors.”

**Business Overview**

We are a leading provider of trading, clearing, exchange technology, regulatory, securities listing, information and public company services across six continents. Our global offerings are diverse and include trading and clearing across multiple asset classes, access services, data products, financial indexes, capital formation solutions, corporate solutions and market technology products and services. Our technology powers markets across the globe, supporting equity derivatives trading, clearing and settlement, cash equity trading, fixed income trading and many other functions.

For further discussion of our business, see “Item 1. Business.”

**Business Environment**

We serve listed companies, market participants and investors by providing derivative, commodities, cash equity, and fixed income markets, thereby facilitating economic growth and corporate entrepreneurship. We provide market technology to exchanges, clearing organizations and central securities depositories around the world. We also offer companies and other organizations access to innovative products , software solutions and services that increase transparency, mitigate risk, improve board efficiency and facilitate better corporate governance. In broad terms, our business performance is impacted by a number of drivers including macroeconomic events affecting the risk and return of financial assets, investor sentiment, government and private sector demands for capital, the regulatory environment for capital markets, and changing technology, particularly in the financial services industry. Our future revenues and net income will continue to be influenced by a number of domestic and international economic trends including:

- Trading volumes in equity derivative, cash equity and FICC, which are driven primarily by overall macroeconomic conditions;
- The number of companies seeking equity financing, which is affected by factors such as investor demand, the global economy, availability of diverse sources of financing as well as tax and regulatory policies;
- The demand for information about, or access to, our markets, which is dependent on the products we trade, our importance as a liquidity center and the quality and pricing of our data and access services;
- The demand by companies and other organizations for the products sold by our Corporate Solutions business, which is largely driven by the overall state of the economy and the attractiveness of our offerings;
- The demand for licensed exchange traded products and other financial products based on our indexes as well as changes to the underlying assets associated with existing licensed financial products;
- The challenges created by the automation of market data consumption, including competition and the quickly evolving nature of the data business;
- The outlook of our technology customers for capital market activity;
- Continuing pressure in transaction fee pricing due to intense competition in the U.S. and Europe;
- Competition for listings and trading related to pricing, product features and service offerings;
- Regulatory changes relating to market structure or affecting certain types of instruments, transactions, pricing structures or capital market participants; and
- Technological advances and members’ demand for speed, efficiency, and reliability.

Currently our business drivers are defined by investors’ and companies’ increasingly cautious outlook about the pace of future global economic growth . The second half of 2015 showed the global economy responding to new directions in the monetary policy of central banks in North America, Europe and Asia . The current consensus forecasts for g ross domestic product , or GDP, growth in 2016 are 2.1% for North America and 1.9% for the European Union. Forecasts for both regions have been experiencing downward revisions over the last six months as the outlook for growth deteriorates. While we expect continue d modest annual growth in many of our non-transactional businesses , we recognize that there are a number of significant structural and political issues continu ing to impact the global economy . Consequently , sustained instability could return at any time, resulting in an increased level of market volatility, oscillating trading volumes, and a more cautious outlook by the clients of our non-transactional businesses . Market volatility surged during the third quarter of 2015 then partially receded for the balance of the year. As a result of the higher average market volatility in 2015 compared to 2014 , our U.S. and European cash equity trading businesses and our European equity derivative business experienced increases in volume. However, our U.S. equity derivative business experienced a decrease in volume. Volatility during the third quarter of 2015 led to a decline in the number of U.S. IPOs during the last two quarters of the year relative to the first half of the year . Additional impacts on our business drivers included the international enactment and implementation of new legislative and regulatory initiatives, the evolution of market participants’ trading behavior, and the continued rapid progression and deployment of new technology in the financial services industry. The business environment that influenced our financial performance for 201 5 may be characterized as follows:

- A slower pace of new equity issuance in the U.S. with 143 IPOs on The NASDAQ Stock Market in 2015, down from 189 in 2014. IPO activity improved in the Nordics and the Baltics with 78 IPOs in 2015 compared with 47 IPOs in 2014 on the Nasdaq Nordic and Nasdaq Baltic exchanges;
- Average daily matched equity options volume for our three U.S. options exchanges decreased 9.1 % in 2015 compared with 2014. Overall average daily U.S. options volume de creased 3 . 3 % while our combined matched market share for our three U.S. options exchanges decreased by 1 . 7 percentage points;
- Matched share volume for all of our U.S. cash equity markets increased by 0. 5 % in 2015 compared to 2014, while average daily U.S. share volume increased by 1 0 .0 % relative to the same period in 2014. Although matched share volume increased

in 2015, matched market share decreased from 20.2% in 2014 (NASDAQ 17.1%; Nasdaq BX 2.5%; Nasdaq PSX 0.6%) to 18.8 % in 2015 (NASDAQ 15 . 8 %; Nasdaq BX 2 .0%; Nasdaq PSX 1 .0%);

- Modest growth for our Nasdaq Basic data products. The number of Nasdaq Basic subscribers was 1 . 5 % higher at the end of 2015 compared with the year ended 2014;
- A 22 . 3 % increase relative to 2014 in the average daily number of cash equity trades on our Nasdaq Nordic and Nasdaq Baltic exchanges;
- A 23 . 9 % increase relative to 2014 in the S wedish K rona value of cash equity transactions on our Nasdaq Nordic and Nasdaq Baltic exchanges;
- A 22.2 % decline in U.S. fixed income notional trading volume, a 9 . 9 % increase in total average daily volume of Nordic and Baltic fixed income derivative contracts, and a 4.3 % decline in total cleared power contracts in 2015 compared with 2014;
- A 6 . 4 % increase in the average daily number of options and futures contracts traded on our Nasdaq Nordic and Nasdaq Baltic exchanges relative to 2014 (including Finnish option contracts traded on EUREX);
- Intense competition among U.S. exchanges and dealer-owned systems for cash equity trading volume and strong competition between multilateral trading facilities and exchanges in Europe for cash equity trading volume;
- Globalization of exchanges, customers and competitors extending the competitive horizon beyond national markets; and
- Market trends requiring continued investment in technology to meet customers' and regulators' demands as markets adapt to a global financial industry, as increasing numbers of new companies are created, and as emerging countries show ongoing interest in developing their financial markets.

**Financial Summary**

The following table summarizes our financial performance for the year ended December 31, 201 5 when compared with the same period in 201 4 . The comparability of our results of operations between reported periods is impacted by the acquisition of DWA on January 30, 2015. See "Acquisition of Dorsey, Wright & Associates, LLC," of Note 4, "Acquisitions," to the consolidated financial statements for further discussion.

| | Year Ended December 31, | | Percentage Change |
|---|---|---|---|
| | 2015 | 2014 | |
| | (in millions, except per share amounts) | | |
| Revenues less transaction-based expenses | $ 2,090 | $ 2,067 | 1.1% |
| Operating expenses | 1,370 | 1,313 | 4.3% |
| Operating income | 720 | 754 | (4.5)% |
| Interest expense | 111 | 117 | (5.1)% |
| Asset impairment charges | - | 49 | # |
| Net income from unconsolidated investees | 17 | - | # |
| Income before income taxes | 630 | 594 | 6.1% |
| Income tax provision | 203 | 181 | 12.2% |
| Net income attributable to Nasdaq | $ 428 | $ 414 | 3.4% |
| Diluted earnings per share | $ 2.50 | $ 2.39 | 4.6% |

# Denotes a variance equal to 100.0%.

In countries with currencies other than the U.S. dollar, revenues and expenses are translated using monthly average exchange rates. The following discussion of results of operations isolates the impact of year-over-year foreign currency fluctuations to better measure the comparability of operating results between periods. Operating results excluding the impact of foreign currency fluctuations are calculated by translating the current period's results by the prior period's exchange rates.

Impacts o n our revenues less transaction-based expenses and operating income associated with fluctuations in foreign currency are discussed in more detail under " Item 7A. Quantitative and Qualitative Disclosures about Market Risk."

The following summarizes significant changes in our financial performance for the year ended December 31, 201 5 when compared with the same period in 201 4 :

- Revenues less transaction -based expenses increased $ 23 million, or 1 . 1 %, to $ 2 , 090 million in 201 5 , compared with $ 2 , 067 million in 201 4 , reflecting an operational increase of $ 123 million and a n un favorable impact from foreign exchange of $ 100 million. The increase in operational revenues was primarily due to an:
  - increase in cash equity trading revenues less transaction-based expenses of $48 million, from both U.S. and European cash equity trading;
  - increase in listing services revenues of $38 million;
  - increase in data products revenues of $29 million, primarily from U.S. data products;
  - increase in index licensing and services revenues of $25 million; and
  - increase in market technology revenues of $16 million, partially offset by a;
  - decrease in FICC revenues less transaction-based expenses of $24 million; and a
  - decrease in equity derivative trading and clearing revenues less transaction-based expenses of $10 million, primarily from U.S. equity derivative trading and clearing revenues.
- Operating expenses increased $ 57 million, or 4 . 3 %, to $ 1 , 370 million in 201 5 , compared with $ 1,313 million in 201 4 , reflecting an operational increase of $ 133 million and a favorable impact from foreign exchange of $ 76 million. The increase in operational expenses was primarily due to restructuring charges, an increase in compensation and benefit expense and higher computer operations and data communications expense, partially offset by lower merger and strategic initiatives expense, lower occupancy expense, and a decrease in general, administrative and other expense.
- Interest expense de creased $ 6 million, or 5 . 1 %, to $ 111 million in 201 5 , compared with $ 117 million in 201 4 , primarily due to a favorable impact from foreign exchange of $6 million .
- Asset impairment charges of $49 million in 2014 related to certain acquired intangible assets associated with customer relationships ($38 million ) and certain technology assets ($11 million ).
- Income tax provision increased $22 million, or 12.2%, in 2015 compared with 2014, primarily due to higher income before income taxes in 2015 compared with 2014. Also, the lower income tax provision in 2014 was attributable to a decrease in unrecognized tax benefits .

These current and prior year items are discussed in more detail below.

Excluding income recognized from our equity method investment in The Options Clearing Corporation, or OCC, restructuring charges, amortization expense of acquired intangible assets, asset impairment charges , merger and strategic initiatives expense, and other items that are not reflective of our core business performance, net of taxes, non-GAAP consolidated net income attributable to N asdaq for the year ended December 31, 201 5 was $ 581 million , or $ 3 . 39 per diluted share, compared with $ 542 million, or $ 3 . 13 per diluted share, for the year ended December 31, 201 4 . See “Non-GAAP Financial Measures” below for further discussion.

**Outlook**

Over the past few years we have transitioned from predominately a U.S. equity exchange operator to a globally, diversified portfolio of businesses that offer trading, clearing, exchange technology, regulatory, securities listing, information and public company services across six continents. During 2015, we continued to demonstrate our ability to invest in our future, make strategic acquisitions that deliver for our clients and shareholders and demonstrate solid organic growth across the franchise. Our growth strategy continues to include identifying product line extensions within our core business units, developing adjacent opportunities within our core businesses and identifying acquisitions that both complement our strengths and offer opportunities for both revenue and expense synergies. We invested in several complementary acquisitions and launched a number of important organic initiatives during 2015 that we expect to benefit us far into the future.

During 2015, we acquired DWA which added model-based strategies and analysis to our robust index portfolio and further strengthened our position as a leading smart beta index provider in the U.S. We also acquired SecondMarket through NPM to expand our offerings for private companies to manage their equity and to provide liquidity events to their employees and investors. In February 2016, we completed the previously announced acquisitions of Chi-X Canada and Marketwired. The acquisition of Chi-X Canada provides Nasdaq with direct access to the Canadian equities market. The Marketwired acquisition strengthens our Corporate Solutions business offerings by adding social media targeting tools and analytics. It also enables us to accelerate our strategy to develop a robust and integrated platform for communications professionals. Collectively, these acquisitions broaden our existing product offerings in ways we expect to significantly benefit our customers and investors.

In 2015, we also introduced important organic initiatives which we believe will benefit our future growth. In May 2015, we announced plans for an enterprise-wide initiative around the blockchain technology. Two initial applications, Nasdaq Linq and a proxy voting application in Estonia, were announced during the year. Another 2015 initiative was the launch of NFX. With NFX, Nasdaq entered into the energy derivatives markets in the U.S. NFX market share in our targeted energy derivatives contracts was growing through year end 2015 and we continue to see growth in early 2016. In addition, in early 2016 our Corporate Solutions business released the IR Insight solution. Through these initiatives, consistent with our long-term strategy, we continued to leverage our technology strength and offer new products that expand our customer base and strengthen our relationships with all our customers.

During 2015, market volatility was higher than in the previous two years, as economic and political uncertainty continued to weigh on the global economy and the debate over future fiscal and monetary policy in the U.S. and Europe continued. While the consensus economic view is that the financial crisis has passed, robust economic growth has yet to develop, particularly in Europe, and the markets are quick to recall the recent past at every hint of slowing growth. We believe that our diversified businesses position us well to compete in a challenging market environment. If increased levels of market volatility persist in 2016, many of the asset classes within our Market Services segment and our data business will continue to benefit. The eSpeed business operated in a challenging market environment during 2015 as U.S. treasury volumes remained low and competitive pressures increased. We continue to offer new products in both eSpeed and the other products that comprise our FICC business and we expect that, as market conditions improve, the FICC business will contribute to our growth.

Growth in our Listings Services, Corporate Solutions, Market Technology and the Index Licensing and Services businesses depend on a positive economic outlook. Volatility in the markets will have a negative impact on the pace of IPOs and consequently on the opportunities for revenue growth in our Listing Services and Corporate Solutions businesses. Continued declines in oil prices may negatively impact the economics of oil-exporting nations, some of which have exchanges buying our technology. If market volatility proves to be the precursor of slower economic growth, then revenues in our Listing Services, Information Services and Technology Solutions segments will grow at a slower pace.

During 2016, we expect changes in both the competitive and regulatory environments. In the U.S., in late 2015, the National Stock Exchange reactivated its trading business, IEX filed to become an exchange, and new options exchanges were launched or announced. While the willingness of new entrants to commence operations in the trading industry can be taken as a positive sign of good health in the trading industry, as these organizations implement their strateg ies , they have the potential to affect the competitive environment we face.

European regulators are currently moving forward on a number of new policies affecting the operation and infrastructure of the financial markets. The implementation of EMIR is changing the way we structure and operate the Nordic clearinghouse. MiFID II, as well as the new regulations in MiFIR, will change the way our trading business operate s and will create both challenges in our existing

businesses , as well as new opportunities for growth. Full implementation of these regulations may be delayed and consequently create an uncertain environment for our businesses.

We expect global markets to continue to be marked by significant change in 201 6 , driven primarily by regulatory initiatives in the U.S. and Europe as regulations resulting from legislation in the aftermath of the financial crisis continue to be implemented . These changes could result in the continued fragmentation of cash equity markets , and trading could continue to migrate from exchanges to OTC systems, particularly in the U.S. Conversely, trading in OTC derivatives could begin to move onto exchanges and other execution facilities .

We believe that our future will continue to be determined by our ability to challenge the status quo and our ability to allocate resources in strategic areas which will yield attractive returns. Over the next five years, we expect that our Market Services and Listing Services segments will continue to experience organic growth at roughly the same pace as growth in GDP in the countries where we operate. Our Information Services and Technology Solutions segments are expected to outperform our traditional exchange businesses as our strategic portfolio of businesses advances our clients objectives and thereby improves our competitive position . We also believe that our organic research and development initiatives, such as NFX and the b lockchain based initiatives, and our complementary acquisitions, such as DWA, offer significant and material revenue growth and could have a transformative effect on their respective industries.

To the extent that recent economic and market volatility do not become excessive, the year ahead may be positive for our business drivers and our operations. We believe that our continu ed focus on meeting our cost, revenue and technology objectives will enable us to benefit from any improving economic conditions in the future . We will continue to look for opportunities to further diversify our business with enhanced product offerings and/or acquisitions that are complementary to our existing businesses.

**Business Segments**

W e manage, operate and provide our products and services in four business segments: Market Services, Listing Services, Information Services and Technology Solutions. See Note 1 , " Organization and Nature of Operations ," and Note 19, "Business Segments," to the consolidated financial statements for additional financial information about our reportable segments and geographic data.

**Sources of Revenues and Transaction-B ased Expenses**

See "Revenue Recognition and Transaction- B ased Expenses," of Note 2, "Summary of Significant Accounting Policies," to the consolidated financial statements for further discussion of our sources of revenues and transaction-based expenses.

**Nasdaq's Operating Results**

**Key Drivers**

The following table includes key drivers for our Market Services, Listing Services, Information Services and Technology Solutions segments. In evaluating the performance of our business, our senior management closely watches these key drivers.

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| **Market Services** | | | |
| **Equity Derivative Trading and Clearing** | | | |
| *U.S. Equity Options* | | | |
| Total industry average daily volume (in millions) | 14.8 | 15.3 | 14.8 |
| Nasdaq PHLX matched market share | 16.7% | 16.0% | 18.2% |
| The NASDAQ Options Market matched market share | 7.7% | 10.0% | 8.7% |
| Nasdaq BX Options Market matched market share | 0.8% | 0.9% | 1.0% |
| Total matched market share executed on Nasdaq's exchanges | 25.2% | 26.9% | 27.9% |
| *Nasdaq Nordic and Nasdaq Baltic options and futures* | | | |
| Total average daily volume options and futures contracts [1] | 380,944 | 358,141 | 390,816 |
| **Cash Equity Trading** | | | |
| *Total U.S.-listed securities* | | | |
| Total industry average daily share volume (in billions) | 6.91 | 6.41 | 6.19 |
| Matched share volume (in billions) | 327.7 | 326.0 | 292.9 |
| Matched market share executed on NASDAQ | 15.8% | 17.1% | 15.6% |
| Matched market share executed on Nasdaq BX | 2.0% | 2.5% | 2.5% |
| Matched market share executed on Nasdaq PSX | 1.0% | 0.6% | 0.7% |
| Total matched market share executed on Nasdaq's exchanges | 18.8% | 20.2% | 18.8% |
| Market share reported to the FINRA/NASDAQ Trade Reporting Facility | 31.8% | 30.3% | 33.5% |
| Total market share [2] | 50.6% | 50.5% | 52.3% |
| *Nasdaq Nordic and Nasdaq Baltic securities* | | | |
| Average daily number of equity trades executed on Nasdaq's exchanges | 430,185 | 351,772 | 309,967 |
| Total average daily value of shares traded (in billions) | $ 5.1 | $ 4.8 | $ 4.3 |
| Total market share executed on Nasdaq's exchanges | 68.5% | 71.5% | 68.6% |
| **Fixed Income, Currency and Commodities Trading and Clearing** | | | |
| *Total U.S. fixed income* | | | |
| U.S. fixed income notional trading volume (in billions) [3] | $ 29,234 | $ 37,594 | $ 17,891 |
| *Nasdaq Nordic and Nasdaq Baltic fixed income* | | | |
| Total average daily volume fixed income contracts | 108,708 | 98,948 | 128,290 |
| *Nasdaq Commodities* | | | |
| Power contracts cleared (TWh) [4] | 1,496 | 1,564 | 1,680 |
| **Listing Services** | | | |
| *Initial public offerings* | | | |
| NASDAQ | 143 | 189 | 126 |
| Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic | 78 | 47 | 14 |
| *Total New listings* | | | |
| NASDAQ [5] | 274 | 327 | 239 |
| Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic [6] | 91 | 72 | 34 |
| *Number of listed companies* | | | |
| NASDAQ [7] | 2,859 | 2,782 | 2,637 |
| Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic [8] | 852 | 792 | 758 |
| **Information Services** | | | |
| Number of licensed exchange traded products | 222 | 166 | 151 |
| ETP assets under management tracking Nasdaq indexes (in billions) [9] | $ 114 | $ 99 | $ 92 |
| **Technology Solutions** | | | |
| **Market Technology** | | | |
| Order intake (in millions) [10] | $ 271 | $ 320 | $ 346 |
| Total order value (in millions) [11] | $ 788 | $ 716 | $ 678 |

(1) Includes Finnish option contracts traded on EUREX.

(2) Includes transactions executed on NASDAQ's, Nasdaq BX's and Nasdaq PSX's systems plus trades reported through the FINRA/NASDAQ Trade Report Facility.

(3) For the year ended December 31, 2013, U.S. fixed income notional trading volume represents trading volume from July 2013 to December 2013.

(4) Transactions executed on Nasdaq Commodities or OTC and reported for clearing to Nasdaq Commodities measured by TWh.

(5) New listings include IPOs, including those completed on a best efforts basis, issuers that switched from other listing venues, closed-end funds and separately listed ETPs.

(6) New listings include IPOs and represent companies listed on the Nasdaq Nordic and Nasdaq Baltic exchanges and companies on the alternative markets of Nasdaq First North.

(7) Number of listed companies for NASDAQ at period end, including separately listed ETPs.

(8) Represents companies listed on the Nasdaq Nordic and Nasdaq Baltic exchanges and companies on the alternative markets of Nasdaq First North at period end.

(9) Represents assets under management in licensed ETPs.

(10) Total contract value of orders signed during the period.

(11) Represents total contract value of signed orders that are yet to be recognized as revenue. Market technology deferred revenue, as discussed in Note 8, "Deferred Revenue," to the consolidated financial statements, represents consideration received that is yet to be recognized as revenue for these signed orders.

**Segment Operating Results**

The following table shows our revenues by segment, transaction-based expenses for our Market Services segment and total revenues less transaction-based expenses:

| | Year Ended December 31, | | | Percentage Change | |
|---|---|---|---|---|---|
| | 2015 | 2014 | 2013 | 2015 vs. 2014 | 2014 vs. 2013 |
| | (in millions) | | | | |
| Market Services | $ 2,084 | $ 2,229 | $ 2,072 | (6.5)% | 7.6% |
| Transaction-based expenses | (1,313) | (1,433) | (1,316) | (8.4)% | 8.9% |
| Market Services revenues less transaction-based expenses | 771 | 796 | 756 | (3.1)% | 5.3% |
| Listing Services | 264 | 238 | 228 | 10.9% | 4.4% |
| Information Services | 512 | 473 | 436 | 8.2% | 8.5% |
| Technology Solutions | 543 | 560 | 475 | (3.0)% | 17.9% |
| Total revenues less transaction-based expenses | $ 2,090 | $ 2,067 | $ 1,895 | 1.1% | 9.1% |

Of our 2015 total revenues less transaction-based expenses of $2,090 million, 36.9% was from our Market Services segment, 12.6% was from our Listing Services segment, 24.5% was from our Information Services segment and 26.0% was from our Technology Solutions segment. Of our 2014 total revenues less transaction-based expenses of $2,067 million, 38.5% was from our Market Services segment, 11.5% was from our Listing Services segment, 22.9% was from our Information Services segment and 27.1% was from our Technology Solutions segment. Of our 2013 total revenues less transaction-based expenses of $1,895 million, 39.9% was from our Market Services segment, 12.0% was from our Listing Services segment, 23.0% was from our Information Services segment and 25.1% was from our Technology Solutions segment.

**MARKET SERVICES**

The following table shows total revenues less transaction-based expenses from our Market Services segment:

| | Year Ended December 31, | | | Percentage Change | |
|---|---|---|---|---|---|
| | 2015 | 2014 | 2013 | 2015 vs. 2014 | 2014 vs. 2013 |
| | (in millions) | | | | |
| **Market Services Revenues:** | | | | | |
| **Equity Derivative Trading and Clearing Revenues** [1] | $ 432 | $ 525 | $ 514 | (17.7)% | 2.1% |
| Transaction-based expenses: | | | | | |
| Transaction rebates | (223) | (285) | (259) | (21.8)% | 10.0% |
| Brokerage, clearance and exchange fees [1] | (21) | (32) | (33) | (34.4)% | (3.0)% |
| **Equity derivative trading and clearing revenues less transaction-based expenses** | 188 | 208 | 222 | (9.6)% | (6.3)% |
| | | | | | |
| **Cash Equity Trading Revenues** [2] | 1,315 | 1,335 | 1,212 | (1.5)% | 10.1% |
| Transaction-based expenses: | | | | | |
| Transaction rebates | (756) | (780) | (743) | (3.1)% | 5.0% |
| Brokerage, clearance and exchange fees [2] | (306) | (332) | (279) | (7.8)% | 19.0% |
| **Cash equity trading revenues less transaction-based expenses** | 253 | 223 | 190 | 13.5% | 17.4% |
| | | | | | |
| **Fixed Income, Currency and Commodities Trading and Clearing Revenues** | 98 | 130 | 111 | (24.6)% | 17.1% |
| Transaction-based expenses: | | | | | |
| Transaction rebates | (4) | - | - | # | - |
| Brokerage, clearance and exchange fees | (3) | (4) | (2) | (25.0)% | # |
| **Fixed income, currency and commodities trading and clearing revenues less transaction-based expenses** | 91 | 126 | 109 | (27.8)% | 15.6% |
| **Access and Broker Services Revenues** | 239 | 239 | 235 | - | 1.7% |
| **Total Market Services revenues less transaction-based expenses** | $ 771 | $ 796 | $ 756 | (3.1)% | 5.3% |

# Denotes a variance equal to or greater than 100.0%.

[1] Includes Section 31 fees of $19 million in 2015, $ 28 million in 201 4 and $ 27 million in 201 3 . Section 31 fees are recorded as equity derivative trading and clearing revenues with a corresponding amount recorded in transaction-based expenses .

[2] Includes Section 31 fees of $282 million in 2015, $ 306 million in 201 4 and $ 243 million in 201 3 . Section 31 fees are recorded as cash equity trading revenues with a corresponding amount recorded in transaction-based expenses .

Market services revenues less transaction-based expense s decrease d in 2015 compared with 2014 and increased in 2014 compared with 201 3 . The decrease in 2015 was primarily due to a decrease in both FICC revenues less transaction-based expenses and equity derivative trading and clearing revenues less transaction-based expenses, partially offset by an increase in cash equity trading revenues less transaction-based expenses. The increase in 2014 was primarily due to an increase in both cash equity trading revenues less transaction-based expenses and FICC revenues less transaction-based expenses, partially offset by a decline in equity derivative trading and clearing revenues less transaction-based expenses. Market services revenues included an unfavorable impact from foreign exchange of $47 million in 2015 and $ 12 million in 2014.

***Equity Derivative Trading and Clearing Revenues***

Equity derivative trading and clearing revenues decreased in 2015 compared with 2014 and increased in 2014 compared with 2013. The decrease in 2015 was primarily due to a decrease in U.S. gross revenue capture, a decline in overall market share at our three U.S. options exchanges, a decrease in U.S. industry trading volumes, a decline in Section 31 pass-through fee revenue and an unfavorable impact from foreign exchange of $10 million, partially offset by an increase in trading volumes in European stock option s and index futures products. The increase in 2014 was primarily due to an increase in U.S. industry trading volumes, partially offset by an unfavorable impact from foreign exchange of $3 million.

Equity derivative trading and clearing revenues less transaction-based expenses decreased both in 2015 compared with 2014 and in 2014 compared with 2013. T he decrease in 2015 was primarily due to a decline in overall market share at our three U.S. options exchanges, a decrease in U.S. industry trading volumes, declines in U.S. average net capture and an unfavorable impact from foreign exchange of $10 million, partially offset by an increase in trading volumes in European stock options and index futures products. The

decrease in 2014 was primarily due to a decline in U.S. average net capture, a decline in overall market share at our three U.S. options exchanges, and an unfavorable impact from foreign exchange of $ 3 million, partially offset by an increase in U.S. industry trading volumes .

Section 31 fees are recorded as equity derivative trading and clearing revenues with a corresponding amount recorded as transaction-based expenses. In the U.S., we are assessed these fees from the SEC and pass them through to our customers in the form of incremental fees. Pass-through fees can increase or decrease due to rate changes by the SEC, our percentage of the overall industry volumes processed on our systems, and differences in actual dollar value of shares traded. Since the amount recorded in revenues is equal to the amount recorded as transaction-based expenses, there is no impact on our revenues less transaction-based expenses. Section 31 fees were $19 million in 2015, $28 million in 2014 and $27 million in 2013. The decrease in 2015 compared with 2014 was primarily due to lower rates and lower dollar value traded. The increase in 2014 compared with 2013 was primarily due to higher dollar value traded.

Transaction rebates, in which we credit a portion of the per share execution charge to the market participant, decreased in 2015 compared with 2014 and increased in 2014 compared with 2013. The decrease in 2015 was primarily due to a decrease in overall rebate capture rates, a decline in overall market share at our three U.S. options exchanges and a decrease in U.S. industry trading volumes. The increase in 2014 was primarily due to an increase in overall rebate capture rates and an increase in U.S. industry trading volumes, partially offset by a decrease in overall market share at our three U.S. options exchanges.

Brokerage, clearance and exchange fees decreased both in 2015 compared with 2014 and in 2014 compared with 2013. The decrease in 2015 was primarily due to lower Section 31 pass-through fees and a decrease in routing costs due to a decline in volume routed. The decrease in 2014 was primarily due to a decrease in routing costs due to lower volume routed, partially offset by an increase in Section 31 pass-through fees.

***Cash Equity Trading Revenues***

Cash equity trading revenues decreased in 2015 compared with 2014 and increased in 2014 compared with 2013. The decrease in 2015 was primarily due to a decrease in our overall U.S. matched market share executed on Nasdaq's exchanges, a decline in Section 31 pass-through fee revenue, and an unfavorable impact from foreign exchange of $18 million, partially offset by higher U.S. and European industry trading volumes and higher U.S. gross revenue capture. The increase in 2014 was primarily due to an increase in Section 31 pass-through fee revenue, an increase in overall U.S. matched market share executed on Nasdaq's exchanges, and higher industry trading volumes, partially offset by lower U.S. gross revenue capture and an unfavorable impact from foreign exchange of $2 million.

Cash equity trading revenues less transaction-based expenses increased both in 2015 compared with 2014 and in 2014 compared with 2013. The increase in 2015 was primarily due to higher U.S. and European industry trading volumes and higher average net capture, partially offset by a decrease in our overall U.S. matched market share executed on Nasdaq's exchanges and an unfavorable impact from foreign exchange of $18 million. The increase in 2014 was primarily due to an increase in our overall U.S. matched market share executed on Nasdaq's exchanges, higher industry trading volumes, partially offset by an unfavorable impact from foreign exchange of $2 million.

Similar to equity derivative trading and clearing, in the U.S. we record Section 31 fees as cash equity trading revenues with a corresponding amount recorded as transaction-based expenses. We are assessed these fees from the SEC and pass them through to our customers in the form of incremental fees. Since the amount recorded as revenues is equal to the amount recorded as transaction-based expenses, there is no impact on our revenues less transaction-based expenses. Section 31 fees were $282 million in 2015, $306 million in 2014 and $243 million in 2013. The decrease in 2015 was primarily due to lower SEC fee rates, partially offset by higher dollar value traded. The increase in 2014 was primarily due to higher dollar value traded on Nasdaq's trading systems, partially offset by lower pass-through fee rates.

For NASDAQ and Nasdaq PSX, we credit a portion of the per share execution charge to the market participant that provides the liquidity and for Nasdaq BX, we credit a portion of the per share execution charge to the market participant that takes the liquidity. These transaction rebates decreased in 2015 compared with 2014 and increased in 2014 compared with 2013. The decrease in 2015 was primarily due to a decrease in our overall U.S. matched market share executed on Nasdaq's exchanges and a decline in rebate capture, partially offset by an increase in U.S. industry trading volumes. The in crease in 2014 was primarily due to an increase in our overall U.S. matched market share executed on Nasdaq's exchanges and higher U.S. industry trading volumes, partially offset by a decline in rebate capture.

Brokerage, clearance and exchange fees decreased in 2015 compared with 2014 and increased in 2014 compared with 2013. The decrease in 2015 was primarily due to a decline in Section 31 pass-through fees. The increase in 2014 was primarily due to an increase in Section 31 pass-through fees, partially offset by a decrease in routing costs due to lower volume routed.

***Fixed Income, Currency and Commodities Trading and Clearing Revenues***

Fixed income , currency and commodities trading and clearing revenues less transaction-based expenses decreased in 2015 compared with 2014 and increased in 2014 compared with 2013. The decrease in 2015 was primarily due to volume declines in U.S. fixed income and European commodities products, a decrease related to a scheduled contract termination of an eSpeed technology licensing customer, and an unfavorable impact from foreign exchange of $11 million, partially offset by lower Nasdaq NLX trading incentives. The increase in 2014 was primarily due to transaction fees generated from our eSpeed electronic benchmark U.S. Treasury trading platform that was acquired in June 2013 and an increase in other revenues and fees primarily due to higher clearing revenues, partial ly offset by a decline in short-term futures and options interest product revenues due to lower volume, the impact of Nasdaq NLX trading incentives and an unfavorable impact from foreign exchange of $ 5 million.

***Access and Broker Services Revenues***

Access and broker services revenues were flat in 2015 compared with 2014 as an increase in customer demand for network connectivity was offset by an unfavorable impact from foreign exchange of $8 million. Access and broker services revenues increased in 2014 compared with 2013 primarily due to increased revenues from the addition of hosting revenues from eSpeed which was acquired in June 2013, partially offset by an unfavorable impact from foreign exchange of $2 million .

**LISTING SERVICES**

The following table shows revenues from our Listing Services segment:

| | Year Ended December 31, | | | Percentage Change | |
|---|---|---|---|---|---|
| | 2015 | 2014 | 2013 | 2015 vs. 2014 | 2014 vs. 2013 |
| | (in millions) | | | | |
| **Listing Services Revenues** | $ 264 | $ 238 | $ 228 | 10.9% | 4.4% |

Listing services revenues increased in both 2015 compared with 2014 and 2014 compared with 2013. The increase in 2015 was primarily due to an increase in U.S. listing services revenues , partially offset by a decrease in European listing services revenues. The increase in U.S. listing services revenues was primarily due to an increase in annual listing fees as a result of pricing actions and an increase in the number of listed companies. The number of NASDAQ listed companies was 2,859 as of December 31, 2015 compared with 2,782 as of December 31, 2014. European listing services revenues decreased in 2015 primarily due to an unfavorable impact from foreign exchange of $12 million, partially offset by an increase in the number of listed companies and higher annual fees. The increase in 2014 was primarily due to an increase in both U.S. and European listing services revenues. The increase in U.S. listing services revenues for 2014 was primarily due to increases in both initial listing and annual listing fees reflecting an increase in new listings and the number of listed companies. The number of NASDAQ listed companies was 2,782 as of December 31, 2014 compared with 2,637 as of December 31, 2013. Partially offsetting the increase in U.S. listing services revenues in 2014 was a decrease in listing of additional shares fees . The increase in European listing services revenues in 2014 was driven by an increase in the number of listed companies and higher market capitalization, partially offset by an unfavorable impact from foreign exchange of $2 million .

**INFORMATION SERVICES**

The following table shows revenues from our Information Services segment:

| | Year Ended December 31, | | | Percentage Change | |
|---|---|---|---|---|---|
| | 2015 | 2014 | 2013 | 2015 vs. 2014 | 2014 vs. 2013 |
| | (in millions) | | | | |
| **Information Services Revenues:** | | | | | |
| **Data products revenues** | $ 399 | $ 384 | $ 362 | 3.9% | 6.1% |
| **Index licensing and services revenues** | 113 | 89 | 74 | 27.0% | 20.3% |
| **Total Information Services Revenues** | $ 512 | $ 473 | $ 436 | 8.2% | 8.5% |

Information services revenues increased in both 2015 compared with 2014 and 2014 compared with 2013 due to increases in both data products and index licensing and services revenues, partially offset by an unfavorable impact from foreign exchange of $15 million in 2015 and $2 million in 2014.

***Data Products Revenues***

Data products revenues increased in both 2015 compared to 2014 and 2014 compared to 2013. The increase in 2015 was primarily due to the inclusion of revenues associated with the acquisition of DWA in January 2015, higher shared tape revenue plans, and higher customer demand for U.S. proprietary data products, partially offset by an unfavorable impact from foreign exchange of $14 million. The increase in 2014 was primarily due to higher customer demand for U.S. proprietary data products, select pricing

initiatives, and an increase in revenues due to the acquisition of eSpeed, which was completed in June 2013, partially offset by lower audit collections and an unfavorable impact from foreign exchange of $2 million.

***Index Licensing and Services Revenues***

Index licensing and services revenues increased in both 2015 compared with 2014 and 2014 compared with 2013 due to an increase in the value of underlying assets associated with Nasdaq-licensed ETFs and other financial products due to product growth and newly executed product licenses. The increase in 2015 was also due to our acquisition of DWA in January 2015.

See "Acquisition of Dorsey, Wright & Associates, LLC," and "Acquisition of eSpeed for Trading of U.S. Treasuries," of Note 4, "Acquisitions," to the consolidated financial statements for further discussion of our DWA and eSpeed acquisitions.

## TECHNOLOGY SOLUTIONS

The following table shows revenues from our Technology Solutions segment:

| | Year Ended December 31, | | | Percentage Change | |
|---|---|---|---|---|---|
| | 2015 | 2014 | 2013 | 2015 vs. 2014 | 2014 vs. 2013 |
| | (in millions) | | | | |
| **Technology Solutions Revenues:** | | | | | |
| **Corporate Solutions revenues** | $ 298 | $ 314 | $ 230 | (5.1)% | 36.5% |
| **Market Technology revenues** | 245 | 246 | 245 | (0.4)% | 0.4% |
| **Total Technology Solutions revenues** | $ 543 | $ 560 | $ 475 | (3.0)% | 17.9% |

Technology solutions revenues decreased in 2015 compared with 2014 and increased in 2014 compared with 2013. The decrease in 2015 was primarily due to a decrease in c orporate s olutions revenues. The increase in 2014 was primarily due to an increase in c orporate s olutions revenues. Technology s olutions revenues included an unfavorable impact from foreign exchange of $26 million in 2015 and $ 8 million in 2014.

***Corporate Solutions Revenues***

Corporate solutions revenues decreased in 2015 compared with 2014 and increased in 2014 compared with 2013. The decrease in 2015 was primarily due to a decline in the demand for our investor relations products and an unfavorable impact from foreign exchange of $9 million. The increase in 2014 was primarily due to the acquisition of the TR Corporate businesses completed in May 2013, an increase in the number of clients utilizing Directors Desk, expanding customer utilization of GlobeNewswire products and a favorable impact from foreign exchange of $ 3 million. See "Acquisition of the Investor Relations, Public Relations and Multimedia Solutions Businesses of Thomson Reuters," of Note 4, "Acquisitions," to the consolidated financial statements for further discussion of our acquisition of the TR Corporate businesses.

***Market Technology Revenues***

Market technology revenues decreased in 2015 compared with 2014 and increased in 2014 compared with 2013. The decrease in 2015 was primarily due to an unfavorable impact from foreign exchange of $17 million and lower software license and support revenues, partially offset by operational increases in software as a service revenues and change request revenues, reflecting increased customer demand. The increase in 2014 was primarily due to operational increases in software as a service revenues, software license and support revenues , and advisory revenues reflecting increased customer demand, p artially offset by a decrease in change request revenues and an unfavorable impact from foreign exchange of $ 11 million.

Total Order Value

As of December 31, 2015, total order value, which represents the total contract value of orders signed that are yet to be recognized as revenues, was $788 million. Total order value as of December 31, 2014 was $716 million and was $678 million as of December 31, 2013. As of December 31, 2015, m arket t echnology deferred revenue, included in the total t echnology s olutions deferred revenue of $ 199 million , represents consideration received that is yet to be recognized as revenue for these signed orders. See Note 8, "Deferred Revenue," to the consolidated financial statements for further discussion. The recognition and timing of these revenues depends on many factors, including those that are not within our control. As such, the following table of m arket t echnology revenues to be recognized in the future represents our best estimate:

| | Total Order Value |
|---|---|
| | (in millions) |
| Fiscal year ended: | |
| 2016 | $ 234 |

| | |
|---|---|
| 2017 | 193 |
| 2018 | 128 |
| 2019 | 85 |
| 2020 | 73 |
| 2021 and thereafter | 75 |
| Total | $ 788 |

**Expenses**

***Operating Expenses***

The following table shows our operating expenses:

| | Year Ended December 31, | | | Percentage Change | |
|---|---|---|---|---|---|
| | 2015 | 2014 | 2013 | 2015 vs. 2014 | 2014 vs. 2013 |
| | (in millions) | | | | |
| Compensation and benefits | $ 590 | $ 588 | $ 539 | 0.3% | 9.1% |
| Marketing and advertising | 28 | 32 | 30 | (12.5)% | 6.7% |
| Depreciation and amortization | 138 | 137 | 122 | 0.7% | 12.3% |
| Professional and contract services | 148 | 157 | 151 | (5.7)% | 4.0% |
| Computer operations and data communications | 107 | 92 | 82 | 16.3% | 12.2% |
| Occupancy | 85 | 110 | 98 | (22.7)% | 12.2% |
| Regulatory | 27 | 27 | 30 | - | (10.0)% |
| Merger and strategic initiatives | 10 | 81 | 22 | (87.7)% | # |
| General, administrative and other | 65 | 89 | 80 | (27.0)% | 11.3% |
| Restructuring charges | 172 | - | 9 | # | # |
| Voluntary accommodation program | - | - | 44 | - | # |
| **Total operating expenses** | $ 1,370 | $ 1,313 | $ 1,207 | 4.3% | 8.8% |

# Denotes a variance equal to or greater than 100.0%.

Total operating expenses increased $57 million in 2015 compared with 2014 and increased $106 million in 2014 compared with 2013. The increase in 2015 reflects an operational increase of $133 million, partially offset by a favorable impact from foreign exchange of $76 million. The operational increase in 2015 was mainly due to restructuring charges, an increase in compensation and benefits expense, and higher computer operations and data communications expense , partially offset by lower merger and strategic initiatives expense, lower occupancy expense, and a decrease in general, administrative and other expense. The increase in 2014 reflects an operational increase of $11 6 million, partially offset by a favorable impact from foreign exchange of $10 million . The operational increase in 2014 was primarily due to additional overall expense associated with our acquisitions of the TR Corporate businesses in May 2013 and eSpeed in June 2013, higher merger and strategic initiatives expense, higher occupancy expense reflecting a sublease loss reserve recorded in 2014, and a loss on debt extinguishment. Partially offsetting these increases were expenses recorded during 2013 consisting of restructuring charges, expense related to our voluntary accommodation program, and $10 million related to an SEC matter.

