Intercontinental Exchange, Inc.
Form 10-K
February 07, 2017

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

(Mark One)

þ	ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the fiscal year ended December 31, 2016
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 001-36198

Intercontinental Exchange, Inc.
(Exact name of registrant as specified in its charter)

Delaware	46-2286804
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification Number)
5660 New Northside Drive, Atlanta, Georgia	30328
(Address of principal executive offices)	(Zip Code)

(770) 857-4700
Registrant's telephone number, including area code

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $0.01 par value per share	New York Stock Exchange

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 þ 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 þ
Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act 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 þ 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 during

the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes þ No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Annual Report on 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 definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer þ	Accelerated filer ¨	Non-accelerated filer ¨	Smaller reporting company ¨
		(Do not check if a smaller company)	

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

The aggregate market value of the registrant’s voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold as of the last business day of the registrant’s most recently completed second fiscal quarter was $30,181,720,745. As of February 3, 2017, the number of shares of the registrant’s Common Stock outstanding was 595,341,344 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information contained in the registrant’s Proxy Statement for the 2017 Annual Meeting of Stockholders is incorporated herein by reference in Part III of this Annual Report on Form 10-K. The Proxy Statement will be filed with the Securities and Exchange Commission within 120 days after the end of the registrant’s fiscal year to which this report relates.

Intercontinental Exchange, Inc.
ANNUAL REPORT ON FORM 10-K
For the Fiscal Year Ended December 31, 2016
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PART I

In this Annual Report on Form 10-K, or Annual Report, and unless otherwise indicated, the terms "Intercontinental Exchange", "ICE", "we", "us", "our", "our company", and "our business" refer to Intercontinental Exchange, Inc. together wit consolidated subsidiaries. References to ICE products mean products listed on one or more of our markets.

The following discussion should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this Annual Report. Due to rounding, figures in tables may not sum exactly. All references to "options" or "options contracts" in the context of our futures products refer to options on futures contracts.

Forward-Looking Statements

This Annual Report, including the sections entitled "Business", "Legal Proceedings," "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations", contains forward-looking statements that are based on our beliefs and assumptions and information currently available to us. You can identify these statements by terminology such as "may," "will," "should," "could," "would," "targets," "goal," "expect," "intend," "plan," "anticipate," " "estimate," "predict," "potential," "continue," or the antonyms of these terms or other comparable terminology. Forward-looking statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our results, levels of activity, performance, cash flows, financial position or achievements to differ materially from those expressed or implied by these statements. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Accordingly, we caution you not to place undue reliance on any forward-looking statements we may make.

Factors that may affect our performance and the accuracy of any forward-looking statements include, but are not limited to, those listed below:

- conditions in global financial markets and domestic and international economic, political and social conditions;
- the impact of the introduction of or any changes in laws, regulations, rules or government policy with respect to financial markets, increased regulatory scrutiny or enforcement actions and our ability to comply with these requirements;
- volatility in commodity prices, equity prices, and price volatility of financial benchmarks and instruments such as interest rates, credit spreads, equity indices and foreign exchange rates;
- the business environment in which we operate and trends in our industry, including trading volumes, clearing, data services, fees, changing regulations, competition and consolidation;
- the success of our clearing houses and our ability to minimize the risks associated with operating clearing houses in multiple jurisdictions;
- the success of our equity exchanges and the exchanges' compliance with their regulatory and over-sight responsibilities;
- the resilience of our electronic platforms and soundness of our business continuity and disaster recovery plans;
- continued high renewal rates of subscription-based data revenues;
- our ability to identify and effectively pursue, implement and integrate acquisitions and strategic alliances;
- our ability to complete and realize the synergies and benefits of our acquisitions within the expected time frame, and to integrate acquired operations with our business;
- our ability to effectively maintain our growth;
- the performance and reliability of our other technologies and those of third party service providers, including our ability to keep pace with technological developments and ensure that the technology we utilize is not vulnerable to security risks or other disruptive events;
- our ability to identify trends and adjust our business to benefit from such trends;
- the accuracy of our cost and other financial estimates and our belief that cash flows from operations will be sufficient to service our debt and fund our operational and capital expenditure needs;
- our ability to maintain existing market participants and data customers, and attract new ones, and to offer additional products and services, leverage our risk management capabilities and enhance our technology in a timely and cost-effective fashion;

- our ability to attract and retain key talent;
- our ability to protect our intellectual property rights and to operate our business without violating the intellectual property rights of others; and
- potential adverse results of threatened or pending litigation and regulatory actions and proceedings.

These risks and other factors include, among others, those set forth in Item 1(A) under the caption “Risk Factors” and elsewhere in this Annual Report, as well as in other filings we make with the Securities and Exchange Commission, or SEC. Due to the uncertain nature of these factors, management cannot assess the impact of each factor on the business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

Any forward-looking statement speaks only as of the date on which such statement is made, and we undertake no obligation to update any of these statements to reflect events or circumstances occurring after the date of this Annual Report. New factors may emerge and it is not possible to predict all factors that may affect our business and prospects.