Compensation and benefits expense increased in both 2015 compared with 2014 and 2014 compared with 2013. The increase in 2015 was primarily due to overall higher compensation costs associated with increased financial performance and increased compensation costs resulting from our acquisition of DWA in January 2015. Partially offsetting these increases was a favorable impact from foreign exchange of $38 million. The increase in 2014 was primarily due to an operational increase of $ 57 million , partially offset by a favorable impact from foreign exchange of $8 million. The operational increase primarily reflects additional salary expense resulting from our acquisitions of the TR Corporate businesses and eSpeed, as well as higher share-based compensation expense due to the timing of the issuance of our 2013 equity awards. Headcount, including staff employed at consolidated entities where we have a controlling financial interest, increased to 3 , 8 24 employees at December 31, 2015 from 3,687 at December 31, 2014. Headcount was 3,365 at December 31, 2013.

Marketing and advertising expense decreased in 2015 compared with 2014 and increased in 2014 compared with 2013. The decrease in 2015 was primarily due to de creased advertising spend . The increase in 2014 was primarily due to increased advertising on behalf of new issuers and our rebranding initiative.

Depreciation and amortization expense increased in both 2015 compared with 2014 and 2014 compared with 2013. The increase in 2015 was primarily due to additional amortization expense associated with acquired intangible assets relating to the acquisition of DWA in January 2015, as well as increased depreciation expense associated with assets placed in service and software development . Partially offsetting these increases was a favorable impact from foreign exchange of $10 million. The increase in 2014 was primarily due to additional amortization expense associated with acquired intangible assets, primarily relating to the acquisitions of the TR

Corporate businesses in May 2013 and eSpeed in June 2013, as well as increased depreciation expense associated with assets placed in service and software development . Partially offsetting these increases was a favorable impact from foreign exchange of $ 2 million.

Professional and contract services expense decreased in 2015 compared with 2014 and increased in 2014 compared with 2013. The decrease in 2015 was primarily due to a favorable impact from foreign exchange of $8 million. The increase in 2014 was primarily due to revenue-related costs incurred as a result of our acquisition of the TR Corporate businesses, costs incurred for legal expenses and the launch of new initiatives . The revenue-related costs are primarily due to the production and delivery of webcast events as well as other events and services.

Computer operations and data communications expense increased in both 2015 compared with 2014 and 2014 compared with 2013. The increase in 2015 was primarily due to an increase in value added tax, or VAT, reflecting a charge for the reversal of previously recorded VAT receivables no longer deemed collectible of $12 million and higher software lease and maintenance costs, partially offset by a favorable impact from foreign exchange of $8 million. The increase in 2014 was primarily due to higher software development expenditures primarily associated with our Technology Solutions businesses and additional expense as a result of our acquisitions of the TR Corporate businesses and eSpeed.

Occupancy expense decreased in 2015 compared with 2014 and increased in 2014 compared with 2013. The decrease in 2015 reflects lower facility and rent costs due to our restructuring activities and lower costs resulting from services no longer needed under the transition services agreement that was entered into in connection with our acquisition of the TR Corporate businesses. Also contributing to the decrease in 2015 was a favorable impact from foreign exchange of $5 million. The increase in 2014 was primarily due to an $11 million sublease loss reserve charge on space we currently occupy due to excess capacity.

Merger and strategic initiatives expense was $10 million in 2015, $81 million in 2014, and $22 million in 2013. Merger and strategic initiatives expense for 2015 was primarily related to certain strategic initiatives and our acquisition of DWA. Merger and strategic initiatives expense for 2014 was primarily related to our acquisitions of the TR Corporate businesses and eSpeed and a charge of $23 million related to the reversal of a receivable under a tax sharing agreement with an unrelated party . Merger and strategic initiatives expense for 2013 primarily related to our acquisitions of the TR Corporate businesses and eSpeed. The costs incurred in 2013 were partially offset by a credit of $23 million associated with a receivable under a tax sharing agreement with an unrelated party and the remeasurement of a contingent purchase price liability related to the BWise acquisition due to changes in the anticipated performance of BWise.

General, administrative and other expense decreased in 2015 compared with 2014 and increased in 2014 compared with 2013. The decrease in 2015 was primarily due to a lower provision for bad debts due to better collection results, a favorable impact from foreign exchange of $5 million, and a loss on extinguishment of debt recorded in 2014. In addition, i n March 2015, we recorded a loss reserve of $31 million for litigation arising from the Facebook IPO in May 2012. The reserve was intended to cover the estimated amount of a settlement of class-action litigation initiated on behalf of investors in Facebook common stock on the date of its IPO. The reserve also covered the cost of re-opening Nasdaq's voluntary accommodation program to allow any Nasdaq member that did not file for compensation in 2013 to submit a claim during the second quarter of 2015, subject to the conditions and limitations that were applicable to claims filed in 2013. The re-opened accommodation program is now closed. During the second half of 2015, we recorded an insurance recovery which offset the loss reserve that was recorded in March 2015. The increase in general, administrative and other expense in 2014 compared with 2013 was primarily due to additional expense associated with our acquisitions of the TR Corporate businesses in May 2013 and eSpeed in June 2013, an $11 million loss on extinguishment of debt in 2014, and an unfavorable impact from foreign exchange of $3 million . Partially offsetting this increase was $10 million of expense rela ted to an SEC matter incurred in 2013.

Restructuring charges were $172 million in 2015 and $9 million in 2013. See Note 3, "Restructuring Charges," to the consolidated financial statements for a discussion of our restructuring charges recorded during 2015 and 2013.

Voluntary accommodation program expense of $44 million in 2013 relates to the one-time program for voluntary accommodation s to qualifying members of up to $62 million, for which a liability was recorded when the program was approved by the SEC in March 2013. This program expanded the pool available to compensate members of The NASDAQ Stock Market for qualified losses arising directly from the system issues experienced with the Facebook IPO that occurred on May 18, 2012. After claims were reviewed, our liability was reduced to $44 million and payment of valid claims totaling $44 million was made in the fourth quarter of 2013.

***Non-operating Income and Expenses***

The following table shows our non-operating income and expenses:

| | Year Ended December 31, | | | Percentage Change | |
|---|---|---|---|---|---|
| | 2015 | 2014 | 2013 | 2015 vs. 2014 | 2014 vs. 2013 |
| | (in millions) | | | | |
| Interest income | $ 4 | $ 6 | $ 9 | (33.3)% | (33.3)% |

| | | | | | |
|---|---|---|---|---|---|
| Interest expense | (111) | (117) | (111) | (5.1)% | 5.4% |
| Net interest expense | (107) | (111) | (102) | (3.6)% | 8.8% |
| Gain on sale of investment security | - | - | 30 | - | # |
| Asset impairment charges | - | (49) | (14) | # | # |
| Net income (loss) from unconsolidated investees | 17 | - | (2) | # | # |
| Total non-operating expenses | $ (90) | $ (160) | $ (88) | (43.8)% | 81.8% |

# Denotes a variance equal to or greater than 100.0%.

Total non-operating expenses were $90 million in 2015 compared with $160 million in 2014 and $88 million in 2013. Total non-operating expenses for 2015 included net interest expense of $107 million and net income from unconsolidated investees of $17 million. Total non-operating expenses for 2014 included net interest expense of $111 million and asset impairment charges of $49 million. Total non-operating expenses for 2013 primarily included net interest expense of $102 million and asset impairment charges of $14 million, partially offset by a gain of $30 million on the sale of an available-for-sale investment security.

Interest Income

Interest income decreased in both 201 5 compared with 2014 and 2014 compared with 2013. The decreases were primarily due to lower average cash and financial investments balances .

Interest Expense

The following table shows our interest expense:

| | Year Ended December 31, | | | Percentage Change | |
|---|---|---|---|---|---|
| | 2015 | 2014 | 2013 | 2015 vs. 2014 | 2014 vs. 2013 |
| | (in millions) | | | | |
| Interest expense | $ 106 | $ 110 | $ 101 | (3.6)% | 8.9% |
| Accretion of debt issuance costs and debt discount | 4 | 4 | 6 | - | (33.3)% |
| Other bank and investment-related fees | 1 | 3 | 4 | (66.7)% | (25.0)% |
| Total interest expense | $ 111 | $ 117 | $ 111 | (5.1)% | 5.4% |

Interest expense decreased in 2015 compared with 2014 primarily due to a favorable impact from foreign exchange of $6 million. Interest expense increased in 2014 compared with 2013 primarily due to the issuance of our 2021 Notes in June 2013 and the issuance of our 2024 Notes in May 2014, partially offset by the early extinguishment of our 4.00% senior notes in June 2014, the repayment of our 2.50% convertible senior notes in August 2013, and lower outstanding balances on our 2011 credit facility.

See Note 9, “Debt Obligations,” to the consolidated financial statements for further discussion of our debt obligations.

Gain on Sale of Investment Security

In the fourth quarter of 2013, we sold an available-for-sale investment security for $48 million and recorded a gain of $30 million on the sale, which is net of costs directly related to the sale, primarily broker fees.

Asset Impairment Charges

Asset impairment charges of $49 million in 2014 related to a $38 million non-cash intangible asset impairment charge associated with customer relationships and an $11 million non-cash asset impairment charge related to certain technology assets . Asset impairment charges of $14 million in 2013 related to non-cash intangible asset impairment charges related to certain acquired intangible assets associated with customer relationships ($7 million) and a certain trade name ($7 million). See “Intangible Asset Impairment Charges,” of Note 5, “Goodwill and Acquired Intangible Assets,” to the consolidated financial statements for further discussion of the intangible asset impairment charges in 2014 and 2013.

Net Income (Loss) from Unconsolidated Investees

Net income (loss) from unconsolidated investees was $17 million income in 2015 and a $2 million loss in 2013. Net income from unconsolidated investees for 2015 was primarily due to income recognized from our equity method investment in OCC. We were not able to determine what our share of OCC’s income was for the year ended December 31, 2014 until the first quarter of 2015, when OCC financial statements were made available to us. As a result, we recorded other income of $13 million in 2015 relating to our share of OCC’s income for the year ended December 31, 2014.

See "Equity Method Investments," of Note 6, "Investments," to the consolidated financial statements for further discussion of our investment in OCC.

***Tax Matters***

Nasdaq's income tax provision was $ 203 million in 201 5 compared with $1 81 million in 201 4 and $ 2 1 6 million in 201 3 . The overall effective tax rate was 3 2 . 2 % in 201 5 , 3 0 . 5 % in 201 4 and 36.3% in 201 3 . The higher tax rate in 2015 when compared to 2014, and the lower effective tax rate in 2014 when compared to 2013, was primarily due to a decrease in unrecognized tax benefits in 2014.

The effective tax rate may vary from period to period depending on, among other factors, the geographic and business mix of earnings and losses. These same and other factors, including history of pre-tax earnings and losses, are taken into account in assessing the ability to realize deferred tax assets.

In order to recognize and measure our unrecognized tax benefits, management determines whether a tax position is more likely than not to be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. Once it is determined that a position meets the recognition thresholds, the position is measured to determine the amount of benefit to be recognized in the consolidated financial statements. Interest and/or penalties related to income tax matters are recognized in income tax expense.

See Note 10, "Income Taxes," to the consolidated financial statements for further discussion of our tax matters.

***Non-GAAP Financial Measures***

In addition to disclosing results determined in accordance with U.S. GAAP, we also have provided non-GAAP net income attributable to Nasdaq and non-GAAP diluted earnings per share. Management uses this non-GAAP information internally, along with U.S. GAAP information, in evaluating our performance and in making financial and operational decisions.

We believe our presentation of these measures provides investors with greater transparency and supplemental data relating to our financial condition and results of operations. In addition, we believe the presentation of these measures is useful to investors for period-to-period comparison of results as the items described below do not reflect operating performance. These measures are not in accordance with, or an alternative to, U.S. GAAP, and may be different from non-GAAP measures used by other companies. Investors should not rely on any single financial measure when evaluating our business. We recommend investors review the U.S. GAAP financial measures included in this Annual Report on Form 10-K, including our consolidated financial statements and the notes thereto. When viewed in conjunction with our U.S. GAAP results and the accompanying reconciliation, we believe these non-GAAP measures provide greater transparency and a more complete understanding of factors affecting our business than U.S. GAAP measures alone. Our management uses these measures to evaluate operating performance, and management decisions during the reporting period are made by excluding certain items that we believe have less significance on, or do not impact, the day-to-day performance of our business. In addition, since management does not consider intangible asset amortization expense for the purpose of evaluating the performance of the business or its managers or when making decisions to allocate resources, such expenses have been shown as a non-GAAP adjustment.

We understand that analysts and investors regularly rely on non-GAAP financial measures, such as non-GAAP net income and non-GAAP diluted earnings per share, to assess operating performance. We use non-GAAP net income attributable to Nasdaq and non-GAAP diluted earnings per share because they more clearly highlight trends in our business that may not otherwise be apparent when relying solely on U.S. GAAP financial measures, since these measures eliminate from our results specific financial items that have less bearing on our operating performance. Non-GAAP net income attributable to Nasdaq for the periods presented below is calculated by adjusting net income attributable to Nasdaq for charges or gains related to acquisition and divestiture transactions, integration activities related to acquisitions, amortization expense of acquired intangible assets, other significant infrequent charges or gains and their related income tax effects that are not related to our core business. We do not believe these items are representative of our future operating performance since these charges were not consistent with our core operating performance.

Non-GAAP adjustments for the year ended December 31, 2015 primarily related to the following:

(i) income from our equity method investment in OCC of $13 million. See "Equity Method Investments," of Note 6, "Investments," to the consolidated financial statements for further discussion , (ii) restructuring charges of $172 million. See Note 3, "Restructuring Charges," to the consolidated financial statements for further discussion, (iii) amortization expense of acquired intangible assets of $62 million, (iv) reversal of previously recorded VAT receivables no longer deemed collectible of $12 million, (v) merger and strategic initiatives costs of $10 million primarily related to certain strategic initiatives and our acquisition of DWA, and (vi) adjustment to the income tax provision of $90 million to reflect these non-GAAP adjustments.

Non-GAAP adjustments for the year ended December 31, 2014 primarily related to the following:

(i) special legal expense of $2 million , (ii) amortization expense of acquired intangible assets of $69 million, (iii) loss on extinguishment of debt of $11 million reflecting $9 million related to the early extinguishment of our 4.00% senior notes in June 2014

and $2 million related to the refinancing of our 2011 credit facility , (iv) merger and strategic initiatives costs of $81 million primarily related to our acquisition of the TR Corporate businesses in May 2013 and eSpeed in June 2013 and a charge of $23 million related to the reversal of a receivable under a tax sharing agreement with an unrelated party - this charge is offset in item (vii ) below , (v) asset impairment charges of $49 million related to certain acquired intangible assets associated with customer relationships and certain technology assets , (vi) sublease loss reserve charge of $11 million on space we currently occupy due to excess capacity , and (vii) adjustment to the income tax provision of $ 9 7 million to reflect these non-GAAP adjustments.

Non-GAAP adjustments for the year ended December 31, 2013 primarily related to the following:

(i) restructuring charges of $9 million, (ii) special legal expense of $3 million , (iii) amortization expense of acquired intangible assets of $63 million, (iv) merger and strategic initiatives costs of $22 million reflecting $45 million of merger and strategic initiative costs primarily associated with our acquisitions of the TR Corporate businesses and eSpeed, partially offset by a credit of $23 million associated with a receivable under a tax sharing agreement with an unrelated party - this credit is offset in item (ix) below, (v) asset impairment charges of $14 million related to certain acquired intangible assets associated with customer relationships and a certain trade name, ( vi ) voluntary accommodation program expense of $44 million, (vi i ) gain on sale of investment security of $30 million related to the sale of an available-for-sale investment security , (viii) expenses paid with respect to an SEC matter of $ 10 million , and (ix) adjustment to the income tax provision of $ 3 3 million to reflect these non-GAAP adjustments .

The following table represents reconciliations between U.S. GAAP net income and diluted earnings per share and non-GAAP net income and diluted earnings per share:

| | Year Ended December 31, 2015 | | Year Ended December 31, 2014 | | Year Ended December 31, 2013 | |
|---|---|---|---|---|---|---|
| | Net Income | Diluted Earnings Per Share | Net Income | Diluted Earnings Per Share | Net Income | Diluted Earnings Per Share |
| | (in millions, except share and per share amounts) | | | | | |
| **U.S. GAAP net income attributable to Nasdaq and diluted earnings per share** | $ 428 | $ 2.50 | $ 414 | $ 2.39 | $ 385 | $ 2.25 |
| Non-GAAP adjustments: | | | | | | |
| Income from OCC equity investment | (13) | (0.08) | - | - | - | - |
| Restructuring charges | 172 | 1.00 | - | - | 9 | 0.05 |
| Special legal expense | - | - | 2 | 0.01 | 3 | 0.02 |
| Amortization expense of acquired intangible assets | 62 | 0.36 | 69 | 0.40 | 63 | 0.37 |
| Reversal of value added tax refund | 12 | 0.07 | - | - | - | - |
| Extinguishment of debt | - | - | 11 | 0.07 | - | - |
| Merger and strategic initiatives | 10 | 0.06 | 81 | 0.47 | 22 | 0.13 |
| Asset impairment charges | - | - | 49 | 0.28 | 14 | 0.08 |
| Voluntary accommodation program | - | - | - | - | 44 | 0.26 |
| Gain on sale of investment security | - | - | - | - | (30) | (0.18) |
| SEC matter | - | - | - | - | 10 | 0.06 |
| Sublease loss reserve | - | - | 11 | 0.07 | - | - |
| Other | - | - | 2 | - | (3) | (0.02) |
| Adjustment to the income tax provision to reflect non-GAAP adjustments [1] | (90) | (0.52) | (97) | (0.56) | (33) | (0.19) |
| Total non-GAAP adjustments, net of tax | 153 | 0.89 | 128 | 0.74 | 99 | 0.58 |
| **Non-GAAP net income attributable to Nasdaq and diluted earnings per share** | $ 581 | $ 3.39 | $ 542 | $ 3.13 | $ 484 | $ 2.83 |
| Weighted-average common shares outstanding for diluted earnings per share | | 171,283,271 | | 173,018,849 | | 171,266,146 |

[1] We determine the tax effect of each item based on the tax rules in the respective jurisdiction where the transaction occurred.

In addition to disclosing non-GAAP net income attributable to Nasdaq and non-GAAP diluted e arnings per share, we also have provided non-GAAP operating income which is used in the disclosure of foreign currency exchange rate risk. See “Foreign Currency Exchange Rate Risk,” of Item 7A . “Quantitative and Qualitative Disclosures About Market Risk,” for further discussion.

**Liquidity and Capital Resources**

Historically, we have funded our operating activities and met our commitments through cash generated by operations, augmented by the periodic issuance of our common stock and debt. See Note 9, "Debt Obligations," to the consolidated financial statements for further discussion of our debt obligations.

As part of the acquisition of eSpeed, Nasdaq has contingent future obligations to issue 992,247 shares of Nasdaq common stock annually which approximated certain tax benefits associated with the transaction of $484 million. Such contingent future issuances of Nasdaq common stock will be paid ratably through 2027 if Nasdaq's total gross revenues equal or exceed $25 million in each such year. The contingent future issuances of Nasdaq common stock are subject to anti-dilution protections and acceleration upon certain events.

In November 2014, we entered into a $750 million senior unsecured five-year credit facility which matures on November 25, 2019, or the 2014 Credit Facility . The 2014 Credit Facility consists of a $750 million revolving credit commitment (with sublimits for non-dollar borrowings, swingline borrowings and letters of credit). As of December 31, 2015, availability under the revolving credit commitment was $490 million. See "2014 Credit Facility," of Note 9, "Debt Obligations," to the consolidated financial statements for further discussion.

In the near term, we expect that our operations and availability under our revolving credit commitment will provide sufficient cash to fund our operating expenses, capital expenditures, debt repayments, any share repurchases, and any dividends.

Various assets and liabilities, including cash and cash equivalents , receivables, accounts payable and accrued expenses , can fluctuate from month to month. Working capital (calculated as current assets less current liabilities) was $340 million at December 31, 2015, compared with $420 million at December 31, 2014, a decrease of $80 million. Current asset balance changes de creased working capital by $ 116 million, with de creases in cash and cash equivalents and receivables, net, partially offset by in crease s in default funds and margin deposits, financial investments, at fair value, deferred tax assets, restricted cash and other current assets . Current liability balance changes in creased working capital by $ 36 million due to decreases in deferred revenue, accounts payable and accrued expenses, Section 31 fees payable to the SEC and deferred tax liabilities, partially offset by increases in default funds and margin deposits, accrued personnel costs and other current liabilities .

Principal factors that could affect the availability of our internally-generated funds include:

- deterioration of our revenues in any of our business segments;
- changes in our working capital requirements; and
- an increase in our expenses.

Principal factors that could affect our ability to obtain cash from external sources include:

- operating covenants contained in our credit facility that limit our total borrowing capacity;
- increases in interest rates under our credit facility;
- credit rating downgrades, which could limit our access to additional debt;
- a decrease in the market price of our common stock; and
- volatility in the public debt and equity markets.

The following sections discuss the effects of changes in our financial assets, debt obligations, clearing and broker-dealer net capital requirements, and cash flows on our liquidity and capital resources.

***Financial Assets***

The following table summarizes our financial assets:

| | December 31, 2015 | December 31, 2014 |
|---|---|---|
| | (in millions) | |
| Cash and cash equivalents | $ 301 | $ 427 |
| Restricted cash | 56 | 49 |
| Financial investments, at fair value | 201 | 174 |
| Total financial assets | $ 558 | $ 650 |

Cash and Cash Equivalents and Restricted Cash

Cash and cash equivalents include cash in banks and all non-restricted highly liquid investments with original maturities of 90 days or less at the time of purchase. The balance retained in cash and cash equivalents is a function of anticipated or possible short-term cash needs, prevailing interest rates, our investment policy, and alternative investment choices. As of December 31, 2015, our

cash and cash equivalents of $301 million were primarily invested in bank deposits, money market funds and commercial paper. In the long-term, we may use both internally generated funds and external sources to satisfy our debt obligations and other long-term liabilities. Cash and cash equivalents as of December 31, 2015 decreased $126 million from December 31, 2014 primarily due to net cash used in investing and financing activities, partially offset by net cash provided by operating activities. S ee “Cash Flow Analysis” below for further discussion.

As of December 31, 2015 and December 31, 2014, current restricted cash included cash held for regulatory purposes and other requirements and is not available for general use. Current restricted cash was $56 million as of December 31, 2015 and $49 million as of December 31, 2014, an increase of $7 million. The increase is primarily due to restricted cash held at SecondMarket, partially offset by lower restricted cash requirements in our Nasdaq Nordic and Nasdaq Baltic operations. We acquired SecondMarket in the fourth quarter of 2015. The restricted cash held at SecondMarket relates to customer funds held in connection with privately negotiated securities transactions for the exclusive benefit of the customer . Current restricted cash is classified as restricted cash in the Consolidated Balance Sheets.

*Repatriation of Cash*

Our cash and cash equivalents held outside of the U.S. in various foreign subsidiaries totaled $105 million as of December 31, 2015 and $83 million as of December 31, 2014. The remaining balance held in the U.S. totaled $196 million as of December 31, 2015 and $344 million as of December 31, 2014.

Unremitted earnings of subsidiaries outside of the U.S. are used to finance our international operations and are generally considered to be indefinitely reinvested. It is not our current intent to change this position. However, the majority of cash held outside the U.S. is available for repatriation, but under current law, could subject us to additional U.S. income taxes, less applicable foreign tax credits.

*Share Repurchase Program*

See “Share Repurchase Program,” of Note 13, “Nasdaq Stockholders’ Equity,” to the consolidated financial statements for further discussion of our share repurchase program.

*Cash Dividends on Common Stock*

In June, September and December 2015, we paid a quarterly cash dividend of $0.25 per share on our outstanding common stock, and in March 2015, we paid a quarterly cash dividend of $0.15 per share on our outstanding common stock. See “Cash Dividends on Common Stock,” of Note 13, “Nasdaq Stockholders’ Equity,” to the consolidated financial statements for further discussion of the dividends.

Financial Investments, at Fair Value

Our financial investments, at fair value totaled $201 million as of December 31, 2015 and $174 million as of December 31, 2014 and are primarily comprised of trading securities, mainly highly rated European government debt securities. Of these securities, $ 166 m illion as of December 31, 2015 and $159 million as of December 31, 2014 are assets utilized to meet regulatory capital requirements primarily for clearing operations at Nasdaq Clearing. See Note 6, “Investments,” to the consolidated financial statements for further discussion of our trading investment securities.

***Debt Obligations***

The following table summarizes our debt obligations by contractual maturity:

| | Maturity Date | December 31, 2015 | December 31, 2014 |
|---|---|---|---|
| | | (in millions) | |
| 5.25% senior unsecured notes [1] | January 2018 | $ 368 | $ 368 |
| $750 million revolving credit commitment [2] | November 2019 | 258 | 119 |
| 5.55% senior unsecured notes [1] | January 2020 | 597 | 596 |
| 3.875% senior unsecured notes [1] | June 2021 | 646 | 720 |
| 4.25% senior unsecured notes [1] | June 2024 | 495 | 494 |
| Total long-term debt obligations | | $ 2,364 | $ 2,297 |

(1) Net of unamortized debt discount and debt issuance costs.

(2) Net of unamortized debt issuance costs.

In addition to our $750 million revolving credit commitment, we also have other credit facilities related to our Nasdaq Clearing operations in order to provide further liquidity. In addition, at December 31, 2014, we had credit facilities to provide for default protection . At December 31, 2015, credit facilities, which are available in multiple currencies, primarily Swedish Krona, totaled $202

million in available liquidity , none of which was utilized. At December 31, 201 4 , credit facilities, which are available in multiple currencies, primarily Swedish Krona, totaled $ 236 million ($ 197 million in available liquidity and $ 39 million for default protection), of which $ 7 million was util ized.

At December 31, 2015, we were in compliance with the covenants of all of our debt obligations.

See Note 9, “Debt Obligations,” to the consolidated financial statements for further discussion of our debt obligations.

***Clearing and Broker-Dealer Net Capital Requirements***

Clearing Operations Regulatory Capital Requiremen ts

We are required to maintain minimum levels of regulatory capital for the clearing operations of Nasdaq Clearing. The level of regulatory capital required to be maintained is dependent upon many factors, including market conditions and creditworthiness of the counterparty. At December 31, 201 5 , our required regulatory capital consisted of $ 166 million of highly rated European government debt securities that are included in financial investments, at fair value in the Consolidated Balance Sheets.

Broker-Dealer Net Capital Requirements

Our broker-dealer subsidiaries, Nasdaq Execution Services, Execution Access , NPM Securities and SMTX are subject to regulatory requirements intended to ensure their general financial soundness and liquidity. These requirements obligate these subsidiaries to comply with minimum net capital requirements. The following table summarizes the capital requirements for our broker-dealer subsidiaries as of December 31, 201 5:

| Broker-Dealer Subsidiaries | Total Net Capital | Required Minimum Net Capital | Excess Capital |
|---|---|---|---|
| | | (in millions) | |
| Nasdaq Execution Services | $ 6.8 | $ 0.3 | $ 6.5 |
| Execution Access | 45.5 | 0.4 | 45.1 |
| NPM Securities | 0.3 | - | 0.3 |
| SMTX | 0.4 | 0.3 | 0.1 |

Other Capital Requirements

Nasdaq Execution Services also is required to maintain a $2 million minimum level of net capital under our clearing arrangement with OCC.

***Cash Flow Analysis***

The following table summarizes the changes in cash flows:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | Percentage Change |
| | (in millions) | | |
| Net cash provided by (used in): | | | |
| Operating activities | $ 685 | $ 687 | (0.3)% |
| Investing activities | (441) | (155) | # |
| Financing activities | (362) | (485) | (25.4)% |
| Effect of exchange rate changes on cash and cash equivalents | (8) | (18) | (55.6)% |
| Net increase (decrease) in cash and cash equivalents | (126) | 29 | # |
| Cash and cash equivalents at the beginning of period | 427 | 398 | 7.3% |
| Cash and cash equivalents at the end of period | $ 301 | $ 427 | (29.5)% |

# Denotes a variance greater than 100.0%.

Net Cash Provided by Operating Activities

The following items impacted our net cash provided by operating activities for the year ended December 31, 2015:

- Net income of $427 million, plus:
  - Adjustments to reconcile net income to net cash provided by operating activities of $273 million comprised primarily of $138 million of depreciation and amortization expense, $136 million in non-cash restructuring charges, and $68 million of share-based compensation expense, partially offset by $45 million of excess tax benefits related to share-based payments, net income from unconsolidated investees of $17 million and deferred income taxes of $14 million.

- Decrease in rece ivables, net of $55 million primarily due to the timing of collections and activity.
- Increase in other liabilities of $6 0 million primarily reflecting customer funds held in connection with privately negotiated securities transactions at SecondMarket , an increase in accrued taxes and an increase in our restructuring reserve .
- Increase in accrued personnel costs of $33 million primarily due to the 2015 accrual, partially offset by the payment of our 2014 incentive compensation in the first quarter of 2015.

Partially offset by a n :

- Increase in other assets of $50 million primarily reflecting our equity method investment in OCC , restricted cash held at SecondMarket , and an increase in deferred costs associated with the timing and delivery of technology projects.
- Decrease in deferred revenue of $49 million mainly related to our Technology Solutions businesses.
- Decrease in accounts payable and accrued expenses of $38 million primarily reflecting the timing of trade payables.
- Decrease in Section 31 fees payable to the SEC of $26 million primarily due to lower SEC fee rates and a decline in equity and options matched market share executed on Nasdaq's exchanges.

The following items impacted our net cash provided by operating activities for the year ended December 31, 2014:

- Net income of $413 million, plus:
    - Adjustments to reconcile net income to net cash provided by operating activities of $275 million comprised primarily of $137 million of depreciation and amortization expense, $62 million of share-based compensation expense, $49 million of asset impairment charges, other reconciling items of $28 million, which primarily reflects bad debt expense , and non-c ash merger and strategic initiatives expense of $20 million, partially offset by $15 million of excess tax benefits related to share-based payments.
- Increase in deferred revenue of $64 million mainly related to our Corporate Solutions and Market Technology businesses.
- Increase in Section 31 fees payable to the SEC of $42 million primarily due to higher volumes, contract value and SEC fee rates .

Partially offset by an:

- Increase in other assets of $55 million primarily reflecting an increase in deferred costs associated with the timing and delivery of technology projects, partially offset by a decrease in restricted cash held for regulatory purposes.
- Decrease in accounts payable and accrued expenses of $40 million reflecting the timing of payments and a decrease in interest payable related to our debt obligations.

Net Cash Used in Investing Activities

Net cash used in investing activities for the year ended December 31, 2015 primarily consisted of our acquisition of DWA in January 2015 of $226 million, our purchases of trading and available-for-sale investment securities of $384 million, a capital contribution of $30 million in connection with our equity method investment in OCC, and purchases of property and equipment of $133 million, partially offset by proceeds from sales and redemptions of trading securities of $319 million and proceeds from maturities of available-for-sale investment securities of $29 million.

Net cash used in investing activities for the year ended December 31, 2014 primarily consisted of purchases of trading securities and available-for-sale investment securities of $303 million and purchases of property and equipment of $140 million, partially offset by proceeds from sales and redemptions of trading securities of $281 million and proceeds from maturities of available-for-sale investment securities of $17 million .

Net Cash Provided by (Used in) Financing Activities

Net cash used in financing activities for the year ended December 31, 2015 primarily consisted of $377 million related to the repurchase our common stock, $369 million of cash used in connection with the repayment of the revolving credit commitment under our 2014 Credit Facility, $149 million related to cash dividends paid on our common stock, partially offset by $506 million from the partial utilization of the revolving credit commitment under our 2014 Credit Facility to partially fund our acquisition of DWA and other general corporate purposes.

Net cash used in financing activities for the year ended December 31, 2014 primarily consisted of $970 million of cash used in connection with the repayment of debt obligations, which consisted of a $408 million payment to repay in full our 4.00% senior notes in June 2014 , a $349 million payment to repay in full our $450 million funded term loan, and the repayment of the total amount drawn on our 2011 revolving credit commitment of $213 million, which included $118 million of proceeds received during the year ended December 31, 2014. In addition, cash used in financing activities included $178 million related to the repurchase of our common stock and $98 million related to cash dividends paid on our common stock. Partially offsetting these decreases were net proceeds received of $735 million which consisted of $494 million from the issuance of our 2024 Notes, $118 million from the partial utilization of the

revolving credit commitment of our 2011 credit facility and $123 million from the partial utilization of the revolving credit commitment under our 2014 Credit Facility.

For further discussion of our DWA acquisition, see Note 4, "Acquisitions," to the consolidated financial statements. For further discussion of our debt obligations, see Note 9, "Debt Obligations," to the consolidated financial statements. For further discussion of our share repurchase program, see "Share Repurchase Program," of Note 13, "Nasdaq Stockholders' Equity," to the consolidated financial statements.

**Contractual Obligations and Contingent Commitments**

Nasdaq has contractual obligations to make future payments under debt obligations by contract maturity, minimum rental commitments under non-cancelable operating leases, net and other obligations. The following table shows these contractual obligations as of December 31, 2015:

| | Payments Due by Period | | | | |
|---|---|---|---|---|---|
| Contractual Obligations | Total | Less than 1 year | 1-3 years | 3-5 years | More than 5 years |
| | | | (in millions) | | |
| Debt obligations by contract maturity [1] | $ 2,934 | $ 104 | $ 570 | $ 1,009 | $ 1,251 |
| Minimum rental commitments under non-cancelable operating leases, net [2] | 320 | 78 | 92 | 75 | 75 |
| Other obligations [3] | 12 | 11 | 1 | - | - |
| Total | $ 3,266 | $ 193 | $ 663 | $ 1,084 | $ 1,326 |

[1] Our debt obligations include both principal and interest obligations. At December 31, 2015, an interest rate of 2.22% was used to compute the amount of the contractual obligations for interest on the 2014 Credit Facility. All other debt obligations were primarily calculated on a 360-day basis at the contractual fixed rate multiplied by the aggregate principal amount at December 31, 2015. See Note 9, "Debt Obligations," to the consolidated financial statements for further discussion.

[2] We lease some of our office space and equipment under non-cancelable operating leases with third parties and sublease office space to third parties. Some of our leases contain renewal options and escalation clauses based on increases in property taxes and building operating costs.

[3] Other obligations primarily consist of a potential future escrow agreement payment related to a prior acquisition as well as other service agreement payments.

**Non-Cash Contingent Consideration**

As part of the eSpeed purchase price consideration, we have agreed to future annual issuances of 992,247 shares of Nasdaq common stock which approximated certain tax benefits associated with the transaction. Such contingent future issuances of Nasdaq common stock will be paid ratably through 2027 if Nasdaq's total gross revenues equal or exceed $25 million in each such year. The contingent future issuances of Nasdaq common stock are subject to anti-dilution protections and acceleration upon certain events.

**Off-Balance Sheet Arrangements**

For discussion of off-balance sheet arrangements see:

- Note 16, "Clearing Operations," to the consolidated financial statements for further discussion of our non-cash default fund contributions and margin deposits received for clearing operations;
- Note 17, "Leases," to the consolidated financial statements for further discussion of our lease commitments; and
- Note 18, "Commitments, Contingencies and Guarantees," to the consolidated financial statements for further discussion of :
  - Guarantees issued and credit facilities available;
  - Other guarantees;
  - Non-cash contingent consideration;
  - OCC;
  - Chi-X Canada;
  - Marketwired ;
  - Escrow agreement ;
  - Routing brokerage activities ;
  - Litigation; and

• Tax audits.

**Quantitative and Qualitative Disclosures About Market Risk**

Market risk represents the potential for losses that may result from changes in the market value of a financial instrument due to changes in market conditions. As a result of our operating, investing and financing activities, we are exposed to market risks such as interest rate risk and foreign currency exchange rate risk. We are also exposed to credit risk as a result of our normal business activities.

We have implemented policies and procedures to measure, manage, monitor and report risk exposures, which are reviewed regularly by management and the board of directors. We identify risk exposures and monitor and manage such risks on a daily basis.

We perform sensitivity analyses to determine the effects of market risk exposures. We may use derivative instruments solely to hedge financial risks related to our financial positions or risks that are incurred during the normal course of business. We do not use derivative instruments for speculative purposes.

***Interest Rate Risk***

We are subject to the risk of fluctuating interest rates in the normal course of business. Our exposure to market risk for changes in interest rates relates primarily to our financial investments and debt obligations which are discussed below.

Financial Investments

As of December 31, 2015, our investment portfolio was primarily comprised of trading securities, mainly highly rated European government debt securities, which pay a fixed rate of interest. These securities are subject to interest rate risk and will decrease in value if market interest rates increase. If market interest rates were to increase immediately and uniformly by 100 basis points from levels as of December 31, 2015, the fair value of this portfolio would have declined by $6 million.

Debt Obligations

As of December 31, 2015, substantially all of our debt obligations are fixed-rate obligations. While changes in interest rates will have no impact on the interest we pay on fixed-rate obligations, we are exposed to changes in interest rates as a result of borrowings under our $750 million revolving credit commitment, as the interest rate on this facility has a variable interest rate. As of December 31, 2015, the principal amount outstanding under this facility was $260 million. A hypothetical 100 basis points increase in interest rates on this facility would increase interest expense by approximately $3 million based on borrowings as of December 31, 2015.

***Foreign Currency Exchange Rate Risk***

As a leading global exchange group, we are subject to foreign currency translation risk.

The table below sets forth our primary exposure to foreign currency denominated revenues less transaction-based expenses and operating income for the years ended December 31, 2015 and 2014. Due to our restructuring charges and other non-GAAP charges discussed below, we have also provided operating income and percentage of operating income on a non-GAAP basis for the years ended December 31, 2015 and 2014 as a majority of these charges were recorded in currencies other than the U.S. dollar, primarily the Swedish Krona.

Management uses non-GAAP measures to evaluate operating performance, and management decisions during the reporting period are made by excluding certain items that we believe have less significance on, or do not impact, the day-to-day performance of our business. Since the charges discussed below had a material impact on our non-U.S. operating results for the years ended December 31, 2015 and 2014, we believe that non-GAAP operating income results better reflect our on-going exposure to foreign currency exchange rate risk. For further discussion of our non-GAAP financial measures, see “Non-GAAP Financial Measures,” of “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Non-GAAP adjustments related to operating income for the year ended December 31, 2015 related to the following:

- restructuring charges of $172 million. See Note 3, “Restructuring Charges,” to the consolidated financial statements for further discussion;
- merger and strategic initiatives costs of $10 million primarily related to certain strategic initiatives and our acquisition of DWA;
- amortization expense of acquired intangible assets of $62 million. S ince management does not consider intangible asset amortization expense for the purpose of evaluating the performance of the business or its managers or when making decisions to allocate resources, such expenses have been shown as a non-GAAP adjustment; and
- reversal of previously recorded VAT receivables no longer deemed collectible of $12 million . See “Other Tax Matter,” of Note 10, “Income Taxes ,” to the consolidated financial statements for further discussion of the VAT receivables .

Non-GAAP adjustments related to operating income for the year ended December 31, 2014 related to the following:

- merger and strategic initiatives costs of $81 million primarily related to our acquisition of the TR Corporate businesses in May 2013 and eSpeed in June 2013 and a charge of $23 million related to the reversal of a receivable under a tax sharing agreement with an unrelated party;
- special legal expense of $2 million;
- sublease loss reserve charge of $11 million on space we currently occupy due to excess capacity;
- loss on extinguishment of debt of $11 million reflecting $9 million related to the early extinguishment of our 4.00% notes in June 2014 and $2 million related to the refinancing of our 2011 credit facility ; and
- amortization expense of acquired intangible assets of $69 million. S ince management does not consider intangible asset amortization expense for the purpose of evaluating the performance of the business or its managers or when making decisions to allocate resources, such expenses have been shown as a non-GAAP adjustment.

Our primary exposure to foreign currency denominated revenues less transaction-based expenses, operating income, and non-GAAP operating income for the years ended December 31, 2015 and 2014 is presented in the following tables:

| | Euro | Swedish Krona | Other Foreign Currencies | U.S. Dollar | Total |
|---|---|---|---|---|---|
| | (in millions, except currency rate) | | | | |
| **Year Ended December 31, 2015** | | | | | |
| Average foreign currency rate to the U.S. dollar | 1.1097 | 0.1186 | # | N/A | N/A |
| Percentage of revenues less transaction-based expenses | 10.4% | 8.5% | 4.4% | 76.7% | 100.0% |
| Percentage of operating income | 20.3% | (18.3)% | (8.1)% | 106.1% | 100.0% |
| Impact of a 10% adverse currency fluctuation on revenues less transaction-based expenses | $ (22) | $ (18) | $ (9) | $ - | $ (49) |
| Impact of a 10% adverse currency fluctuation on operating income | $ (15) | $ (13) | $ (6) | $ - | $ (34) |
| **Reconciliation between U.S. GAAP operating income and non-GAAP operating income:** | | | | | |
| Operating income (loss) | $ 146 | $ (132) | $ (58) | $ 764 | $ 720 |
| Non-GAAP adjustments: | | | | | |
| Restructuring charges | 5 | 135 | 7 | 25 | 172 |
| Merger and strategic initiatives | - | - | 1 | 9 | 10 |
| Amortization expense of acquired intangible assets | 3 | 12 | 8 | 39 | 62 |
| Reversal of value added tax refund | - | 12 | - | - | 12 |
| Non-GAAP operating income (loss) | $ 154 | $ 27 | $ (42) | $ 837 | $ 976 |
| Percentage of non-GAAP operating income | 15.8% | 2.8% | (4.3)% | 85.7% | 100.0% |
| Impact of a 10% adverse currency fluctuation on non-GAAP operating income | $ (15) | $ (3) | $ (4) | $ - | $ (22) |

| | Euro | Swedish Krona | Other Foreign Currencies | U.S. Dollar | Total |
|---|---|---|---|---|---|
| | (in millions, except currency rate) | | | | |
| **Year Ended December 31, 2014** | | | | | |
| Average foreign currency rate to the U.S. dollar | 1.3267 | 0.1457 | # | N/A | N/A |
| Percentage of revenues less transaction-based expenses | 12.4% | 9.7% | 5.3% | 72.6% | 100.0% |
| Percentage of operating income | 23.5% | (0.7)% | (10.1)% | 87.3% | 100.0% |
| Impact of a 10% adverse currency fluctuation on revenues less transaction-based expenses | $ (26) | $ (20) | $ (11) | $ - | $ (57) |
| Impact of a 10% adverse currency fluctuation on operating income | $ (17) | $ (1) | $ (8) | $ - | $ (26) |
| **Reconciliation between U.S. GAAP operating income and non-GAAP operating income:** | | | | | |
| Operating income (loss) | $ 177 | $ (5) | $ (76) | $ 658 | $ 754 |

| | | | | | |
|---|---|---|---|---|---|
| Non-GAAP adjustments: | | | | | |
| Merger and strategic initiatives | 2 | 5 | 13 | 61 | 81 |
| Special legal expenses | - | - | - | 2 | 2 |
| Sublease loss reserve | - | - | - | 11 | 11 |
| Extinguishment of debt | - | - | - | 11 | 11 |
| Amortization expense of acquired intangible assets | 3 | 15 | 9 | 42 | 69 |
| Other | - | - | - | 2 | 2 |
| Non-GAAP operating income (loss) | $ 182 | $ 15 | $ (54) | $ 787 | $ 930 |
| Percentage of non-GAAP operating income | 19.6% | 1.6% | (5.8)% | 84.6% | 100.0% |
| Impact of a 10% adverse currency fluctuation on non-GAAP operating income | $ (18) | $ (2) | $ (5) | $ - | $ (25) |

# Represents multiple foreign currency rates.
N/A Not applicable.

Our investments in foreign subsidiaries are exposed to volatility in currency exchange rates through translation of the foreign subsidiaries' net assets or equity to U.S. dollars. Substantially all of our foreign subsidiaries operate in functional currencies other than the U.S. dollar. Fluctuations in currency exchange rates may create volatility in our results of operations as we are required to translate the balance sheets and operational results of these foreign currency denominated subsidiaries into U.S. dollars for consolidated reporting. The translation of foreign subsidiaries' non-U.S. dollar balance sheets into U.S. dollars for consolidated reporting results in a cumulative translation adjustment which is recorded in accumulated other comprehensive loss within stockholders' equity in the Consolidated Balance Sheets.

Our primary exposure to net assets in foreign currencies as of December 31, 2015 is presented in the following table:

| | Net Assets | Impact of a 10% Adverse Currency Fluctuation |
|---|---|---|
| | (in millions) | |
| Swedish Krona [1] | $ 3,334 | $ (333) |
| Norwegian Krone | 179 | (18) |
| British Pound | 131 | (13) |
| Euro | 135 | (14) |
| Australian Dollar | 74 | (7) |

[1] Includes goodwill of $ 2,588 million and intangible assets, net of $ 644 million.

***Credit Risk***

Credit risk is the potential loss due to the default or deterioration in credit quality of customers or counterparties. We are exposed to credit risk from third parties, including customers, counterparties and clearing agents. These parties may default on their obligations to us due to bankruptcy, lack of liquidity, operational failure or other reasons. We limit our exposure to credit risk by rigorously evaluating the counterparties with which we make investments and execute agreements. The financial investment portfolio objective is to invest in securities to preserve principal while maximizing yields, without significantly increasing risk. Credit risk associated with investments is minimized substantially by ensuring that these financial assets are placed with governments which have investment grade ratings, well-capitalized financial institutions and other creditworthy counterparties.

Our subsidiary Nasdaq Execution Services may be exposed to credit risk, due to the default of trading counterparties, in connection with the routing services it provides for our trading customers. System trades in cash equities routed to other market centers for members of our cash equity exchanges are routed by Nasdaq Execution Services for clearing to the National Securities Clearing Corporation, or NSCC. In this function, Nasdaq Execution Services is to be neutral by the end of the trading day, but may be exposed to intraday risk if a trade extends beyond the trading day and into the next day, thereby leaving Nasdaq Execution Services susceptible to counterparty risk in the period between accepting the trade and routing it to the clearinghouse. In this interim period, Nasdaq Execution Services is not novating like a clearing broker but instead is subject to the short-term risk of counterparty failure before the clearinghouse enters the transaction. Once the clearinghouse officially accepts the trade for novation, Nasdaq Execution Services is legally removed from trade execution risk. However, Nasdaq has membership obligations to NSCC independent of Nasdaq Execution Services' arrangements.

Pursuant to the rules of the NSCC and Nasdaq Execution Services' clearing agreement, Nasdaq Execution Services is liable for any losses incurred due to a counterparty or a clearing agent's failure to satisfy its contractual obligations, either by making payment or delivering securities. Adverse movements in the prices of securities that are subject to these transactions can increase our credit

risk. However, we believe that the risk of material loss is limited, as Nasdaq Execution Services' customers are not permitted to trade on margin and NSCC rules limit counterparty risk on self-cleared transactions by establishing credit limits and capital deposit requirements for all brokers that clear with NSCC. Historically, Nasdaq Execution Services has never incurred a liability due to a customer's failure to satisfy its contractual obligations as counterparty to a system trade. Credit difficulties or insolvency, or the perceived possibility of credit difficulties or insolvency, of one or more larger or visible market participants could also result in market-wide credit difficulties or other market disruptions.

Execution Access is an introducing broker which operates the eSpeed trading platform for U.S. Treasury securities. Execution Access has a clearing arrangement with Cantor Fitzgerald. As of December 31, 2015, we have contributed $19 million of clearing deposits to Cantor Fitzgerald in connection with this clearing arrangement. These deposits are recorded in other current assets in our Consolidated Balance Sheets. Some of the trading activity in Execution Access is cleared by Cantor Fitzgerald through the Fixed Income Clearing Corporation. Execution Access assumes the counterparty risk of clients that do not clear through the Fixed Income Clearing Corporation. Counterparty risk of clients exists for Execution Access between the trade date and settlement date of the individual transactions, which is one business day. All of Execution Access' obligations under the clearing arrangement with Cantor Fitzgerald are guaranteed by Nasdaq. Counterparties that do not clear through the Fixed Income Clearing Corporation are subject to a credit due diligence process and may be required to post collateral, provide principal letters, or provide other forms of credit enhancement to Execution Access for the purpose of mitigating counterparty risk.

We are exposed to credit risk through our clearing operations with Nasdaq Clearing. See Note 16, "Clearing Operations," to the consolidated financial statements for further discussion.

We also have credit risk related to transaction and subscription-based revenues that are billed to customers on a monthly or quarterly basis, in arrears. Our potential exposure to credit losses on these transactions is represented by the receivable balances in our Consolidated Balance Sheets. On an ongoing basis, we review and evaluate changes in the status of our counterparties' creditworthiness.

Credit losses such as those described above could adversely affect our consolidated financial position and results of operations.

**Critical Accounting Policies and Estimates**

The preparation of financial statements and related disclosures in conformity with U.S. GAAP requires management to make judgments, assumptions, and estimates that affect the amounts reported in the consolidated financial statements and accompanying notes. Note 2, "Summary of Significant Accounting Policies," to the consolidated financial statements describes the significant accounting policies and methods used in the preparation of the consolidated financial statements. The accounting policies described below are significantly affected by critical accounting estimates. Such accounting policies require significant judgments, assumptions, and estimates used in the preparation of the consolidated financial statements, and actual results could differ materially from the amounts reported based on these policies .

***Revenue Recognition***

Listing Services Revenues

Listing s ervices revenues primarily include annual renewal fees, initial listing fees, and listing of additional shares fees. Annual renewal fees do not require any judgments or assumptions by management as these amounts are recognized ratably over the following 12-month period. However, listing of additional shares fees and initial listing fees are recognized on a straight-line basis over estimated service periods, which are four and six years, respectively, based on our historical listing experience and projected future listing duration. Unamortized balances are recorded as deferred revenue in the Consolidated Balance Sheets.

Technology Solutions Revenues

*Market Technology Revenues*

For most technology solutions, we enter into multiple-element sales arrangements to develop technology solutions, license the right to use software, and provide post-contract support and other services to our customers. In order to recognize revenues associated with each individual element of a multiple-element sales arrangement separately, we are required to establish the existence of vendor specific objective evidence of fair value , or VSOE, for each element. When VSOE for individual elements of an arrangement cannot be established, revenue is generally deferred and recognized over either the final element of the arrangement or the entire term of the arrangement for which the services will be delivered.

***Goodwill and Related Impairment***

Goodwill represents the excess of purchase price over the value assigned to the net tangible and identifiable intangible assets of a business acquired. Goodwill is allocated to our reporting units based on the assignment of the fair values of each reporting unit of the acquired company. We test goodwill for impairment at the reporting unit level annually, or in interim periods if certain events occur

indicating that the carrying amount may be impaired, such as changes in the business climate, poor indicators of operating performance or the sale or disposition of a significant portion of a reporting unit. For purposes of performing our goodwill impairment test, our five reporting units are the Market Services segment, the Listing Services segment, the Information Services segment , and the two businesses comprising the Technology Solutions segment: Corporate Solutions and Market Technology. We test for impairment during the fourth quarter of our fiscal year using carrying amounts as of October 1. In conducting the 2015 annual impairment test for goodwill, we first performed a qualitative assessment to determine whether it was more likely than not that the fair value of a reporting unit was less than the carrying amount as a basis for determining whether it was necessary to perform the two-step quantitative goodwill impairment test described in Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 350, "Intangibles–Goodwill and Other," or ASC Topic 350. The more-likely-than-not threshold is defined as having a likelihood of more than 50 percent. If, after assessing the totality of events or circumstances, we determine that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, then the two-step quantitative test for goodwill impairment is performed for the appropriate reporting units. Otherwise, we conclude that no impairment is indicated and the two-step quantitative test for goodwill impairment is not performed.

In conducting the qualitative assessment, we analyzed actual and projected growth trends for each reporting unit, as well as historical performance versus plan and the results of prior quantitative tests performed. Additionally, each reporting unit assesses critical areas that may impact their business, including macroeconomic conditions and the related impact, market related exposures, competitive changes, new or discontinued products, changes in key personnel, and other potential risks to their projected financial results.

If required, the quantitative goodwill impairment test is a two-step process performed at the reporting unit level. First, the fair value of each reporting unit is compared to its corresponding carrying amount, including goodwill. The fair value of each reporting unit is estimated using a combination of discounted cash flow valuation, which incorporates assumptions regarding future growth rates, terminal values, and discount rates, as well as guideline public company valuations, incorporating relevant trading multiples of comparable companies and other factors. The estimates and assumptions used consider historical performance and are consistent with the assumptions used in determining future profit plans for each reporting unit, which are approved by our board of directors. If the first step results in the carrying amount exceeding the fair value of the reporting unit, then a second step must be completed in order to determine the amount of goodwill impairment that should be recorded, if any. In the second step, the implied fair value of the reporting unit's goodwill is determined by allocating the reporting unit's fair value to all of its assets and liabilities other than goodwill in a manner similar to a purchase price allocation. The implied fair value of the goodwill that results from the application of this second step is then compared to the carrying amount of the goodwill and an impairment charge is recorded for any difference.

For our annual test of goodwill impairment in 2015 , we considered the results of prior quantitative test s p erformed on our reportable segments and also considered future financial projections, current market conditions, and any changes in the carrying amount of the reporting units.

At the time of our 2015 annual impairment test, our goodwill balance was $ 5 , 421 million, of which $ 2 , 9 60 million was attributable to our Market Services segment, $ 1 06 million was attributable to our L isting Services segment, $ 1 , 8 32 million was attributable to our Information Services segment and $ 5 23 million was attributable to our Technology Solutions segment.

We utilized the qualitative screen for our Listing Services, Information Services and Market Technology reporting units, as the excesses of their fair values over their respective carrying amounts at the time of the last quantitative test in 2013 were significant. In conducting the qualitative assessment for these three reporting units, we evaluated the performance of these reporting units since these last quantitative test, as well as future financial projections to determine if there were any changes in the key inputs used to determine the fair values of each reporting unit. We also considered the qualitative factors in ASC Topic 350, as well as other relevant events and circumstances. Based on the results of the qualitative assessment for each reporting unit, we concluded based on a preponderance of positive indicators and the weight of such indicators that the fair values of our Listing Services, Information Services and Market Technology reporting units are more likely than not greater than their respective carrying amounts and as a result, quantitative analyses were not needed. Therefore, no further testing of goodwill for impairment was performed for these reporting units for the year ended December 31, 2015 .

Although the fair values of our Market Services and Corporate Solutions reporting units also exceeded their carrying amounts by more than 10% in our 2014 annual goodwill impairment test, since the fair values of these reporting units exceeded their carrying amounts by less than 10.0% in our 2013 annual goodwill impairment test, we bypassed the qualitative assessment for these reporting units. We performed step one of the quantitative goodwill impairment test for both of these reporting units and determined that the fair values of our Market Services and Corporate Solutions reporting units exceeded their carrying amounts by more than 10 .0 %. As a result, no goodwill impairment was recorded. The fair value of our Market Services and Corporate Solutions reporting units was determined using a combination of two equally weighted valuation methods, a market approach and an income approach. The market approach estimates fair value by applying revenues, earnings and cash flow multiples to the Market Services and Corporate Solutions reporting units' operating performance. The multiples are derived from comparable publicly-traded companies with similar operating and investment characteristics to our Market Services and Corporate Solutions reporting units. The market approach requires management's judgment to determine several valuation input s, including the selection of comparable companies and control premium.

The control premium is based on recent transactions in the marketplace. Under the income approach, we estimated future cash flows of our Market Services and Corporate Solutions reporting units based on internally generated forecasts of future financial performance. We determined a long-term growth rate for the terminal year period based on historical and expected inflation rates as well as management's estimate of the long-term growth of the business. We then discounted the projected cash flows using the appropriate weighted average cost of capital for each reporting unit .

Although we believe our estimates of fair value are reasonable, the determination of certain valuation inputs is subject to management's judgment. Changes in these inputs could materially affect the results of our impairment review. If our forecasts of cash flows generated by our Market Services and Corporate Solutions reporting units or other key inputs are negatively revised in the future, the estimated fair value of the Market Services and Corporate Solutions reporting units would be adversely impacted, potentially leading to an impairment in the future that could materially affect our operating results.

Subsequent to our annual impairment test, no indications of an impairment were identified.

***Indefinite-Lived Intangible Assets and Related Impairment***

Intangible assets deemed to have indefinite useful lives are not amortized but instead are tested for impairment at least annually and more frequently whenever events or changes in circumstances indicate that the fair value of the asset may be less than its carrying amount. The fair value of indefinite-lived intangible assets is primarily determined on the basis of estimated discounted value, using the relief from royalty approach or excess earnings approach for trade names and the Greenfield Approach for exchange and clearing registrations and licenses, both of which incorporate assumptions rega rding future revenue projections and discount rates. Similar to goodwill impairment testing, we test for impairment of indefinite-lived intangible assets during the fourth quarter of our fiscal year using carrying amounts as of October 1. In conducting the 2015 annual impairment test for indefinite-lived intangible assets, we first performed a qualitative assessment to determine whether it was more likely than not that the fair value of an indefinite-lived intangible asset was less than the carrying amount as a basis for determining whether it was necessary to perform the quantitative impairment test described in ASC Topic 350. The more-likely-than-not threshold is defined as having a likelihood of more than 50 percent. If, after assessing the totality of events or circumstances, we determine that it is more likely than not that the fair va lue of an indefinite-lived intangible asset is less than its carrying amount, then the quantitative test for indefinite-lived intangible assets impairment is performed for the appropriate intangible assets. If the carrying amount of the indefinite-lived intangible asset exceeds its fair value, an impairment charge is recorded for the difference.

The eSpeed business operated in a market environment that became increasingly challenging during 2015 and, as a result, has experienced a decline in operating performance. As such, in the fourth quarter of 2015, we concluded that a quantitative impairment test was required for the eSpeed trade name indefinite-lived intangible asset. As of December 31, 2015, the carrying amount of the eSpeed trade name was $578 million. We performed a valuation of the trade name using a discounted cash flow analysis, which included assumptions regarding the discount rate, management's projections of future operating performance and expectations regarding the future market environment, including government debt issuances and changes in interest rates. The fair value determined in this valuation exceeded the carrying amount of the trade name as of December 31, 2015, and therefore, no impairment charge was recorded . If the market environment for the eSpeed business remains challenging for a prolonged period of time, if market conditions deteriorate further or if operating performance over time is below management's projections, we will reevaluate the eSpeed trade name for potential impairment. As of December 31, 2015, the fair value exceeded the carrying amount by more than 10.0%.

As discussed in "Intangible Asset Impairment Charges," of Note 5, "Goodwill and Acquired Intangible Assets," to the consolidated financial statements , in connection with our global rebranding initiative, we decided to change our company name from The NASDAQ OMX Group, Inc. to Nasdaq, Inc., which became effective in the third quarter of 2015. In connection with this action, we decided to discontinue the use of the OMX trade name and recorded a pre-tax, non-cash impairment charge of $119 million in March 2015 because we no longer attribute any material value to the trade name. The impairment charge did not impact the company's consolidated cash flows, liquidity, or capital resources. There was no other impairment of indefinite -lived intangible assets for the years ended December 31, 2015, 2014 and 2013.

***Other Long-Lived Assets and Related Impairment***

We review our other long-lived assets, such as finite-lived intangible assets, equity and cost method investments, as well as property and equipment for potential impairment when there is evidence that events or changes in circumstances indicate that the carrying amount of an asset may not be recover able . The carrying amount of a n asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. We evaluate our equity and cost method investments for other-than-temporary declines in value by considering a variety of factors such as the earnings capacity of the investment and the fair value of the investment compared to its carrying amount. In addition, for investments where the market value is readily determinable, we consider the underlying stock price as an additional factor. Any required impairment loss is measured as the amount by which the carrying amount of the asset exceeds its fair value and is recorded as a reduction in the carrying amount of the related asset and a charge to operating results.

Among our finite-lived intangible assets, we performed an undiscounted cash flow analysis to test whether the eSpeed customer relationship intangible asset was recoverable as we concluded that indicators of impairment were present in the current year as

discussed above under “Indefinite-Lived Intangible Assets and Related Impairment.” As of December 31, 2015, the eSpeed customer relationship intangible asset had a remaining net book value of $66 million. The results of the recoverability test indicated that the estimated future undiscounted cash flows exceeded the carrying amount of the asset by a significant amount. Therefore, no impairment charge was recorded in 2015. As further discussed above under “Indefinite-Lived Intangible Assets and Related Impairment,” we continue to monitor potential triggering events in our eSpeed business. Any changes in these factors could result in further testing for recoverability, and, if it is determined that the carrying amount of the asset is not recoverable, an impairment of the asset would then be recorded.

During 2014, we recorded intangible asset impairment charges of $38 million and recorded intangible asset impairment charges of $14 million in 2013. See “Intangible Asset Impairment Charges,” of Note 5, “Goodwill and Acquired Intangible Assets,” for further discussion of impairment charges recorded on our finite-lived intangible assets .

***Amortization Periods of Intangible Assets with Finite-Lives***

Intangible assets, net, primarily include exchange and clearing registrations, customer relationships, trade names, licenses and technology. Intangible assets with finite-lives are amortized on a straight-line basis over their average estimated useful lives as follows:

- Technology: 2—5 years
- Customer relationships: 9—30 years
- O ther: 2—10 years

The estimated useful life of developed and new technology is based on the likely duration of benefits to be derived from the technology. We consider such factors as the migration cycle for re-platforming existing technologies and the development of future generations of technology. We also give consideration to the pace of the technological changes in the industries in which we sell our products.

The estimated useful life of customer relationships is determined based on an analysis of the historical attrition rates of customers and an analysis of the legal, regulatory, contractual, competitive, economic, or other factors that limit the useful life of customer relationships.

See Note 4, “Acquisitions,” and Note 5, “Goodwill and Acquired Intangible Assets,” to the consolidated financial statements for further discussion of intangible assets.

***Income Taxes***

Estimates and judgments are required in the calculation of certain tax liabilities and in the determination of the recoverability of certain deferred tax assets, which arise from net operating loss carryforwards, tax credit carryforwards and temporary differences between the tax and financial statement recognition of revenue and expense. Our deferred tax assets are reduced by a valuation allowance if it is more likely than not that some portion or all of the recorded deferred tax assets will not be realized in future periods. Management is required to determine whether a tax position is more likely than not to be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. Once it is determined that a position meets the recognition thresholds, the position is measured to determine the amount of benefit to be recognized in the consolidated financial statements. Interest and/or penalties related to income tax matters are recognized in income tax expense.

In assessing the need for a valuation allowance, we consider all available evidence including past operating results, the existence of cumulative losses in the most recent fiscal years, estimates of future taxable income and the feasibility of tax planning strategies. In the event that we change our determination as to the amount of deferred tax assets that can be realized, we will adjust our valuation allowance with a corresponding impact to the provision for income taxes in the period in which such determination is made.

In addition, the calculation of our tax liabilities involves uncertainties in the application of tax regulations in the U.S. and other tax jurisdictions. We recognize potential liabilities for anticipated tax audit issues in such jurisdictions based on our estimate of whether, and the extent to which, additional taxes and interest may be due. While we believe that our tax liabilities reflect the probable outcome of identified tax uncertainties, it is reasonably possible that the ultimate resolution of any tax matter may be greater or less than the amount accrued. If events occur and the payment of these amounts ultimately proves unnecessary, the reversal of the liabilities would result in tax benefits being recognized in the period when we determine the liabilities are no longer necessary. If our estimate of tax liabilities proves to be less than the ultimate assessment, a further charge to expense would result.

***Software Costs***

We capitalize and amortize significant purchased application software and operational software that are an integral part of computer hardware on the straight-line method over their estimated useful lives, generally five years. We expense other purchased software as incurred.

Certain costs incurred in connection with developing or obtaining internal use software are capitalized. These costs include both internal and third party costs.

Under our Technology Solutions segment, certain costs of computer software to be sold, leased, or otherwise marketed as a separate product or as part of a product or process are capitalized beginning when a product 's technological feasibility has been established and ending when a product is available for general release . Technological feasibility is established upon completion of a detail program design or, in its absence, completion. Prior to reaching technological feasibility, all costs are charged to expense. Capitalized costs are amortized on a straight-line basis over the remaining estimated economic life of the product and are included in depreciation and amortization expense in the Consolidated Statements of Income.

**Recent Accounting Pronouncements**

See " Recently Adopted Accounting Pronouncements ," and " Recently Issued Accounting Pronouncements ," of Note 2, "Summary of Significant Accounting Policies," to the consolidated financial statements for further discussion of recently adopted and recently issued accounting pronouncements that are applicable to Nasdaq.

**Summarized Quarterly Financial Data (Unaudited)**

| | 1st Qtr 2015 | 2nd Qtr 2015 | 3rd Qtr 2015 | 4th Qtr 2015 |
|---|---|---|---|---|
| | (in millions, except per share amounts) | | | |
| Total revenues | $ 858 | $ 807 | $ 871 | $ 865 |
| Transaction-based expenses | (351) | (289) | (342) | (329) |
| Revenues less transaction-based expenses | 507 | 518 | 529 | 536 |
| Total operating expenses | 480 | 301 | 298 | 290 |
| Operating income | 27 | 217 | 231 | 246 |
| Net income attributable to Nasdaq | $ 9 | $ 133 | $ 138 | $ 148 |
| Basic earnings per share | $ 0.05 | $ 0.79 | $ 0.83 | $ 0.90 |
| Diluted earnings per share | $ 0.05 | $ 0.77 | $ 0.80 | $ 0.88 |
| Cash dividends declared per common share | $ 0.15 | $ 0.25 | $ 0.25 | $ 0.25 |

| | 1st Qtr 2014 | 2nd Qtr 2014 | 3rd Qtr 2014 | 4th Qtr 2014 |
|---|---|---|---|---|
| | (in millions, except per share amounts) | | | |
| Total revenues | $ 898 | $ 865 | $ 818 | $ 919 |
| Transaction-based expenses | (369) | (342) | (321) | (402) |
| Revenues less transaction-based expenses | 529 | 523 | 497 | 517 |
| Total operating expenses | 345 | 332 | 290 | 344 |
| Operating income | 184 | 191 | 207 | 173 |
| Net income attributable to Nasdaq | $ 103 | $ 101 | $ 123 | $ 87 |
| Basic earnings per share | $ 0.61 | $ 0.60 | $ 0.73 | $ 0.52 |
| Diluted earnings per share | $ 0.59 | $ 0.59 | $ 0.71 | $ 0.50 |
| Cash dividends declared per common share | $ 0.28 | $ - | $ 0.15 | $ 0.15 |

**Item 7A. Quantitative and Qualitative Disclosures About Market Risk.**

Information about quantitative and qualitative disclosures about market risk is incorporated herein by reference from "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Quantitative and Qualitative Disclosures About Market Risk."

**Item 8. Financial Statements and Supplementary Data.**

Nasdaq's consolidated financial statements, including Consolidated Balance Sheets as of December 31, 2015 and 2014, Consolidated Statements of Income for the years ended December 31, 2015, 2014 and 2013, Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2015, 2014 and 2013, Consolidated Statements of Changes in Equity for the years ended December 31, 2015, 2014 and 2013, Consolidated Statements of Cash Flows for the years ended December 31, 2015, 2014 and 2013 and notes to our consolidated financial statements, together with a report thereon of Ernst & Young LLP, dated February 26, 2016 , are attached hereto as pages F-1 through F-53 and incorporated by reference herein.

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.**

None.

**Item 9A. Controls and Procedures.**

( a). ***Disclosure controls and procedures.*** Nasdaq's management, with the participation of Nasdaq's Chief Executive Officer, and Interim Chief Financial Officer and Senior Vice President and Controller , has evaluated the effectiveness of Nasdaq's disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Based upon that evaluation, Nasdaq's Chief Executive Officer, and Interim Chief Financial Officer and Senior Vice President and Controller have concluded that, as of the end of such period, Nasdaq's disclosure controls and procedures are effective.

(b). ***Internal controls over financial reporting*** . There have been no changes in Nasdaq 's internal controls over financial reporting (as defined in Rule 13a-15(f) and Rule 15d-15(f) under the Exchange Act) that occurred during the quarter ended December 31, 2015 that have materially affected, or are reasonably likely to materially affect, Nasdaq 's internal controls over financial reporting.

***Management's Report on Internal Control Over Financial Reporting***

Management is responsible for the preparation and integrity of the consolidated financial statements appearing in the reports that we file with the SEC. The consolidated financial statements were prepared in conformity with U.S. generally accepted accounting principles and include amounts based on management's estimates and judgments.

Management is also responsible for establishing and maintaining adequate internal control over N asdaq 's financial reporting. Although there are inherent limitations in the effectiveness of any system of internal control over financial reporting, we maintain a system of internal control that is designed to provide reasonable assurance as to the fair and reliable preparation and presentation of the consolidated financial statements, as well as to safeguard assets from unauthorized use or disposition that could have a material effect on the financial statements.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 201 5 , based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2013 framework ) . This evaluation included review of the documentation of controls, evaluation of the design effectiveness of controls, testing of the operating effectiveness of controls and a conclusion on this evaluation. Based on its assessment, our management believes that, as of December 31, 201 5 , our internal control over financial reporting is effective.

Ernst & Young LLP, an independent registered public accounting firm, has issued an attestation report on Nasdaq's internal control over financial reporting, which is included herein.

**Report of Independent Registered Public Accounting Firm**

The Board of Directors and Stockholders of Nasdaq, Inc.

We have audited Nasdaq, Inc.'s internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Nasdaq, Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Nasdaq, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Nasdaq, Inc. as of December 31, 2015 and 2014, and the related consolidated statements of income, comprehensive income (loss), changes in equity, and cash flows for each of the three years in the period ended December 31, 2015 of Nasdaq, Inc. and our report dated February 26, 2016 expressed an unqualified opinion thereon.

***/s/ Ernst & Young LLP***

New York, New York
February 26 , 201 6

**Item 9B. Other Information.**

**Disclosure of Iranian Activities Under Section 13(r) of the Securities Exchange Act of 1934**

Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012, or the ITRSHRA, requires disclosure by public companies of certain transactions involving the Government of Iran, as well as entities and individuals designated under Executive Order 13382 and Executive Order 13224. In some instances, ITRSHRA requires companies to disclose these types of transactions, even if they were permissible under U.S. law or were conducted by a non-U.S. affiliate in accordance with the local law under which such entity operates.

As a leading provider of trading, clearing, exchange technology, regulatory, securities listing, information and public company services across six continents, we own and operate stock exchanges and other businesses in many jurisdictions throughout the world. To our knowledge, none of our activities during 2015 is required to be disclosed pursuant to ITRSHRA, with the following possible exception. As set forth in our prior filings, a former non-U.S. subsidiary of Nasdaq, NASDAQ OMX Armenia OJSC, operated the Armenian Stock Exchange and the Central Depository of Armenia, which are regulated by the Central Bank of Armenia under Armenian law. In accordance with the requirements of Armenian law, Mellat Bank SB CJSC, an Armenian entity that is designated under Executive Order 13382, is a market participant on the Armenian Stock Exchange and, as a result, pays participation and transaction fees to the Armenian Stock Exchange. In the first quarter of 2015, the Armenian Stock Exchange received participation and transaction fees from Mellat Bank SB CJSC totaling 1,586,231 Armenian Dram (the equivalent of approximately $3,339), which represents only 2.4% of all participation and transaction fees collected by the Armenian Stock Exchange during that period. We voluntarily self-disclosed this matter to the U.S. government and applied for authorization from the U.S. government to continue, if necessary, certain activities pertaining to Mellat Bank SB CJSC in Armenia in a limited manner.

## Part III

**Item 10. Directors, Executive Officers and Corporate Governance.**

Information about Nasdaq's directors, as required by Item 401 of Regulation S-K, is incorporated by reference from the discussion under the caption "Proposal I: Election of Directors" in Nasdaq's proxy statement for the 2016 Annual Meeting of Stockholders, or the Proxy. Information about Nasdaq's executive officers, as required by Item 401 of Regulation S-K, is incorporated by reference from the discussion under the caption "Executive Officers" in the Proxy. Information about Section 16 reports, as required by Item 405 of Regulation S-K, is incorporated by reference from the discussion under the caption "Section 16(a) Beneficial Ownership Reporting Compliance" in the Proxy. Information about Nasdaq's code of ethics, as required by Item 406 of Regulation S-K, is incorporated by reference from the discussion under the caption "Corporate Governance" in the Proxy. Information about Nasdaq's nomination procedures, audit committee and audit committee financial experts, as required by Items 407(c)(3), 407(d)(4) and 407(d)(5) of Regulation S-K, is incorporated by reference from the discussion under the caption "Corporate Governance" in the Proxy.

**Item 11. Executive Compensation.**

Information about Nasdaq's director and executive compensation, as required by Items 402, 407(e)(4) and 407(e)(5) of Regulation S-K, is incorporated by reference from the discussion under the captions "Director Compensation," "Named Executive Officer Compensation," "Compensation Discussion and Analysis," "Management Compensation Committee Report," "Management Compensation Committee Interlocks and Insider Participation" and "Executive Compensation Tables " in the Proxy.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.**

Information about security ownership of certain beneficial owners and management, as required by Item 403 of Regulation S-K, is incorporated by reference from the discussion under the caption "Security Ownership of Certain Beneficial Owners and Management" in the Proxy.

**Equity Compensation Plan Information**

Nasdaq's Equity Plan provides for the issuance of our equity securities to our officers and other employees, directors and consultants. In addition, most employees of Nasdaq and its subsidiaries are eligible to participate in the Nasdaq Employee Stock Purchase Plan, or ESPP, at 85.0% of the fair market value of our common stock on the price calculation date. The Equity Plan and the ESPP have been approved previously by our stockholders. The following table sets forth information regarding outstanding options and shares reserved for future issuance under all of Nasdaq's compensation plans as of December 31, 2015.

| Plan Category | Number of shares to be issued upon exercise of outstanding options, warrants and rights(a) [1] | Weighted-average exercise price of outstanding options, warrants and rights(b) | Number of shares remaining available for future issuance under equity compensation plans (excluding shares reflected in column(a)(c) |
|---|---|---|---|
| Equity compensation plans approved by stockholders | 2,626,487 | $27.74 | 9,482,677 [2] |
| Equity compensation plans not approved by stockholders | — | $ — | |
| Total | 2,626,487 | $27.74 | 9,482,677 [2] |

[1] The amounts in this column include only the number of shares to be issued upon exercise of outstanding options, warrants and rights. At December 31, 2015, we also had 5,207,423 shares to be issued upon vesting of outstanding restricted stock and performance share units, or PSUs.

[2] This amount includes 6,924,468 shares of common stock that may be awarded pursuant to the Equity Plan and 2,558,209 shares of common stock that may be issued pursuant to the ESPP.

**Item 13. Certain Relationships and Related Transactions, and Director Independence.**

Information about certain relationships and related transactions, as required by Item 404 of Regulation S-K, is incorporated herein by reference from the discussion under the caption “Certain Relationships and Related Transactions” in the Proxy. Information about director independence, as required by Item 407(a) of Regulation S-K, is incorporated herein by reference from the discussion under the caption “Proposal I: Election of Directors” in the Proxy.

**Item 14. Principal Accountant Fees and Services.**

Information about principal accountant fees and services, as required by Item 9(e) of Schedule 14A, is incorporated herein by reference from the discussion under the caption “Proposal II: Ratification of the Appointment of Independent Registered Public Accounting Firm” in the Proxy.

## Part IV

**Item 15. Exhibits, Financial Statement Schedules.**

(a)(1) Financial Statements

See “Index to Consolidated Financial Statements and Schedule.”

(a)(2) Financial Statement Schedules

See “Index to Consolidated Financial Statements and Schedule.”

All other schedules for which provision is made in the applicable accounting regulations of the SEC are not required under the related instructions or are inapplicable and therefore have been omitted.

(a)(3) Exhibits

### Exhibit Index

| Exhibit Number | |
|---|---|
| 2.1 | Purchase Agreement, dated as of April 1, 2013, among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) , BGC Partners, Inc., BGC Holdings, L.P., BGC Partners, L.P., and, solely for purposes of certain sections thereof, Cantor Fitzgerald, L.P. (incorporated herein by reference to Exhibit 2.1 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2013 filed on August 8, 2013). |
| 3.1 | Amended and Restated Certificate of Incorporation of Nasdaq (incorporated herein by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on January 28, 2014). |
| 3.1.1 | Certificate of Elimination of Nasdaq’s Series A Convertible Preferred Stock (incorporated herein by reference to Exhibit 3.1.1 to the Current Report on Form 8-K filed on January 28, 2014). |

| | |
|---|---|
| 3.1.2 | Certificate of Amendment of Nasdaq's Amended and Restated Certificate of Incorporation (incorporated herein by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on November 19, 2014). |
| 3.1. 3 | Certificate of Amendment of Nasdaq's Amended and Restated Certificate of Incorporation (incorporated herein by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on September 8, 2015). |
| 3.2 | Nasdaq's By-Laws (incorporated herein by reference to Exhibit 3.2 to the Current Report on Form 8-K filed on September 8 , 201 5 ). |
| 4.1 | Form of Common Stock certificate (incorporated herein by reference to Exhibit 4.1 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2015 fi led on November 4 , 20 15 ). |
| 4.2 | Stockholders' Agreement, dated as of February 27, 2008, between Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) and Borse Dubai Limited (incorporated herein by reference to Exhibit 10.2 to the Current Report on Form 8-K filed on March 3, 2008). |
| 4.2.1 | First Amendment to Stockholders' Agreement, dated as of February 19, 2009, between Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) and Borse Dubai Limited (incorporated herein by reference to Exhibit 4.10.1 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009). |
| 4.3 | Registration Rights Agreement, dated as of February 27, 2008, among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) , Borse Dubai Limited and Borse Dubai Nasdaq Share Trust (incorporated herein by reference to Exhibit 10.3 to the Current Report on Form 8-K filed on March 3, 2008). |
| 4.3.1 | First Amendment to Registration Rights Agreement, dated as of February 19, 2009, among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) , Borse Dubai Limited and Borse Dubai Nasdaq Share Trust (incorporated herein by reference to Exhibit 4.11.1 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009). |
| 4.4 | Indenture, dated as of January 15, 2010, between Nasdaq (f/k/a The NASDAQ OMX Group, Inc. ) and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on January 19, 2010). |
| 4.5 | First Supplemental Indenture, dated as of January 15, 2010, among Nasdaq (f/k/a The NASDAQ OMX Group, Inc. ) and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.2 to the Current Report on Form 8-K filed on January 19, 2010). |
| 4.6 | Second Supplemental Indenture, dated as of December 21, 2010, among Nasdaq (f/k/a The NASDAQ OMX Group, Inc. ) and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on December 21, 2010). |
| 4.7 | Stockholders' Agreement, dated as of December 16, 2010, between Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) and Investor AB (incorporated herein by reference to Exhibit 4.12 to the Annual Report on Form 10-K for the year ended December 31, 2010 filed on February 24, 2011). |
| 4.8 | Indenture, dated as of June 7, 2013, between Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on June 10, 2013). |
| 4.9 | First Supplemental Indenture, dated as of June 7, 2013, among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) , Wells Fargo Bank, National Association, as Trustee, Deutsche Bank AG, London Branch, as paying agent, and Deutsche Bank Luxembourg S.A., as registrar and transfer agent (incorporated herein by reference to Exhibit 4.2 to the Current Report on Form 8-K filed on June 10, 2013). |

| | |
|---|---|
| 4.10 | Second Supplemental Indenture, dated as of May 29, 2014, among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on May 30, 2014) . |
| 4.11 | Registration Rights Agreement, dated as of June 28, 2013, by and among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) , BGC Partners, Inc., BGC Holdings, L.P. and BGC Partners, L.P. (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on July 1, 2013). |
| 10.1 | Amended and Restated Board Compensation Policy, effective on October 17, 2013 (incorporated herein by reference to Exhibit 10.1 to the Annual Report on Form 10-K for the year ended December 31, 2013 filed on February 24, 2014).* |
| 10.2 | Nasdaq Executive Corporate Incentive Plan, effective as of January 1, 201 5 (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on May 11 , 201 5 ).* |
| 10.3 | Form of Nasdaq Non-Qualified Stock Option Award Certificate (incorporated herein by reference to Exhibit 10.3 to the Annual Report on Form 10-K for the year ended December 31, 2010 filed on February 24, 2011).* |
| 10.4 | Form of Nasdaq Restricted Stock Unit Award Certificate (employees) (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended March 3 1 , 201 5 filed on May 6 , 201 5 ) .* |
| 10.5 | Form of Nasdaq Restricted Stock Unit Award Certificate (directors) (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 201 5 filed on August 6 , 201 5 ).* |
| 10.6 | Form of Nasdaq One-Year Performance Share Unit Agreement (incorporated herein by reference to Exhibit 10. 2 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 201 5 filed on May 6 , 201 5 ).* |
| 10.7 | Form of Nasdaq Three-Year Performance Share Unit Agreement (incorporated herein by reference to Exhibit 10. 3 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 201 5 filed on May 6 , 201 5 ).* |
| 10.8 | Amended and Restated Supplemental Executive Retirement Plan, dated as of December 17, 2008 (incorporated herein by reference to Exhibit 10.6 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009).* |
| 10.8.1 | Amendment No. 1 to Amended and Restated Supplemental Executive Retirement Plan, effective as of December 31, 2008 (incorporated herein by reference to Exhibit 10.6.1 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009).* |
| 10.9 | Nasdaq Supplemental Employer Retirement Contribution Plan, dated as of December 17, 2008 (incorporated herein by reference to Exhibit 10.7 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009).* |
| 10.10 | Employment Agreement between Nasdaq and Robert Greifeld, effective as of February 22, 2012 (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on February 28, 2012).* |
| 10.10.1 | Memorandum of Understanding between Nasdaq and Robert Greifeld, dated as of December 11, 2012 (incorporated herein by reference to Exhibit 10.10.1 to the Annual Report on Form 10-K for the year ended December 31, 2012 filed on February 21, 2013).* |
| 10.11 | Nonqualified Stock Option Agreement between Nasdaq and Robert Greifeld reflecting December 13, 2006 grant (incorporated herein by reference to Exhibit 10.13 to the Annual Report on Form 10-K for the year ended December 31, 2007 filed on February 25, 2008).* |
| 10.12 | Nonqualified Stock Option Agreement between Nasdaq and Robert Greifeld reflecting June 30, 2009 grant (incorporated herein by reference to Exhibit 10.11 to the Annual Report on Form 10-K for the year ended December 31, 2009 filed on February 18, 2010).* |

| | |
|---|---|
| 10.13 | Employment Agreement between Nasdaq and Adena Friedman, made and entered into on May 9, 2014 and effective as of June 16, 2014 (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2014 filed on August 6, 2014).* |
| 10.14 | Employment Agreement between Nasdaq and Hans-Ole Jochumsen, made and entered into and effective on August 5, 2014 (incorporated herein by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2014 filed on November 5, 2014).* |
| 10.15 | Employment Agreement between Nasdaq and Edward Knight, effective as of December 29, 2000 (incorporated herein by reference to Exhibit 10.14 to the Annual Report on Form 10-K for the year ended December 31, 2002 filed on March 31, 2003).* |
| 10.15.1 | First Amendment to Employment Agreement between Nasdaq and Edward Knight, effective February 1, 2002 (incorporated herein by reference to Exhibit 10.14.1 to the Annual Report on Form 10-K for the year ended December 31, 2002 filed on March 31, 2003).* |
| 10.15.2 | Second Amendment to Employment Agreement between Nasdaq and Edward Knight, effective as of December 31, 2008 (incorporated herein by reference to Exhibit 10.13.2 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009).* |
| 10.15.3 | Third Amendment to Employment Agreement between Nasdaq and Edward Knight, effective as of February 22, 2012 (incorporated herein by reference to Exhibit 10.2 to the Current Report on Form 8-K filed on February 28, 2012).* |
| 10.16 | Nasdaq Change in Control Severance Plan for Executive Vice Presidents and Senior Vice Presidents, effective November 26, 2013 (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on November 29, 2013).* |
| 10.17 | Credit Agreement, dated as of November 24, 2014, among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) , Bank of America, N.A., JPMorgan Chase Bank, N.A. and Wells Fargo Bank, National Association, as Swingline Lenders, the other Lenders party thereto and Bank of America, N.A., as Administrative Agent and Issuing Bank (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on December 1, 2014). |
| 10.1 8 | Amendment No. 1, dated as of September 28, 2015, to the Credit Agreement among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc.), the lenders party thereto and Bank of America, N.A., as Administrative Agent, a Swingline Lender and Issuing Bank (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2015 filed on November 4, 2015). |
| 11 | Statement regarding computation of per share earnings (incorporated herein by reference from Note 14 to the consolidated financial statements under Part II, Item 8 of this Form 10-K). |
| 12.1 | Computation of Ratio of Earnings to Fixed Charges. |
| 21.1 | List of all subsidiaries. |
| 23.1 | Consent of Ernst & Young LLP. |
| 24.1 | Powers of Attorney. |
| 31.1 | Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (“Sarbanes-Oxley”). |
| 31.2 | Certification of Interim Chief Financial Officer and Senior Vice President and Controller pursuant to Section 302 of Sarbanes-Oxley. |
| 32.1 | Certifications Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of Sarbanes-Oxley. |
| 101.INS | XBRL Instance Document . ** |

| | |
|---|---|
| 101.SCH | XBRL Taxonomy Extension Schema . |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase . |
| 101.DEF | Taxonomy Extension Definition Linkbase . |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase . |
| 101.PRE | XBRL Taxonomy Extension Presentation Linkbase . |

* Management contract or compensatory plan or arrangement.