ITEM 1. BUSINESS

Our Business

We are a leading global operator of regulated exchanges, clearing houses and listings venues, and a provider of data services for commodity and financial markets. We operate regulated marketplaces for listing, trading and clearing a broad array of derivatives and securities contracts across major asset classes, including energy and agricultural commodities, interest rates, equities, equity derivatives, exchange traded funds, credit derivatives, bonds and currencies. We offer end-to-end market data services to support the trading, investment, risk management and connectivity needs of customers across virtually all asset classes. Below is a list of the global markets and related products that we currently serve.

Our exchanges include futures exchanges in the United States, or U.S., United Kingdom, or U.K., Continental Europe, Canada and Singapore, and cash equities, equity options and bond exchanges in the U.S. We also operate over-the-counter, or OTC, markets for physical energy and credit default swaps, or CDS, trade execution. To serve global derivatives markets, we operate central counterparty clearing houses in the U.S., U.K., Continental Europe, Canada and Singapore. We offer a range of data services for global financial and commodity markets, including pricing and reference data, exchange data, analytics, feeds, desktops and connectivity solutions. Through our markets, clearing houses, listings and data services, we provide end-to-end solutions for our customers through liquid markets, benchmark products, access to capital markets, and related services to support their ability to manage risk and raise capital.

Our business is currently conducted as two reportable business segments, our Trading and Clearing segment and our Data and Listings segment, and the majority of our identifiable assets are located in the U.S. and U.K. For a summary of our revenues, net assets and net property and equipment by geographic region, see note 18 to our consolidated financial statements included in this Annual Report.

Derivatives Exchanges

Our derivatives markets provide a means for trading and managing risks associated with price volatility, securing physical delivery of certain commodities, as well as enabling investment, asset allocation and diversification. The majority of our commodity contract volume is settled based upon the difference between the contract price and the value of the underlying commodity at contract expiry rather than through physical delivery of the commodity or financial instrument itself (commonly referred to as cash or financially-settled). Our futures and option contracts on futures contracts are cleared through one of our central clearing houses. Our options markets are operated via a dual market structure through a single technology platform. Our options markets encourage deep liquidity and encourage market makers to provide the best possible prices.

We conduct our derivatives markets through the following regulated exchanges:

- ICE Futures Europe is a leading exchange for futures and options contracts based on energy and agricultural commodities, interest rates, equity derivatives and emissions. ICE Clear Europe clears contracts traded on ICE Futures Europe.
- ICE Futures U.S. is a leading exchange that lists futures and options for agricultural and energy commodities, equity indices, currencies, credit and precious metals. ICE Clear Europe clears the energy contracts traded on ICE Futures U.S. and ICE Clear U.S. clears all other contracts traded on ICE Futures U.S.
- ICE Futures Canada is Canada's leading agricultural futures and options exchange. It offers futures and options contracts on canola, milling wheat, durum wheat and barley. ICE Clear Canada clears contracts traded on ICE Futures Canada.
- ICE Endex is a leading continental European energy exchange providing regulated markets for natural gas and power derivatives, gas balancing markets and gas storage services and is based in Amsterdam, the Netherlands. We own a majority stake of ICE Endex, with NV Netherlands Gasunie, or Gasunie, holding a minority stake. ICE Clear Europe provides clearing for ICE Endex.
- ICE Futures Singapore lists futures contracts for energy, gold and foreign exchange commodities. ICE Clear Singapore provides clearing for ICE Futures Singapore.
- NYSE Amex Options is a U.S. equity options exchange that offers order execution through a hybrid model (both electronic and via open outcry on our trading floor adjoining the New York Stock Exchange) in approximately 2,500 options issues.
- NYSE Arca Options is also a U.S. equity options exchange that offers order execution through a hybrid model, with both electronic trading and trading via our trading floor in San Francisco. NYSE Arca Options offers trading in approximately 2,200 options issues.

OTC Markets

Our OTC markets include both regulated and unregulated platforms for the execution of cleared and bilateral, or non-cleared, CDS instruments and bilateral energy contracts. ICE Swap Trade, Creditex Group and its subsidiaries (collectively, "Creditex") and Creditex Brokerage provide trade execution in our CDS business and are authorized and regulated by the Commodity Futures Trading Commission, or CFTC. We list financially settled bilateral energy contracts on ICE Swap Trade and offer electronic trading on our physically settled North American natural gas, power, and global crude and refined oil products. We offer electronic trading of contracts based on physically settled natural gas, power and refined oil products through ICE U.S. OTC Commodity Markets.