** The following materials from Nasdaq, Inc. Annual Report on Form 10-K for the year ended December 31, 2015, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheets as of December 31, 2015 and December 31, 2014; (ii) Consolidated Statements of Income for the years ended December 31, 2015, 2014 and 2013; (iii) Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2015, 2014 and 2013; (iv) Consolidated Statements of Changes in Equity for the years ended December 31, 2015, 2014 and 2013; (v) Consolidated Statements of Cash Flows for the years ended December 31, 2015, 2014 and 2013; and (vi) notes to consolidated financial statements.

(b) Exhibits:

See Item 15(a)(3) above.

(c) Financial Statement Schedules:

See Item 15(a)(2) above.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on February 26, 2016.

Nasdaq, I NC .

**By:** / S / R OBERT G REIFELD
**Name:** **Robert Greifeld**
**Title:** **Chief Executive Officer**

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated as of February 26, 2016.

| Name | Title |
|---|---|
| / S / R OBERT G REIFELD<br>**Robert Greifeld** | Chief Executive Officer and Director<br>(Principal Executive Officer) |
| / S / R ONALD H ASSEN<br>**Ronald Hassen** | Interim Chief Financial Officer and Senior Vice President and Controller<br>(Principal Financial and Accounting Officer) |
| *<br>**Börje E. Ekholm** | Chairman of the Board |
| *<br>**Charlene T. Begley** | Director |
| *<br>**Steven D. Black** | Director |
| *<br>**Glenn H. Hutchins** | Director |
| *<br>**Essa Kazim** | Director |
| *<br>**Thomas A. Kloet** | Director |
| *<br>**John D. Markese** | Director |
| *<br>**Ellyn A. McColgan** | Director |
| *<br>**Michael R. Splinter** | Director |
| *<br>**Lars R. Wedenborn** | Director |

* Pursuant to Power of Attorney

By: / S / E DWARD S. K NIGHT
**Edward S. Knight**
**Attorney-in-Fact**

**N asdaq , I nc .**

**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS AND SCHEDULE**

The following consolidated financial statements and schedule of N asdaq , Inc. and its subsidiaries are presented herein on the page indicated:


| | |
|---|---|
| Report of Independent Registered Public Accounting Firm | F-2 |
| Consolidated Balance Sheets | F-3 |
| Consolidated Statements of Income | F-4 |
| Consolidated Statements of Comprehensive Income (Loss) | F-5 |
| Consolidated Statements of Changes in Equity | F-6 |
| Consolidated Statements of Cash Flows | F-8 |
| Notes to Consolidated Financial Statements | F-9 |
| Financial Statement Schedule: Schedule II—Valuation and Qualifying Accounts | 1 |

**Report of Independent Registered Public Accounting Firm**

The Board of Directors and Stockholders of Nasdaq, Inc.

We have audited the accompanying consolidated balance sheets of Nasdaq, Inc. (the "Company") as of December 31, 2015 and 2014, and the related consolidated statements of income, comprehensive income (loss), changes in equity, and cash flows for each of the three years in the period ended December 31, 2015. Our audits also included the financial statement schedule listed in the Index at Item 15(a)(2). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Nasdaq, Inc. at December 31, 2015 and 2014, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2015, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Nasdaq, Inc.'s internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 26, 2016 expressed an unqualified opinion thereon .

***/s/ Ernst & Young LLP***

New York, New York
February 26 , 201 6

**Nasdaq, Inc.**

**Consolidated Balance Sheets**
**(in millions, except share and par value amounts)**

| | December 31, 2015 | December 31, 2014 |
|---|---|---|
| **Assets** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 301 | $ 427 |
| Restricted cash | 56 | 49 |
| Financial investments, at fair value | 201 | 174 |
| Receivables, net | 316 | 389 |
| Deferred tax assets | 24 | 16 |
| Default funds and margin deposits | 2,228 | 2,194 |
| Other current assets | 158 | 151 |
| Total current assets | 3,284 | 3,400 |
| Property and equipment, net | 323 | 292 |
| Non-current deferred tax assets | 619 | 536 |
| Goodwill | 5,395 | 5,538 |
| Intangible assets, net | 1,959 | 2,077 |
| Other non-current assets | 281 | 228 |
| Total assets | $ 11,861 | $ 12,071 |
| **Liabilities** | | |
| Current liabilities: | | |
| Accounts payable and accrued expenses | $ 158 | $ 189 |
| Section 31 fees payable to SEC | 98 | 124 |
| Accrued personnel costs | 171 | 143 |
| Deferred revenue | 127 | 177 |
| Other current liabilities | 138 | 116 |
| Deferred tax liabilities | 24 | 37 |
| Default funds and margin deposits | 2,228 | 2,194 |
| Total current liabilities | 2,944 | 2,980 |
| Debt obligations | 2,364 | 2,297 |
| Non-current deferred tax liabilities | 602 | 626 |
| Non-current deferred revenue | 200 | 215 |
| Other non-current liabilities | 142 | 159 |
| Total liabilities | 6,252 | 6,277 |
| **Commitments and contingencies** | | |
| **Equity** | | |
| Nasdaq stockholders' equity: | | |
| Common stock, $0.01 par value, 300,000,000 shares authorized, shares issued: 167,241,734 at December 31, 2015 and 170,325,304 at December 31, 2014; shares outstanding: 164,324,270 at December 31, 2015 and 168,795,263 at December 31, 2014 | 2 | 2 |
| Additional paid-in capital | 3,011 | 3,222 |
| Common stock in treasury, at cost: 2,917,464 shares at December 31, 2015 and 1,530,041 shares at December 31, 2014 | (111) | (41) |
| Accumulated other comprehensive loss | (864) | (682) |
| Retained earnings | 3,571 | 3,292 |
| Total Nasdaq stockholders' equity | 5,609 | 5,793 |
| Noncontrolling interests | - | 1 |
| Total equity | 5,609 | 5,794 |
| Total liabilities and equity | $ 11,861 | $ 12,071 |

See accompanying notes to consolidated financial statements.

**Nasdaq, Inc.**

**Consolidated Statements of Income**
**(in millions, except per share amounts)**

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| **Revenues:** | | | |
| Market Services | $ 2,084 | $ 2,229 | $ 2,072 |
| Listing Services | 264 | 238 | 228 |
| Information Services | 512 | 473 | 436 |
| Technology Solutions | 543 | 560 | 475 |
| **Total revenues** | 3,403 | 3,500 | 3,211 |
| **Transaction-based expenses:** | | | |
| Transaction rebates | (983) | (1,065) | (1,002) |
| Brokerage, clearance and exchange fees | (330) | (368) | (314) |
| **Revenues less transaction-based expenses** | 2,090 | 2,067 | 1,895 |
| **Operating expenses:** | | | |
| Compensation and benefits | 590 | 588 | 539 |
| Marketing and advertising | 28 | 32 | 30 |
| Depreciation and amortization | 138 | 137 | 122 |
| Professional and contract services | 148 | 157 | 151 |
| Computer operations and data communications | 107 | 92 | 82 |
| Occupancy | 85 | 110 | 98 |
| Regulatory | 27 | 27 | 30 |
| Merger and strategic initiatives | 10 | 81 | 22 |
| General, administrative and other | 65 | 89 | 80 |
| Restructuring charges | 172 | - | 9 |
| Voluntary accommodation program | - | - | 44 |
| **Total operating expenses** | 1,370 | 1,313 | 1,207 |
| **Operating income** | 720 | 754 | 688 |
| Interest income | 4 | 6 | 9 |
| Interest expense | (111) | (117) | (111) |
| Gain on sale of investment security | - | - | 30 |
| Asset impairment charges | - | (49) | (14) |
| Net income (loss) from unconsolidated investees | 17 | - | (2) |
| **Income before income taxes** | 630 | 594 | 600 |
| Income tax provision | 203 | 181 | 216 |
| **Net income** | 427 | 413 | 384 |
| Net loss attributable to noncontrolling interests | 1 | 1 | 1 |
| **Net income attributable to Nasdaq** | $ 428 | $ 414 | $ 385 |
| **Per share information:** | | | |
| Basic earnings per share | $ 2.56 | $ 2.45 | $ 2.30 |
| Diluted earnings per share | $ 2.50 | $ 2.39 | $ 2.25 |
| Cash dividends declared per common share | $ 0.90 | $ 0.58 | $ 0.52 |

See accompanying notes to consolidated financial statements.

**Nasdaq, Inc.**

**Consolidated Statements of Comprehensive Income (Loss)**
**(in millions)**

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| **Net income** | $ 427 | $ 413 | $ 384 |
| Other comprehensive income (loss): | | | |
| Net unrealized holding gains (losses) on available-for-sale investment securities: | | | |
| Unrealized holding gain arising during period | - | - | 26 |
| Reclassification adjustment for (gain) realized and included in net income | - | - | (30) |
| Total | - | - | (4) |
| Foreign currency translation losses: | | | |
| Net foreign currency translation losses | (283) | (733) | (17) |
| Income tax benefit | 100 | 127 | 127 |
| Total | (183) | (606) | 110 |
| Employee benefit plan gains (losses): | | | |
| Employee benefit plan adjustment gains (losses) | 2 | (15) | 21 |
| Income tax benefit (expense) | (1) | 6 | (9) |
| Total | 1 | (9) | 12 |
| Total other comprehensive income (loss), net of tax | (182) | (615) | 118 |
| **Comprehensive income (loss)** | 245 | (202) | 502 |
| Comprehensive loss attributable to noncontrolling interests | 1 | 1 | 1 |
| **Comprehensive income (loss) attributable to Nasdaq** | $ 246 | $ (201) | $ 503 |

See accompanying notes to consolidated financial statements.

**Nasdaq, Inc.**

**Consolidated Statements of Changes in Equity**
**(in millions, except share amounts)**

| | Number of Common Shares Outstanding | Common Stock at Par Value | Additional Paid-in Capital | Common Stock In Treasury at Cost | Accumulated Other Comprehensive Loss | Retained Earnings | Noncontrolling Interests | Total |
|---|---|---|---|---|---|---|---|---|
| **Balance at December 31, 2012** | 165,605,838 | $ 2 | $ 3,771 | $ (1,058) | $ (185) | $ 2,678 | $ 1 | $ 5,209 |
| Net income (loss) | - | - | - | - | - | 385 | (1) | 384 |
| Foreign currency translation, net of tax of $127 | - | - | - | - | 110 | - | - | 110 |
| Employee benefit plan adjustments, net of tax of $9 | - | - | - | - | 12 | - | - | 12 |
| Unrealized holding gains on available-for-sale security, net of reclassification for gains realized in net income | - | - | - | - | (4) | - | - | (4) |
| Cash dividends declared per common share | - | - | - | - | - | (87) | - | (87) |
| Share repurchase program | (321,000) | - | - | (10) | - | - | - | (10) |
| Amortization and vesting of restricted stock and PSUs | 779,614 | - | 23 | 17 | - | - | - | 40 |
| Stock options amortization and exercises, net | 2,346,220 | - | (20) | 52 | | | | 32 |
| Other issuances of common stock, net | (45,835) | - | 20 | (6) | - | - | - | 14 |
| Purchase price related to issuance of Nasdaq common stock - eSpeed acquisition | 992,247 | - | 484 | - | - | - | - | 484 |
| **Balance at December 31, 2013** | 169,357,084 | $ 2 | $ 4,278 | $ (1,005) | $ (67) | $ 2,976 | $ - | $ 6,184 |
| Net income (loss) | - | - | - | - | - | $ 414 | $ (1) | 413 |
| Foreign currency translation, net of tax of $127 | - | - | - | - | (606) | - | - | (606) |
| Employee benefit plan adjustments, net of tax of $6 | - | - | - | - | (9) | - | - | (9) |
| Cash dividends declared per common share | - | - | - | - | - | (98) | - | (98) |
| Share repurchase program | (4,592,194) | - | - | (178) | - | - | - | (178) |
| Amortization and vesting of restricted stock and PSUs | 1,972,573 | - | 57 | - | - | - | - | 57 |
| Stock options amortization and exercises, net | 1,578,050 | - | 33 | - | - | - | - | 33 |
| Other issuances of common stock, net | (512,497) | - | 24 | (28) | - | - | | (4) |
| Retirement of common stock held in treasury | - | - | (1,170) | 1,170 | - | - | - | - |
| Sale of subsidiary shares to noncontrolling interests and other adjustments | - | - | - | - | - | - | 2 | 2 |
| Purchase price related to issuance of Nasdaq common stock - eSpeed acquisition | 992,247 | - | - | - | - | - | - | - |
| **Balance at December 31, 2014** | 168,795,263 | $ 2 | $ 3,222 | $ (41) | $ (682) | $ 3,292 | $ 1 | $ 5,794 |

| | Number of Common Shares Outstanding | Common Stock at Par Value | Additional Paid-in Capital | Common Stock in Treasury at Cost | Accumulated Other Comprehensive Loss | Retained Earnings | Noncontrolling Interests | Total |
|---|---|---|---|---|---|---|---|---|
| Net income (loss) | - | $ - | $ - | $ - | $ - | $ 428 | $ (1) | $ 427 |
| Foreign currency translation, net of tax of $100 | - | - | - | - | (183) | - | - | (183) |
| Employee benefit plan adjustments, net of tax of $1 | - | - | - | - | 1 | - | - | 1 |
| Cash dividends declared per common share | - | - | - | - | - | (149) | - | (149) |
| Share repurchase program | (7,191,685) | - | (340) | (37) | - | - | - | (377) |
| Amortization and vesting of restricted stock and PSUs | 1,455,380 | - | 64 | - | - | - | - | 64 |
| Stock options amortization and exercises, net | 682,054 | - | 18 | - | - | - | - | 18 |
| Other issuances of common stock, net | (408,989) | - | 59 | (33) | - | - | - | 26 |
| Purchase of subsidiary shares to noncontrolling interests and other adjustments | - | - | (12) | - | - | - | - | (12) |
| Purchase price related to issuance of Nasdaq common stock - eSpeed acquisition | 992,247 | - | - | - | - | - | - | - |
| **Balance at December 31, 2015** | 164,324,270 | $ 2 | $ 3,011 | $ (111) | $ (864) | $ 3,571 | $ - | $ 5,609 |

See accompanying notes to consolidated financial statements.

**N asdaq , Inc.**

**Consolidated Statements of Cash Flows**
**(in millions)**

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| **Cash flows from operating activities:** | | | |
| Net income | $ 427 | $ 413 | $ 384 |
| Adjustments to reconcile net income to net cash provided by operating activities: | | | |
| Depreciation and amortization | 138 | 137 | 122 |
| Share-based compensation | 68 | 62 | 47 |
| Excess tax benefits related to share-based payments | (45) | (15) | (16) |
| Gain on sale of investment security | - | - | (30) |
| Deferred income taxes | (14) | (6) | 28 |
| Non-cash restructuring charges | 136 | - | 1 |
| Non-cash merger and strategic initiatives | - | 20 | - |
| Asset impairment charges | - | 49 | 14 |
| Net (income) loss from unconsolidated investees | (17) | - | 2 |
| Other reconciling items included in net income | 7 | 28 | 9 |
| Net change in operating assets and liabilities, net of effects of acquisitions: | | | |
| Receivables, net | 55 | (16) | (55) |
| Other assets | (50) | (55) | 8 |
| Accounts payable and accrued expenses | (38) | (40) | 51 |
| Section 31 fees payable to SEC | (26) | 42 | (15) |
| Accrued personnel costs | 33 | (4) | 39 |
| Deferred revenue | (49) | 64 | (33) |
| Other liabilities | 60 | 8 | 18 |
| **Net cash provided by operating activities** | 685 | 687 | 574 |
| **Cash flows from investing activities:** | | | |
| Purchases of trading securities | (346) | (283) | (437) |
| Proceeds from sales and redemptions of trading securities | 319 | 281 | 452 |
| Purchases of available-for-sale investment securities | (38) | (20) | - |
| Proceeds from maturities of available-for-sale investment securities | 29 | 17 | - |
| Proceeds from sale of available-for-sale investment security | - | - | 48 |
| Capital contribution in equity method investment | (30) | - | (43) |
| Acquisition of businesses, net of cash and cash equivalents acquired | (226) | - | (1,121) |
| Purchases of property and equipment | (133) | (140) | (115) |
| Other investment activities | (16) | (10) | - |
| **Net cash used in investing activities** | (441) | (155) | (1,216) |
| **Cash flows from financing activities:** | | | |
| Payments of debt obligations | (369) | (970) | (289) |
| Proceeds from utilization of credit commitment | 506 | 735 | 895 |
| Cash paid for repurchase of common stock | (377) | (178) | (10) |
| Cash dividends | (149) | (98) | (87) |
| Proceeds received from employee stock activity | 29 | 40 | 35 |
| Payments related to employee shares withheld for taxes | (34) | (31) | (12) |
| Excess tax benefits related to share-based payments | 45 | 15 | 16 |
| Other financing activities | (13) | 2 | (1) |
| **Net cash provided by (used in) financing activities** | (362) | (485) | 547 |
| Effect of exchange rate changes on cash and cash equivalents | (8) | (18) | (4) |
| Net increase (decrease) in cash and cash equivalents | (126) | 29 | (99) |
| Cash and cash equivalents at beginning of period | 427 | 398 | 497 |
| Cash and cash equivalents at end of period | $ 301 | $ 427 | $ 398 |
| **Supplemental Disclosure Cash Flow Information** | | | |
| Cash paid for: | | | |
| Interest | $ 103 | $ 114 | $ 79 |
| Income taxes, net of refund | $ 202 | $ 190 | $ 157 |
| Non-cash investing activities: | | | |
| Cost method investment | $ - | $ 75 | $ - |
| Acquisition of eSpeed contingent future issuance of Nasdaq common stock | $ - | $ - | $ 484 |

See accompanying notes to consolidated financial statements.

**N asdaq , Inc.**

**Notes to Consolidated Financial Statements**

## 1. Organization and Nature of Operations

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

We manage, operate and provide our products and services in four business segments: Market Services, Listing Services, Information Services and Technology Solutions.

### Market Services

Our Market Services segment includes our equity derivative trading and clearing, cash equity trading, FICC, and access and broker services businesses. We operate multiple exchanges and other marketplace facilities across several asset classes, including derivatives, commodities, cash equity, debt, structured products and ET P s. In addition, in some countries where we operate exchanges, we also provide broker services, clearing, settlement and central depository services. Our transaction-based platforms provide market participants with the ability to access, process, display and integrate orders and quotes. The platforms allow the routing and execution of buy and sell orders as well as the reporting of transactions, providing fee-based revenues.

In the U.S., we operate three options exchanges, as well as three cash equity exchanges. The NASDAQ Stock Market, the largest of our cash equities exchanges, is the largest single venue of liquidity for trading U.S.-listed cash equities. We also operate a leading electronic platform for trading of U.S. Treasuries.

In the third quarter of 2015, we launched NFX , which is our U.S. based energy derivatives market. NFX offers cash settled energy derivatives based on key energy benchmarks including oil, natural gas and U.S. power.

In Europe, we operate exchanges in Stockholm (Sweden), Copenhagen (Denmark), Helsinki (Finland), and Iceland, as well as the clearing operations of Nasdaq Clearing. We also operate exchanges in Tallinn (Estonia), Riga (Latvia) and Vilnius (Lithuania) as Nasdaq Baltic. Collectively, Nasdaq Nordic and Nasdaq Baltic offer trading in cash equities and depository receipts, warrants, convertibles, rights, fund units and ETFs, as well as trading and clearing of derivatives and clearing of resale and repurchase agreements. Through Nasdaq First North, our Nordic and Baltic operations also offer alternative marketplaces for smaller companies.

In addition, Nasdaq Commodities operates a power derivatives exchange regulated in Norway and a European carbon exchange. In the U.K., we operate Nasdaq NLX, a London-based multilateral trading venue that offers a range of both short-term interest rate and long-term interest rate euro-and sterling-based listed derivative products.

Through our Access and Broker Services business, we provide market participants with a wide variety of alternatives for connecting to and accessing our markets via a number of different protocols used for quoting, order entry, trade reporting, DROP functionality and connectivity to various data feeds. We also provide co-location services to market participants, whereby firms may lease cabinet space and power to house their own equipment and servers within our data center. Our broker services operations offer technology and customized securities administration solutions to financial participants in the Nordic market.

### Listing Services

Our Listing Services segment includes our U.S. and European Listing Services businesses. We operate a variety of listing platforms around the world to provide multiple global capital raising solutions for private and public companies. Our main listing markets are The NASDAQ Stock Market and the Nasdaq Nordic and Nasdaq Baltic exchanges. Our Listing Segment also includes NPM and SecondMarket, which are marketplaces for private growth companies.

As of December 31, 2015, The NASDAQ Stock Market was home to 2,859 listed companies with a combined market capitalization of approximately $8.3 trillion, and in Europe, the Nasdaq Nordic and Nasdaq Baltic exchanges, together with Nasdaq First North, were home to 852 listed companies with a combined market capitalization of approximately $1.3 trillion .

### Information Services

Our Information Services segment includes our Data Products and our Index Licensing and Services businesses. Our Data Products business sells and distributes historical and real-time quote and trade information to market participants and data distributors. Our data products enhance transparency of the market activity within the exchanges that we operate and provide critical information to professional and non-professional investors globally.

Our Index Licensing and Services business develops and licenses Nasdaq branded indexes, associated derivatives, and financial products and also provides custom calculation services for third-party clients. As of December 31, 2015, we had 222 exchange traded products licensed to Nasdaq's indexes and had over $114 billion of assets under management in licensed exchange traded products tracking Nasdaq indexes.

**Technology Solutions**

Our Technology Solutions segment includes our Corporate Solutions and Market Technology businesses.

Our Corporate Solutions business serves corporate clients, including companies listed on our exchanges. We help organizations manage the two-way flow of information with their key constituents, including their board members and investors, and with clients and the public through our suite of advanced technology, analytics, and consultative services. Our Corporate Solutions business primarily offers products to serve the following key areas: investor relations, public relations, multimedia solutions, and governance. We currently have over 9,500 Corporate Solutions clients.

Our Market Technology business is a leading global technology solutions provider and partner to exchanges, clearing organizations, central securities depositories, regulators, banks, brokers and corporate businesses. Our Market Technology business is the sales channel for our complete global offering to other marketplaces.

Market Technology provides technology solutions for trading, clearing, settlement, surveillance and information dissemination to markets with wide-ranging requirements, from the leading markets in the U.S., Europe and Asia to emerging markets in the Middle East, Latin America, and Africa. Our marketplace solutions can handle a wide array of assets including cash equities, equity derivatives, currencies, various interest-bearing securities, commodities, and energy products, and are currently powering more than 70 marketplaces in 50 countries. Market Technology also provides market surveillance services to broker-dealer firms worldwide, as well as enterprise governance, risk management and compliance software solutions.

For further discussion of our business, see "Item 1. Business."

**2. Summary of Significant Accounting Policies**

**Basis of Presentation and Principles of Consolidation**

The consolidated financial statements are prepared in accordance with U.S. GAAP. The financial statements include the accounts of Nasdaq, its wholly-owned subsidiaries and other entities in which Nasdaq has a controlling financial interest. Intercompany accounts and transactions have been eliminated. When we do not have a controlling interest in an entity but exercise significant influence over the entity's operating and financial policies, such investment is accounted for under the equity method of accounting. We recognize our share of earnings or losses of an equity method investee based on our ownership percentage. As permitted under U.S. GAAP, for certain equity method investments for which financial information is not sufficiently timely for us to apply the equity method of accounting currently, we record our share of the earnings or losses of the investee from the most recently available financial statements on a lag. See "Equity Method Investments," of Note 6, "Investments," for further discussion of our equity method investments.

Certain prior year amounts have been reclassified to conform to the current year presentation.

Subsequent Events

We have evaluated subsequent events through the issuance date of this Annual Report on Form 10-K. See Note 20, "Subsequent Events," for further discussion.

**Use of Estimates**

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts and the disclosure of contingent amounts in the consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

**Foreign Currency**

Foreign denominated assets and liabilities are remeasured into the functional currency at exchange rates in effect at the balance sheet date and recorded through the income statement. Gains or losses resulting from foreign currency transactions are remeasured using the rates on the dates on which those elements are recognized during the period, and are included in general, administrative and other expense in the Consolidated Statements of Income.

Translation gains or losses resulting from translating our subsidiaries' financial statements from the local functional currency to the reporting currency, net of tax, are included in accumulated other comprehensive loss within stockholders' equity in the Consolidated Balance Sheets. Assets and liabilities are translated at the balance sheet date while revenues and expenses are translated at the date the transaction occurs or at an applicable average rate.

Deferred taxes are not provided on cumulative translation adjustments where we expect earnings of a foreign subsidiary to be indefinitely reinvested. The income tax effect of currency translation adjustments related to foreign subsidiaries that are not considered indefinitely reinvested is recorded as a component of deferred taxes with an offset to accumulated other comprehensive loss within stockholders' equity in the Consolidated Balance Sheets.

**Cash and Cash Equivalents**

Cash and cash equivalents include cash in banks and all non-restricted highly liquid investments with original maturities of 90 days or less at the time of purchase. Such equivalent investments included in cash and cash equivalents in the Consolidated Balance Sheets were $157 million as of December 31, 2015 and $278 million as of December 31, 2014. Cash equivalents are carried at cost plus accrued interest, which approximates fair value due to the short maturities of these investments.

**Restricted Cash**

Current restricted cash, which was $56 million as of December 31, 2015 and $49 million as of December 31, 2014, is not available for general use by us due to regulatory and other requirements and is classified as restricted cash in the Consolidated Balance Sheets. As of December 31, 2015 , current restricted cash primarily includes restricted cash held at SecondMarket related to customer funds held in connection with privately negotiated securities transactions for the exclusive benefit of the customer and cash held for regulatory purposes for our trading and clearing businesses. As of December 31, 2014, current restricted cash primarily includes cash held for regulatory purposes for our trading and clearing businesses.

**Financial Investments**

Financial investments, at fair value are primarily comprised of trading securities, mainly highly rated European government debt securities. Trading securities are bought principally to meet regulatory capital requirements for Nasdaq Clearing's operations and are generally sold in the near term. Changes in fair value of trading securities are included in dividend and investment income. Financial investments that are classified as available-for-sale investment securities are carried at fair value with unrealized gains and losses, net of tax, reported in accumulated other comprehensive loss within stockholders' equity in the Consolidated Balance Sheets. Realized gains and losses on these securities are included in earnings upon disposition of the securities using the specific identification method. In addition, realized losses are recognized when management determines that a decline in value is other than temporary, which requires judgment regarding the amount and timing of recovery. For financial investments that are classified as available-for-sale securities, we also consider the extent to which cost exceeds fair value, the duration of that difference, management's judgment about the issuer's current and prospective financial condition, as well as our intent and ability to hold the security until recovery of the unrealized losses.

Fair value of both trading and available-for-sale investment securities is generally obtained from third party pricing sources. When available, quoted market prices are used to determine fair value. If quoted market prices are not available, fair values are estimated using pricing models with observable market inputs. The inputs to the valuation models vary by the type of security being priced but are typically benchmark yields, reported trades, broker-dealer quotes, and prices of similar assets. Pricing models generally do not entail material subjectivity because the methodologies employed use inputs observed from active markets. See "Fair Value Measurements," below for further discussion of fair value measures.

**Receivables, net**

Our receivables are concentrated with our member firms, market data distributors, listed companies and technology solutions customers. Receivables are shown net of a reserve for uncollectible accounts. The reserve for bad debts is maintained at a level that management believes to be sufficient to absorb estimated losses in the accounts receivable portfolio. The reserve is increased by the provision for bad debts which is charged against operating results and decreased by the amount of charge-offs, net of recoveries. The provision for bad debts is included in general, administrative and other expense in the Consolidated Statements of Income. The amount charged against operating results is based on several factors including, but not limited to, a continuous assessment of the collectability of each account, the length of time a receivable is past due and our historical experience with the particular customer. In

circumstances where a specific customer's inability to meet its financial obligations is known (i.e., bankruptcy filings), we record a specific provision for bad debts against amounts due to reduce the receivable to the amount we reasonably believe will be collected. Due to changing economic, business and market conditions, we review the reserve for bad debts monthly and make changes to the reserve through the provision for bad debts as appropriate. If circumstances change (i.e., higher than expected defaults or an unexpected material adverse change in a major customer's ability to pay), our estimates of recoverability could be reduced by a material amount. The total reserve netted against receivables in the Consolidated Balance Sheets was $14 million as of December 31, 2015 and $16 million as of December 31, 2014.

**Default Funds and Margin Deposits**

Nasdaq Clearing members' cash contributions are included in default funds and margin deposits in the Consolidated Balance Sheets as both a current asset and a current liability. These balances may fluctuate over time due to changes in the amount of deposits required and whether members choose to provide cash or non-cash contributions. Non-cash contributions include highly rated government debt securities that must meet specific criteria approved by Nasdaq Clearing. Non-cash contributions are pledged assets that are not recorded in the Consolidated Balance Sheets as Nasdaq Clearing does not take legal ownership of these assets and the risks and rewards remain with the clearing members.

**Derivative Financial Instruments and Hedging Activities**

***Non-Designated Derivatives***

We use derivatives as economic hedges that are not designed as accounting hedges or do not qualify for hedge accounting treatment. For such derivative financial instruments, changes in fair value are reported in current period earnings.

We use foreign exchange forward contracts to manage foreign currency exposure of intercompany loans. These contracts are not designated as hedges for financial reporting purposes. The change in fair value of these contracts is recognized in general, administrative and other expense in the Consolidated Statements of Income and offsets the foreign currency impact recognized on the intercompany loans.

As of December 31, 2015 and 2014, the fair value amounts of our derivative instruments were immaterial.

***Net Investment Hedges***

Net assets of our foreign subsidiaries are exposed to volatility in foreign currency exchange rates. We may utilize net investment hedges to offset the translation adjustment arising from re-measuring our investment in foreign subsidiaries.

Our 2021 Notes have been designated as a hedge of our net investment in certain foreign subsidiaries to mitigate the foreign exchange risk associated with certain investments in these subsidiaries. Any increase or decrease related to the remeasurement of the 2021 Notes into U.S. dollars is recorded within accumulated other comprehensive loss in the Consolidated Balance Sheets. See "3.875% Senior Unsecured Notes," of Note 9, "Debt Obligations," for further discussion.

**Property and Equipment, net**

Property and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. Depreciation and amortization are recognized over the estimated useful lives of the related assets. Estimated useful lives range from 10 to 40 years for buildings and improvements, 2 to 5 years for data processing equipment and software and 5 to 10 years for furniture and equipment. Leasehold improvements are amortized over the shorter of their estimated useful lives or the remaining term of the related lease. Depreciation and amortization are computed using the straight-line method. See Note 7, "Property and Equipment, net," for further discussion.

**Goodwill and Indefinite-Lived Intangible Assets**

Goodwill represents the excess of purchase price over the value assigned to the net tangible and identifiable intangible assets of a business acquired. Goodwill is allocated to our reporting units based on the assignment of the fair values of each reporting unit of the acquired company. For purposes of performing our goodwill impairment test, our five reporting units are the Market Services segment, the Listing Services segment, the Information Services segment, and the two businesses comprising the Technology Solutions segment: Corporate Solutions and Market Technology. Goodwill impairment testing is performed annually in the fourth quarter of our fiscal year using carrying amounts as of October 1, or more frequently if conditions exist that indicate that the asset may be impaired, such as changes in the business climate, poor indicators of operating performance or the sale or disposition of a significant portion of a reporting unit.

Goodwill impairment testing is a two-step process performed at the reporting unit level. First, the fair value of each reporting unit is compared to its corresponding carrying amount, including goodwill. The fair value of each reporting unit is estimated using a combination of a discounted cash flow valuation, which incorporates assumptions regarding future growth rates, terminal values, and

discount rates, as well as a guideline public company valuation, incorporating relevant trading multiples of comparable companies and other factors. The estimates and assumptions used consider historical performance and are consistent with the assumptions used in determining future profit plans for each reporting unit. If the first step results in the carrying amount exceeding the fair value of the reporting unit, then a second step must be completed in order to determine the amount of goodwill impairment that should be recorded, if any. In the second step, the implied fair value of the reporting unit's goodwill is determined by allocating the reporting unit's fair value to all of its assets and liabilities other than goodwill in a manner similar to a purchase price allocation. The implied fair value of the goodwill that results from the application of this second step is then compared to the carrying amount of the goodwill and an impairment charge is recorded for any difference.

We also evaluate indefinite-lived intangible assets for impairment annually in the fourth quarter of our fiscal year using carrying amounts as of October 1, or more frequently whenever events or changes in circumstances indicate that the fair value of the asset may be less than its carrying amount. Such evaluation includes determining the fair value of the asset and comparing the fair value of the asset with its carrying amount . The fair value of indefinite-lived intangible assets is primarily determined on the basis of estimated discounted value, using the relief from royalty approach and the excess earnings approach for trade names and the Greenfield Approach for exchange and clearing registrations and licenses, both of which incorporate assumptions regarding future revenue projections and discount rates. If the fair value of the indefinite-lived intangible asset is less than its carrying amount , an impairment charge is recognized in an amount equal to the difference. See "Intangible Asset Impairment Charges," of Note 5, "Goodwill and Acquired Intangible Assets," for further discussion.

For goodwill and indefinite-lived intangible assets impairment testing, we have the option to first perform a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit or indefinite-lived intangible asset is less than the carrying amount. The more-likely-than-not threshold is defined as having a likelihood of more than 50 percent. If, after assessing the totality of events or circumstances, we determine that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, then we must perform additional testing of the reporting unit or indefinite-lived intangible asset. Otherwise, we conclude that no impairment is indicated and further testing is not performed.

There was no impairment of goodwill for the years ended December 31, 2015, 2014 and 2013. A s discussed in "Intangible Asset Impairment Charges," of Note 5, "Goodwill and Acquired Intangible Assets," we recorded a pre-tax, non-cash indefinite-lived intangible asset impairment charge of $119 million in 2015. There was no other impairment of indefinite -lived intangible assets for the years ended December 31, 2015, 2014 and 2013. However, disruptions to our business and events , such as economic weakness or unexpected significant declines in the operating results of any of our reporting units or businesses, may result in goodwill or indefinite-lived intangible asset impairment charges in the future.

**Valuation of Other Long-Lived Assets**

We review our other long-lived assets, such as finite-lived intangible assets and property and equipment for potential impairment when there is evidence that events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The carrying amount of an asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. Any required impairment loss is measured as the amount by which the carrying amount of the asset exceeds its fair value and is recorded as a reduction in the carrying amount of the related asset and a charge to operating results. See "Intangible Asset Impairment Charges," of Note 5, "Goodwill and Acquired Intangible Assets," for further discussion of impairment charges recorded on our finite-lived intangible assets .

**Equity Method Investments**

In general, the equity method of accounting is used when we own 20% to 50% of the outstanding voting stock of a company and when we are able to exercise significant influence over the operating and financial policies of a company. We have certain investments in which we have determined that we have significant influence and as such account for the investments under the equity method of accounting. We record our pro-rata share of earnings or losses each period and record any dividends as a reduction in the investment balance. We evaluate our equity method investments for other-than-temporary declines in value by considering a variety of factors such as the earnings capacity of the investment and the fair value of the investment compared to its carrying amount. In addition, for investments where the market value is readily determinable, we consider the underlying stock price. If the estimated fair value of the investment is less than the carrying amount and management considers the decline in value to be other than temporary, the excess of the carrying amount over the estimated fair value is recognized in the financial statements as an impairment.

**Cost Method Investments**

In general, the cost method of accounting is used when we own less than 20% of the outstanding voting stock of a company which does not have a readily determinable fair value and when we are not able to exercise significant influence over the operating and financial policies of a company. Under the cost method of accounting, investments are carried at cost and are adjusted only for other-than-temporary declines in fair value, certain distributions, and additional investments. We evaluate our cost method

investments for other-than-temporary declines in value by considering a variety of factors such as the earnings capacity of the investment .

**Revenue Recognition and Transaction-Based Expenses**

***Market Services Revenues***

Market services revenues include equity derivative trading and clearing revenues, cash equity trading revenues, fixed income, currency and commodities trading and clearing revenues, and access and broker services revenues.

Equity Derivative Trading and Clearing Revenues

In our equity derivative markets, we earn trading and clearing revenues which are variable. In the U.S., trading revenues are based on traded volumes, and recognized when executed. The principal types of equity derivative contracts traded are equity options, ETF options, index options and foreign currency options. In the U.S., we record execution revenues from transactions on a gross basis as revenues and record related expenses as transaction-based expenses, as we have certain risk associated with trade execution.

In Europe, equity derivative trading and clearing revenues are based on the volume and value of traded and cleared contracts, and recognized when executed or when contracts are cleared. The principal types of equity derivative contracts traded and cleared are stock options and futures and index options and futures.

Equity Derivative Trading and Clearing Transaction-Based Expenses

For U.S. equity derivative trading, we credit a portion of the per share execution charge to the market participant that provides the liquidity and record the transaction rebate as a transaction-based expense in the Consolidated Statements of Income. These transaction rebates are paid on a monthly basis and the amounts due are included in accounts payable and accrued expenses in the Consolidated Balance Sheets.

In the U.S., we pay Section 31 fees to the SEC for supervision and regulation of securities markets. We pass these costs along to our customers through our equity derivative trading and clearing fees. We collect the fees as a pass-through charge from organizations executing eligible trades on our options exchanges and we recognize these amounts in equity derivative trading and clearing transaction-based expenses when incurred. Section 31 fees received are included in cash and cash equivalents in the Consolidated Balance Sheets at the time of receipt and, as required by law, the amount due to the SEC is remitted semiannually and recorded as Section 31 fees payable to the SEC in the Consolidated Balance Sheets until paid. Since the amount recorded as revenues is equal to the amount recorded as transaction-based expenses, there is no impact on our revenues less transaction-based expenses. As we hold the cash received until payment to the SEC, we earn interest income on the related cash balances.

Under our Limitation of Liability Rule and procedures, we may, subject to certain caps, provide compensation for losses directly resulting from the systems' actual failure to correctly process an order, quote, message or other data into our platform. We do not record a liability for any potential claims that may be submitted under the Limitation of Liability Rule unless they meet the provisions required in accordance with U.S. GAAP. As such, losses arising as a result of the rule are accrued and charged to expense only if the loss is probable and estimable.

The exchanges that comprise Nasdaq Nordic and Nasdaq Baltic do not have any revenue sharing agreements or transaction-based expenses, such as transaction rebates and brokerage, clearance and exchange fees.

Cash Equity Trading Revenues

U.S. cash equity trading revenues are variable, based on individual customer share volumes, and recognized as transactions occur. We charge transaction fees for executing cash equity trades in NASDAQ-listed and other listed securities on our U.S. cash equity exchanges, as well as on orders that are routed to other market venues for execution. Similar to U.S. equity derivative trading and clearing, we record cash equity trading revenues from transactions on a gross basis as revenues and record related expenses as transaction-based expenses, as we have certain risk associated with trade execution. For further discussion see "Equity Derivative Trading and Clearing Transaction-Based Expenses" above.

For NASDAQ and Nasdaq PSX, we credit a portion of the per share execution charge to the market participant that provides the liquidity and for Nasdaq BX, we credit a portion of the per share execution charge to the market participant that takes the liquidity. We record these credits as transaction rebates that are included in transaction-based expenses in the Consolidated Statements of Income. These transaction rebates are paid on a monthly basis and the amounts due are included in accounts payable and accrued expenses in the Consolidated Balance Sheets.

As discussed above in "Equity Derivative Trading and Clearing Transaction-Based Expenses," we also pay Section 31 fees to the SEC for supervision and regulation of securities markets. We pass these costs along to our customers through our cash equity

trading fees. We collect the fees as a pass-through charge from organizations executing eligible trades on our cash equity platforms and we recognize these amounts in transaction-based expenses when incurred.