Clearing Houses

We operate clearing houses, each of which acts as a central counterparty that becomes the buyer to every seller and the seller to every buyer. Through this central counterparty function, the clearing houses provide financial security for each transaction for the duration of the position by limiting counterparty credit risk. Our clearing houses are responsible for providing clearing services to each of our futures exchanges and certain of our clearing houses clear contracts traded outside of our execution venues. Our clearing houses are:

- ICE Clear Europe clears ICE Futures Europe and ICE Endex futures contracts for interest rates, equity indices, energy and agriculture products, as well as ICE Futures U.S. futures contracts for energy and OTC European CDS instruments;
- ICE Clear U.S. clears ICE Futures U.S. soft commodity, currency, metals, credit and domestic and equity index futures contracts;
- ICE Clear Credit clears North American, European, Asian-Pacific and Emerging Market CDS instruments;
- ICE Clear Canada clears ICE Futures Canada agricultural futures contracts;

- ICE Clear Netherlands clears Dutch equity options (which are traded on The Order Machine, an unrelated trading platform); and
- ICE Clear Singapore clears ICE Futures Singapore commodity contracts and foreign exchange, or FX.

Securities Trading and Listings

We operate three securities exchanges for the trading of cash equities, including exchange traded funds, or ETFs, fixed income securities and securities options. One of the primary functions of these markets is to ensure that orders to purchase and sell securities are executed in a fair, orderly and efficient manner. In addition, through our listings operations, we offer corporate and ETF issuers access to the U.S. capital markets. We conduct our securities trading and listings business through the following exchanges and marketplaces:

- The New York Stock Exchange is a leading global cash equity exchange. It is the leading equity exchange for initial public offerings, or IPOs, globally, and enables companies seeking to raise capital to become publicly listed through the IPO process upon meeting exchange listing standards. In addition to common stocks, preferred stocks and warrants, the New York Stock Exchange, or NYSE, lists structured products, such as capital securities and mandatory convertible securities. In addition, NYSE operates NYSE Bonds, an electronic trading platform with transparent pricing for trading debt securities, including corporate bonds.
- NYSE MKT, formerly NYSE Amex and prior to that the American Stock Exchange, became part of NYSE Group, Inc., or NYSE Group, in 2008. It is our U.S. listing venue for emerging growth companies. NYSE MKT supports growth companies that benefit from a fully integrated trading platform model similar to the New York Stock Exchange. NYSE MKT provides a listing venue for a broad range of companies that may not qualify for listing on the New York Stock Exchange. NYSE MKT also lists and trades securities options.
- NYSE Arca offers trading of more than 8,000 listed securities, including listings on the NYSE, Nasdaq, Inc. and BATS Global Markets, Inc., or BATS. NYSE Arca is the leading listing and trading platform for ETFs and exchange traded notes. NYSE Arca also lists and trades securities options.

Data Services

Our data business, ICE Data Services, or IDS, initially distributed data created from our exchanges and clearing houses, which currently spans nine asset classes at eleven exchanges and six clearing houses. We have completed acquisitions of data services companies, including Interactive Data, SuperDerivatives, Trayport and certain assets from S&P Global, which enables IDS to provide services across the full spectrum of financial and commodity markets to meet the needs of asset managers, financial institutions, commercial hedgers and corporations, among others. The diversity and quality of the market data we distribute, together with technology and connectivity solutions, support liquidity, price discovery, trading and investing, risk management, compliance, reporting and other operational activities in global financial markets.

We have defined our data business in three main categories of services: Pricing and Analytics; Exchange Data; and Desktops, and Connectivity. These encompass a broad range of services, such as the distribution of real-time information provided by our markets and others' markets relating to prices, transactions and orders, and the comprehensive network of infrastructure services provided by the Secure Financial Transaction Infrastructure, or SFTI, which connects our markets with other market centers as well as our global aggregated consolidated feeds. We also provide valuation, reference, instrument data and analytical services, as well as pricing and valuation services, for benchmarks, ETFs and a range of financial derivatives and clearing house positions, including ICE indices for fixed income markets. In addition, through ICE Benchmark Administration, or IBA, we administer regulated benchmarks including LIBOR, Gold Price and ICE Swap Rate (formerly known as ISDAFIX).

On October 3, 2016, we completed our acquisition of Standard & Poor's Securities Evaluations, Inc., or SPSE, a provider of fixed income evaluated pricing, and Credit Market Analysis, a provider of independent data for the OTC markets, including credit derivatives and bonds. These solutions will further our depth of products in the fixed income valuation space, especially in U.S. municipal instruments, as well as expand our data sets within the CDS market. SPSE, which we renamed Securities Evaluations upon completion of the acquisition, is currently being managed separately from the IDS valuation services and is expected to be integrated in 2017.

We intend to continue to invest to expand our data distribution offerings across asset classes, data types and services to serve the evolving needs of our global customer base. For additional information about our current data service offerings, see "Our Products and Services" below.

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Our History

Our Competitive Strengths and Competition

Competitive Strengths

We operate global markets in the asset classes in which we compete, including futures, cash equities, equity options and OTC markets. We believe our key strengths include our:

- global data services including pricing and analytics, desktop and connectivity services across multiple asset classes for futures and OTC markets;
- diverse liquid, global derivatives and equities markets across 11 regulated exchanges as well as OTC venues;
- secure central counterparty clearing houses and risk management for global derivatives markets through 6 clearing houses;
- leading global cash equities, options and ETF trading venues together with leading equities and ETF listings venues; and
- widely-distributed, leading edge technology for trading, clearing, data and trade processing.

We are a leading global data provider and offer a range of data services based on data from our exchanges, markets and clearing houses, as well as analytics, valuation, reference data, desktop, benchmark services and connectivity services. Our acquisitions of SuperDerivatives, Interactive Data, Securities Evaluations and Credit Market Analysis have served to expand our data services based on rising demand for independent, real-time information, which is being driven by regulation, market fragmentation, passive investing and indexation, and increased automation. We provide data to global financial institutions and asset managers, commercial hedgers, corporates, traders and consumers across virtually all asset classes. We believe our data services are relevant to our clients’ business operations regardless of market volatility and price levels due to the need for continuous information and analysis. Our data connectivity services are operated out of data centers in the U.S. and Europe.

Our regulated exchanges and trading and clearing platforms offer qualified market participants access to our markets and risk management services, covering a range of asset classes, including interest rates, equities, energy, agricultural, metals, equity index, environmental, currencies, CDS and equity options. By operating several markets and offering thousands of products we provide our participants with flexibility to implement their trading and risk management strategies with common technology, integrated clearing and data solutions. We operate in multiple geographies and serve customers in dozens of countries as a result of products that are globally relevant.

Many of our futures contracts serve as global benchmarks for managing risk relating to exposure to price movements in the underlying products, including financial, energy and agricultural commodities. For example, we operate the leading market for trading in ICE Brent crude oil futures, as measured by the volume of contracts traded in 2016 according to the Futures Industry Association. The ICE Brent Crude futures contract is the benchmark for pricing light, sweet crude oil produced and consumed outside of the U.S. It is part of the Brent complex, which forms the price reference for approximately two-thirds of the world's internationally-traded physical oil. Based on 2016 contract volume, nearly half of the world's crude and refined oil futures contracts were traded through ICE Futures Europe. In 2015, open interest in Brent surpassed open interest in Nymex WTI. In addition, we operate a leading market for short-term European interest rates contracts, with our principal contracts based on implied forward rates on European Money Markets Institute Euribor rates and a short-term Sterling contract based on the ICE Libor rate. We also offer markets in soft commodity benchmark contracts, including sugar, cocoa, cotton, coffee and canola, which serve as global price benchmarks.

We offer a range of central clearing and related risk management services to promote the liquidity and security of our markets in jurisdictions around the world to meet local regulatory and operational needs in key financial market centers. The credit and performance assurance provided by our clearing houses to clearing members is designed to substantially reduce counterparty risk and is a critical component of our exchanges' identities as reliable and secure marketplaces for global transactions. We believe the range of products cleared and the risk management services offered by our clearing houses are a competitive advantage and attract market participants. Our clearing houses are designed to protect the financial integrity of our markets by maintaining strong governance and rules, managing collateral, facilitating payments and collections, enhancing capital efficiency and limiting counterparty credit risk.

We operate the leading global listings and trading exchanges for equities and ETFs, and offer our customers access to the U.S. capital markets. Our listing venues allow companies to list domestic and international equity securities, corporate structured products, convertible bonds, trackers and debt securities. In 2016, the NYSE was the global leader in capital raising for the sixth consecutive year, with $120 billion raised in total IPO proceeds and follow-on offerings, including the largest U.S. IPO of the year.

Competition

The execution markets in which we operate are global and highly competitive. We face competition in all aspects of our business from a number of different enterprises, both domestic and international, including traditional exchanges, electronic trading platforms, data vendors and voice brokers. We believe we compete on the basis of a number of factors, including:

- depth and liquidity of markets;
- price transparency;
- reliability and speed of trade execution and processing;
- technological capabilities and innovation;
- breadth of products and services;
- rate and quality of new product developments;
- quality of service;
- stability of services;
- distribution and ease of connectivity;
- mid- and back-office service offerings, including differentiated and value-added services;
- transaction costs; and
- reputation.

We believe that we compete favorably with respect to these factors, and that our deep, liquid markets, breadth of product offerings, new product development, customer relationships and efficient, secure settlement, clearing and support services distinguish

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us from our competitors. We believe that in order to maintain our competitive position, we must continue to develop new and innovative products and services, enhance our technology infrastructure, maintain liquidity and offer competitive costs.

In our derivatives markets, certain exchanges replicate our futures contracts. For example, CME Group lists our futures on agricultural and energy commodities, currency and equity index contracts. Nasdaq Futures, Inc., or NFX, an energy platform operated by Nasdaq has also listed certain of our energy contracts. We compete in European interest rates and equity derivatives with Eurex, which is the derivatives exchange operated by Deutsche Börse, NLX, a U.K. based multi-lateral trading facility operated by Nasdaq, and Curve Global, a consortium of banks and exchanges that lists interest rate futures. In the European utilities markets, we compete with EEX.

In addition to venues that offer futures products, we also face competition from electronic trading systems, third-party clearing houses and technology firms. Additional ventures could form, or have been formed, to provide services that could potentially compete with certain services that we provide.

We compete with voice brokers active in the credit derivatives markets, other electronic trading platforms for derivatives, clearing houses and market data vendors. ICE Swap Trade and Creditex compete with other swap execution facilities and large inter-dealer brokers in the credit derivatives market.