As discussed above, in the U.S., under our Limitation of Liability Rule and procedures, we may, subject to certain caps, provide compensation for losses directly resulting from the systems' actual failure to correctly process an order, quote, message or other data into our platform.

In our European markets, we charge transaction fees for executing trades on the exchanges that comprise Nasdaq Nordic and Nasdaq Baltic. These transaction fees are charged per executed order and as per value traded.

The exchanges that comprise Nasdaq Nordic and Nasdaq Baltic do not have any revenue sharing agreements or transaction-based expenses, such as transaction rebates and brokerage, clearance and exchange fees.

Fixed Income, Currency and Commodities Trading and Clearing Revenues

Fixed income trading revenues are primarily earned from trading of U.S. Treasury securities and other fixed income products. Customer contracts may be on a fixed or variable rate basis. Revenues from customers with a fixed rate basis are recognized ratably over the contract period. Revenues from customers with a variable rate basis are based upon individual customer share volume and are recognized as revenues as the transaction occurs. Currency and commodities trading and clearing revenues are primarily earned from trading and clearing of energy , emission allowance, freight, seafood and other commodity products. Trading and clearing revenues are based on the volume and value of traded and cleared contracts, and recognized when executed or when contracts are cleared. In addition, Nasdaq Commodities members are billed an annual fee which is recognized ratably over the following 12-month period.

We also generate clearing revenues for OTC traded derivatives, interest rate swaps, and resale and repurchase agreements. These clearing revenues are based on the value and length of the contract and are recognized when cleared. In connection with our collateral management process in our Nasdaq Clearing operations, we recognize interest income on cash contributions that we manage when earned.

Access and Broker Services Revenues

*Access Services*

We generate revenues by providing market participants with several alternatives for accessing our markets for a fee. The type of connectivity is determined by the level of functionality a customer needs. As a result, access services revenues vary depending on the type of connection provided to customers. We provide co-location services to market participants, whereby firms may lease cabinet space and power to house their own equipment within our data centers. These participants are charged monthly fees for cabinet space, connectivity and support. We also earn revenues from annual and monthly exchange membership and registration fees. Revenues for providing access to our markets, co-location services and revenues for monthly exchange membership and registration fees are recognized on a monthly basis as the service is provided. Revenues from annual fees for exchange membership and registration fees are recognized ratably over the following 12-month period.

*Broker Services*

Our broker services operations offer technology and customized securities administration solutions to financial participants in our Nasdaq Nordic markets. The primary services offered are flexible back-office systems which allow customers to entirely or partly outsource their company's back-office functions. Revenues from broker services are based on a fixed basic fee for administration or licensing, maintenance and operations, and a variable portion that depends on the number of transactions completed. Broker services revenues are recognized on a continuous basis as services are rendered.

***Listing Services Revenues***

Listing services revenues primarily include annual fees, initial listing fees and listing of additional shares fees.

Annual Fees

In the U.S., annual fees are charged based on the number of outstanding shares of companies listed in the U.S. at the end of the prior year and are recognized ratably over the following 12-month period. European annual fees, which are received from companies listed on our Nasdaq Nordic and Nasdaq Baltic exchanges and Nasdaq First North, are directly related to the listed companies' market capitalization on a trailing 12-month basis.

Initial Listing Fees

Initial listing fees pertain to our U.S. market and are generally based on the number of shares that a company initially lists and are recognized on a straight-line basis over estimated service periods of six years, based on our historical listing experience and projected future listing duration.

Listing of Additional Shares Fees

Listing of additional shares fees pertain to our U.S. market and are paid by listed companies in connection with corporate actions involving the issuance of new shares to be listed, such as stock splits and sales of additional securities. These fees are recognized on a straight-line basis over estimated service periods of four years, based on our historical listing experience and projected future listing duration.

Listing of additional share fees are expected to decline and will be phased out by January 2018 as a result of the implementation of our new fee program for our U.S. markets. See " All-Inclusive Annual Listing Fee Program" below for further discussion.

All-Inclusive Annual Listing Fee Program

Nasdaq announced an all-inclusive annual listing fee program for companies listed in the U.S. which became effect ive in 2015. Under this new program, listed companies pay an annual fee which includes all listing-related activities, including listing of additional shares. All listed companies will be subject to the all-inclusive program beginning in January 2018, but can elect to opt-in to this program prior to January 2018. These revenues will be recognized ratably over the following 12-month period.

***Information Services Revenues***

Information services revenues include data products revenues and index licensing and services revenues.

Data Products Revenues

Data products revenues are earned from U.S. and European proprietary data products and index data products. In the U.S., we also earn revenues from U.S. tape plans.

We collect and process information from our exchanges and earn revenues as a distributor of our own data and select third-party content. We provide varying levels of quote and trade information to market participants and to data distributors, who in turn sell subscriptions for this information to the public. We earn revenues primarily based on the number of data subscribers and distributors of our data. Data products revenues are subscription-based and are recognized on a monthly basis net of amounts due under revenue sharing arrangements with market participants.

We also generate revenues from our Nasdaq indexes that consist of Global Index Data Services, which delivers real-time index values throughout the trading day, and Global Index Watch, which delivers weightings and components data, corporate actions and a breadth of additional data. We earn revenues primarily based on the number of data subscribers and distributors of our data. These revenues, which are subscription based, are recognized on a monthly basis.

Revenues from U.S. tape plans include eligible UTP Plan revenues that are shared among UTP Plan participants and are presented on a net basis. Under the revenue sharing provision of the UTP Plan, we are permitted to deduct costs associated with acting as the administrator of the UTP Plan from the total amount of tape revenues collected. After these costs are deducted from the tape revenues, we distribute to the respective UTP Plan participants, including The NASDAQ Stock Market, Nasdaq BX and Nasdaq PSX, their share of tape revenues based on a formula, required by Regulation NMS, that takes into account both trading and quoting activity. In addition, all quotes and trades in NYSE- and NYSE MKT-listed securities are reported and disseminated in real-time, and as such, we share in the tape revenues for information on NYSE- and NYSE MKT-listed securities. Revenues from net U.S. tape plans are recognized on a monthly basis.

*Data Products Revenue Sharing*

The most significant component of data products revenues recorded on a net basis is the UTP Plan revenue sharing in the U.S. All indicators of gross v er s us net reporting under U.S. GAAP have been considered in analyzing the appropriate presentation of UTP Plan revenue sharing. However, the following are the primary indicators of net reporting:

- Primary Obligor: We are the administrator for the UTP Plan, in addition to being a participant in the UTP Plan. In our unique role as administrator, we facilitate the collection and dissemination of revenues on behalf of the UTP Plan participants. As a participant, we share in the net distribution of revenues according to the plan on the same terms as all other plan participants.
- Risk of Loss/Credit Risk: Risk of loss on the revenue is shared equally among plan participants according to the UTP Plan.
- Price Latitude: The operating committee of the UTP Plan, which is comprised of representatives from each of the participants, including us solely in our capacity as a UTP Plan participant, is responsible for setting the level of fees to be paid by distributors and subscribers and taking action in accordance with the provisions of the UTP Plan, subject to SEC approval.

The exchanges that comprise Nasdaq Nordic and Nasdaq Baltic do not have any data products revenue sharing agreements.

Index Licensing and Services Revenues

We develop and license Nasdaq branded indexes, associated derivatives and financial products as part of our Global Index Family. Revenues primarily include license fees from these branded indexes, associated derivatives and financial products in the U.S. and abroad. We primarily have two types of license agreements: transaction-based licenses and asset-based licenses. Transaction-based licenses are generally renewable long-term agreements. Customers are charged based on transaction volume or a minimum contract amount, or both. If a customer is charged based on transaction volume, we recognize revenue when the transaction occurs. If a customer is charged based on a minimum contract amount, we recognize revenue on a pro-rata basis over the licensing term. Asset-based licenses are also generally long-term agreements. Customers are charged based on a percentage of assets under management for licensed products, per the agreement, on a monthly or quarterly basis. These revenues are recorded on a monthly or quarterly basis over the term of the license agreement.

***Technology Solutions Revenues***

Technology Solutions revenues include corporate solutions revenues and market technology revenues.

Corporate Solutions Revenues

Corporate solutions revenues primarily include subscription and transaction-based income from our Investor Relations, Public Relations, Multimedia Solutions and Governance products. Subscription-based revenues earned are recognized ratably over the contract period, generally one to two years in length. As part of the subscription agreements, customers can also be charged usage fees based upon actual usage of the services provided. Revenues from usage fees and other services are recognized when earned. Revenues from transaction-based services, such as webcasting and wire distribution, are recorded as the services are provided and delivered.

Market Technology Revenues

Market Technology provides technology solutions for trading, clearing, settlement, surveillance and information dissemination, as well as enterprise governance, risk management and compliance software solutions. Revenues primarily consist of software, license and support revenues, change request and advisory revenues, and software as a service revenues.

For most solutions, we enter into multiple-element sales arrangements to develop technology solutions, license the right to use software, and provide post-contract support and other services to our customers. In order to recognize revenues associated with each individual element of a multiple-element sales arrangement separately, we are required to establish the existence of VSOE of fair value for each element. When VSOE for individual elements of an arrangement cannot be established, revenue is generally deferred and recognized over either the final element of the arrangement or the entire term of the arrangement for which the services will be delivered.

We enter into agreements to modify the system solutions sold by Nasdaq after delivery has occurred. These revenues are recognized when earned.

In addition, we enter into revolving subscription agreements which allow customers to connect to our servers to access certain services. These revenues are recognized ratably over the subscription term.

**Earnings Per Share**

We present both basic and diluted earnings per share. Basic earnings per share is computed by dividing net income attributable to Nasdaq by the weighted average number of common shares outstanding for the period. Diluted earnings per share is computed by dividing net income attributable to Nasdaq by the weighted-average number of common shares and common share equivalents outstanding during the period and reflects the assumed conversion of all dilutive securities, which primarily consist of employee stock options, restricted stock and PSUs. Common share equivalents are excluded from the computation in periods for which they have an anti-dilutive effect . Stock options for which the exercise price exceeds the average market price over the period are anti-dilutive and, accordingly, are excluded from the calculation . See Note 14, “Earnings Per Share,” for further discussion.

**Treasury Stock**

We account for the purchase of treasury stock under the cost method with the shares of stock repurchased reflected as a reduction to Nasdaq stockholders’ equity and included in common stock in treasury, at cost in the Consolidated Balance Sheets. Most shares repurchased under our share repurchase program are retired and cancelled, and the remaining shares are available for general corporate purposes. When treasury shares are reissued, they are recorded at the average cost of the treasury shares acquired.

**Pension and Post-Retirement Benefits**

Pension and other post-retirement benefit plan information for financial reporting purposes is developed using actuarial valuations. We assess our pension and other post-retirement benefit plan assumptions on a regular basis. In evaluating these assumptions, we consider many factors, including evaluation of the discount rate, expected rate of return on plan assets, mortality rate,

healthcare cost trend rate, retirement age assumption, our historical assumptions compared with actual results and analysis of current market conditions and asset allocations. See Note 11, “Employee Benefits,” for further discussion.

Discount rates used for pension and other post-retirement benefit plan calculations are evaluated annually and modified to reflect the prevailing market rates at the measurement date of a high-quality fixed-income debt instrument portfolio that would provide the future cash flows needed to pay the benefits included in the benefit obligations as they come due. Actuarial assumptions are based upon management’s best estimates and judgment.

The expected rate of return on plan assets for our U.S. pension plans represents our long-term assessment of return expectations which may change based on significant shifts in economic and financial market conditions. The long-term rate of return on plan assets is derived from return assumptions based on targeted allocations for various asset classes. While we consider the pension plans’ recent performance and other economic growth and inflation factors, which are supported by long-term historical data, the return expectations for the targeted asset categories represent a long-term prospective return.

**Share-Based Compensation**

Accounting for share-based compensation requires the measurement and recognition of compensation expense for all share-based awards made to employees based on estimated fair values. Share-based awards, or equity awards, include employee stock options, restricted stock and PSUs. Restricted stock awards generally refer to restricted stock units. We generally recognize compensation expense for equity awards on a straight-line basis over the requisite service period of the award.

We estimate the fair value of PSUs granted under our total shareholder return, or TSR, program using the Monte Carlo simulation model, as these awards contain a market condition. Assumptions used in the Monte Carlo simulation model include the weighted average risk-free rate and the expected volatility. The risk-free interest rate for periods within the expected life of the award is based on the U.S. Treasury yield curve in effect at the time of grant. We use historic volatility for PSU awards issued under the TSR program, as implied volatility data could not be obtained for all the companies in the peer groups used for relative performance measurement within the TSR program.

See Note 12, “Share-Based Compensation,” for further discussion.

**Software Costs**

Significant purchased application software and operational software that are an integral part of computer hardware are capitalized and amortized on a straight-line basis over their estimated useful lives, generally five years. All other purchased software is charged to expense as incurred. We develop systems solutions for both internal and external use.

Certain costs incurred in connection with developing or obtaining internal use software are capitalized. Unamortized capitalized software development costs are included in data processing equipment and software, within property and equipment, net in the Consolidated Balance Sheets. Capitalized internal use software costs are amortized on a straight-line basis over the estimated useful lives of the software, not to exceed three years. Amortization of these costs is included in depreciation and amortization expense in the Consolidated Statements of Income.

Certain costs of computer software to be sold, leased, or otherwise marketed as a separate product or as part of a product or process are capitalized beginning when a product’s technological feasibility has been established and ending when a product is available for general release. Unamortized capitalized costs are included in data processing equipment and software, within property and equipment, net in the Consolidated Balance Sheets. Technological feasibility is established upon completion of a detailed program design or, in its absence, completion. Prior to reaching technological feasibility, all costs are charged to expense. Capitalized costs are amortized on a straight-line basis over the remaining estimated economic life of the product and are included in depreciation and amortization expense in the Consolidated Statements of Income.

**Leases**

We expense rent from non-cancellable operating leases, net of sublease income, on a straight line basis, based on future minimum lease payments. The net costs are included in occupancy expense in the Consolidated Statements of Income. See Note 17, “Leases,” for further discussion.

**Fair Value Measurements**

Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability, or the exit price, in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required or permitted to be either recorded or disclosed at fair value, we consider the principal or most advantageous market in which we would transact, and we also consider assumptions that market participants would use when pricing the asset or liability. Fair value measurement establishes a hierarchy of valuation techniques based on whether the inputs to those valuation

techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect Nasdaq's market assumptions. These two types of inputs create the following fair value hierarchy:

- Level 1—Quoted prices for identical instruments in active markets.
- Level 2—Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations whose inputs are observable or whose significant value drivers are observable.
- Level 3—Instruments whose significant value drivers are unobservable.

This hierarchy requires the use of observable market data when available.

**Income Taxes**

We use the asset and liability method to determine income taxes on all transactions recorded in the consolidated financial statements. Deferred tax assets and liabilities are determined based on differences between the financial statement carrying amounts and the tax basis of existing assets and liabilities (i.e., temporary differences) and are measured at the enacted rates that will be in effect when these differences are realized. If necessary, a valuation allowance is established to reduce deferred tax assets to the amount that is more likely than not to be realized.

In order to recognize and measure our unrecognized tax benefits, management determines whether a tax position is more likely than not to be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. Once it is determined that a position meets the recognition thresholds, the position is measured to determine the amount of benefit to be recognized in the consolidated financial statements. Interest and/or penalties related to income tax matters are recognized in income tax expense.

**Recently Adopted Accounting Pronouncements**

***ASU 2015-16***

In September 2015, the FASB issued Accounting Standards Update, or ASU, 2015-16, "Simplifying the Accounting for Measurement-Period Adjustments," which eliminates the requirement that an acquirer in a business combination account for measurement-period adjustments retrospectively. This guidance requires that an acquirer recognize adjustments to provisional amounts that are identified during the measurement period in the reporting period in which the adjustment amounts are determined. In addition, the amendments in this guidance require an entity to present separately on the face of the income statement or disclose in the notes the portion of the amount recorded in current-period earnings by line item that would have been recorded in previous reporting periods if the adjustment to the provisional amounts had been recognized as of the acquisition date. We adopted this new standard on January 1, 2016, which had no impact on our consolidated financial statements. We will apply the new guidance to future adjustments to provisional amounts, if any.

***ASU 2015-03***

In April 2015, the FASB issued ASU 2015-03, "Simplifying the Presentation of Debt Issuance Costs," which requires debt issuance costs to be presented in the balance sheet as a direct deduction from the carrying amount of the related debt liability rather than as an asset. This guidance does not change the recognition and measurement of debt issuance costs. In the second quarter of 2015, we elected to early adopt this guidance retrospectively for all periods presented in the Consolidated Balance Sheets. The reclassification of debt issuance costs resulted in reductions in other non-current assets and debt obligations of $16 million for the year ended December 31, 2014. Other than this reclassification, the adoption of this guidance did not have an impact on our consolidated financial statements.

**Recently Issued Accounting Pronouncements**

***ASU 201 6 -0 1***

In January 2016, the FASB issued ASU 2016-01, "Recognition and Measurement of Financial Assets and Financial Liabilities. " Th is new standard requires that most equity investments be measured at fair value, with subsequent changes in fair value recognized in net income. Under this new guidance, Nasdaq will no longer be able to recognize unrealized holding gains and losses on equity securities classified today as available-for-sale in accumulated other comprehensive income within stockholders' equity. This new standard does not change the guidance for classifying and measuring investments in debt securities and loans. This new guidance also impacts financial liabilities accounted for under the fair value option and affects the presentation and disclosure requirements for financial assets and liabilities. This new standard is effective for us on January 1, 2018. Early adoption is not permitted. We do not anticipate a material impact on our consolidated financial statements at the time of adoption of this new standard.

***ASU 201 5 - 17***

In November 2015, the FASB issued ASU 2015-17, “Balance Sheet Classification of Deferred Taxes,” which eliminates the current requirement to present deferred tax liabilities and assets as current and noncurrent in a classified balance sheet. Instead, Nasdaq will be required to classify all deferred tax liabilities and assets as noncurrent. This new standard is effective for us on January 1, 2017. Early adoption is permitted and the standard may be applied either prospectively or retrospectively to all periods presented. We plan to retrospectively adopt this standard in the first quarter of 2016. We do not anticipate a material impact on our consolidated financial statements at the time of adoption of this new standard.

***ASU 2014-09***

In May 2014, the FASB issued ASU 2014-09, “Revenue from Contracts with Customers,” which supersedes the revenue recognition guidance in ASC 605, “Revenue Recognition.” The new revenue recognition standard sets forth a five-step revenue recognition model to determine when and how revenue is recognized. The core principle of the guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration it expects to receive in exchange for those goods or services. The standard also requires more detailed disclosures. The standard provides alternative methods of initial adoption. On July 9, 2015, the FASB approved the deferral of the effective date of the new revenue recognition standard by one year. As a result, this new standard will now be effective for us on January 1, 2018. Early adoption as of the original effective date is permitted. We are currently evaluating this standard and our existing revenue recognition policies to determine which contracts in the scope of the guidance will be affected by the new requirements and what impact this standard will have on our consolidated financial statements upon adoption. At this time, we do not intend to adopt this standard early and we have not yet determined if we will select the full retrospective or the modified retrospective implementation method upon adoption.

**3. Restructuring Charges**

**2015 Restructuring Plan**

During the first quarter of 2015, we performed a comprehensive review of our processes, businesses and systems in a company-wide effort to improve performance, cut costs, and reduce spending. In the first quarter of 2015, we also decided to change our company name from The NASDAQ OMX Group, Inc. to Nasdaq, Inc., which became effective in the third quarter of 2015. We currently estimate that we will recognize net pre-tax restructuring charges of $190 million, consisting of the rebranding of our trade name, severance, asset impairments, facility-related and other costs. We recognized net restructuring charges of $172 million for the year ended December 31, 2015, with the remaining amount to be recognized through June 2016. The restructuring charge for the year ended December 31, 2015 includes the reversal of a sublease loss reserve of $ 10 million. See “Facilities-related” below for further discussion. Through this initiative, we achieved pre-tax savings in 2015 of approximately $20 million and annualized savings of $23 million. Restructuring charges are recorded on restructuring plans that have been committed to by management and are, in part, based upon management's best estimates of future events. Changes to the estimates may require future adjustments to the restructuring reserve .

The following table presents a summary of the 2015 restructuring plan charges in the Consolidated Statements of Income for the year ended December 31, 2015:

| | Year Ended December 31, 2015 |
|---|---|
| | (in millions) |
| Rebranding of trade name | $ 119 |
| Severance | 25 |
| Facilities-related | - |
| Asset impairments | 18 |
| Other | 10 |
| Total restructuring charges | $ 172 |

**Rebranding of Trade Name**

As noted above, in connection with our global rebranding initiative, we decided to change our company name from The NASDAQ OMX Group, Inc. to Nasdaq, Inc., which became effective in the third quarter of 2015. In connection with this action, we decided to discontinue the use of the OMX trade name and recorded a pre-tax, non-cash impairment charge of $119 million in March 2015 because we no longer attribute any material value to the trade name. The impairment charge did not impact the company's consolidated cash flows, liquidity, or capital resources.

**Severance**

Severance, other termination benefits and other associated costs of $25 million for the year ended December 31, 2015, related to workforce reductions of 230 positions across our organization. In addition to reducing our workforce, we have relocated certain functions to lower cost locations and expect to continue hiring in these lower cost locations to support the business.

**Facilities-related**

The facilities-related costs were $10 million for the year ended December 31, 2015 and pertained to the consolidation of leased facilities. These costs were offset by a credit of $10 million which pertained to the release of a previously recorded sublease loss reserve for part of the space we lease in New York, New York. In June 2015, a s part of our real estate reorganization plans, management decided to occupy this space. Based on management's decision, we released the sublease loss reserve recorded for this space.

**Asset Impairments**

Asset impairment charges of $18 million for the year ended December 31, 2015 primarily related to fixed assets and capitalized software that were retired during the year ended December 31, 2015.

**Restructuring Reserve**

The following table presents the changes in the restructuring reserve for the year ended December 31, 2015:

| | Balance at January 1, 2015 | Expense Incurred | Cash Payments | Balance at December 31, 2015 |
|---|---|---|---|---|
| | | (in millions) | | |
| Severance | $ - | $ 25 | $ (13) | $ 12 |
| Facilities-related | - | 10 | (10) | - |
| Total | $ - | $ 35 | $ (23) | $ 12 |

As of December 31, 2015, the majority of the restructuring reserve is included in other current liabilities in the Consolidated Balance Sheets and will be paid in 2016.

**2012 Restructuring Plan**

In the first quarter of 2013, as part of o ur 2012 restructuring plan to improve performance, cut costs, and reduce spending , we recognized restructuring charges totaling $9 million , including severance costs of $6 million related to workforce reductions of 31 positions across our organization, $1 million for facilities-related charges related to lease rent accruals for facilities we no longer occupy due to facilities consolidation, $1 million for asset impairments, primarily consisting of fixed assets and capitalized software that have been retired, and $1 million of other charges . This restructuring plan was completed in the first quarter of 201 3. Nasdaq incurred total charges of $53 million in connection with our 2012 restructuring plan .

**4. Acquisitions**

We completed the following acquisitions and strategic initiatives in 201 5 , 201 4 and 201 3 . Financial results of each transaction are included in our Consolidated Statements of Income from the date of each acquisition or strategic initiative.

**201 5 Acquisitions**

| | Purchase Consideration | Total Net Assets (Liabilities) Acquired | Acquired Intangible Assets | Goodwill |
|---|---|---|---|---|
| | | (in millions) | | |
| Dorsey, Wright & Associates, LLC | $ 226 | $ (26) | $ 141 | $ 111 |

The amounts in the table above represent the preliminary allocation of the purchase price and were subject to revision during the measurement period, a period not to exceed 12 months from the acquisition date. We finalized the allocation of the purchase price for the above acquisition in January 2016. There were no adjustments to the provisional values during the 12 month measurement period .

***Acquisition of Dorsey, Wright & Associates, LLC***

On January 30, 2015, we completed the acquisition of DWA for $226 million ( $225 million cash paid plus $1 million in working capital adjustments). DWA is a market leader in data analytics, passive indexing and smart beta strategies. We acquired net assets, at fair value, totaling $8 million and recorded a current deferred tax liability of $1 million and a non-current deferred tax

liability of $33 million related to differences in the U.S. GAAP and tax basis of our investment in DWA, resulting in total net liabilities acquired of $26 million. DWA is part of our Data Products and Index Licensing and Services businesses within our Information Services segment.

Nasdaq used cash on hand and borrowed $100 million under the revolving credit commitment of our current credit facility to fund this acquisition.

***Intangible Assets***

The following table presents the details of the DWA acquired intangible assets. All acquired intangible assets with finite lives are amortized using the straight-line method.

| | Value | Estimated Average Remaining Useful Life |
|---|---|---|
| Intangible assets: | (in millions) | (in years) |
| Trade name | $ 108 | Indefinite |
| Customer relationships | 29 | 15 years |
| Technology | 4 | 5 years |
| Total intangible assets | $ 141 | |

Below is a discussion of the methods used to determine the fair value of DWA 's intangible assets, as well as a discussion of the estimated average remaining useful life of each intangible asset. The carrying amounts of all other assets and liabilities were deemed to approximate their estimated fair values.

Trade Name

The DWA trade name is recognized in the industry and carries a reputation for quality. As such, DWA's reputation and positive recognition embodied in the trade name is a valuable asset to Nasdaq. The trade name was considered the primary asset acquired in this transaction. In valuing the acquired trade name, we used the income approach, specifically the excess earnings method. The excess earnings method examines the economic returns contributed by the identified tangible and intangible assets of a company, and then isolates the excess return that is attributable to the intangible asset being valued.

A discount rate of 17.0% was utilized, which reflects the amount of risk associated with the hypothetical cash flows generated by the DWA trade name in the future. In developing a discount rate for the trade name, we estimated a weighted average cost of capital for the overall business and we employed this rate when discounting the cash flows. The resulting discounted cash flows were then tax-effected at a rate of 36.5% , and a discounted tax amortization benefit was added to the fair value of the asset under the assumption that the trade name would be amortized for tax purposes over a period of 15 years.

We estimated the useful life of the trade name to be indefinite. The useful life was based on several factors including the number of years the name has been in service, its popularity within the industry, and our intention to continue its use in the branding of products.

Customer Relationships

Customer relationships represent the non-contractual and contractual relationships that DWA has with its customers. The DWA customer relationships were valued individually for each of DWA's businesses using the income approach, specifically the with-and-without method. The with-and-without method is commonly used when the cash flows of a business can be estimated with and without the asset in place. The premise associated with this valuation technique is that the value of an asset is represented by the differences in the subject business' cash flows under scenarios where (a) the asset is present and is used in operations (with); and (b) the asset is absent and not used in operations (without). Cash flow differentials are then discounted to present value to arrive at an estimate of fair value for the asset.

We estimated that without current customer relationships, it would take approximately 3-6 years, depending on the business, for the customer base to grow to 100% of current projected revenues. We also made estimates related to compensation levels and other expenses such as sales and marketing that would be incurred as the business was ramped up through the year in which the customer base would be expected to reach the level that currently exists.

A discount rate of 17.5% , which reflects the estimated weighted average cost of capital for the overall business plus a premium of 0.5% reflecting the risk and uncertainty of the cash flows for the customer relationships relative to the overall business, was utilized when discounting the cash flows. The resulting discounted cash flows were then tax-effected at a rate of 36.5% , and a discounted tax amortization benefit was added to the fair value of the asset under the assumption that the customer relationships would be amortized for tax purposes over a period of 15 years.

Based on the historical behavior of the customers and a parallel analysis of the customers using the excess earnings method, we estimated the remaining useful life for the acquired customer relationships to be 15 years.

Technology

The fair value of the acquired DWA developed technology was valued using the income approach, specifically the relief from royalty method, or RFRM. The RFRM is used to estimate the cost savings that accrue to the owner of an intangible asset who would otherwise have to pay royalties or license fees on revenues earned through the use of the asset. The royalty rate is applied to the projected revenue over the expected remaining life of the intangible asset to estimate royalty savings. The net after-tax royalty savings are calculated for each year in the remaining economic life of the intangible asset and discounted to present value.

To determine the royalty rate we searched for and identified market transactions and royalty rates for comparable technology. In addition, we performed a profit split analysis that produced a range of royalty rates that were then compared for reasonableness to the royalty rates identified in the market transactions and royalty rates for comparable technology. Profit split theory states that a reasonable market participant would be willing and able to make revenue-based royalty payments of 25.0% to 30.0% of their operating profit to receive the rights to certain licensable intellectual property necessary for conducting business. Conversely, the owner of such intellectual property would save that amount or be relieved from making those royalty payments. By analyzing these profit splits at 25 .0% to 3 0.0% , we estimated supportable royalty rates for the technology and selected a pre-tax royalty rate of 15.0% .

A discount rate of 17.0% was utilized, which reflects the estimated weighted average cost of capital for the overall business and we employed this rate when discounting the cash flows. The resulting discounted cash flows were then tax-effected at a rate of 36.5% , and a discounted tax amortization benefit was added to the fair value of the asset under the assumption that the technology would be amortized for tax purposes over a period of 15 years.

We have estimated the remaining useful life for the acquired developed technology to be 5 years.

***Acquisition of Full Ownership of NPM and Acquisition of SecondMarket***

In October 2015, we acquired full ownership of NPM following the acquisition of the minority stake that was previously held by a third party. In addition, through NPM, we acquired SecondMarket a recognized innovator in facilitating liquidity for private company securities . The purchase of the additional ownership interest in NPM and the acquisition of SecondMarket were purchased for an immaterial amount. NPM and SecondMarket are part of our Listing Services segment.

**2014 Acquisition**

In March 2014, we completed the acquisition of the remaining 28.0% ownership interest in BWise that was previously held by a third party. BWise is part of our Market Technology business within our Technology Solutions segment.

**2013 Acquisitions**

| | Purchase Consideration | Total Net Assets (Liabilities) Acquired | Acquired Intangible Assets | Goodwill |
|---|---|---|---|---|
| | | (in millions) | | |
| eSpeed | $ 1,239 | $ 5 | $ 715 | $ 519 |
| TR Corporate businesses | 366 | (37) | 91 | 312 |

The amounts in the table above represent the preliminary allocation of the purchase price and were subject to revision during the measurement period, a period not to exceed 12 months from the acquisition date. We finalized the allocation of the purchase price for the above acquisitions in 2014. There were no adjustments to the provisional values during the 12 month measurement period for t he above acquisitions .

***Acquisition of eSpeed for Trading of U.S. Treasuries***

On June 28, 2013, we acquired eSpeed from BGC for $1.2 billion. We acquired net assets, at fair value, totaling $5 million and acquire d intangible assets of $715 million which consisted of $578 million for the eSpeed trade name, $121 million in customer relationships and $16 million in technology. The eSpeed businesses are part of our Market Services and Information Services segments.

The purchase price consisted of $755 million in cash and contingent future annual issuances of 992,247 shares of N asdaq common stock , which approximat ed certain tax benefits associated with the transaction of $484 million. Such contingent future issuances of N asdaq common stock will be paid ratably through 2027 if N asdaq's total gross revenues equal or exceed $25 million in

each such year. The contingent future issuances of N asdaq common stock are subject to anti-dilution protections and acceleration upon certain events.

N asdaq used the majority of the net proceeds from the issuance of the 2021 Notes to fund the cash consideration paid for the acquisition of eSpeed.

***Intangible Assets***

The following table presents the details of the eSpeed acquired intangible assets. All acquired intangible assets with finite lives are amortized using the straight-line method.

| | Value | Estimated Average Remaining Useful Life |
|---|---|---|
| Intangible assets: | (in millions) | (in years) |
| Trade name: | | |
| Market Services | $ 528 | Indefinite |
| Information Services | 50 | Indefinite |
| Total trade name | 578 | |
| Customer relationships: | | |
| Market Services | 105 | 13 years |
| Information Services | 16 | 13 years |
| Total customer relationships | 121 | |
| Technology: | | |
| Market Services | 14 | 5 years |
| Information Services | 2 | 5 years |
| Total technology | 16 | |
| Total intangible assets | $ 715 | |

Below is a discussion of the methods used to determine the fair value of eSpeed's intangible assets, as well as a discussion of the estimated average remaining useful life of each intangible asset. The carrying amounts of all other assets and liabilities were deemed to approximate their estimated fair values.

Trade Name

N asdaq has incorporated eSpeed into two reporting segments —Market Services and Information Services. The eSpeed trade name was valued as used in each of these reporting segments. The trade name is recognized in the industry and carries a reputation for quality. As such, eSpeed and related brands' reputation and positive recognition embodied in the trade name are valuable assets to N asdaq . The trade name was considered the primary asset acquired in this transaction. In valuing the acquired trade name, we used the income approach, specifically the excess earnings method. The excess earnings method examines the economic returns contributed by the identified tangible and intangible assets of a company, and then isolates the excess return that is attributable to the intangible asset being valued.

A discount rate of 10.0% was utilized, which reflects the amount of risk associated with the hypothetical cash flows generated by the eSpeed trade name in the future. In developing a discount rate for the trade name, we estimated a weighted average cost of capital for the overall business and we employed this rate when discounting the cash flows. The resulting discounted cash flows were then tax-effected at a rate of 40.0% , and a discounted tax amortization benefit was added to the fair value of the asset under the assumption that the trade name would be amortized for tax purposes over a period of 15 years for both Market Services and Information Services.

We estimated the useful life of the trade name to be indefinite. The useful life was based on several factors including the number of years the name has been in service, its popularity within the industry, and our intention to continue its use.

Customer Relationships

Customer relationships represent the non-contractual and contractual relationships that eSpeed has with its customers. The eSpeed customer relationships were valued using the income approach, specifically the with-and-without method. The with-and-

without method is commonly used when the cash flows of a business can be estimated with and without the asset in place. The premise associated with this valuation technique is that the value of an asset is represented by the differences in the subject business' cash flows under scenarios where (a) the asset is present and is used in operations (with); and (b) the asset is absent and not used in operations (without). Cash flow differentials are then discounted to present value to arrive at an estimate of fair value for the asset.

We estimated that without current customer relationships, it would take approximately 4 - 5 years for the customer base to grow from 10.0% of current revenues to 100.0% of revenues. We also made estimates related to compensation levels and other expenses such as sales and marketing that would be incurred as the business was ramped up through year 5, which is the year the customer base would be expected to reach the level that currently exists.

A discount rate of 10.0% , which reflects the estimated weighted average cost of capital for the overall business, was utilized when discounting the cash flows. The resulting discounted cash flows were then tax-effected at a rate of 40.0% , and a discounted tax amortization benefit was added to the fair value of the asset under the assumption that the customer relationships would be amortized for tax purposes over a period of 15 years.

Based on the historical behavior of the customers and a parallel analysis of the customers using the excess earnings method, we estimated the remaining useful life to be 13 years for the acquired customer relationships.

In the fourth quarter of 2014, we recorded a non-cash int angible asset impairment charge totaling $38 million related to the customer relationships intangible asset. The impairment resulted primarily from changes in the forecasted revenues associated with the acquired customer list. See "Intangible Asset Impairment Charges," of Note 5, "Goodwill and Acquired Intangible Assets," to the consolidated financial statements for further discussion.

Technology

The fair value of the eSpeed acquired developed technology was valued using the income approach, specifically the RFRM , as discussed above in "Technology" related to DWA .

To determine the royalty rate we searched for and identified market transactions and royalty rates for comparable technology. Due to the limited data, we relied on our estimates and benchmarked the estimated excess earnings of eSpeed to determine a range of royalty rates that would be reasonable for the use of its intangible assets based on a profit split methodology. Profit split theory states that a reasonable market participant would be willing and able to make revenue based royalty payments of 25.0% to 33.0% of their operating profit to receive the rights to certain licensable intellectual property necessary for conducting business. Conversely, the owner of such intellectual property would save that amount or be relieved from making those royalty payments. By analyzing these profit splits at 25 .0% to 3 3.0% , we estimated supportable royalty rates for the technology and selected a pre-tax royalty rate of 5.0% .

A discount rate of 10.0% was utilized, which reflects the estimated weighted average cost of capital for the overall business and we employed this rate when discounting the cash flows. The resulting discounted cash flows were then tax-effected at a rate of 40.0% , and a discounted tax amortization benefit was added to the fair value of the asset under the assumption that the technology would be amortized for tax purposes over a period of 15 years for both Market Services and Information Services.

We have estimated the remaining useful life to be 5 years for the acquired developed technology.

***Acquisition of the Investor Relations, Public Relations and Multimedia Solutions Businesses of Thomson Reuters***

On May 31, 2013, we acquired the TR Corporate businesses for $390 million ( $366 million cash paid plus $24 million in working capital adjustments). We acquired net liabilities, at fair value, totaling $37 million and acquir ed intangible assets of $91 million , which consisted of $89 million in customer relationships and $2 million in technology. The TR Corporate businesses are part of our Corporate Solutions business within our Technology Solutions segment.

Nasdaq used cash on hand and borrowed $50 million under a former credit facility to fund this acquisition.

***Intangible Assets***

The following table presents the details of the acquired intangible assets in the acquisition of the TR Corporate businesses . All acquired intangible assets with finite lives are amortized using the straight-line method.

| | Value | Estimated Average Remaining Useful Life |
|---|---|---|
| Intangible assets: | (in millions) | (in years) |
| Customer relationships | $ 89 | 9-14 years |
| Technology | 2 | 2-5 years |
| Total intangible assets | $ 91 | |

Below is a discussion of the methods used to determine the fair value of the acquired intangible assets in the acquisition of the TR Corporate businesses, as well as a discussion of the estimated average remaining useful life of each intangible asset. The carrying amounts of all other assets and liabilities were deemed to approximate their estimated fair values.

Customer Relationships

Customer relationships represent the non-contractual and contractual relationships that each of the TR Corporate businesses has with its customers and represented a key intangible asset in this transaction. Customer relationships were identified and valued individually for each of the TR Corporate businesses using the income approach, specifically an excess earnings method. This valuation method relied on assumptions regarding projected revenues, attrition rates, and operating cash flows for each of the TR Corporate businesses.

We assumed annual revenue attrition of 10.0% for the customers for each of the TR Corporate businesses, as well as charges for contributory assets. Operating expenses associated with maintaining the assets were applied to the attrition adjusted revenues. For the five years following 2016, operating margins were adjusted in order to reach a normalized operating margin level that included an estimate for the fixed costs for the businesses. From 2021 onward, the operating margin was held constant at a normalized level. The tax-effected cash flows were discounted at a rate of 11.0% to 11.5% based on the risk associated with the hypothetical cash flows generated by the customer base for each specific business line.

The cash flows were then tax-effected at a rate of 40.0% , and a discounted tax amortization benefit was added to the fair value of the assets under the assumption that the customer relationships would be amortized for tax purposes over a period of 15 years.

The estimated remaining useful life captured 90.0% of the present value of the cash flows generated by each customer relationship.

Technology

The fair values of the acquired developed technologies were valued using the income approach, specifically the RFRM, as discussed above in “T echnology ” relating to DWA .

To determine the royalty rate we searched for and identified market transactions and royalty rates for comparable technology and relied on our estimates and expectations surrounding the relative importance of the acquired developed technologies, competing technologies, foreseeable shifts in the market, and expected royalty payments for comparable technologies. We also performed a profit split analysis, as described above in “T echnology ” relating to DWA , for each separate acquired technology in order to estimate an acceptable royalty rate. Based on the information obtained and the profit spilt analysis, we selected a pre-tax royalty rate of 1.5% for the webhosting technology and 0.5% for the public relations and multimedia solutions technologies.

A discount rate of 11.0% was utilized based on the risk associated with the hypothetical cash flows generated by the developed technologies and we employed this rate when discounting the cash flows. The resulting discounted cash flows were then tax-effected at a rate of 40.0% , and a discounted tax amortization benefit was added to the fair value of the asset under the assumption that the developed technology would be amortized for tax purposes over a period of 15 years.

We have estimated the remaining useful life to be 2 - 5 years for the acquired developed technology.

In the first quarter of 2014, we performed a review of our legacy Corporate Solutions’ technology platforms in an effort to leverage our scale and expertise as well as improve the efficiencies that we deliver to our customers and reduce our costs. This review resulted in the consolidation and retirement of several technology platforms, resulting in a charge of $18 million in the first quarter of 2014. This charge is included in merger and strategic initiatives expense in the Consolidated Statements of Income for 2014.

***Formation of NPM Joint Venture***

In March 2013, we formed a joint venture with SharesPost , Inc. creating NPM, a marketplace for private growth companies. Prior to October 2015, w e own ed a majority interest in NPM, combining N asdaq ’s resources, market and operating expertise with SharesPost’s web-based platform. NPM launch ed in March 2014 and is part of our Listing Services segment.

We finalized the allocation of the purchase price for NPM in the first quarter of 2014. There were no adjustments to the provisional values during the 12 month measurement period for this joint venture.

In October 2015, we acquired full ownership of NPM following the acquisition of the minority stake that was previously held by SharesPost for an immaterial amount.

***EuroCCP***

In December 2013, Nasdaq purchased an additional ownership interest in EuroCCP N.V., a clearinghouse, for an immaterial amount, increasing its equity interest to 25.0% from 22.0% . We account for our investment in EuroCCP N.V. under the equity method of accounting and this investment is part of our Market Services segment . See “Equity Method Investments,” of Note 6, “Investments,” for further discussion of our equity method investments.

***Acquisition of Dutch Cash Equities and Equity Derivatives Trading Venue***

In April 2013, we acquired a 25.0% equity interest in The Order Machine, or TOM, a Dutch cash equities and equity derivatives trading venue, for an immaterial amount. The terms of the transaction also provide us an option to acquire an additional 25.1% of the remaining shares at a future date. This transaction expanded our derivatives presence in Europe and this investment is part of our Market Services segment. We account for our investment in TOM under the equity method of accounting. See “Equity Method Investments,” of Note 6, “Investments,” for further discussion of our equity method investments.

**Pro Forma Results and Acquisition-related Costs**

The consolidated financial statements for the years ended December 31, 201 5 , 201 4 and 201 3 include the financial results of the above 201 5 , 201 4 and 201 3 acquisitions from the date of each acquisition. Pro forma financial results for the acquisitions completed in 201 5 , 201 4 and 201 3 have not been presented since these acquisitions both individually and in the aggregate were not material to our financial results.

Acquisition-related costs for the transactions described above were expensed as incurred and are included in merger and strategic initiatives expense in the Consolidated Statements of Income.

**5. Goodwill and Acquired Intangible Assets**

**Goodwill**

The following table presents the changes in goodwill by business segment during the year ended December 31, 2015:

| | Market Services | Listing Services | Information Services | Technology Solutions | Total |
|---|---|---|---|---|---|
| | | | (in millions) | | |
| Balance at December 31, 2014 | $ 3,081 | $ 114 | $ 1,794 | $ 549 | $ 5,538 |
| Goodwill acquired | - | 7 | 111 | - | 118 |
| Foreign currency translation adjustment | (140) | (9) | (82) | (30) | (261) |
| Balance at December 31, 2015 | $ 2,941 | $ 112 | $ 1,823 | $ 519 | $ 5,395 |

The goodwill acquired for Listing Services shown above relates to our acquisition of SecondMarket in October 2015 and the goodwill acquired for Information Services shown above relates to our acquisition of DWA in January 2015. See “Acquisition of Dorsey, Wright & Associates, LLC ,” of Note 4, “Acquisitions,” for further discussion of the DWA acquisition and see “Acquisition of Full Ownership of NPM and Acquisition of SecondMarket ,” of Note 4, “Acquisitions,” for further discussion of the SecondMarket acquisition.

As of December 31, 2015, the amount of goodwill that is expected to be deductible for tax purposes in future periods is $896 million, of which $542 million is related to our acquisition of eSpeed, $258 million is related to our acquisition of the TR Corporate businesses and $96 million is related to other acquisitions.

**Acquired Intangible Assets**

The following table presents details of our total acquired intangible assets, both finite- and indefinite-lived:

| | December 31, 2015 | | | | December 31, 2014 | | | |
|---|---|---|---|---|---|---|---|---|
| | Gross Amount | Accumulated Amortization | Net Amount | Weighted-Average Useful Life (in Years) | Gross Amount | Accumulated Amortization | Net Amount | Weighted-Average Useful Life (in Years) |
| | (in millions) | | | | (in millions) | | | |
| ***Finite-Lived Intangible Assets*** | | | | | | | | |
| Technology | $ 39 | $ (23) | $ 16 | 5 | $ 35 | $ (16) | $ 19 | 5 |
| Customer relationships | 1,038 | (387) | 651 | 20 | 1,009 | (329) | 680 | 20 |
| Other | 5 | (4) | 1 | 9 | 5 | (3) | 2 | 9 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Foreign currency translation adjustment | (138) | 43 | (95) | (94) | 26 | (68) |
| Total finite-lived intangible assets | $ 944 | $ (371) | $ 573 | $ 955 | $ (322) | $ 633 |
| | | | | | | |
| ***Indefinite-Lived Intangible Assets*** | | | | | | |
| Exchange and clearing registrations | $ 790 | $ - | $ 790 | $ 790 | $ - | $ 790 |
| Trade names | 700 | - | 700 | 756 | - | 756 |
| Licenses | 51 | - | 51 | 51 | - | 51 |
| Foreign currency translation adjustment | (155) | - | (155) | (153) | - | (153) |
| Total indefinite-lived intangible assets | $ 1,386 | $ - | $ 1,386 | $ 1,444 | $ - | $ 1,444 |
| Total intangible assets | $ 2,330 | $ (371) | $ 1,959 | $ 2,399 | $ (322) | $ 2,077 |

Amortization expense for acquired finite-lived intangible assets was $62 million for the year ended December 31, 2015, $69 million for the year ended December 31, 2014 and $63 million for the year ended December 31, 2013. The decrease in amortization expense in 2015 compared to 2014 was primarily due to lower amortization expense on certain intangible assets that were impaired in 2014 as discussed below, partially offset by amortization expense on identifiable finite-lived intangible assets acquired in connection with the acquisition of DWA. The increase in amortization expense in 2014 compared to 2013 was primarily due to amortization expense on identifiable finite-lived intangible assets acquired in connection with the acquisitions of eSpeed and the TR Corporate businesses, partially offset by lower amortization expense on certain intangible assets that were impaired in the first quarter of 2013 as discussed below.

The estimated future amortization expense (excluding the impact of foreign currency translation adjustments of $95 million as of December 31, 2015) of acquired finite-lived intangible assets as of December 31, 2015 is as follows:

| | (in millions) |
|---|---|
| 2016 | $ 66 |
| 2017 | 64 |
| 2018 | 61 |
| 2019 | 47 |
| 2020 | 46 |
| 2021 and thereafter | 384 |
| Total | $ 668 |

**Intangible Asset Impairment Charges**

In 2015, in connection with our global rebranding initiative, we decided to change our company name from The NASDAQ OMX Group, Inc. to Nasdaq, Inc., which became effective in the third quarter of 2015. In connection with this action, we decided to discontinue the use of the OMX trade name and recorded a pre-tax, non-cash impairment charge of $119 million because we no longer attribute any material value to the trade name. This charge is recorded in restructuring charges in the Consolidated Statements of Income for 2015. The trade name impairment charge related primarily to our Market Services segment. However, for segment reporting purposes, this charge was allocated to corporate items based on the decision that this charge should not be used to evaluate the segment's operating performance. The impairment charge did not impact the company's consolidated cash flows, liquidity, or capital resources.

In 2014, we recorded a non-cash intangible asset impairment charge totaling $38 million related to an acquired intangible asset associated with customer relationships. The impairment resulted primarily from changes in the forecasted revenues associated with the acquired customer list of our eSpeed business. The fair value of customer relationships of $71 million was determined using the income approach, specifically the with-and-without method. This charge is recorded in asset impairment charges in the Consolidated Statements of Income for 2014. The customer relationships impairment charge related primarily to our Market Services segment. However, for segment reporting purposes, this charge was allocated to corporate items based on the decision that this charge should not be used to evaluate the segment's operating performance.

In 2013, we recorded non-cash intangible asset impairment charges totaling $14 million related to certain acquired intangible assets associated with customer relationships ($ 7 million) and a certain trade name ($ 7 million). The customer relationships impairment resulted primarily from changes in the forecasted revenues associated with the acquired customer list of FTEN, Inc. The fair value of customer relationships of $4 million was determined using the income approach, specifically the multi-period excess

earnings method. The trade name impairment resulted from management's decision to no longer utilize the FTEN, Inc. trade name, which was written down to zero value. These charges are recorded in asset impairment charges in the Consolidated Statements of Income for 2013. These impairment charges related to our Market Services segment. However, for segment reporting purposes, these charges were allocated to corporate items based on the decision that these charges should not be used to evaluate the segment's operating performance.

Significant judgments and unobservable inputs categorized as Level III in the fair value hierarchy are inherent in impairment tests performed and include assumptions about the amount and timing of expected future cash flows, growth rates and the determination of appropriate discount rates. We believe that the assumptions used in our impairment tests are reasonable, but variations in any of the assumptions may result in different calculations of fair value.

**6. Investments**

**Trading Securities**

Trading securities, which are included in financial investments, at fair value in the Consolidated Balance Sheets, were $189 million at December 31, 201 5 and $171 million as of December 31, 201 4 . These securities are primarily comprised of highly rated European government debt securities, of which $166 million as of December 31, 201 5 and $159 million as of December 31, 201 4 are assets utilized to meet regulatory capital requirements primarily for our clearing operations at Nasdaq Clearing.

**Available-for-Sale Investment Secur ities**

Available-for-sale investment securities, which are included in financial investments, at fair value in the Consolidated Balance Sheets, were $12 million as of December 31, 2015 and $3 million as of December 31, 2014. These securities are primarily comprised of short-term commercial paper. As of December 31, 2015 and December 31, 2014, the cumulative unrealized gains and losses on these securities were immaterial.

**Equity Method Investments**

The carrying amounts of our equity method investments totaled $72 million as of December 31, 201 5 and $25 million as of December 31, 201 4 and are included in other non-current assets in the Consolidated Balance Sheets. The increase in 2015 compared with 2014 was primarily due to our capital contribution of $30 million to OCC. See below for further discussion. As of December 31, 2015, our equity method investments primarily included equity interests in OCC, EuroCCP N.V. and TOM. As of December 31, 201 4 , our equity method investments consisted primarily of our equity interests in EuroCCP N.V. and TOM.

Net income recognized from our equity interest in the earnings and losses of these equity method investments was $17 million for the year ended December 31, 2015 and was immaterial for both the years ended December 31, 2014 and 2013. The increase in year ended December 31, 2015 compared with the same periods in 2014 and 2013 is primarily due to income recognized from our equity method investment in OCC. We were not able to determine what our share of OCC's income was for the year ended December 31, 2014 until the first quarter of 2015, when OCC's financial statements were made available to us. As a result, we recorded other income of $13 million in March 2015 relating to our share of OCC's income for the year ended December 31, 2014. This income is included in net income (loss) from unconsolidated investees in the Consolidated Statements of Income for 2015.

***Capital Contribution to OCC***

In March 2015, in connection with being designated systemically important by the Financial Stability Oversight Council, OCC implemented a capital plan under which the options exchanges that are OCC's stockholders made new capital contributions to OCC, committed to make further capital contributions in the future under certain specified circumstances, and received certain commitments from OCC with respect to future dividend payments and related matters. Under the OCC capital plan, OCC's existing exchange stockholders, including Nasdaq, each contributed a pro-rata share of $150 million in new equity capital. Nasdaq's capital contribution was $30 million. OCC's exchange stockholders also committed to provide, as may become necessary from time to time, additional replenishment capital on a pro-rata basis if certain capital thresholds are triggered. For its part, OCC adopted specific policies with respect to fees, customer refunds and stockholder dividends, which envision an annual dividend payment to its stockholders equal to the portion of OCC's after-tax income that exceeds OCC's capital requirements after payment of refunds to OCC's clearing members (with such customer refunds generally to constitute 50% of the portion of OCC's pre-tax income that exceeds OCC's capital requirements). After the SEC staff approved the OCC capital plan and the stockholders made their capital contributions, the plan's further effectiveness was suspended under the applicable SEC rules because certain parties petitioned the full Commission to reconsider the capital plan's approval. This stay was lifted by the SEC in September 2015, allowing OCC to implement the plan and in February 2016, the SEC issued an order approving the OCC capital plan as previously implemented and dismissed the petitions challenging that plan. The petitioners have 30 days to appeal the SEC's February 2016 order .

**Cost Method Investment s**

The carrying amount of our cost method investment s totaled $132 million as of December 31, 201 5 and $138 million as of December 31, 201 4 and is included in other non-current assets in the Consolidated Balance Sheets. As of December 31, 2015 and 2014, our cost method investments primarily represented our 5% ownership interest in Borsa Istanbul, and our 5% ownership interest in LCH.Clearnet Group Limited, or LCH .

The Borsa Istanbul shares, which were issued to us in the first quarter of 2014, are part of the consideration to be received under a market technology agreement. This investment has a cost basis of $75 million which is guaranteed to us via a put option negotiated as part of the market technology agreement.

**7. Property and Equipment, net**

The following table presents our major categories of property and equipment, net:

| | Year Ended December 31, | |
|---|---|---|
| | 2015 | 2014 |
| | (in millions) | |
| Data processing equipment and software | $ 576 | $ 533 |
| Furniture, equipment and leasehold improvements | 254 | 227 |
| Total property and equipment | 830 | 760 |
| Less: accumulated depreciation and amortization | (507) | (468) |
| Total property and equipment, net | $ 323 | $ 292 |

Depreciation and amortization expense for property and equipment was $76 million for the year ended December 31, 201 5 , $68 million for the year ended December 31, 201 4 and $59 million for the year ended December 31, 201 3 . The increase in depreciation and amortization expense in 201 5 compared to 201 4 and 2 01 4 compared to 201 3 was primarily due to additional expense associated with assets placed in service and software development . These amounts are included in depreciation and amortization expense in the Consolidated Statements of Income.

We recorded asset impairment charges of $18 million for the year ended December 31, 2015 primarily related to fixed assets and capitalized software that were retired in 2015. These charges are included in restructuring charges in the Consolidated Statements of Income for 2015. During 2014, we recorded asset impairment charges of $11 million primarily related to certain technology assets. These charges are included in asset impairment charges in the Consolidated Statements of Income for 2014.

As of December 31, 201 5 and 201 4 , we d id not own any real estate properties.

**8. Deferred Revenue**

Deferred revenue represents consideration received that is yet to be recognized as revenue. The changes in our deferred revenue during the years ended December 31, 2015 and 2014 are reflected in the following table:

| | Initial Listing Revenues | Listing of Additional Shares Revenues | Annual Renewal and Other Revenues | Technology Solutions Revenues [2] | Total |
|---|---|---|---|---|---|
| | | | (in millions) | | |
| Balance at January 1, 2015 | $ 54 | $ 78 | $ 13 | $ 247 | $ 392 |
| Additions [1] | 21 | 10 | 256 | 339 | 626 |
| Amortization [1] | (16) | (35) | (250) | (373) | (674) |
| Translation adjustment | - | - | (3) | (14) | (17) |
| Balance at December 31, 2015 | $ 59 | $ 53 | $ 16 | $ 199 | $ 327 |
| | | | | | |
| Balance at January 1, 2014 | $ 41 | $ 75 | $ 20 | $ 158 | $ 294 |
| Additions [1] | 27 | 42 | 226 | 536 | 831 |
| Amortization [1] | (14) | (39) | (230) | (419) | (702) |
| Translation adjustment | - | - | (3) | (28) | (31) |
| Balance at December 31, 2014 | $ 54 | $ 78 | $ 13 | $ 247 | $ 392 |

[1] The additions and amortization for initial listing revenues, listing of additional shares revenues and annual renewal and other revenues primarily reflect revenues from our U.S. Listing Services business. The additions to technology solutions revenues in 2014 include $75 million related to the Borsa Istanbul market technology agreement. See “Cost Method Investments,” of Note 6, “Investments,” for further discussion.

[2] Technology solutions deferred revenue primarily includes revenues from our corporate solutions subscription-based contracts, which are primarily billed quarterly in advance, and our market technology client contracts where customization and significant

modifications to the software are made to meet the needs of our customers. For our market technology contracts, total revenues, as well as costs incurred, are deferred until significant modifications are completed and delivered. Once delivered, deferred revenue and the related deferred costs are recognized over the post-contract support period. For these market technology contracts, we have included the deferral of costs in other current assets and other non-current assets in the Consolidated Balance Sheets.

At December 31, 2015, we estimate that our deferred revenue, which is primarily listing services and technology solutions revenues, will be recognized in the following years:

| | Initial Listing Revenues | Listing of Additional Shares Revenues | Annual Renewal and Other Revenues | Technology Solutions Revenues [1] | Total |
|---|---|---|---|---|---|
| | | | (in millions) | | |
| Fiscal year ended: | | | | | |
| 2016 | $ 16 | $ 27 | $ 16 | $ 68 | $ 127 |
| 2017 | 13 | 18 | - | 30 | 61 |
| 2018 | 12 | 7 | - | 28 | 47 |
| 2019 | 10 | 1 | - | 23 | 34 |
| 2020 | 6 | - | - | 22 | 28 |
| 2021 and thereafter | 2 | - | - | 28 | 30 |
| | $ 59 | $ 53 | $ 16 | $ 199 | $ 327 |

[1] Technology solutions deferred revenue primarily includes corporate solutions and market technology deferred revenue. The timing of recognition of our deferred technology solutions revenues is primarily dependent upon the completion of customization and any significant modifications made pursuant to existing market technology contracts. As such, as it relates to market technology revenues, the timing represents our best estimate.

**9. Debt Obligations**

As discussed in "ASU 2015-03," of Note 2, "Summary of Significant Accounting Policies," we elected to early adopt ASU 2015-03 which requires debt issuance costs to be presented in the balance sheet as a direct deduction from the carrying amount of the related debt liability rather than an asset. As of December 31, 2015, we have reclassified debt issuance costs associated with our debt obligations from other non-current assets to debt obligations. In accordance with ASU 2015-03, prior year amounts have been reclassified to conform to the current year classification, resulting in an adjustment to debt obligations of $16 million for the year ended December 31, 2014.

The following table presents the changes in the carrying amount of our debt obligations during the year ended December 31, 201 5 :

| | December 31, 2014 | Additions | Payments, Accretion and Other | December 31, 2015 |
|---|---|---|---|---|
| | | (in millions) | | |
| 5.55% senior unsecured notes due January 15, 2020 [1][2] | $ 596 | $ - | $ 1 | $ 597 |
| 5.25% senior unsecured notes due January 16, 2018 [1][2] | 368 | - | - | 368 |
| 3.875% senior unsecured notes due June 7, 2021 [1][2] | 720 | - | (74) | 646 |
| 4.25% senior unsecured notes due June 1, 2024 [1][2] | 494 | - | 1 | 495 |
| $750 million revolving credit commitment due November 25, 2019 (average interest rate of 1.51% for the period January 1, 2015 through December 31, 2015) [3] | 119 | 506 | (367) | 258 |
| Total long-term debt obligations | $ 2,297 | $ 506 | $ (439) | $ 2,364 |

[1] See "Senior Unsecured Notes" below for further discussion.
[2] Net of unamortized debt discount and debt issuance costs.
[3] Net of unamortized debt issuance costs. See "2014 Credit Facility" below for further discussion.

**Senior Unsecured Notes**

***5.55% Senior Unsecured Notes***

In January 2010, N asdaq issued $600 million aggregate principal amount of 5.55% senior notes due 2020, or the 2020 Notes , at a discount . As a result of the discount, the proceeds received from the issuance were less than the aggregate principal amounts. As of December 31, 2015, the balance of $597 million for the 2020 Notes reflects the aggregate principal amount, less the unamortized debt discount and the unamortized debt issuance costs . The unamortized debt discount and the unamortized debt issuance costs are being accreted through interest expense over the life of the 2020 Notes.

The 2020 Notes pay interest semiannually at a rate of 5.55% per annum until January 15, 2020. The 2020 Notes are general unsecured obligations of ours and rank equally with all of our existing and future unsubordinated obligations. The 2020 Notes are not guaranteed by any of our subsidiaries. The 2020 Notes were issued under indentures that, among other things, limit our ability to consolidate, merge or sell all or substantially all of our assets, create liens, and enter into sale and leaseback transactions.

***5.25% Senior Unsecured Notes***

In December 2010, N asdaq issued $370 million aggregate principal amount of 5.25% senior notes due 2018, or t he 2018 Notes , at a discount. As a result of the discount, the proceeds received from the issuance were less than the aggregate principal amount. As of December 31, 201 5 , the balance of $368 million reflects the aggregate principal amount, less the unamortized debt discount and the unamortized debt issuance costs . The unamortized debt discount and the unamortized debt issuance costs are be ing accreted through interest expense over the life of the 2018 Notes.

The 2018 Notes pay interest semiannually at a rate of 5.25% per annum until January 16, 2018 and such rate may vary with N asdaq ’s debt rating up to a rate not to exceed 7.25% . The 2018 Notes are general unsecured obligations of ours and rank equally with all of our existing and future unsubordinated obligations. They are not guaranteed by any of our subsidiaries. The 2018 Notes were issued under indentures that among other things, limit our ability to consolidate, merge or sell all or substantially all of our assets, create liens, and enter into sale and leaseback transactions. In addition, upon a change of control triggering event (as defined in the indenture), the terms require us to repurchase all or part of each holder’s notes for cash equal to 101% of the aggregate principal amount purchased plus accrued and unpaid interest, if any.

***3.875% Senior Unsecured Notes***

In June 2013, N asdaq issued €600 million aggregate principal amount of 3.875% senior unsecured notes due June 2021, or the 2021 Notes , at a discount . As a result of the discount, the proceeds received from the issuance were less than the aggregate principal amount. As of December 31, 201 5 , the balance of $646 million reflects the aggregate principal amount translated into U.S. dollars , less the unamortized debt discount and the unamortized debt issuance costs . The unamortized debt discount and the unamortized debt issuance costs are be ing accreted through interest expense over the life of the 2021 Notes.

The 2021 Notes pay interest annually at a rate of 3.875% per annum until June 7, 2021 and such rate may vary with N asdaq ’s debt rating up to a rate not to exceed 5.875% . The 2021 Notes are general unsecured obligations of ours and rank equally with all of our existing and future unsubordinated obligations. They are not guaranteed by any of our subsidiaries. The 2021 Notes were issued under indentures that among other things, limit our ability to consolidate, merge or sell all or substantially all of our assets, create liens, and enter into sale and leaseback transactions. In addition, upon a change of control triggering event (as defined in the indenture), the terms require us to repurchase all or part of each holder’s notes for cash equal to 101% of the aggregate principal amount purchased plus accrued and unpaid interest, if any.

The 2021 Notes have been designated as a hedge of our net investment in certain foreign subsidiaries to mitigate the foreign exchange risk associated with certain investments in these subsidiaries. The de crease in the carrying amount of $74 million noted in the “Payments, Conversions, Accretion and Other” column in the table above reflects the translation of the 2021 Notes into U.S. dollars and is recorded in accumulated other comprehensive loss within stockholders’ equity in the Consolidated Balance Sheets for the year ended December 31, 201 5 .

***4.25% Senior Unsecured Notes***

In May 2014, Nasdaq issued $500 million of 4.25% senior unsecured notes due June 1, 2024, or the 2024 Notes, at a discount. As a result of the discount, the proceeds received from the issuance were less than the aggregate principal amount. As of December 31, 2015, the balance of $495 million reflects the aggregate principal amount, less the unamortized debt discount and the unamortized debt issuance costs . The unamortized debt discount and the unamortized debt issuance costs are being accreted through interest expense over the life of the 2024 Notes.

The 2024 Notes pay interest semiannually at a rate of 4.25% per annum until June 1, 2024 and such rate may vary with Nasdaq’s debt rating up to a rate not to exceed 6.25% . The 2024 Notes are general unsecured obligations of ours and rank equally with all of our existing and future unsubordinated obligations. They are not guaranteed by any of our subsidiaries. The 2024 Notes were issued under indentures that among other things, limit our ability to consolidate, merge or sell all or substantially all of our assets, create liens, and enter into sale and leaseback transactions. In addition, upon a change of control triggering event (as defined in the indenture), the terms require us to repurchase all or part of each holder’s notes for cash equal to 101% of the aggregate principal amount purchased plus accrued and unpaid interest, if any.

**Credit Facilities**

***201 4 Credit Facility***

In November 201 4 , N asdaq refinanced its existing credit agreement and entered into the 201 4 Credit Facility. The 201 4 Credit Facility consist s of a $750 million revolving credit commitment (with sublimits for non-dollar borrowings, swingline borrowings and letters of credit). In January 2015, we used cash on hand and borrowed $100 million under the revolving credit commitment of the 2014 Credit Facility to fund our acquisition of DWA. During 2015, we also borrowed $406 million for general corporate purposes. See "Acquisition of Dorsey, Wright & Associates, LLC ," of Note 4, "Acquisitions," for further discussion of the DWA acquisition. During 2015, we repaid $369 million under the revolving credit commitment of the 2014 Credit Facility. As of December 31, 2015, the balance of $258 million reflects the outstanding amount under the 2014 Credit Facility, less the unamortized debt issuance costs. The unamortized debt issuance costs are being accreted through interest expense over the life of the 2014 Credit Facility.

The loans under the 2014 Credit Facility have a variable interest rate based on either the London Interbank Offered Rate, or LIBOR, or the b ase r ate (as defined in the credit agreement) (or other applicable rate with respect to non-dollar borrowings), plus an applicable margin that varies with Nasdaq's debt rating. The Credit Agreement includes an option for Nasdaq to propose an increase in the available aggregate amount by up to $500 million, subject to the consent of the lenders funding the increase and certain other conditions.

The 2014 Credit Facility contains financial and operating covenants. Financial covenants include an interest expense coverage ratio and a maximum leverage ratio. Operating covenants include limitations on Nasdaq's ability to incur additional indebtedness, grant liens on assets, enter into affiliate transactions and pay dividends. Our 2014 Credit Facility allow s us to pay cash dividends on our common stock. The 2014 Credit Facility also contains customary affirmative covenants, including access to financial statements, notice of defaults and certain other material events, maintenance of business and insurance, and events of default, including cross-defaults to our material indebtedness.

Nasdaq is permitted to repay borrowings under the 2014 Credit Facility at any time in whole or in part, without penalty. We are also required to repay loans outstanding under the 2014 Credit Facility with net cash proceeds from sales of property and assets of Nasdaq and its subsidiaries (excluding inventory sales and other sales in the ordinary course of business) and casualty and condemnation proceeds, in each case subject to specified exceptions and thresholds.

**Other Credit Facilities**

In addition to the revolving credit commitment under our 201 4 Credit Facility discussed above, we have credit facilities related to our Nasdaq Clearing operations in order to provide further liquidity. In addition, at December 31, 2014 we had credit facilities to provide for default protection . At December 31, 2015, credit facilities, which are available in multiple currencies, primarily Swedish Krona, totaled $202 million in available liquidity, none of which was utilized. At December 31, 201 4 , credit facilities, which are available in multiple currencies, primarily Swedish Krona, totaled $236 million ( $197 million in available liquidity and $39 million for default protection ), of which $7 million was utilized.

**Debt Covenants**

At December 31, 201 5 , we were in compliance with the covenants of all of our debt obligations.

**10. Income Taxes**

The income tax provision consists of the following amounts:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| | | (in millions) | |
| Current income taxes: | | | |
| Federal | $ 139 | $ 123 | $ 134 |
| State | 42 | 36 | 21 |
| Foreign | 36 | 28 | 33 |
| Total current income taxes | 217 | 187 | 188 |
| Deferred income taxes: | | | |
| Federal | (18) | (13) | 13 |
| State | (1) | (2) | 11 |
| Foreign | 5 | 9 | 4 |
| Total deferred income taxes | (14) | (6) | 28 |
| Total income tax provision | $ 203 | $ 181 | $ 216 |

U.S. federal taxes have not been provided on undistributed earnings of certain non-U.S. subsidiaries to the extent such earnings will be reinvested abroad for an indefinite period of time. At December 31, 201 5 , the cumulative amount of undistributed earnings in these subsidiaries is approximately $121 million. We have the intent and ability to indefinitely reinvest the undistributed earnings of these non-U.S. subsidiaries.

A reconciliation of the income tax provision, based on the U.S. federal statutory rate, to our actual income tax provision for the years ended December 31, 201 5 , 201 4 and 201 3 is as follows:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| Federal income tax provision at the statutory rate | 35.0 % | 35.0 % | 35.0 % |
| State income tax provision, net of federal effect | 3.9 % | 3.4 % | 2.9 % |
| Non-U.S. subsidiary earnings | (6.4)% | (7.0)% | (4.4)% |
| Change in unrecognized tax benefits | 0.3 % | (3.0)% | 4.8 % |
| Other, net | (0.6)% | 2.1 % | (2.3)% |
| Actual income tax provision [1] | 32.2 % | 30.5 % | 36.0 % |

[1] The higher effective tax rate in 2015 when compared to 2014, and the lower effective tax rate in 2014 when compared to 2013, is primarily due to a decrease in unrecognized tax benefits in 2014.

The temporary differences, which give rise to our deferred tax assets and (liabilities), consisted of the following:

| | December 31, | |
|---|---|---|
| | 2015 | 2014 |
| | (in millions) | |
| Deferred tax assets: | | |
| Deferred revenues | $ 46 | $ 36 |
| U.S. federal net operating loss | 5 | 2 |
| Foreign net operating loss | 92 | 99 |
| State net operating loss | 2 | 1 |
| Compensation and benefits | 86 | 96 |
| Foreign currency translation | 458 | 358 |
| Sublease loss reserves | 7 | 15 |
| Tax credits | 7 | 9 |
| Other | 25 | 26 |
| Gross deferred tax assets | 728 | 642 |
| | | |
| Deferred tax liabilities: | | |
| Amortization of software development costs and depreciation | (135) | (107) |
| Amortization of acquired intangible assets | (478) | (536) |
| Other | (13) | (20) |
| Gross deferred tax liabilities | (626) | (663) |
| Net deferred tax assets (liabilities) before valuation allowance | 102 | (21) |
| Less: valuation allowance | (85) | (90) |
| Net deferred tax assets (liabilities) | $ 17 | $ (111) |

A valuation allowance has been established with regards to the tax benefits primarily associated with certain net operating losses, as it is more likely than not that these benefits will not be realized in the foreseeable future.

As of December 31, 201 5 , our U.S. federal net operating loss of $5 million will expire in 203 5 . Our foreign net operating loss of $92 million, as of December 31, 2015, includes $59 million that will expire in years 201 8 through 202 5 and $33 million that has no expiration date. Also, our state net operating loss of $2 million, as of December 31, 2015, will expire in years 2016 through 2035. Our tax credits of $7 million related to U.S. research and development credits will expire in years 2018 through 2027.

The following represents the domestic and foreign components of income before income tax provision:

| | Year Ended December 31, | | |
|---|---|---|---|
| 2015 | 2014 | 2013 | |
| | (in millions) | | |

| | | | |
|---|---|---|---|
| Domestic | $ 393 | $ 349 | $ 362 |
| Foreign | 237 | 245 | 238 |
| Income before income tax provision | $ 630 | $ 594 | $ 600 |

W e recorded income tax benefits of $34 million in 2015 , $9 million in 2014 and $16 million in 2013 , primarily related to share-based compensation. These amounts were recorded as additional paid-in-capital in the Consolidated Balance Sheets.

We are subject to examination by federal, state and local, and foreign tax authorities. We regularly assess the likelihood of additional assessments by each jurisdiction and have established tax reserves that we believe are adequate in relation to the potential for additional assessments. We believe that the resolution of tax matters will not have a material effect on our financial condition but may be material to our operating results for a particular period and the effective tax rate for that period.

There are $33 million as of December 31, 2015 and $35 million as of December 31, 2014 of unrecognized tax benefits that if recognized would affect our effective tax rate.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

| | Year Ended December 31, | |
|---|---|---|
| | 2015 | 2014 |
| | (in millions) | |
| Beginning balance | $ 41 | $ 58 |
| Additions (reductions) as a result of tax positions taken in prior periods | 3 | (21) |
| Additions as a result of tax positions taken in the current period | 3 | 5 |
| Reductions related to settlements with taxing authorities | (2) | (1) |
| Reductions as a result of lapses of the applicable statute of limitations | (5) | - |
| Ending balance | $ 40 | $ 41 |

Our policy is to recognize interest and/or penalties related to income tax matters in income tax expense. We have accrued $7 million as of December 31, 2015 and $6 million a s of December 31, 201 4 for interest and penalties, net of tax effect.

Nasdaq and its eligible subsidiaries file a consolidated U.S. federal income tax return and applicable state and local income tax returns and non-U.S. income tax returns. Federal income tax returns for the years 2011 through 2013 are currently under audit by the Internal Revenue Service and we are subject to examination for year 2014 . In 2014, we concluded the audit for the year 2007. The conclusion of this audit gave rise to a reduction of our unrecognized tax benefits, resulting in a decrease to tax expense of $21 million. This amount was partially offset by an increase to operating expenses of $19 million associated with the reversal of a receivable under a tax sharing agreement with an unrelated party. We also recorded a decrease to tax expense of $8 million associated with the reversal of the $19 million receivable. This amount was partially offset by an increase to operating expenses of $4 million associated with the reversal of a receivable under a tax sharing agreement with an unrelated party. Several state tax returns are currently under examination by the respective tax authorities for the years 2005 through 2013 and we are subject to examination for the year 2014. Non-U.S. tax returns are subject to examination by the respective tax authorities for the years 2008 through 2014 . In 2015, we received an assessment of $6 million from the Swedish Tax Agency for the year 2013. We will appeal this assessment to the Swedish Courts. Due to the uncertainty of the outcome of this matter, in 2015 we recorded a reserve of $6 million. This reserve is mostly offset by the recognition of $5 million of previously unrecognized tax benefits, in 2015, due to the lapse of the statute of limitations related to tax examinations in various jurisdictions in the U.S. We anticipate that the amount of unrecognized tax benefits at December 31, 2015 will significantly decrease in the next twelve months as we expect to settle certain tax audits. The final outcome of such audits cannot yet be determined. We anticipate that such adjustments will not have a material impact on our consolidated financial position or results of operations.

In the fourth quarter of 2010, we received an appeal from the Finnish Tax Authority challenging certain interest expense deductions claimed by Nasdaq in Finland for the year 2008. The appeal also demanded certain penalties be paid with regard to the company's tax return filing position. In October 2012, the Finnish Appeals Board disagreed with the company's tax return filing position for years 2009 through 2011 , even though the tax return position with respect to this deduction was previously reviewed and approved by the Finnish Tax Authority. In June 2014, the Finnish Administrative Court also disagreed with the company's tax return filing position for these years. We have appealed this ruling to the Finnish Supreme Administrative Court and expect to receive a favorable decision. Through December 31, 2015, we have recorded tax benefits of $29 million associated with this filing position. We have paid $40 million to the Finnish tax authorities, which include $ 11 million in interest and penalties. We expect the Finnish Supreme Administrative Court to agree with our position, which would result in an expected refund to Nasdaq of $35 million, which reflects the impact of foreign currency translation. If the Finnish Supreme Administrative Court disagrees with our position, we would record tax expense of $3 5 million, or $0.21 per diluted share.

From 2009 through 2012, we recorded tax benefits associated with certain interest expense incurred in Sweden. Our position is supported by a 2011 ruling we received from the Swedish Supreme Administrative Court. However, under new legislation effective

January 1, 2013, limitations are imposed on certain forms of interest expense. Because this legislation is unclear with regard to our ability to continue to claim such interest deductions, Nasdaq filed an application for an advance tax ruling with the Swedish Tax Council for Advance Tax Rulings. In June 2014, we received an unfavorable ruling from the Swedish Tax Council for Advance Tax Rulings. We appealed this ruling to the Swedish Supreme Administrative Court; however the Swedish Supreme Administrative Court denied our request for a ruling based on procedural requirements. In the third quarter of 2015, we received a notice from the Swedish Tax Agency that interest deductions for the year 2013 have been disallowed. We will appeal to the Swedish Lower Administrative Court. We continue to expect a favorable decision. Since January 1, 2013, we have recorded tax benefits of $44 million, or $0.26 per diluted share associated with this matter. We will pay all assessments from the Swedish Tax Agency while this matter is pending. If the Swedish Courts agree with our position we will receive a refund of all paid assessments; if the Swedish Courts disagree with our position, we will record tax expense of $36 million, or $0.21 per diluted share, which reflects the impact of foreign currency translation. We expect to record recurring quarterly tax benefits of $1 million to $2 million with respect to this matter for the foreseeable future.

**Other Tax Matter**

In December 2012, the Swedish Tax Agency approved our 2010 amended VAT tax return and we received a cash refund for the amount claimed. In 2013, we filed amended VAT tax returns for 2011 and 2012 and utilized the same approach which was approved for the 2010 filing. We also utilized this approach in our 2013 and 2014 filings. However, even though the VAT return position was previously reviewed and approved by the Swedish Tax Agency, the Swedish Tax Agency challenged our approach. The revised position of the Swedish Tax Agency was upheld by the Lower Administrative Court in 2015. As a result, in 2015 we reversed the previously recorded benefit of $12 million, based on the court decision. We have appealed the ruling of the Lower Administrative Court to the Court of Appeals.

## 11. Employee Benefits

**U.S. Defined-Benefit Pension and Supplemental Executive Retirement Plans**

We maintain non-contributory, defined-benefit pension plans , non-qualified supplemental executive retirement plans, or SERPs, for certain senior executives and post-retirement benefit plans for eligible employees in the U.S., collectively referred to as the Nasdaq Benefit Plans.

Our pension plans and SERPs are frozen. Future service and salary for all participants do not count toward an accrual of benefits under the pension plans and SERPs.

**Components of Net Periodic Benefit Cost**

The following table sets forth the components of net periodic pension, SERP and post-retirement benefits costs f o r the N asdaq Benefit Plans recognized in compensation and benefits expense in the Consolidated Statements of Income:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| | (in millions) | | |
| **Components of net periodic benefit cost:** | | | |
| Interest cost | $ 6 | $ 6 | $ 5 |
| Expected return on plan assets | (5) | (5) | (5) |
| Recognized net actuarial loss | 4 | - | 4 |
| Curtailment loss | - | - | 2 |
| **Net periodic benefit cost** | $ 5 | $ 1 | $ 6 |

**Benefit Obligations and Funded Status**

The following table provides a reconciliation of the changes in the benefit obligation, the plan assets and the funded status of the N asdaq Benefit Plans:

| | 2015 | | | | 2014 | | | |
|---|---|---|---|---|---|---|---|---|
| | Pension | SERP | Post-retirement | Total | Pension | SERP | Post-retirement | Total |
| **Change in benefit obligation** | (in millions) | | | | | | | |
| Benefit obligation at beginning of year | $ 104 | $ 33 | $ 2 | $ 139 | $ 91 | $ 30 | $ 3 | $ 124 |
| Interest cost | 5 | 1 | - | 6 | 4 | 2 | - | 6 |
| Actuarial gains | - | (1) | - | (1) | - | - | (1) | (1) |
| Benefits paid | (6) | (1) | - | (7) | (3) | (2) | - | (5) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (Gains) losses due to change in discount rate | (2) | - | - | (2) | 11 | 2 | - | 13 |
| (Gains) losses due to change in mortality rate | (1) | - | - | (1) | 1 | 1 | - | 2 |
| **Benefit obligation at end of year** | 100 | 32 | 2 | 134 | 104 | 33 | 2 | 139 |
| **Change in plan assets** | | | | | | | | |
| Fair value of plan assets at beginning of year | 76 | - | - | 76 | 75 | - | - | 75 |
| Actual return on plan assets | - | - | - | - | 4 | - | - | 4 |
| Company contributions | - | 1 | - | 1 | - | 2 | - | 2 |
| Benefits paid | (6) | (1) | - | (7) | (3) | (2) | - | (5) |
| **Fair value of plan assets at end of year** | 70 | - | - | 70 | 76 | - | - | 76 |
| **Underfunded status of the plans** | (30) | (32) | (2) | (64) | (28) | (33) | (2) | (63) |
| **Accumulated benefit obligation** | $ 100 | $ 32 | $ 2 | $ 134 | $ 104 | $ 33 | $ 2 | $ 139 |

The total underfunded status of the N asdaq Benefit Plans of $64 million at December 31, 201 5 and $63 million at December 31, 201 4 is included in other non-current liabilities and accrued personnel costs in the Consolidated Balance Sheets. No plan assets are expected to be returned to us during the year ending December 31, 201 6 .

**Actuarial Assumptions**

The following tables provide the weighted-average actuarial assumptions for the N asdaq Benefit Plans.

Weighted-average assumptions used to determine benefit obligations at the end of the fiscal year:

| | 2015 | 2014 |
|---|---|---|
| Discount rate: | | |
| Pension | 4.3 % | 4.2 % |
| SERP | 4.3 % | 4.2 % |
| Post-retirement | 4.3 % | 4.2 % |

Weighted-average assumptions used to determine net benefit cost for the fiscal year:

| | 2015 | 2014 | 2013 |
|---|---|---|---|
| Discount rate: | | | |
| Pension | 4.2 % | 4.9 % | 4.0 % |
| SERP | 4.2 % | 4.9 % | 4.0 % |
| Post-retirement | 4.2 % | 4.9 % | 4.0 % |
| Expected return on plan assets: | | | |
| Pension | 7.3 % | 7.3 % | 7.8 % |
| SERP | N/A | N/A | N/A |
| Post-retirement | N/A | N/A | N/A |

N/A—Not applicable

The assumptions above are used to develop the benefit obligations at fiscal year-end and to develop the net periodic benefit cost for the subsequent fiscal year. Therefore, the assumptions used to determine benefit obligations were established at each year-end while the assumptions used to determine net periodic benefit cost for each year are established at the end of each previous year.

The net periodic benefit obligations and the net periodic benefit cost are based on actuarial assumptions that are reviewed on an annual basis. We revise these assumptions based on an annual evaluation of long-term trends, as well as market conditions, which may have an impact on the cost of providing retirement benefits.

**P lan Assets of the N asdaq Benefit Plans**

N asdaq 's Pension and 401(k) Committee, which is comprised of employees of N asdaq , has oversight responsibility for the plan assets of the N asdaq Benefit Plans. The investment policy and strategy of the plan assets, which was adopted by N asdaq 's Pension and 401(k) Committee, is to provide for preservation of principal, both in nominal and real terms, in order to meet the long-term spending needs of the N asdaq Benefit Plans. We invest in securities per the target allocations stated below. Target allocations may change based on certain funded levels. Approximated allocations for plan assets as of December 31, 201 5 were as follows:

| | Target Allocation |
|---|---|

| | |
|---|---|
| Equity securities | 40% |
| Fixed income securities | 44% |
| Other investment strategies and cash | 16% |
| Total allocation | 100% |

Asset allocations are reviewed quarterly and adjusted, as appropriate, to remain within target allocations. The investment policy is reviewed on an annual basis, with the advice of an investment consultant, to determine if the policy or asset allocation targets should be changed.

The fair value of the plan assets for the N asdaq Benefit Plans at December 31, 201 5 and 2014 , by asset category and fair value hierarchy, are as follows:

| | Total Benefit Plan Assets as of December 31, 2015 | Fair Value Measurements [1] | | |
|---|---|---|---|---|
| | | Level 1 | Level 2 | Level 3 |
| | | (in millions) | | |
| Equity securities [2] | $ 27 | $ - | $ 27 | $ - |
| Fixed income securities [3] | 30 | 3 | 27 | - |
| Other investment strategies and cash [4] | 13 | - | - | 13 |
| Total benefit plan assets | $ 70 | $ 3 | $ 54 | $ 13 |

| | Total Benefit Plan Assets as of December 31, 2014 | Fair Value Measurements [1] | | |
|---|---|---|---|---|
| | | Level 1 | Level 2 | Level 3 |
| | | (in millions) | | |
| Equity securities [2] | $ 36 | $ - | $ 36 | $ - |
| Fixed income securities [3] | 27 | 4 | 23 | - |
| Other investment strategies and cash [4] | 13 | - | - | 13 |
| Total benefit plan assets | $ 76 | $ 4 | $ 59 | $ 13 |

[1] See " Fair Value Measurements ," of Note 2, "Summary of Significant Accounting Policies , " for further discussion of fair value measurements.