We face significant competition with respect to equities trading, and this competition is expected to remain intense. Our current and prospective competitors include regulated markets, dark pools and other alternative trading systems, market makers and other execution venues. We also face competition from large brokers and customers that may assume the role of principal and act as counterparty to orders originating from retail customers, or by matching their respective order flows through bilateral trading arrangements, including through internalization of order flow.

Our principal competitor for listings in the U.S. is Nasdaq OMX Group, Inc., or Nasdaq OMX. For ETF listings, we compete with Nasdaq OMX and BATS. We also face competition for foreign issuer listings from a number of stock exchanges outside the U.S., including the London Stock Exchange, Deutsche Börse, Euronext and stock exchanges in Hong Kong and Toronto. As other liquidity venues seek exchange status, we may face more competition for listings.

NYSE Arca and NYSE Amex Options face considerable competition in the equity options markets. Their principal U.S. competitors are the Chicago Board Options Exchange, Inc., or CBOE, BATS and Nasdaq OMX.

ICE Data Services operates in a competitive environment for all its constituent parts. Our Exchange Data products compete with similar offerings by other exchange groups. That competition and the competition for order flow among the exchange groups creates a competitive pricing environment for our proprietary data products. Pricing and Analytics competes with information obtained from informal industry relationships and sources, such as broker quotes. It, along with the Desktop and Connectivity business, compete with purchased third-party information and services from large global suppliers of financial market data, such as Bloomberg L.P., Thomson Reuters Corporation, IHSMarkit and SIX Financial. Our Connectivity business, SFTI, competes with other extranet providers such as CenturyLink and Transaction Network Services, known as TNS.

Our Growth Strategy

Throughout our history, we have expanded our core exchange, clearing and data businesses both organically and through acquisitions, developed innovative new products for global markets, and provided services to a larger and more diverse participant base. In addition, we have completed a number of strategic alliances to leverage our core strengths and grow our business. We seek to advance our leadership position in our markets by focusing our efforts on the following key strategies for growth:

- expand our data offerings to address the rising demand for information;
- expand on our extensive trading, clearing and risk management capabilities;
- maintain leadership in our listing businesses;
- enhance our technology infrastructure and increase distribution; and
- pursue select acquisitions and strategic relationships that maximize customer and shareholder benefits.

The record consolidated revenues and trading volume we achieved in 2016 reflect our focus on the implementation and execution of our long-term growth strategy.

Expand our Data Offerings to Address the Rising Demand for Information

With the growth of our ICE derivatives markets and NYSE equity markets, we have strengthened and enhanced our data services due to demand for more data solutions. This has been driven by many factors, and accelerated following the financial crisis due to increased automation, regulation and demand for independent real-time information. To build on our exchange data and connectivity business, in December 2015, we acquired Interactive Data, which is now part of ICE Data Services, which supports our growth strategy by expanding the markets we serve and adding new data, connectivity and valuation services. As a result, we currently produce daily evaluated prices for more than 2.7 million fixed income securities and other illiquid instruments, with an array of additional analytics and related services. By bringing together a wide range of data products, we offer customers efficiencies in accessing data while serving the growing demand for data, analysis, valuation and connectivity globally by innovating new solutions to address the need for more transparency, efficiency and information.

Also in December 2015, we acquired Trayport. Trayport is a software company that licenses its technology to serve brokers, exchanges and traders to facilitate electronic and hybrid trade execution primarily in the energy markets. This acquisition enables us to provide new technology and software-related services to our energy customers. The U.K. Competition and Markets Authority, or the CMA, undertook a review of our acquisition of Trayport under the merger control laws of the U.K. During the pendency of the review, we did not integrate Trayport into our existing business operations. For additional information regarding the Trayport acquisition, refer to Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations - Recent Developments”, which is included in this Annual Report.

In October 2016, we acquired from S&P Global, Securities Evaluations and Credit Market Analysis, which are now part of the suite of pricing and analytics products and services that comprise ICE Data Services. We will continue to look for strategic opportunities to grow our data offerings and will also continue to pursue opportunities in markets we do not currently serve but where it expands the ways in which we can serve our customers.

Expand on Our Extensive Trading, Clearing and Risk Management Capabilities

Our derivatives customer base has grown and diversified as a result of several drivers, including adding new markets and products, the move toward increased risk management and counterparty credit management, mark-to-market and margining services, and regulatory requirements. We continue to add new participants to our markets, which bring additional demand for new products and services. Our markets support price transparency and risk management, particularly in times of volatility and in many markets for products where there is less liquidity. In addition, the use of hedging, trading and risk management programs by commercial enterprises continues to rise based on the availability of technology to deliver more products, as well as the security and the capital efficiencies offered by clearing. We develop new products, but have also increased our capabilities through licenses and acquisitions of companies and intellectual property. Further, by acquiring, building and maintaining our own geographically diverse clearing operations, we are able to respond to market demand for central clearing and related risk management services across diverse geographic and regulatory jurisdictions. As new markets evolve, we intend to leverage our domain knowledge to meet additional demand for cleared products and related risk management solutions.

As requirements for regulatory compliance and capital efficiencies grow, the use of clearing, data and related post-trade services such as independent data providers and benchmark services also continues to grow. We intend to continue to expand our customer base by leveraging our existing relationships and our global sales and marketing team to promote participation in our markets, and by expanding our range of products and services.

Maintain Leadership in our Listing Businesses

The following chart depicts 2016 global capital proceeds raised on various listings venues:

In our NYSE listings business, we will continue to focus on enhancing our product offerings and services to retain and attract companies of all sizes and industries to our listing venues. In 2016, demand for our listing services continued to be strong in terms of new listings and secondary offerings. A total of 534 new issuers listed on NYSE markets in 2016 and there are over 2,400 total companies listed on the New York Stock Exchange and NYSE MKT. NYSE was the leader in capital raising in 2016 with $120 billion raised in 398 transactions. The New York Stock Exchange listed 38 IPOs in 2016 raising total IPO proceeds of $13 billion, including the largest U.S. IPO of 2016. The NYSE has listed all 25 of the last 25 IPOs greater than $700 million in proceeds, and in the last three years, the NYSE has listed 27 of the 30 largest IPOs.

In ETFs, as of December 31, 2016, NYSE Arca's listed ETFs had nearly $2.4 trillion in assets under management, or AUM, representing nearly 92% of all U.S. listed ETFs. We strive to maintain our leadership position by offering ETF issuers:

- guidance through the complete listings process, including expert consultations around regulatory and legal items;
- a decade of experience in listing more than 2,500 ETFs across a wide range of asset classes and investment strategies;
- a focus on customer service from experienced ETF professionals;
- the highest liquidity of any exchange and some of the narrowest quoted bid / ask spreads; and
- Lead Market Maker, or LMM, and incentive programs.

Enhance Our Technology Infrastructure and Increase Distribution

We develop and maintain our own network infrastructure, electronic trading platform and clearing systems to ensure scalability and the delivery of technology that meets our expanding base's demands for price transparency, reliability, risk management and transaction efficiency. We intend to continue to increase ease of access and connectivity with our existing and prospective market participants. We develop and maintain our trading and clearing systems, as well as our data solutions and many post-trade systems such as ICE Link and ICE Trade Vault, among others. We are developing a new integrated trading platform and matching engine known as NYSE Pillar that will eventually serve each of our U.S. cash equities and equity options markets to improve performance and reduce the cost and complexity of operating multiple trading systems. We also own and operate two data centers and offer connectivity solutions to global exchanges and content service providers via dedicated data circuits.

Pursue Select Acquisitions and Strategic Relationships that Maximize Customer and Shareholder Benefits

As an early consolidator in global markets to build out our markets and services for customers, we intend to continue to explore and pursue acquisitions and other strategic opportunities to strengthen our competitive position globally, broaden our product offerings and service, and support the growth of our company while maximizing shareholder value as measured by return on invested capital, earnings and cash flow growth. We may enter into business combinations, make acquisitions or enter into strategic partnerships, joint ventures or alliances, any of which may be material. In addition to growing our business, we may enter into these transactions for a variety of additional reasons, including leveraging our existing strengths to enter new markets, expanding our products and services, addressing underserved markets, advancing our technology, anticipating or responding to regulatory change or potential changes in our industry.

Our Products and Services

The primary services we provide are price discovery and trade execution, listings, trade processing and data repositories, clearing and related post-trade activities, data services and benchmark administration. As a result of the growth of our exchange business and our acquisitions of Interactive Data, Securities Evaluations and Credit Market Analysis, our data services have become a more prominent part of our business, however Securities Evaluations is currently operated separately until fully integrated. Trading in our regulated markets is available to our members and market participants. Once trades are executed on our derivatives platforms, they are matched and forwarded to a trade registration system that routes them to the applicable clearing house. In our clearing houses, derivatives trades are maintained by our risk management systems until the positions are settled and closed. Our exchanges are regulated and are responsible for carrying out self-regulatory functions and have governance, compliance, surveillance and market supervision functions. In our data businesses, we produce, package and distribute proprietary data, as well as provide market connectivity, hosting and other applications to meet the informational needs of market participants. The following provides a summary of our products and services:

Energy Futures Contracts

We operate regulated markets for energy futures contracts and options on those contracts through our subsidiaries ICE Futures Europe, ICE Futures U.S. and ICE Futures Singapore. Our core products include contracts based on crude and refined oil, natural gas, power, emissions, coal, freight, iron ore and natural gas liquids. In aggregate, we make available for trading over 1,300 energy futures contracts. Our largest energy contract is the ICE Brent crude futures contract. The contract is a derivative of the ICE Brent Index, which is based on trades in the forward physical market for blends of light, sweet crude oil that originate from oil fields in the North Sea that comprise the Brent, Forties, Oseberg, Ekofisk, or BFOE, complex as well as other oil fields that have been added in recent years. The Brent complex, which includes ICE Brent crude futures, is a group of related benchmarks used to price a range of traded oil products, including approximately two-thirds of the world’s internationally-traded crude oil. The ICE Low Sulphur Gasoil futures contract is a European diesel oil contract that offers physical delivery and serves as a middle distillate pricing benchmark for refined oil products, particularly in Europe and Asia. We also operate the world’s second largest market for trading in WTI crude oil futures, as measured by the volume of contracts traded in 2016 according to the Futures Industry Association. The WTI Crude futures contract is the benchmark for pricing U.S. crude. Nearly half of the global crude oil futures market traded at ICE during 2016. ICE also operates markets for North American natural gas and power futures contracts, and European and U.K. natural gas futures contracts.