[2] Includes securities held in various classes of domestic, international and emerging market equities.

[3] Includes investments in U.S. fixed income and emerging markets debt.

[4] Includes securities held in multi-strategy hedge funds, and securities held in real estate funds. Securities held in real estate funds include investments in a real estate ETF and an open-end commingled fund. Securities held in multi-strategy hedge funds are held in multiple asset classes and include investments in equity securities.

The change in Level 3 plan assets for the year ended December 31, 201 5 is as follows:

| | December 31, 2014 | Net Unrealized Gains (Losses) | December 31, 2015 |
|---|---|---|---|
| | | (in millions) | |
| Other investment strategies: | | | |
| Real estate investment | $ 5 | $ 1 | $ 6 |
| Hedge fund investment | 8 | (1) | 7 |
| Total other investment strategies | $ 13 | $ - | $ 13 |

All Level 3 pension plan assets are valued by our independent third party investment plan manager. The Level 3 plan assets in the real estate investment are valued using various valuation techniques which include the income capitalization approach, the sales comparison approach and the cost approach. The Level 3 plan assets in the hedge fund investment are valued based on the net asset value of the underlying investments.

The expected rate of return on plan assets for the N asdaq Benefit Plans represents our long-term assessment of return expectations which may change based on significant shifts in economic and financial market conditions. The long-term rate of return on plan assets is derived from return assumptions determined based on asset classes held and weighted based on the current target allocation for each class. Over the long term, our investments in equity securities are expected to return between 6.5% and 10.6% , investments in fixed income securities are expected to return between 3.1% and 6.5% , and other investment strategies are expected to return between 4.6% and 6.9% . While we considered the Nasdaq Benefit Plans' recent performance and other economic growth and

inflation factors, which are supported by long-term historical data, the return expectations for each of these asset categories represents a long-term prospective return .

**Accumulated Other Comprehensive Income (Loss)**

Accumulated other comprehensive income (loss), as of December 31, 201 5 , consisted of the following amounts that have yet to be recognized in net periodic benefit costs for the N asdaq Benefit Plans:

| | Pension | SERP | Post-retirement | Total |
|---|---|---|---|---|
| | | (in millions) | | |
| Unrecognized net gain (loss) | $ (41) | $ (1) | $ 7 | $ (35) |
| Income tax benefit (expense) | 16 | 1 | (3) | 14 |
| Employee benefit plan adjustment, net of tax | $ (25) | $ - | $ 4 | $ (21) |

**Estimated Future Benefit Payments**

We expect to make the following benefit payments to participants in the next ten fiscal years under the N asdaq Benefit Plans:

| | Pension | SERP | Post-retirement | Total |
|---|---|---|---|---|
| Fiscal Year Ended: | | (in millions) | | |
| 2016 | $ 4 | $ 4 | $ - | $ 8 |
| 2017 | 4 | 6 | - | 10 |
| 2018 | 5 | 2 | - | 7 |
| 2019 | 5 | 3 | - | 8 |
| 2020 | 5 | 3 | 1 | 9 |
| 2021 through 2025 | 26 | 8 | 1 | 35 |
| | $ 49 | $ 26 | $ 2 | $ 77 |

**Non—U.S. Benefit Plans**

Most employees outside the U.S. are covered by local retirement plans or by applicable social laws. Benefits under social laws are generally expensed in the periods in which the costs are incurred. These costs are included in compensation and benefits expense in the Consolidated Statements of Income and were $17 million in 2015, $20 million in 2014 and $19 million in 2013.

**U.S. Defined Contribution Savings Plan**

We sponsor a voluntary defined contribution savings plan, or 401(k) Plan, for U.S. employees. Employees are immediately eligible to make contributions to the plan and are also eligible for an employer contribution match at an amount equal to 100.0% of the first 6.0% of eligible employee contributions in 2015 and 2014 and the first 4.0% of eligible employee contributions in 2013 . Savings plan expense included in compensation and benefits expense in the Consolidated Statements of Income was $10 million in 2015, $9 million in 2014 and $6 million in 2013.

Prior to 2015, we ha d a profit-sharing contribution feature to our 401(k) P lan which allow ed eligible U.S. employees to receive employer retirement contributions, or ERCs, when we met our annual corporate goals. In addition, we ha d a supplemental ERC for select highly compensated employees whose ERCs were limited by the annual Internal Revenue Service compensation limit. ERC expense recorded in compensation and benefits expense in the Consolidated Statements of Income was $3 million in 2014 and $5 million in 2013.

In December 2013, we announced changes to the ERC program. In 2014, we reduced the basic ERC contribution for all plan participants and effective January 1, 2015, the ERC plan was discontinued and no future contributions will be made.

**Employee Stock Purchase Plan**

We have an ESPP under which approximately 2.6 million shares of our common stock have been reserved for future issuance as of December 31, 201 5 .

Our ESPP allows eligible U.S. and non-U.S. employees to purchase a limited number of shares of our common stock at six-month intervals, called offering periods, at 85.0% of the lower of the fair market value on the first or the last day of each offering period. The 15.0% discount given to our employees is included in compensation and benefits expense in the Consolidated Statements of Income.

Under our ESPP, employees may purchase shares having a value not exceeding 10.0% of their annual compensation, subject to applicable annual Internal Revenue Service limitations. During 201 5, employees purchased 247,444 shares at a weighted-average

price of $40.95 , during 201 4 , employees purchased 256,772 shares at a weighted-average price of $33.06 and during 2013, employees purchased 271,843 shares at a weighted-average price of $24.12 under the ESPP. We recorded compensation expense of $4 million in both 20 1 5 and 2014 and $3 million in 201 3 for the 15.0% discount that is given to our employees.

**12. Share-Based Compensation**

We have a share-based compensation program that provides our board of directors broad discretion in creating employee equity incentives. Share-based awards granted under this program include stock options, restricted stock (consisting of restricted stock units) , and PSUs. Grants of equity awards are designed to reward employees for their long-term contributions and provide incentives for them to remain with us. For accounting purposes, we consider PSUs to be a form of restricted stock.

Restricted stock is generally time-based and vests over two to five -year periods beginning on the date of the grant. Stock options are also generally time-based and expire ten years from the grant date. Stock option and restricted stock awards granted prior to 2014 generally include performance-based accelerated vesting features based on achievement of specific levels of corporate performance. If N asdaq exceed ed the applicable performance parameters, the grants vest on the third anniversary of the grant date, if N asdaq met the applicable performance parameters, the grants vest on the fourth anniversary of the grant date, and if N asdaq d id not meet the applicable performance parameters, the grants vest on the fifth anniversary of the grant date. Beginning in 2014, restricted stock awards granted vest 25.0% on the second anniversary of the grant date, 25.0% on the third anniversary of the grant date, and 50.0% on the fourth anniversary of the grant date. The grant date fair value of restricted stock awards is based on the closing price on the date of grant less the present value of future cash dividends.

PSUs are based on performance measures that impact the amount of shares that each recipient will receive upon vesting. PSUs are granted at the fair market value of our stock on the grant date and compensation cost is recognized over the performance period and, in certain cases, an additional vesting period. For each grant of PSUs, an employee may receive from 0.0% to 150.0% of the target amount granted, depending on the achievement of performance measures. We report the target number of PSUs granted, unless we have determined that it is more likely than not, based on the actual achievement of performance measures, that an employee will receive a different amount of shares underlying the PSUs, in which case we report the amount of shares the employee is likely to receive.

We also have a performance-based long-term incentive program for our chief executive officer, presidents, executive vice presidents and senior vice presidents that focuses on TSR. This program represents 100.0% of our chief executive officer's , presidents' and executive vice presidents' long-term stock-based compensation and 50.0% of our senior vice presidents' long-term stock-based compensation. Under the program, each individual receives PSUs with a three -year cumulative performance period that vest at the end of the performance period. Performance will be determined by comparing N asdaq 's TSR to two peer groups, each weighted 50.0% . The first peer group consists of exchange companies, and the second peer group consists of all companies in the S&P 500 . N asdaq 's relative performance ranking against each of these groups will determine the final number of shares delivered to each individual under the program. The payout under this program will be between 0.0% and 200.0% of the number of PSUs granted and will be determined by N asdaq 's overall performance against both peer groups. However, if N asdaq 's TSR is negative for the three-year performance period, regardless of TSR ranking, the payout will not exceed 100.0% of the number of PSUs granted. We estimate the fair value of PSU's granted under the TSR program using the Monte Carlo simulation model, as these awards contain a market condition. The following weighted-average assumptions were used to determine the weighted-average fair values of the PSU awards granted under the TSR program for the year s ended December 31, 201 5 and December 31, 201 4 :

| | Year Ended December 31, | |
|---|---|---|
| | 2015 | 2014 |
| Weighted-average risk free interest rate | 0.81% | 0.78% |
| Expected volatility [1] | 21.5% | 28.4% |
| Weighted-average grant date share price | $ 50.97 | $ 36.94 |
| Weighted-average fair value at grant date | $ 64.08 | $ 42.80 |

[1] We use historic volatility for PSU awards issued under the TSR program, as implied volatility data could not be obtained for all the companies in the peer groups used for relative performance measurement within the TSR program.

In addition, the annual dividend assumption utilized in the Monte Carlo simulation model is based on Nasdaq's dividend yield at the date of grant.

**Summary of 2015 Equity Awards**

In March 2015, we granted restricted stock to most active employees. During 2015, certain officers received grants of 609,591 PSUs. Of these PSUs granted, 424,821 units are subject to the performance measures and vesting schedules of the TSR program as discussed above, and the remaining 184,770 units are subject to a one-year performance period and generally vest ratably on an annual

basis from December 31, 2016 through December 31, 2018. See “Summary of Restricted Stock and PSU Activity” below for further discussion.

During 2015, certain grants of PSUs with a one-year performance period exceeded the applicable performance parameters. As a result, an additional 87,582 units were considered granted in the first quarter of 2016.

During 2014, certain grants of PSUs with a one-year performance period exceeded the applicable performance parameters. As a result, an additional 21,429 units were considered granted in the first quarter of 2015.

Certain grants of PSUs that were issued in 2013 under the TSR program with a three-year performance period exceeded the applicable performance parameters. As a result, an additional 406,075 units were considered granted in the first quarter of 2016.

Certain grants of PSUs that were issued in 2012 under the TSR program with a three-year performance period exceeded the applicable performance parameters. As a result, an additional 224,805 units were considered granted in the first quarter of 2015.

See “Summary of Restricted Stock and PSU Activity” below for further discussion.

**Summary of 2014 Equity Awards**

In March 2014, we granted restricted stock to most active employees. During 2014, certain officers received grants of 818,307 PSUs. Of these PSUs granted, 553,846 units are subject to the performance measures and vesting schedules of the TSR program as discussed above, and the remaining 264,461 units are subject to a one-year performance period and generally vest ratably on an annual basis from December 31, 2015 through December 31, 2017.

During 2013, certain grants of PSUs with a one-year performance period exceeded the applicable performance parameters. As a result, an additional 64,330 units were considered granted in the first quarter of 2014.

See “Summary of Restricted Stock and PSU Activity” below for further discussion.

**Summary of 2013 Equity Awards**

In July 2013, we granted restricted stock to most active employees. The restricted stock granted included a performance-based accelerated vesting feature based on achievement of specific levels of corporate performance, as described above. In 201 3 , we achieved the applicable performance parameters, and therefore, we will continue to expense the grant over the four-year vesting period.

Also in July 2013, certain officers received grants of 800,152 PSUs. Of these PSUs granted, 530,823 units are subject to the performance measures and vesting schedules of the TSR program as discussed above, and the remaining 269,329 units are subject to a one year performance period and generally vest ratably on an annual basis from December 31, 2014 through December 31, 2016.

During 2012, certain grants of PSUs with a one-year performance period exceeded the applicable performance parameters. As a result, an additional 28,028 units were considered granted during 2013.

See “Summary of Restricted Stock and PSU Activity” below for further discussion.

**Common Shares Available Under Our Equity Plan**

As of December 31, 201 5 , we had approximately 6.9 million shares of common stock authorized for future issuance under our Equity Plan.

**Summary of Share-Based Compensation Expense**

The following table shows the total share-based compensation expense resulting from equity awards and the 15.0% discount for the ESPP for the years ended December 31, 201 5 , 201 4 and 201 3 in the Consolidated Statements of Income:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| | (in millions) | | |
| Share-based compensation expense before income taxes | $ 68 | $ 62 | $ 47 |
| Income tax benefit | (28) | (26) | (19) |
| Share-based compensation expense after income taxes | $ 40 | $ 36 | $ 28 |

**Summary of Stock Option Activity**

A summary of stock option activity for the years ended December 31, 201 5 , 201 4 and 201 3 is as follows:

| | Number of Stock Options [1] | Weighted-Average Exercise Price |
|---|---|---|
| Outstanding at December 31, 2012 | 7,545,777 | $ 21.10 |
| Exercised | (2,346,220) | 12.05 |
| Forfeited or expired | (273,035) | 24.32 |
| Outstanding at December 31, 2013 | 4,926,522 | $ 25.21 |
| Exercised | (1,578,050) | 20.31 |
| Forfeited or expired | (31,690) | 24.23 |
| Outstanding at December 31, 2014 | 3,316,782 | $ 27.56 |
| Exercised | (682,054) | 26.84 |
| Forfeited or expired | (8,241) | 28.53 |
| Outstanding at December 31, 2015 | 2,626,487 | $ 27.74 |

[1] No stock option awards were granted for the years ended December 31, 2015, 2014 and 2013.

We received net cash proceeds of $18 million from the exercise of 682,054 stock options for the year ended December 31, 2015, received net cash proceeds of $32 million from the exercise of 1,578,050 stock options for the year ended December 31, 201 4 and received net cash proceeds of $28 million from the exercise of 2,346,220 stock options for the year ended December 31, 201 3 . We present excess tax benefits from the exercise of stock options, if any, as financing activities in the Consolidated Statements of Cash Flows.

The following table summarizes significant ranges of outstanding and exercisable stock options as of December 31, 201 5 :

| | Outstanding and Exercisable | | | |
|---|---|---|---|---|
| Range of Exercise Prices | Number of Stock Options | Weighted-Average Remaining Contractual Term (in years) | Weighted-Average Exercise Price | Aggregate Intrinsic Value (in millions) |
| $ 17.36 - $ 24.94 | 1,203,865 | 3.51 | $ 21.11 | $ 45 |
| $ 24.95 - $ 35.91 | 378,061 | 4.35 | 25.32 | 12 |
| $ 35.92 - $ 45.38 | 1,044,561 | 0.99 | 36.27 | 23 |
| | | | 0 | |
| Total | 2,626,487 | 2.63 | $ 27.74 | $ 80 |

The aggregate intrinsic value in the above table represents the total pre-tax intrinsic value (i.e., the difference between our closing stock price on December 31, 201 5 of $58.17 and the exercise price, times the number of shares) based on stock options with an exercise price less than Nasdaq's closing price of $58.17 as of December 31, 201 5 , which would have been received by the option holders had the option holders exercised their stock options on that date. This amount can change based on the fair market value of our common stock. The total number of in-the-money stock options exercisable as of December 31, 201 5 was 2.6 million. As of December 31, 2014, 3.3 million outstanding stock options were exercisable and the weighted-average exercise price was $27.56 .

Total fair value of stock options vested was immaterial for both the year s ended December 31, 201 5 and 2014 . The total pre-tax intrinsic value of stock options exercised was $17 million during 201 5 , $33 million during 201 4 and $48 million during 201 3 .

**Summary of Restricted Stock and PSU Activity**

The following table summarizes our restricted stock and PSU activity for the years ended December 31, 201 5 , 201 4 and 201 3 :

| | Restricted Stock | | PSUs | |
|---|---|---|---|---|
| | Number of Awards | Weighted-Average Grant Date Fair Value | Number of Awards | Weighted-Average Grant Date Fair Value |
| Unvested balances at December 31, 2012 | 3,204,188 | $ 23.20 | 1,879,799 | $ 23.14 |
| Granted | 1,182,870 [1] | 32.69 | 828,180 [2] | 39.68 |
| Vested | (266,724) | 23.77 | (512,890) | 22.68 |
| Forfeited | (293,864) | 24.40 | (279,488) | 25.77 |
| Unvested balances at December 31, 2013 | 3,826,470 | $ 25.96 | 1,915,601 | $ 30.03 |
| Granted | 1,196,441 [1] | 36.87 | 882,637 [2] | 40.34 |
| Vested | (1,529,792) | 23.29 | (442,781) | 27.75 |
| Forfeited | (299,889) | 29.87 | (142,850) | 28.75 |
| Unvested balances at December 31, 2014 | 3,193,230 | $ 30.99 | 2,212,607 | $ 32.69 |
| Granted | 823,950 [1] | 49.26 | 855,825 [2] | 49.32 |

| | | | | |
|---|---|---|---|---|
| Vested | (370,998) | 29.90 | (1,084,382) | 24.33 |
| Forfeited | (302,444) | 34.34 | (120,365) | 36.43 |
| Unvested balances at December 31, 2015 | 3,343,738 | $ 35.36 | 1,863,685 | $ 47.57 |

(1) Restricted stock granted in 2015, 2014 and 2013 primarily reflects our company wide grants as described above.
(2) PSUs granted in 2015, 2014 and 2013 primarily reflect awards issued to certain officers, as described above.

At December 31, 201 5 , $88 million of total unrecognized compensation cost related to restricted stock and PSUs is expected to be recognized over a weighted-average period of 1.6 years .

**13. Nasdaq Stockholders' Equity**

**Common Stock**

At December 31, 201 5 , 300,000,000 shares of our common stock were authorized, 167,241,734 shares were issued and 164,324,270 shares were outstanding. The holders of common stock are entitled to one vote per share, except that our certificate of incorporation limits the ability of any person to vote in excess of 5.0% of the then-outstanding shares of N asdaq common stock.

**Common Stock in Treasury, at Cost**

We account for the purchase of treasury stock under the cost method with the shares of stock repurchased reflected as a reduction to Nasdaq stockholders' equity and included in common stock in treasury, at cost in the Consolidated Balance Sheets. Most shares repurchased under our share repurchase program are retired and cancelled, and the remaining shares are available for general corporate purposes. When treasury shares are reissued, they are recorded at the average cost of the treasury shares acquired. We held 2,917,464 shares of common stock in treasury as of December 31, 201 5 and 1,530,041 shares as of December 31, 201 4 .

***Share Repurchase Program***

In the third quarter of 2012, our board of directors authorized the repurchase of up to $300 million of our outstanding common stock and in the fourth quarter of 2014, our board of directors authorized the repurchase of up to an additional $500 million of our outstanding common stock under our share repurchase program.

These purchases may be made from time to time at prevailing market prices in open market purchases, privately-negotiated transactions, block purchase techniques or otherwise, as determined by our management. The purchases are funded from existing cash balances. The share repurchase program may be suspended, modified or discontinued at any time.

During 2015, we repurchased 7,191,685 shares of our common stock at an average price of $52.44 , for an aggregate purchase price of $377 million, completing the share repurchase program authorized in the third quarter of 2012. During 2014, we repurchased 4,592,194 shares of our common stock at an average price of $38.85 , for an aggregate purchase price of $178 million. As discussed above in "Common Stock in Treasury, at Cost," m ost shares repurchased under our share repurchase program are retired and cancelled, and the remaining shares are available for general corporate purposes. As of December 31, 201 5 , the remaining amount authorized for share repurchases under the program was $159 million.

***Other Repurchases of Common Stock***

For the year ended December 31, 201 5 , we repurchased 656,703 shares of our common stock in settlement of employee tax withholding obligations arising from the vesting of restricted stock.

**Preferred Stock**

Our certificate of incorporation authorizes the issuance of 30,000,000 shares of preferred stock, par value $0.01 per share, issuable from time to time in one or more series. At December 31, 2015 and December 31, 2014, no shares of Series A convertible preferred stock were issued or outstanding .

**Cash Dividends on Common Stock**

During 201 5 , our board of directors declared the following cash dividends:

| Declaration Date | Dividend Per Common Share | Record Date | Total Amount (1) | Payment Date |
|---|---|---|---|---|
| | | | (in millions) | |
| January 26, 2015 | $ 0.15 | March 13, 2015 | $ 25 | March 27, 2015 |
| April 21, 2015 | $ 0.25 | June 12, 2015 | $ 42 | June 26, 2015 |

| | | | | | | |
|---|---|---|---|---|---|---|
| July 23, 2015 | $ | 0.25 | September 11, 2015 | $ | 41 | September 25, 2015 |
| October 22, 2015 | $ | 0.25 | December 14, 2015 | $ | 41 | December 28, 2015 |

(1) These amounts were recorded in retained earnings in the Consolidated Balance Sheets at December 31, 2015.

In January 201 6 , the board of directors declared a regular quarterly cash dividend of $0.25 pe r share on our outstanding common stock. The dividend is payable on March 28, 2016 to shareholders of record at the close of business on March 14, 2016 . Future declarations of quarterly dividends and the establishment of future record and payment dates are subject to approval by the board of directors.

**Accumulated Other Comprehensive Loss**

The following table outlines the components of accumulated other comprehensive loss:

| | Foreign Currency Translation Adjustments [1] | Employee Benefit Plan Adjustments [2] | Accumulated Other Comprehensive Loss |
|---|---|---|---|
| | | (in millions) | |
| Gross balance, December 31, 2014 | $ (1,015) | $ (37) | $ (1,052) |
| Income taxes | 355 | 15 | 370 |
| Net balance, December 31, 2014 | $ (660) | $ (22) | $ (682) |
| Gross balance, December 31, 2015 | $ (1,298) | $ (35) | $ (1,333) |
| Income taxes | 455 | 14 | 469 |
| Net balance, December 31, 2015 | $ (843) | $ (21) | $ (864) |

(1) Amounts include cumulative gains ( losses ) on foreign currency translation adjustments from non-U.S. subsidiaries for which the functional currency is other than the U.S. dollar.

(2) Amounts primarily represent unrecognized net actuarial gains (losses) related to the Nasdaq Benefit Plans.

**14. Earnings Per Share**

The following table sets forth the computation of basic and diluted earnings per share:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| | (in millions, except share and per share amounts) | | |
| **Numerator:** | | | |
| Net income attributable to common shareholders | $ 428 | $ 414 | $ 385 |
| **Denominator:** | | | |
| Weighted-average common shares outstanding for basic earnings per share | 167,285,450 | 168,926,733 | 166,932,103 |
| Weighted-average effect of dilutive securities: | | | |
| Employee equity awards | 3,638,981 | 3,727,839 | 3,969,766 |
| Contingent issuance of common stock [1] | 358,840 | 364,277 | 364,277 - |
| Weighted-average common shares outstanding for diluted earnings per share | 171,283,271 | 173,018,849 | 171,266,146 |
| **Basic and diluted earnings per share:** | | | |
| Basic earnings per share | $ 2.56 | $ 2.45 | $ 2.30 |
| Diluted earnings per share | $ 2.50 | $ 2.39 | $ 2.25 |

(1) See " Non-Cash Contingent Consideration ," of Note 18 , " Commitments, Contingencies and Guarantee s ," for further discussion.

Stock options to purchase 2,626,487 shares of common stock and 5,207,423 shares of restricted stock and PSUs were outstanding at December 31, 2015. For the year ended December 31, 2015, we included all of the outstanding stock options and 4,84 2 , 3 8 3 shares of restricted stock and PSUs in the computation of diluted earnings per share, on a weighted-average basis, as their inclusion was dilutive. The remaining shares of restricted stock and PSUs are antidilutive, and as such, they were properly excluded.

Stock options to purchase 3,316,782 shares of common stock and 5,405,837 shares of restricted stock and PSUs were outstanding at December 31, 2014. For the year ended December 31, 2014, we included 3,198,842 of the outstanding stock options

and 4,836,518 shares of restricted stock and PSUs in the computation of diluted earnings per share, on a weighted-average basis, as their inclusion was dilutive. The remaining stock options and shares of restricted stock and PSUs are antidilutive, and as such, they were properly excluded.

Stock options to purchase 4,926,522 shares of common stock and 5,742,071 shares of restricted stock and PSUs were outstanding at December 31, 2013. For the year ended December 31, 2013, we included 3,677,618 of the outstanding stock options and 5,238,843 shares of restricted stock and PSUs in the computation of diluted earnings per share, on a weighted-average basis, as their inclusion was dilutive. The remaining stock options and shares of restricted stock and PSUs are antidilutive, and as such, they were properly excluded.

**15. Fair Value of Financial Instruments**

The following table presents our financial assets that are measured at fair value on a recurring basis as of December 31, 2015 and 2014. We did not have any financial liabilities measured at fair value on a recurring basis as of December 31, 2015 and 2014.

| | December 31, 2015 | | | |
|---|---|---|---|---|
| | Total | Level 1 | Level 2 | Level 3 |
| | (in millions) | | | |
| **Financial Assets Measured at Fair Value on a Recurring Basis** | | | | |
| Financial investments, at fair value [1] | $ 201 | $ 189 | $ 12 | $ - |
| Default fund and margin deposit investments [2] | 1,556 | 1,253 | 303 | - |
| Total | $ 1,757 | $ 1,442 | $ 315 | $ - |

| | December 31, 2014 | | | |
|---|---|---|---|---|
| | Total | Level 1 | Level 2 | Level 3 |
| | (in millions) | | | |
| **Financial Assets Measured at Fair Value on a Recurring Basis** | | | | |
| Financial investments, at fair value [1] | $ 174 | $ 171 | $ 3 | $ - |
| Default fund and margin deposit investments [2] | 2,148 | 664 | 1,484 | - |
| Total | $ 2,322 | $ 835 | $ 1,487 | $ - |

[1] As of December 31, 2015 and December 31, 2014, Level 1 financial investments, at fair value were primarily comprised of trading securities, mainly highly rated European government debt securities. Of these securities, $166 million as of December 31, 2015 and $159 million as of December 31, 2014 are assets utilized to meet regulatory capital requirements, primarily for the clearing operations at Nasdaq Clearing. As of December 31, 2015 and 2014, Level 2 financial investments, at fair value were primarily comprised of available-for-sale investment securities in short-term commercial paper.

[2] Default fund and margin deposit investments include cash contributions invested by Nasdaq Clearing, in accordance with its investment policy, either in highly rated European, and to a lesser extent, U.S. government debt securities, time deposits or reverse repurchase agreements with highly rated government debt securities as collateral. Of the total balance of $2,228 million recorded in the Consolidated Balance Sheets as of December 31, 2015, $303 million of cash contributions have been invested in reverse repurchase agreements and $1,253 million of cash contributions have been invested in highly rated European, and to a lesser extent, U.S. government debt securities. The remainder of this balance is held in cash. Of the total balance of $2,194 million recorded in the Consolidated Balance Sheets as of December 31, 2014, $1,484 million of cash contributions have been invested in reverse repurchase agreements and $664 million of cash contributions have been invested in highly rated European, and to a lesser extent, U.S. government debt securities and time deposits. The remainder of this balance is held in cash. See Note 16, “Clearing Operations,” for further discussion of default fund contributions and margin deposits.

There were no transfers of assets between Level 1 and Level 2 of the fair value hierarchy as of December 31, 2015 and 2014.

**Financial Instruments Not Measured at Fair Value on a Recurring Basis**

Some of our financial instruments are not measured at fair value on a recurring basis but are recorded at amounts that approximate fair value due to their liquid or short-term nature. Such financial assets and financial liabilities include: cash and cash equivalents, restricted cash, receivables, net, certain other current assets, accounts payable and accrued expenses, Section 31 fees payable to SEC, accrued personnel costs, and certain other current liabilities.

In addition, our investments in OCC, EuroCCP N.V. and TOM are accounted for under the equity method of accounting and our investments in Borsa Istanbul and LCH are carried at cost. See “Equity Method Investments,” and “Cost Method Investments,” of Note 6, “Investments,” for further discussion.

We also consider our debt obligations to be financial instruments. The fair value of our debt, utilizing discounted cash flow analyses for our floating rate debt and prevailing market rates for our fixed rate debt, was $2.5 billion at both December 31, 2015 and 2014. The discounted cash flow analyses are based on borrowing rates currently available to us for debt with similar terms and maturities. Our fixed rate and our floating rate debt is categorized as Level 2 in the fair value hierarchy. For further discussion of our debt obligations, see Note 9, “Debt Obligations.”

## 16. Clearing Operations

### Nasdaq Clearing

Nasdaq Clearing is authorized and supervised under EMIR as a multi-asset clearinghouse by the SFSA and is authorized to conduct clearing operations in Norway by the Norwegian Ministry of Finance. The clearinghouse acts as the CCP for exchange and OTC trades in equity derivatives, fixed income derivatives, resale and repurchase contracts, power derivatives, emission allowance derivatives, freight and fuel oil derivatives, iron ore derivatives and seafood derivatives.

Through our clearing operations in the financial markets, which include the resale and repurchase market, the commodities markets, and the seafood market, N asdaq Clearing is the legal counterparty for, and guarantees the fulfillment of, each contract cleared. These contracts are not used by N asdaq Clearing for the purpose of trading on its own behalf. As the legal counterparty of each transaction, N asdaq Clearing bears the counterparty risk between the purchaser and seller in the contract. In its guarantor role, N asdaq Clearing has precisely equal and offsetting claims to and from clearing members on opposite sides of each contract, standing as the CCP on every contract cleared. In accordance with the rules and regulations of N asdaq Clearing, clearing members’ open positions are aggregated to create a single portfolio for which default fund and margin collateral requirements are calculated. See “Default Fund Contributions and Margin Deposits” below for further discussion of N asdaq Clearing’s default fund and margin requirements.

N asdaq Clearing maintains four member sponsored default funds: one related to financial markets, one related to commodities markets, one related to the seafood market, and a mutualized fund. Under this structure, N asdaq Clearing and its clearing members must contribute to the total regulatory capital related to the clearing operations of N asdaq Clearing. This structure applies an initial separation of default fund contributions for the financial , commodities and seafood markets in order to create a buffer for each market’s counterparty risks. Simultaneously, a mutualized default fund provides capital efficiencies to N asdaq Clearing ’s members with regard to total regulatory capital required. See “Default Fund Contributions” below for further discussion of N asdaq Clearing’s default fund. Power of assessment and a liability waterfall also have been implemented. See “Power of Assessment” and “Liability Waterfall” below for further discussion. These requirements ensure the alignment of risk between N asdaq Clearing and its clearing members.

### Default Fund Contributions and Margin Deposits

As of December 31, 201 5 , clearing member default fund contributions and margin deposits were as follows:

| | December 31, 2015 | | |
|---|---|---|---|
| | Cash Contributions [1] | Non-Cash Contributions | Total Contributions |
| | (in millions) | | |
| Default fund contributions | $ 359 | $ 89 | $ 448 |
| Margin deposits | 1,869 | 4,946 | 6,815 |
| Total | $ 2,228 | $ 5,035 | $ 7,263 |

[1] As of December 31, 2015, in accordance with its investment policy, Nasdaq Clearing ha s invested cash contributions of $303 million in reverse repurchase agreements and $1,253 million in highly rated government debt securities. The remainder of this balance i s held in cash.

#### *Default Fund Contributions*

Contributions made to the default funds are proportional to the exposures of each clearing member. When a clearing member is active in more than one market, contributions must be made to all markets’ default funds in which the member is active. Clearing members’ eligible contributions may include cash and non-cash contributions. Cash contributions received are held in cash or invested by N asdaq Clearing, in accordance with its investment policy, either in highly rated government debt securities , time deposits or reverse repurchase agreements with highly rated government debt securities as collateral. Nasdaq Clearing maintains and manages all cash deposits related to margin collateral. All risks and rewards of collateral ownership, including interest, belong to Nasdaq Clearing. Clearing members’ cash contributions are included in default funds and margin deposits in the Consolidated Balance Sheets as both a

current asset and a current liability. Non-cash contributions include highly rated government debt securities that must meet specific criteria approved by N asdaq Clearing. Non-cash contributions are pledged assets that are not recorded in the Consolidated Balance Sheets as N asdaq Clearing does not take legal ownership of these assets and the risks and rewards remain with the clearing members. These balances may fluctuate over time due to changes in the amount of deposits required and whether members choose to provide cash or non-cash contributions. Assets pledged are held at a nominee account in N asdaq Clearing's name for the benefit of the clearing members and are immediately accessible by N asdaq Clearing in the event of a default. In addition to clearing members' required contributions to the default funds, N asdaq Clearing is also required to contribute capital to the default funds and overall regulatory capital as specified under its clearinghouse rules. As of December 31, 2015, Nasdaq Clearing committed capital totaling $124 million to the member sponsored default funds and overall regulatory capital, in the form of government debt securities, which are recorded as financial investments, at fair value in the Consolidated Balance Sheets. The combined regulatory capital of the clearing members and N asdaq Clearing will serve to secure the obligations of a clearing member and may be used to cover losses sustained by a clearing member in the event of a default.

***Margin Deposits***

Nasdaq Clearing requires all clearing members to provide collateral, which may consist of cash and non-cash contributions, to guarantee performance on the clearing members' open positions, or initial margin. In addition, clearing members must also provide collateral to cover the daily margin call if needed See "Default Fund Contributions" above for further discussion of cash and non-cash contributions.

Nasdaq Clearing maintains and manages all cash deposits related to margin collateral. All risks and rewards of collateral ownership, including interest, belong to Nasdaq Clearing. These cash deposits are recorded in default funds and margin deposits in the Consolidated Balance Sheets as both a current asset and current liability. Pledged margin collateral is not recorded in our Consolidated Balance Sheets as all risks and rewards of collateral ownership, including interest, belong to the counterparty. Assets pledged are held at a nominee account in Nasdaq Clearing's name for the benefit of the clearing members and are immediately accessible by Nasdaq Clearing in the event of a default.

Nasdaq Clearing marks to market all outstanding contracts and requires payment from clearing members whose positions have lost value. The mark-to-market process helps identify any clearing members that may not be able to satisfy their financial obligations in a timely manner allowing Nasdaq Clearing the ability to mitigate the risk of a clearing member defaulting due to exceptionally large losses. In the event of a default, Nasdaq Clearing can access the defaulting member's margin deposits to cover the defaulting member's losses.

**Regulatory Capital and Risk Management Calculations**

Nasdaq Clearing manages risk through a comprehensive counterparty risk management framework, which is comprised of policies, procedures, standards and resources. The level of regulatory capital is determined in accordance with Nasdaq Clearing's regulatory capital policy, as approved by the SFSA. Regulatory capital calculations are continuously updated through a proprietary capital-at-risk calculation model that establishes the appropriate level of capital.

As mentioned above, Nasdaq Clearing is the legal counterparty for each contract traded and thereby guarantees the fulfillment of each contract. Nasdaq Clearing accounts for this guarantee as a performance guarantee. We determine the fair value of the performance guarantee by considering daily settlement of contracts and other margining and default fund requirements, the risk management program, historical evidence of default payments, and the estimated probability of potential default payouts. The calculation is determined using proprietary risk management software that simulates gains and losses based on historical market prices, extreme but plausible market scenarios, volatility and other factors present at that point in time for those particular unsettled contracts. Based on this analysis, the estimated liability was nominal and no liability was recorded as of December 31, 2015.

The market value of derivative contracts outstanding prior to netting was as follows:

| | December 31, 2015 (in millions) |
|---|---|
| Commodity and seafood options, futures and forwards [1][2][3] | $ 1,908 |
| Fixed-income options and futures [2][3] | 591 |
| Stock options and futures [2][3] | 210 |
| Index options and futures [2][3] | 145 |
| Total | $ 2,854 |

[1] We determined the fair value of our forward contracts using standard valuation models that were based on market-based observable inputs including LIBOR rates and the spot price of the underlying instrument.

[2] We determined the fair value of our option contracts using standard valuation models that were based on market-based observable inputs including implied volatility, interest rates and the spot price of the underlying instrument.

[3] We determined the fair value of our futures contracts based upon quoted market prices and average quoted market yields.

The total number of derivative contracts cleared through Nasdaq Clearing for the years ended December 31, 2015 and 2014 was as follows:

| | December 31, 2015 | December 31, 2014 |
|---|---|---|
| Commodity and seafood options, futures and forwards [1] | 2,745,954 | 2,394,710 |
| Fixed-income options and futures | 19,631,917 | 20,130,657 |
| Stock options and futures | 33,519,064 | 32,236,023 |
| Index options and futures | 49,779,173 | 42,871,645 |
| Total | 105,676,108 | 97,633,035 |

[1] The total volume in cleared power related to commodity contracts was 1,496 Terawatt hours (TWh) for the year ended December 31, 2015 and 1,564 TWh for the year ended December 31, 2014.

The outstanding contract value of resale and repurchase agreements was $1.1 billion as of December 31, 2015 and $6.2 billion at December 31, 2014. The total number of contracts cleared was 7,908,873 for the year ended December 31, 2015 and was 4,292,282 for the year ended December 31, 2014.

**Power of Assessment**

To further strengthen the contingent financial resources of the clearinghouse, Nasdaq Clearing has power of assessment that provides the ability to collect additional funds from its clearing members to cover a defaulting member's remaining obligations up to the limits established under the terms of the clearinghouse rules. The power of assessment corresponds to 100.0% of the clearing member's aggregate contribution to the financial , commodities and seafood market's default funds.

**Liability Waterfall**

The liability waterfall is the priority order in which the capital resources would be utilized in the event of a default where the defaulting clearing member's collateral would not be sufficient to cover the cost to settle its portfolio. If a default occurs and the defaulting clearing member's collateral, including cash deposits and pledged assets, is depleted, then capital is utilized in the following amount and order:

- junior capital contributed by N asdaq Clearing, which totaled $21 million at December 31, 2015;
- a loss sharing pool related only to the financial market that is contributed to by clearing members and only applies if the defaulting member's portfolio includes interest rate swap products;
- specific market default fund where the loss occurred (i.e., the financial, commodities, or seafood market), which includes capital contributions of both the clearing members and Nasdaq Clearing on a pro-rata basis;
- senior capital contributed to each specific market by Nasdaq Clearing, calculated in accordance with clearinghouse rules, which totaled $24 million at December 31, 2015; and
- mutualized default fund, which includes capital co ntributions of both the clearing members and N asdaq Clearing on a pro-rata basis.

If additional funds are needed after utilization of the mutualized default fund, then N asdaq Clearing will utilize its power of assessment and additional capital contributions will be required by non-defaulting members up to the limits established under the terms of the clearinghouse rules.

**17. Leases**

We lease some of our office space and equipment under non-cancelable operating leases with third parties and sublease office space to third parties. Some of our lease agreements contain renewal options and escalation clauses based on increases in property taxes and building operating costs.

As of December 31, 201 5 , future minimum lease payments under non-cancelable operating leases (net of sublease income) are as follows:

| | Gross Lease Commitments | Sublease Income | Net Lease Commitments |
|---|---|---|---|
| | | (in millions) | |
| Year ending December 31: | | | |
| 2016 | $ 84 | $ 6 | $ 78 |
| 2017 | 52 | 4 | 48 |
| 2018 | 47 | 3 | 44 |
| 2019 | 45 | 3 | 42 |

| | | | |
|---|---|---|---|
| 2020 | 36 | 3 | 33 |
| Thereafter | 83 | 8 | 75 |
| Total future minimum lease payments | $ 347 | $ 27 | $ 320 |

Rent expense for operating leases (net of sublease income of $5 million in 201 5 and $4 million in both 201 4 and 201 3 ) was $88 million in 201 5 , $93 million in 20 14 and $92 million in 201 3 .

**18. Commitments, Contingencies and Guarantees**

**Guarantees Issued and Credit Facilities Available**

In addition to the default fund contributions and margin collateral pledged by clearing members discussed in Note 16, "Clearing Operations," we have obtained financial guarantees and credit facilities which are guaranteed by us through counter indemnities, to provide further liquidity and default protection related to our clearing businesses. Financial guarantees issued to us totaled $13 million at December 31, 2015 and $14 million at December 31, 2014 . As discussed in "Other Credit Facilities," of Note 9, "Debt Obligations," at December 31, 2015, credit facilities, which are available in multiple currencies, primarily Swedish Krona, totaled $202 million in available liquidity, none of which was utilized . At December 31, 201 4 , credit facilities, which were available in multiple currencies, primarily Swedish Krona, totaled $236 million ( $197 million in available liquidity and $39 million for default protection ), of which $7 million was utilized.

Execution Access is an introducing broker which operates the eSpeed trading platform for U.S. Treasury securities. Execution Access has a clearing arrangement with Cantor Fitzgerald. As of December 31, 201 5 , we have contributed $19 million of clearing deposits to Cantor Fitzgerald in connection with this clearing arrangement. These deposits are recorded in other current assets in our C onsolidated B alance S heets. Some of the trading activity in Execution Access is cleared by Cantor Fitzgerald through the Fixed Income Clearing Corporation . Execution Access assumes the counterparty risk of clients that do not clear through the Fixed Income Clearing Corporation . Counterparty risk of clients exists for Execution Access between the trade date and the settlement date of the individual transactions, which is one business day. All of Execution Access' obligations under the clearing arrangement with Cantor Fitzgerald are guaranteed by N asdaq . C ounterparties that do not clear through the Fixed Income Clearing Corporation are subject to a credit due diligence process and may be required to post collateral, provide principal letters, or provide other forms of credit enhancement to Execution Access for the purpose of mitigating counterparty risk.

We believe that the potential for us to be required to make payments under these arrangements is mitigated through the pledged collateral and our risk management policies. Accordingly, no contingent liability is recorded in the Consolidated Balance Sheets for these arrangements.

**Lease Commitments**

We lease some of our office space and equipment under non-cancelable operating leases with third parties and sublease office space to third parties. Some of our lease agreements contain renewal options and escalation clauses based on increases in property taxes and building operating costs.