Agricultural Futures Contracts

ICE Futures U.S. and ICE Futures Europe are our regulated, leading commodity futures exchanges for the trading of agricultural commodities. The prices for our agricultural contracts serve as global benchmarks for the physical commodity markets, including

Sugar No. 11® (world raw sugar), white sugar, Coffee "C"® (Arabica coffee), robusta coffee, Cotton No. 2® (cotton), U.S. and London cocoa and frozen concentrated orange juice.

ICE Futures Canada is the only regulated commodity futures exchange in Canada and it facilitates the trading of futures and options on futures contracts for canola, milling wheat, durum wheat and barley. ICE Futures Canada contracts are designed to provide effective pricing, trading and hedging tools to market participants worldwide. ICE Futures Canada's canola futures contract is the worldwide price benchmark for canola.

Financial Futures Contracts

ICE Futures Europe makes available for trading a range of financial futures products, including interest rate, equity index, and currency derivative products. Core products are short-term interest rate, or STIR, contracts, with its principal STIR contracts based on implied forward rates denominated in euro and sterling, such as Euribor, short-term Sterling and Gilt contracts, as well as U.S. rates including Eurodollar and GCF repo futures.

ICE Futures U.S. offers financial products in currency, equity index and credit index markets, including contracts on certain MSCI indices. We entered into an agreement with MSCI, Inc. under which we license the right to list futures and options contracts on a broad range of MSCI equity indices, most notably the Emerging Markets and EAFE indices.

ICE Futures U.S. lists futures and options contracts for approximately 60 currency pair contracts including euro-based, U.S. dollar-based, yen-based, sterling-based and other cross-rates, as well as the benchmark U.S. Dollar Index (USDX®) futures contract.

Securities Products and Listings

We offer securities trading products and listings through our securities exchanges: the NYSE, NYSE MKT and NYSE Arca. We provide multiple marketplaces for investors, broker-dealers and other market participants to meet directly to buy and sell equities, fixed income securities and ETFs. One of the primary functions of our markets is to ensure that orders to purchase and sell securities are executed in a reliable, orderly, liquid and efficient manner.

Through our listing venues, we offer our customers access to the capital markets in the U.S. We allow companies to list domestic and international equity securities, corporate structured products, convertible bonds, ETFs and bonds. Through our equity options exchanges, we offer multi-listed options on U.S. equities.

Credit Derivatives Instruments

We offer electronic trade execution for CDS instruments through Creditex Brokerage, which is authorized and regulated by the Financial Conduct Authority, or FCA, and the CFTC, and Creditex, our U.S. based interdealer broker, which is regulated by the CFTC. ICE Swap Trade provides electronic execution for the OTC credit markets. We offer clearing services for the CDS markets through ICE Clear Europe and ICE Clear Credit. Both CDS clearing houses are open-access and therefore accept qualifying trades for clearing that are executed on other venues.

CDS are derivative instruments that involve a credit risk transfer between counterparties with respect to fixed income instruments such as corporate and sovereign debt securities. CDS are mainly used to hedge against credit risk exposure related to a particular reference entity for a specified debt obligation or debt instrument.

We also operate ICE Link, which is an automated trade workflow and electronic connectivity platform for affirming credit derivatives transactions. It also provides connectivity between participants, facilitating straight-through processing to the Depository Trust & Clearing Corporation's Trade Information Warehouse for non-cleared CDS transactions or to a clearing house for CDS transactions that are clearing eligible.

OTC Energy Products

Our OTC energy markets comprise the trading of bilateral energy contracts. We operate our financially settled bilateral energy markets through ICE Swap Trade and we offer electronic trading of contracts based on physically settled natural gas, power and refined oil products through ICE U.S. OTC Commodity Markets.

As of December 31, 2016, approximately 550 OTC energy contracts were listed on our electronic trading platform for bilateral trading. A substantial portion of our OTC volume relates to approximately 70 contracts in North American natural gas and power, and global oil.

ICE Data Services (IDS)

Pricing and Analytics

IDS' Pricing and Analytics service provides global security evaluations, reference data, risk analytics, derivative pricing and other information designed to support financial institutions' and investment funds' trading, pricing activities, research, portfolio management, reporting and regulatory compliance.