**Other Guarantees**

We have provided other guarantees of $11 million as of December 31, 2015 and $13 million at December 31, 201 4 . These guarantees are primarily related to obligations for our rental and leasing contracts as well as performance guarantees on certain market technology contracts related to the delivery of software technology and support services. We have received financial guarantees from various financial institutions to support the above guarantees.

We have provided a guarantee related to lease obligations for The Nasdaq Entrepreneurial Center Inc., or the Entrepreneurial Center, which opened in the third quarter of 2015. The Entrepreneurial Center is a not-for-profit organization designed to convene, connect and engage aspiring and current entrepreneurs. This entity is not included in the consolidated financial statements of Nasdaq.

We believe that the potential for us to be required to make payments under these arrangements is unlikely. Accordingly, no contingent liability is recorded in the Consolidated Balance Sheets for the above guarantees.

In connection with Nasdaq NLX, we entered into agreements with certain members which may have required us to make payments if certain financial goals were achieved. In July 2015, all agreements were settled for an immaterial amount.

**Non-Cash Contingent Consideration**

As part of the eSpeed purchase price consideration, we have agreed to future annual issuances of 992,247 shares of Nasdaq common stock which approximated certain tax benefits associated with the transaction. Such contingent future issuances of Nasdaq

common stock will be paid ratably through 2027 if Nasdaq's total gross revenues equal or exceed $25 million in each such year. The contingent future issuances of Nasdaq common stock are subject to anti-dilution protections and acceleration upon certain events.

**Other Transactions**

***Chi-X Canada***

In December 2015, we agreed to acquire Chi-X Canada for $110 million. In February 2016, we completed the acquisition . Chi-X Canada is part of our Market Services and Information Services segments.

***Marketwired***

In February 2016, we acquire d Marketwired , a newswire operator and press release distributer for C$1 5 0 million . Marketwired is part of our Corporate Solutions business.

**Escrow Agreement**

In connection with a prior acquisition we entered into an escrow agreement to secure the payments of post-closing adjustments and to ensure other closing conditions. At December 31, 201 5 , this escrow agreement provide s for future payment s of $9 million and is included in other current liabilities in the Consolidated Balance Sheets.

**Routing Brokerage Activities**

One of our broker-dealer subsidiaries, Nasdaq Execution Services provides a guarantee to securities clearinghouses and exchanges under its standard membership agreements, which require members to guarantee the performance of other members. If a member becomes unable to satisfy its obligations to a clearinghouse or exchange, other members would be required to meet its shortfalls. To mitigate these performance risks, the exchanges and clearinghouses often require members to post collateral, as well as meet certain minimum financial standards. Nasdaq Execution Services' maximum potential liability under these arrangements cannot be quantified. However, we believe that the potential for Nasdaq Execution Services to be required to make payments under these arrangements is unlikely. Accordingly, no contingent liability is recorded in the Consolidated Balance Sheets for these arrangements.

**Litigation**

As previously disclosed, we became a party to several legal and regulatory proceedings in 2012 and 2013 relating to the Facebook, Inc. IPO that occurred on May 18, 2012. As described in our Annual Report on Form 10-K for the year ended December 31, 2012, we were named as a defendant in a consolidated matter captioned In re Facebook, Inc., IPO Securities and Derivative Litigation, MDL No. 2389 (S.D.N.Y.). On May 22, 2015, the parties executed a stipulation of settlement, and on November 9, 2015, the trial court entered an order approving the settlement. Facebook and other defendants in a separate class action alleging securities fraud intervened in the proceeding relating to the settlement for the purpose of clarifying its potential effect on their own case, and have appealed one aspect of the court 's order. We and the class plaintiffs with whom we have settled had informed the trial court that either the approved settlement language or the alternative language being advocated by the Facebook defendants is acceptable to the settling parties.

In our Quarterly Report on Form 10-Q for the period ended March 31, 2013, we identified a demand for arbitration from a member organization seeking indemnification for alleged losses associated with the Facebook IPO. In April 2015, we reached an agreement to settle the claims asserted by the member organization by allowing it to file a claim under the accommodation plan that had been established for claims by other members.

We established a reserve of $31 million to cover the costs of these settlements. During the second half of 2015, we recorded an insurance recovery which offset the loss reserve.

As previously disclosed, we are a defendant in a putative class action, Rabin v. NASDAQ OMX PHLX LLC, et al., No. 15-551 (E.D. Pa.) filed February 5, 2015 in the United States District Court for the Eastern District of Pennsylvania. Our motion to dism iss the complaint is currently pending with the court . We believe the claims to be without merit and intend to litigate them vigorously. We believe that the legal actions filed against Nasdaq are without merit and intend to defend them vigorously.

We also are named as one of many defendants in City of Providence v. BATS Global Markets, Inc., et al., 14 Civ. 2811 (S.D.N.Y.), which was filed on April 18, 2014 in the United States District Court for the Southern District of New York. The district court appointed lead counsel, who filed an amended complaint on September 2, 2014. The amended complaint names as defendants seven national exchanges, as well as Barclays PLC, which operated a private alternative trading system. On behalf of a putative class of securities traders, the plaintiffs allege that the defendants engaged in a scheme to manipulate the markets through high-frequency trading; the amended complaint asserts claims against us under Section 10(b) of the Exchange Act and Rule 10b-5, as well as under Section 6(b) of the Exchange Act. We filed a motion to dismiss the amended complaint on November 3, 2014. In response, the

plaintiffs filed a second amended complaint on November 24, 2014, which names the same defendants and alleges essentially the same violations. We then filed a motion to dismiss the second amended complaint on January 23, 2015. The district court heard oral argument on the motion on June 18, 2015. On August 26, 2015, the district court entered an order dismissing the second amended complaint in its entirety with prejudice, concluding that most of the plaintiffs' theories were foreclosed by absolute immunity and, in any event, that the plaintiffs failed to state any claim. The plaintiffs have appealed the judgment of dismissal to the United States Court of Appeals for the Second Circuit. On January 9, 2015, the court consolidated this case in a multi-district litigation proceeding under the heading In re Barclays Liquidity Cross and High Frequency Trading Litigation, 14-md-02589 (S.D.N.Y). The consolidated cases bring claims against Barclays PLC and Barclays Capital alleging that certain marketing materials about Barclays LX contained false or misleading statements. Although the Providence matter has been consolidated with the Barclays matter, separate motions to dismiss will be filed for each case. Given the preliminary nature of the proceedings, we are unable to estimate what, if any, liability may result from this litigation. However, we believe the claims to be without merit and intend to litigate them vigorously.

In addition, we are named as one of many exchange defendants in Lanier v. BATS Exchange Inc., et al., 14 Civ. 3745 (S.D.N.Y.), Lanier v. BATS Exchange Inc., et al., 14 Civ. 3865 (S.D.N.Y.), and Lanier v. Bats Exchange Inc., 14 Civ. 3866 (S.D.N.Y.), which were filed between May 23, 2014 and May 30, 2014 in the United States District Court for the Southern District of New York. The plaintiff is the same in each of these cases, and the three complaints contain substantially similar allegations. On behalf of a putative class of subscribers for market data provided by national exchanges, the plaintiff alleges that the exchanges provided data more quickly to certain market participants than to others, supposedly in breach of the exchanges' plans for dissemination of market data and subscriber agreements executed under those plans. The complaint asserts contractual theories under state law based on these alleged breaches. On September 29, 2014, we filed a motion to dismiss the complaints. The district court heard oral argument on the motion on January 16, 2015. On April 28, 2015, the district court entered an order dismissing the complaints in their entirety with prejudice, concluding that they are foreclosed by the Exchange Act and, in any event, do not state a claim under the contracts. The plaintiff has appealed the judgment of dismissal to the United States Court of Appeals for the Second Circuit. The Second Circuit has scheduled oral argument for March 3, 2016. A decision remains pending. Given the preliminary nature of the proceedings, we are unable to estimate what, if any, liability may result from this litigation. However, we believe the claims to be without merit and intend to litigate them vigorously.

Except as disclosed above and in prior reports filed under the Exchange Act, we are not currently a party to any litigation or proceeding that we believe could have a material adverse effect on our business, consolidated financial condition, or operating results. However, from time to time, we have been threatened with, or named as a defendant in, lawsuits or involved in regulatory proceedings.

**Tax Audits**

We are engaged in ongoing discussions and audits with taxing authorities on various tax matters, the resolutions of which are uncertain. Currently, there are matters that may lead to assessments, some of which may not be resolved for several years. Based on currently available information, we believe we have adequately provided for any assessments that could result from those proceedings where it is more likely than not that we will be assessed. We review our positions on these matters as they progress.

**19. Business Segments**

We manage, operate and provide our products and services in four business segments: Market Services, Listing Services, Information Services and Technology Solutions. See Note 1 , " Organization and Nature of Operations ," to the consolidated financial statements for further discussion of our reportable segments.

Our management allocates resources, assesses performance and manages these businesses as four separate segments. We evaluate the performance of our segments based on several factors, of which the primary financial measure is operating income. Results of individual businesses are presented based on our management accounting practices and structure. Certain amounts are allocated to corporate items in our managements reports based on the decision that those activities should not be used to evaluate the segment's operating performance. Since management does not consider intangible asset amortization expense for the purpose of evaluating the performance of the business or its managers or when making decisions to allocate resources, such expenses are shown in corporate items in our management reports. See below for further discussion.

The following table presents certain information regarding our operating segments for the years ended December 31, 201 5 , 201 4 and 201 3:

| | Market Services | Listing Services | Information Services | Technology Solutions | Corporate Items and Eliminations | Consolidated |
|---|---|---|---|---|---|---|
| | | | (in millions) | | | |
| **2015** | | | | | | |
| Total revenues | $ 2,084 | $ 264 | $ 512 | $ 543 | $ - | $ 3,403 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Transaction-based expenses | (1,313) | - | - | - | - | (1,313) |
| Revenues less transaction-based expenses | 771 | 264 | 512 | 543 | - | 2,090 |
| Depreciation and amortization | 64 | 9 | 14 | 51 | - | 138 |
| Operating income (loss) [1] | 413 | 113 | 365 | 84 | (255) | 720 |
| Total assets [2] | 6,906 | 235 | 2,456 | 1,093 | 1,171 | 11,861 |
| Purchase of property and equipment | 53 | 16 | 11 | 53 | - | 133 |
| **2014** | | | | | | |
| Total revenues | $ 2,229 | $ 238 | $ 473 | $ 560 | $ - | $ 3,500 |
| Transaction-based expenses | (1,433) | - | - | - | - | (1,433) |
| Revenues less transaction-based expenses | 796 | 238 | 473 | 560 | - | 2,067 |
| Depreciation and amortization | 80 | 6 | 13 | 38 | - | 137 |
| Operating income (loss) [3] | 413 | 95 | 348 | 75 | (177) | 754 |
| Total assets [2] | 7,437 | 222 | 2,296 | 1,124 | 992 | 12,071 |
| Purchase of property and equipment | 50 | 21 | 12 | 57 | - | 140 |
| **2013** | | | | | | |
| Total revenues | $ 2,072 | $ 228 | $ 436 | $ 475 | $ - | $ 3,211 |
| Transaction-based expenses | (1,316) | - | - | - | - | (1,316) |
| Revenues less transaction-based expenses | 756 | 228 | 436 | 475 | - | 1,895 |
| Depreciation and amortization | 79 | 3 | 11 | 29 | - | 122 |
| Operating income (loss) [4] | 361 | 93 | 325 | 57 | (148) | 688 |
| Total assets [2] | 7,816 | 262 | 2,557 | 1,108 | 820 | 12,563 |
| Purchase of property and equipment | 47 | 5 | 9 | 54 | - | 115 |

[1] The 2015 corporate items and eliminations primarily include:

- r estructuring charges of $172 million. See Note 3, “Restructuring Charges,” for further discussion;
- amortization expense of acquired intangible assets of $62 million;
- reversal of previously recorded VAT receivables no longer deemed collectible of $12 million ; and
- merger and strategic initiatives expense of $10 million primarily related to certain strategic initiatives and our acquisition of DWA .

[2] Total assets decreased $210 million at December 31, 2015 compared with December 31, 2014 primarily due to a decrease in goodwill and intangible assets, net reflecting the impact of changes in foreign exchange rates and amortization . In addition, a s discussed in “Intangible Asset Impairment Charges,” of Note 5, “Goodwill and Acquired Intangible Assets,” the decrease is also due to a $119 million indefinite-lived intangible asset impairment charge recorded in 2015. These decreases were partially offset by an increase in non-current deferred tax assets primarily due to the income tax benefits of net foreign currency translation losses which are recorded in accumulated other comprehensive loss within stockholders’ equity in the Consolidated Balance Sheets . Total assets decreased $492 million at December 31, 2014 compared with December 31, 2013 primarily due to a decrease in goodwill and intangible assets, net reflecting the impact of changes in foreign exchange rates and amortization, partially offset by an increase in default funds and margin deposits .

[3] The 2014 corporate items and eliminations primarily include:

- m erger and strategic initiatives expense of $81 million primarily related to our acquisitions of the TR Corporate businesses and eSpeed and a charge of $23 million related to the reversal of a receivable under a tax sharing agreement with an unrelated party;
- amortization expense of acquired intangible assets of $69 million;
- " s ublease loss reserve of $11 million; and
- loss on e xtinguishment of debt of $11 million, reflecting $9 million related to the early extinguishment of our 4.00% senior notes in June 2014 and $2 million related to the refinancing of our 2011 c redit f acility.

[4] The 2013 corporate items and eliminations primarily include:

- e xpense related to our voluntary accommodation program of $44 million;
- m erger and strategic initiatives expense of $22 million;

- amortization expense of acquired intangible assets of $63 million;
- e xpenses paid with respect to an SEC matter of $10 million; and
- r estructuring charges of $9 million.

For further discussion of our segments' results, see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Segment Operating Results."

**Geographic Data**

The following table presents revenues and property and equipment, net by geographic area for 201 5 , 201 4 and 201 3 . Revenues are classified based upon the location of the customer. Property and equipment information is based on the physical location of the assets.

| | Total Revenues | Property and Equipment, Net |
|---|---|---|
| | (in millions) | |
| **2015:** | | |
| United States | $ 2,408 | $ 217 |
| All other countries [1] | 995 | 106 |
| Total | $ 3,403 | $ 323 |
| **2014:** | | |
| United States | $ 2,524 | $ 198 |
| All other countries [1] | 976 | 94 |
| Total | $ 3,500 | $ 292 |
| **2013:** | | |
| United States | $ 2,386 | $ 166 |
| All other countries [1] | 825 | 102 |
| Total | $ 3,211 | $ 268 |

[1] Property and equipment, net for all other countries primarily includes assets held in Sweden.

No single customer accounted for 10.0% or more of our revenues in 201 5 , 201 4 and 201 3 .

**20. Subsequent Events**

***Chi-X Canada***

In December 2015, we agreed to acquire Chi-X Canada for $110 million. In February 2016, we completed the acquisition. Chi-X Canada is part of our Market Services and Information Services segments.

***Marketwired***

In February 2016, we acquire d Marketwired, a newswire operator and press release distributer for C$1 5 0 million . Marketwired is part of our Corporate Solutions business.

**Schedule II—Valuation and Qualifying Accounts**
**Three Years Ended December 31, 2015**
**(in millions)**

| | Reserve for Bad Debts | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| Balance at beginning of period | $ 16 | $ 9 | $ 5 |
| Additions: | | | |
| Charges to income | 3 | 13 | 5 |
| Deductions: | | | |
| Charges for which reserves were provided | (5) | (6) | (1) |
| Balance at end of period | $ 14 | $ 16 | $ 9 |

## Exhibit Index

| Exhibit Number | |
|---|---|
| 2.1 | Purchase Agreement, dated as of April 1, 2013, among N asdaq , Inc. (f/k/a The NASDAQ OMX Group, Inc.), BGC Partners, Inc., BGC Holdings, L.P., BGC Partners, L.P., and, solely for purposes of certain sections thereof, Cantor Fitzgerald, L.P. (incorporated herein by reference to Exhibit 2.1 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2013 filed on August 8, 2013). |
| 3.1 | Amended and Restated Certificate of Incorporation of Nasdaq (incorporated herein by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on January 28, 2014). |
| 3.1.1 | Certificate of Elimination of Nasdaq's Series A Convertible Preferred Stock (incorporated herein by reference to Exhibit 3.1.1 to the Current Report on Form 8-K filed on January 28, 2014). |
| 3.1.2 | Certificate of Amendment of Nasdaq's Amended and Restated Certificate of Incorporation (incorporated herein by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on November 19, 2014). |
| 3.1. 3 | Certificate of Amendment of Nasdaq's Amended and Restated Certificate of Incorporation (incorporated herein by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on September 8, 2015). |
| 3.2 | Nasdaq's By-Laws (incorporated herein by reference to Exhibit 3.2 to the Current Report on Form 8-K filed on September 8 , 201 5 ). |
| 4.1 | Form of Common Stock certificate (incorporated herein by reference to Exhibit 4.1 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2015 filed on November 4, 2015 ). |
| 4.2 | Stockholders' Agreement, dated as of February 27, 2008, between Nasdaq, Inc. (f/k/a T he NASDAQ OMX Group, Inc. ) and Borse Dubai Limited (incorporated herein by reference to Exhibit 10.2 to the Current Report on Form 8-K filed on March 3, 2008). |
| 4.2.1 | First Amendment to Stockholders' Agreement, dated as of February 19, 2009, between Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) and Borse Dubai Limited (incorporated herein by reference to Exhibit 4.10.1 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009). |
| 4.3 | Registration Rights Agreement, dated as of February 27, 2008, among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) , Borse Dubai Limited and Borse Dubai Nasdaq Share Trust (incorporated herein by reference to Exhibit 10.3 to the Current Report on Form 8-K filed on March 3, 2008). |
| 4.3.1 | First Amendment to Registration Rights Agreement, dated as of February 19, 2009, among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc.), Borse Dubai Limited and Borse Dubai Nasdaq Share Trust (incorporated herein by reference to Exhibit 4.11.1 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009). |

| Exhibit Number | |
|---|---|
| 4.4 | Indenture, dated as of January 15, 2010, between Nasdaq (f/k/a The NASDAQ OMX Group, Inc. ) and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on January 19, 2010). |
| 4.5 | First Supplemental Indenture, dated as of January 15, 2010, among Nasdaq (f/k/a The NASDAQ OMX Group, Inc. ) and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.2 to the Current Report on Form 8-K filed on January 19, 2010). |
| 4.6 | Second Supplemental Indenture, dated as of December 21, 2010, among Nasdaq (f/k/a The NASDAQ OMX Group, Inc. ) and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on December 21, 2010). |
| 4.7 | Stockholders' Agreement, dated as of December 16, 2010, between Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) and Investor AB (incorporated herein by reference to Exhibit 4.12 to the Annual Report on Form 10-K for the year ended December 31, 2010 filed on February 24, 2011). |
| 4.8 | Indenture, dated as of June 7, 2013, between Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on June 10, 2013). |
| 4.9 | First Supplemental Indenture, dated as of June 7, 2013, among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) , Wells Fargo Bank, National Association, as Trustee, Deutsche Bank AG, London Branch, as paying agent, and Deutsche Bank Luxembourg S.A., as registrar and transfer agent (incorporated herein by reference to Exhibit 4.2 to the Current Report on Form 8-K filed on June 10, 2013). |
| 4.10 | Second Supplemental Indenture, dated as of May 29, 2014, among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on May 30, 2014) . |
| 4.11 | Registration Rights Agreement, dated as of June 28, 2013, by and among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) , BGC Partners, Inc., BGC Holdings, L.P. and BGC Partners, L.P. (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on July 1, 2013). |
| 10.1 | Amended and Restated Board Compensation Policy, effective on October 17, 2013 (incorporated herein by reference to Exhibit 10.1 to the Annual Report on Form 10-K for the year ended December 31, 2013 filed on February 24, 2014).* |
| 10.2 | Nasdaq Executive Corporate Incentive Plan, effective as of January 1, 201 5 (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8 - K f iled on May 11 , 201 5). * |
| 10.3 | Form of Nasdaq Non-Qualified Stock Option Award Certificate (incorporated herein by reference to Exhibit 10.3 to the Annual Report on Form 10-K for the year ended December 31, 2010 filed on February 24, 2011).* |
| 10.4 | Form of Nasdaq Restricted Stock Unit Award Certificate (employees) (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended March 3 1 , 201 5 filed on May 6 , 201 6 ) .* |
| 10.5 | Form of Nasdaq Restricted Stock Unit Award Certificate (directors) (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 201 5 filed on August 6 , 201 5 ).* |
| 10.6 | Form of Nasdaq One-Year Performance Share Unit Agreement (incorporated herein by reference to Exhibit 10. 2 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 201 5 filed on May 6 , 201 5 ).* |
| 10.7 | Form of Nasdaq Three-Year Performance Share Unit Agreement (incorporated herein by reference to Exhibit 10. 3 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 201 5 filed on May 6 , 201 5 ).* |

| | |
|---|---|
| 10.8 | Amended and Restated Supplemental Executive Retirement Plan, dated as of December 17, 2008 (incorporated herein by reference to Exhibit 10.6 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009).* |
| 10.8.1 | Amendment No. 1 to Amended and Restated Supplemental Executive Retirement Plan, effective as of December 31, 2008 (incorporated herein by reference to Exhibit 10.6.1 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009).* |
| 10.9 | Nasdaq Supplemental Employer Retirement Contribution Plan, dated as of December 17, 2008 (incorporated herein by reference to Exhibit 10.7 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009).* |
| 10.10 | Employment Agreement between Nasdaq and Robert Greifeld, effective as of February 22, 2012 (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on February 28, 2012).* |
| 10.10.1 | Memorandum of Understanding between Nasdaq and Robert Greifeld, dated as of December 11, 2012 (incorporated herein by reference to Exhibit 10.10.1 to the Annual Report on Form 10-K for the year ended December 31, 2012 filed on February 21, 2013).* |
| 10.11 | Nonqualified Stock Option Agreement between Nasdaq and Robert Greifeld reflecting December 13, 2006 grant (incorporated herein by reference to Exhibit 10.13 to the Annual Report on Form 10-K for the year ended December 31, 2007 filed on February 25, 2008).* |
| 10.12 | Nonqualified Stock Option Agreement between Nasdaq and Robert Greifeld reflecting June 30, 2009 grant (incorporated herein by reference to Exhibit 10.11 to the Annual Report on Form 10-K for the year ended December 31, 2009 filed on February 18, 2010).* |
| 10.13 | Employment Agreement between Nasdaq and Adena Friedman, made and entered into on May 9, 2014 and effective as of June 16, 2014 (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2014 filed on August 6, 2014).* |
| 10.14 | Employment Agreement between Nasdaq and Hans-Ole Jochumsen, made and entered into and effective on August 5, 2014 (incorporated herein by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2014 filed on November 5, 2014).* |
| 10.15 | Employment Agreement between Nasdaq and Edward Knight, effective as of December 29, 2000 (incorporated herein by reference to Exhibit 10.14 to the Annual Report on Form 10-K for the year ended December 31, 2002 filed on March 31, 2003).* |
| 10.15.1 | First Amendment to Employment Agreement between Nasdaq and Edward Knight, effective February 1, 2002 (incorporated herein by reference to Exhibit 10.14.1 to the Annual Report on Form 10-K for the year ended December 31, 2002 filed on March 31, 2003).* |
| 10.15.2 | Second Amendment to Employment Agreement between Nasdaq and Edward Knight, effective as of December 31, 2008 (incorporated herein by reference to Exhibit 10.13.2 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009).* |
| 10.15.3 | Third Amendment to Employment Agreement between Nasdaq and Edward Knight, effective as of February 22, 2012 (incorporated herein by reference to Exhibit 10.2 to the Current Report on Form 8-K filed on February 28, 2012).* |
| 10.16 | Nasdaq . Change in Control Severance Plan for Executive Vice Presidents and Senior Vice Presidents, effective November 26, 2013 (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on November 29, 2013).* |

| | |
|---|---|
| 10.17 | Credit Agreement, dated as of November 24, 2014, among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc. ) , Bank of America, N.A., JPMorgan Chase Bank, N.A. and Wells Fargo Bank, National Association, as Swingline Lenders, the other Lenders party thereto and Bank of America, N.A., as Administrative Agent and Issuing Bank (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on December 1, 2014). |
| 10.1 8 | Amendment No. 1, dated as of September 28, 2015, to the Credit Agreement among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc.), the lenders party thereto and Bank of America, N.A., as Administrative Agent, a Swingline Lender and Issuing Bank (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2015 filed on November 4, 2015). |
| 11 | Statement regarding computation of per share earnings (incorporated herein by reference from Note 14 to the consolidated financial statements under Part II, Item 8 of this Form 10-K). |
| 12.1 | Computation of Ratio of Earnings to Fixed Charges. |
| 21.1 | List of all subsidiaries. |
| 23.1 | Consent of Ernst & Young LLP. |
| 24.1 | Powers of Attorney. |
| 31.1 | Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (“Sarbanes-Oxley”). |
| 31.2 | Certification of Interim Chief Financial Officer and Senior Vice President and Controller pursuant to Section 302 of Sarbanes-Oxley. |
| 32.1 | Certifications Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of Sarbanes-Oxley. |
| 101.INS | XBRL Instance Document . ** |
| 101.SCH | XBRL Taxonomy Extension Schema . |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase . |
| 101.DEF | Taxonomy Extension Definition Linkbase . |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase . |
| 101.PRE | XBRL Taxonomy Extension Presentation Linkbase . |

* Management contract or compensatory plan or arrangement.

** The following materials from Nasdaq , Inc. Annual Report on Form 10-K for the year ended December 31, 2015, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheets as of December 31, 2015 and December 31, 2014; (ii) Consolidated Statements of Income for the years ended December 31, 2015, 2014 and 2013; (iii) Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 201 5 , 201 4 and 201 3 ; (iv) Consolidated Statements of Changes in Equity for the years ended December 31, 2015, 2014 and 2013; (v) Consolidated Statements of Cash Flows for the years ended December 31, 2015, 2014 and 2013; and (vi) notes to consolidated financial statements.

**Exhibit 12.1**

**Nasdaq , Inc.**
**Computation of Ratio of Earnings to Fixed Charges**
**And Preferred Stock Dividends**
**(Dollars in Millions)**
**Unaudited**

| | Year Ended December 31, | | | | |
|---|---|---|---|---|---|
| | 2015 | 2014 | 2013 | 2012 | 2011 |
| Pre-tax income from continuing operations [1] | $ 649 [3] | $596 | $ 600 [3] | $ 548 [4] | $571 |
| Add: fixed charges | 127 | 134 | 126 | 111 | 135 |
| Pre-tax income before fixed charges | 776 | 730 | 726 | 659 | 706 |
| Fixed charges: | | | | | |
| Interest expense [2] | 127 | 134 | 126 | 111 | 135 |
| Total fixed charges | 127 | 134 | 126 | 111 | 135 |
| Preferred stock dividend requirements | — | — | — | — | — |
| Total combined fixed charges and preferred stock dividends | $127 | $134 | $126 | $111 | $135 |
| Ratio of earnings to fixed charges | 6.11 | 5.45 | 5.76 | 5.94 | 5.23 |
| Ratio of earnings to fixed charges and preferred stock dividends | 6.11 | 5.45 | 5.76 | 5.94 | 5.23 |

[1] P re-tax income from continuing operations is before equity in earnings of 50%-or-less-owned companies and adjustment for noncontrolling interests.

[2] Consists of interest expense on all debt obligations (including accretion of debt issuance costs and debt discount) and the portion of operating lease rental expense that is representative of the interest factor.

[3] Includes costs of $1 72 million in 2015 associated with Nasdaq's 2015 restructuring program.

[4] Includes costs of $9 million in 2013 and $44 million in 2012 a ssociated with Nasdaq's 2012 restructuring program that was announced in 2012 .

**Exhibit 21.1**

**SUBSIDIARIES**
**Domestic Subsidiaries**

1. Boston Stock Exchange Clearing Corporation (incorporated in Massachusetts)
2. Bwise Internal Control Inc. (incorporated in New York)
3. Consolidated Securities Source LLC (organized in Delaware)
4. Directors Desk, LLC (organized in Delaware)
5. Dorsey, Wright & Associates, LLC (organized in Virginia)
6. ExactEquity, LLC (organized in Delaware)
7. Execution Access, LLC (organized in Delaware)
8. FinQloud LLC (organized in Delaware)
9. FINRA/NASDAQ Trade Reporting Facility LLC (organized in Delaware)
10. FTEN, Inc. (incorporated in Delaware)
11. Global Network Content Services, LLC ( organized in Florida)
12. GlobeNewswire, Inc. (incorporated in California)
13. GraniteBlock, Inc. (incorporated in Delaware)
14. Granite Redux, Inc. (incorporated in Delaware)
15. Inet Futures Exchange, LLC (organized in Delaware)
16. Kleos Managed Services Holdings, LLC (organized in Delaware)
17. Kleos Managed Services, L.P. (organized in Delaware)
18. Marketwire, Inc. (organized in California)
19. MW Holdco (2006) Inc. (organized in Delaware)
20. NASDAQ Energy Futures, LLC (organized in Delaware)
21. Nasdaq Execution Services, LLC (organized in Delaware)
22. NASDAQ Futures, Inc. (incorporated in Pennsylvania)
23. NASDAQ Global, Inc. (incorporated in Delaware)
24. Nasdaq International Market Initiatives, Inc. (incorporated in Delaware)
25. NASDAQ OMX BX Equities LLC (organized in Delaware)
26. NASDAQ BX, Inc. (incorporated in Delaware)
27. Nasdaq Commodities Clearing LLC (organized in Delaware)
28. Nasdaq Corporate Solutions, Inc. (incorporated in Delaware)
29. Nasdaq Corporate Solutions, LLC (organized in Delaware)
30. Nasdaq Information, LLC (organized in Delaware)
31. NASDAQ PHLX LLC (organized in Delaware)
32. NASDAQ OMX (San Francisco) Insurance LLC (organized in Delaware)
33. NASDAQ Options Services, LLC (organized in Delaware)
34. Nasdaq Technology Services, LLC (organized in Delaware)
35. Norway Acquisition LLC (organized in Delaware)
36. NPM Securities, LLC (organized in Delaware)
37. Nasdaq Educational Foundation, Inc. (incorporated in Delaware) (non-profit)
38. Operations & Compliance Network, LLC (incorporated in Delaware)
39. The NASDAQ Options Market LLC (organized in Delaware)
40. The NASDAQ Private Market, LLC (organized in California)
41. The NASDAQ Stock Market LLC (organized in Delaware)
42. SecondMarket Solutions, Inc. (organized in Delaware)
43. SecondMarket Labs, LLC (organized in Delaware)
44. SMTX, LLC (organized in Delaware)
45. The Stock Clearing Corporation of Philadelphia (incorporated in Pennsylvania)

**Foreign Subsidiaries***

1. 2157971 Ontario Ltd. (organized in Canada)
2. AB Nasdaq Vilnius (organized in Lithuania)

3. AS eCSD Expert (organized in Estonia)
4. AS Eesti Väärtpaberikeskus (organized in Estonia)
5. AS Latvijas Centralais depozitarijs (organized in Latvia)
6. Bwise Beheer B . V . (organized in the Netherlands)
7. Bwise B . V . (organized in the Netherlands)
8. Bwise Germany GmbH (organized in Germany)
9. Bwise Holding B . V . (organized in the Netherlands)
10. Chi-X Canada ATS Limited (organized in Toronto, Canada)
11. Clearing Control CC AB (organized in Sweden)
12. Eignarhaldsfelagid Verdbrefathing hf. (organized in Iceland)
13. Ensoleillement Inc. (organized in New Brunswick, Canada)
14. Farm Church Holdings ULC (organized in British Columbia, Canada)
15. Hugin AS (organized in Norway )
16. Indxis Ltd (organized in the United Kingdom)
17. Lithuanian Central Securities Deposit o ry (organized in Lithuania)
18. Maiclair Holdings ULC (organized in British Columbia, Canada)
19. Marketwire China Holding (HK) Limited (organized in Hong Kong)
20. Marketwired L.P. (organized in Canada)
21. Marketwired UK Limited (organized in the United Kingdom)
22. Nasdaq Canada Inc. (organized in Canada)
23. Nasdaq International Ltd (organized in the United Kingdom)
24. Nasdaq Australia Holding Pty Ltd (organized in Australia)
25. Nasdaq Broker Services AB (organized in Sweden)
26. Nasdaq CSD Iceland hf. (organized in Iceland)
27. Nasdaq Clearing AB (organized in Sweden)
28. Nasdaq Copenhagen A/S (organized in Denmark)
29. Nasdaq Corporate Solutions (India) Private Limited (organized in India)
30. Nasdaq Corporate Solutions International Limited (organized in the United Kingdom)
31. Nasdaq Exchange & Clearing Services AB (organized in Sweden)
32. NASDAQ OMX Europe Ltd (organized in the United Kingdom)
33. NASDAQ OMX France SAS (organized in France)
34. NASDAQ OMX Germany GmbH (organized in Germany)
35. Nasdaq Helsinki Ltd (organized in Finland)
36. Nasdaq Holding AB (organized in Sweden)
37. Nasdaq Holding D e nmark A/S (organized in Denmark)
38. Nasdaq Holding Luxembourg S á rl (organized in Luxembourg)
39. Nasdaq Iceland hf. (organized in Iceland)
40. NASDAQ OMX Korea Ltd. (organized in South Korea)
41. Nasdaq NLX Ltd (organized in the United Kingdom)
42. Nasdaq Nordic Ltd (organized in Finland)
43. Nasdaq Oslo ASA (organized in Norway)
44. Nasdaq Riga, AS (organized in Latvia)
45. Nasdaq (Asia Pacific) Pte. Ltd. (organized in Singapore)
46. Nasdaq Stockholm AB (organized in Sweden)
47. Nasdaq Tallinn AS (organized in Estonia)
48. Nasdaq Teknoloji Servisi Limited Sirketi (organized in Turkey)
49. Nasdaq Vilnius Services UAB (organized in Lithuania)
50. Nasdaq AB (organized in Sweden)
51. Nasdaq Ltd (organized in China)
52. OMX Netherlands B . V . (organized in the Netherlands)
53. OMX Netherlands Holding B . V . (organized in the Netherlands)
54. Nasdaq Pty Ltd (organized in Australia)

55. Nasdaq Technology AB (organized in Sweden)
56. Nasdaq Technology Canada Inc. (organized in Canada)
57. Nasdaq Technology Energy Systems AS (organized in Norway)
58. Nasdaq Technology Italy Srl (organized in Italy)
59. Nasdaq Technology Japan Ltd (organized in Japan)
60. Nasdaq Treasury AB (organized in Sweden)
61. Nasdaq Treasury Euro AB (organized in Sweden)
62. OMX Treasury Euro Holding AB (organized in Sweden)
63. Shareholder.com B.V. (organized in the Netherlands)
64. SMARTS (Asia) Ltd (organized in China)
65. SMARTS Broker Compliance Pty Ltd (organized in Australia)
66. SMARTS Group Holdings Pty Ltd (organized in Australia)
67. SMARTS Market Surveillance Pty Ltd (organized in Australia)

* The list of subsidiaries does not include foreign branches of particular subsidiaries.

**Exhibit 23.1**

**Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-3 No. 333-209080) of Nasdaq, Inc. ,

(2) Registration Statement (Form S-8 No. 333-196838) pertaining to Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc.) Equity Incentive Plan ,

(3) Registration Statement (Form S-8 No. 333-167724) pertaining to Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc.) Employee Stock Purchase Plan,

(4) Registration Statement (Form S-8 No. 333-167723) pertaining to Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc.) Equity Incentive Plan,

(5) Registration Statement (Form S-8 No. 333-110602) pertaining to The Nasdaq Stock Market, Inc. Equity Incentive Plan,

(6) Registration Statement (Form S-8 No. 333-106945) pertaining to the Employment Agreement with Robert Greifeld of The Nasdaq Stock Market, Inc.,

(7) Registration Statement (Form S-8 No. 333-76064) pertaining to The Nasdaq Stock Market, Inc. 2000 Employee Stock Purchase Plan,

(8) Registration Statement (Form S-8 No. 333-72852) pertaining to The Nasdaq Stock Market, Inc. 2000 Employee Stock Purchase Plan, and

(9) Registration Statement (Form S-8 No. 333-70992) pertaining to The Nasdaq Stock Market, Inc. Equity Incentive Plan;

of our reports dated February 26, 2016 , with respect to the consolidated financial statements and schedule of Nasdaq , Inc. and the effectiveness of internal control over financial r eporting of Nasdaq , Inc. included in this Annual Repo rt (Form 10-K) of Nasdaq , Inc. for the year ended December 31, 201 5 .

***/s/ Ernst & Young LLP***

New York, New York
February 26, 2016

**Exhibit 24.1**

POWER OF ATTORNEY
ANNUAL REPORT ON FORM 10-K
NASDAQ, INC.

Know all men by these presents, that the undersigned, a director of Nasdaq , Inc., a Delaware corporation, hereby constitutes and appoints Edward S. Knight and Joan C. Conley, and each of them acting individually, the undersigned's true and lawful attorneys-in-fact and agents, each with full power and substitution and resubstitution, for him and in his name, place, and stead, in any case and all capacities to:

(1) execute for and on behalf of the undersigned, an Annual Report on Form 10-K of Nasdaq , Inc. for the fis cal year ended December 31, 2015 , including any and all amendments and additions thereto (collectively, the "Annual Report") in accordance with the Securities Exchange Act of 1934, as amended, and the rules thereunder;

(2) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to file, or cause to be filed, the Annual Report with all exhibits thereto (including this Power of Attorney), and other documents in connection therewith, with the United States Securities and Exchange Commission; and

(3) take any other action or any type whatsoever in connection with the foregoing which, in the opinion of such attorneys-in-fact, may be of benefit to, in the best interest of, or legally required by, the undersigned, it being understood that the documents executed by such attorneys-in-fact on behalf of the undersigned pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as such attorneys-in-fact may approve in such attorneys-in-fact's discretion.

The undersigned hereby grants to each attorney-in-fact full power and authority to do and perform any and every act and thing whatsoever requisite, necessary or proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such shall lawfully do or cause to be done by virtue of this Power of Attorney and the rights and powers herein granted.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of February 26, 2016 .

/s/ Charlene T. Begley

Signature

POWER OF ATTORNEY
ANNUAL REPORT ON FORM 10-K
NASDAQ , INC.

Know all men by these presents, that the undersigned, a director of Nasdaq , Inc., a Delaware corporation, hereby constitutes and appoints Edward S. Knight and Joan C. Conley, and each of them acting individually, the undersigned's true and lawful attorneys-in-fact and agents, each with full power and substitution and resubstitution, for him and in his name, place, and stead, in any case and all capacities to:

(1) execute for and on behalf of the undersigned, an Annual Report on F orm 10-K of Nasdaq , Inc. for the fiscal year ended December 31, 2015 , including any and all amendments and additions thereto (collectively, the "Annual Report") in accordance with the Securities Exchange Act of 1934, as amended, and the rules thereunder;

(2) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to file, or cause to be filed, the Annual Report with all exhibits thereto (including this Power of Attorney), and other documents in connection therewith, with the United States Securities and Exchange Commission; and

(3) take any other action or any type whatsoever in connection with the foregoing which, in the opinion of such attorneys-in-fact, may be of benefit to, in the best interest of, or legally required by, the undersigned, it being understood that the documents executed by such attorneys-in-fact on behalf of the undersigned pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as such attorneys-in-fact may approve in such attorneys-in-fact's discretion.

The undersigned hereby grants to each attorney-in-fact full power and authority to do and perform any and every act and thing whatsoever requisite, necessary or proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such shall lawfully do or cause to be done by virtue of this Power of Attorney and the rights and powers herein granted.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of February 26 , 201 6 .

/s/ Steven D. Black

Signature

POWER OF ATTORNEY
ANNUAL REPORT ON FORM 10-K
NASDAQ , INC.

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/s/ Börje E. Ekholm

Signature

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NASDAQ , INC.

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/s/ Glenn H. Hutchins

Signature

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NASDAQ , INC.

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/s/ Essa Kazim

Signature

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/s/ Thomas A. Kloet

Signature

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/s/ John D. Markese

Signature

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/s/ Ellyn A. McColgan

Signature

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/s/ Michael R. Splinter

Signature

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NASDAQ, INC.

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IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of February 26, 2016 .

/s/ Lars R. Wedenborn

Signature

**Exhibit 31.1**

**CERTIFICATION**

I, Robert Greifeld, certify that:

1. I have reviewed this Annual Report on Form 10-K of N asdaq , Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Robert Greifeld

Name: Robert Greifeld

Title: Chief Executive Officer

Date: February 26 , 201 6

**Exhibit 31.2**

**CERTIFICATION**

I, Ron ald Hassen , certify that:

1. I have reviewed this Annual Report on Form 10-K of N asdaq , Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Ron ald Hassen

Name: Ron ald Hassen

Title: Interim Chief Financial Officer and Senior Vice President and Controller

Date: February 26 , 201 6

**Exhibit 32.1**

**Certification of CEO and CFO Pursuant to**
**18 U.S.C. Section 1350**
**as Adopted Pursuant to**
**Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the Annual Report on Form 10-K of N asdaq , Inc. (the "Company") for the year ended December 31, 201 5 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Robert Greifeld, as Chief Executive Officer of the Company, and Ron ald Hassen , as Interim Chief Financial Officer and Senior Vice President and C ontroller of the Company, each hereby certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of his knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of the operations of the Company.

/s/ Robert Greifeld

Name: Robert Greifeld

Title: Chief Executive Officer

Date: February 26 , 201 6

/s/ Ron ald Hassen

Name: Ron ald Hassen

Title: Interim Chief Financial Officer and Senior Vice President and Controller

Date: February 26 , 201 6

This certification accompanies the Report pursuant to § 906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by the Sarbanes-Oxley Act of 2002, be deemed filed by the Company for purposes of § 18 of the Securities Exchange Act of 1934, as amended.