We provide bond valuations to approximately 5,000 clients worldwide, including independent evaluated pricing services on over 2.7 million fixed income securities and other hard-to-value financial instruments. Our evaluated pricing spans approximately 135 countries and covers a wide range of financial instruments including sovereign, corporate and municipal bonds, structured products, leveraged loans and derivatives, and our Fair Value Information Services for international equities, options and futures. In addition, we collect, edit and normalize end-of-day pricing data, obtained from a variety of sources, including approximately 200 financial markets and exchanges globally. Clients need to value these financial instruments to meet regulatory requirements and to enable a range of mission-critical processes within their back, middle and front office.

IDS has innovated to address the need for more intraday bond market transparency and pricing information. For example, Continuous Evaluated Pricing service extends the reach of fixed income end-of-day evaluations into intraday applications. Evaluations are updated throughout the trading day as market information, including dealer quotes and trades, is received and processed. Our Best Execution service leverages our Continuous Evaluated Pricing to help traders, portfolio managers and compliance officers more closely monitor trading activities and measure trading effectiveness and quality across a growing number of venues and protocols.

Our liquidity indicators service provides an independent view of near-term relative liquidity to support clients' liquidity risk management needs. The service provides estimates of trade volume capacity, future price volatility, days to liquidate, and market price impact at both the instrument and portfolio level.

Our recently acquired Securities Evaluations business also provides fixed income evaluated pricing services, especially within the U.S. municipal bond space, to a wide range of financial companies. Until this business is integrated into IDS, it is being managed separately from Interactive Data Pricing and Reference Data LLC. In addition, Credit Market Analysis is a provider of independent data for the OTC markets, including credit derivatives and bonds. Securities Evaluations and Credit Market Analysis are part of our suite of pricing and analytics products and services.

SuperDerivatives, now part of IDS, provides valuation calculation services for OTC derivatives and structured products, specializing in complex instruments while offering multi-asset front office solutions. The offering includes a dedicated, in-house quantitative analysis team, secure and scalable grid computing, and broad coverage of implied volatility surfaces, correlations, and curves.

Our reference data complements our evaluated pricing services by offering our clients a broad range of descriptive information, covering over 10 million global financial instruments. This data is used by clients to enhance risk management, support compliance with regulatory mandates and improve operational efficiency across their organizations. We compile information from an extensive range of sources, including exchanges, underwriters, government agencies, issuers and other authoritative sources.

IDS also offers a range of regulatory solutions services designed to help clients meet the ever increasing demands placed upon the financial industry by global regulations. These services support the data and analytics requirements of our clients' compliance workflow, enabling them to more efficiently meet their commitments. Our products are developed to assist clients across sectors such as banking, insurance, asset management, and other financial organizations.

Our BondEdge® fixed income and equity portfolio analytics offerings provide financial institutions with data as well as proprietary fixed income and equity portfolio analytics to help analyze risk and return. These offerings are used by investment professionals to simulate various market environments to help forecast performance, construct portfolios, validate investment strategies, conduct stress testing, generate dynamic risk measures, analyze asset cash flows and support regulatory compliance requirements.

IDS designs and distributes many of today's leading indices and benchmarks across equities, fixed income and derivatives markets. ICE Bond Index Series is a broad representation of the U.S. investment grade, high-yield and treasury markets published in local currency terms, and include numerous metric and analytic values. Our energy benchmarks cover popular trading areas of the market, such as ICE Brent Crude futures, more than 100 North

American natural gas and power hubs, and a variety of other energy markets. Our ETF Valuations and Index Construction offering provides clients with independent and objective operational outsourcing, including design, support, maintenance, calculation and distribution of indices across fixed income instruments, currencies, equities, and commodities.

Exchange Data

We publish a broad range of historical prices and other transaction data and related content from our electronic futures trading platform and clearing houses. The data is disseminated through data vendors and directly to end users via real time feeds in a number of formats. The real-time packages are accessed on a per-user subscription basis.

We distribute real-time market data from our securities exchanges. This data includes price, transaction and order book data on all of the instruments traded on NYSE's markets. The data is disseminated through data vendors and directly to market participants. NYSE provides two types of market data products and services: data products required by the regulations governing the National Market Systems, or NMS, plans and proprietary data products.

The NMS consolidated data products meet the SEC requirement for securities markets to work together in consolidating their bids, offers and last sale prices for each security, and to provide this information to the public on a consolidated basis. Last sale prices and quotes in the New York Stock Exchange-listed, NYSE MKT-listed and NYSE Arca-listed securities are disseminated through Tape A and Tape B, which constitute the majority of our NYSE market data revenues. We also receive a share of the revenues from Tape C, which represents data related to trading of certain securities (including ETFs) that are listed on Nasdaq.

In addition, we make certain equity market data available, which is known as proprietary data. We package this type of market data as real-time products and as historical products used for analysis by traders, researchers and academics. These products are proprietary to ICE, and we do not share the revenues that they generate with other markets. Proprietary data that provides real-time quoting or trading information regarding our markets is subject to review by the SEC. In addition, the pricing for these market data products is subject to review by the SEC on the basis of whether prices are fair, reasonable and not unfairly discriminatory.

Desktops and Connectivity

Our Desktop service offers a range of products and services supporting an array of trading, wealth management, and other investment applications. These applications deliver real-time financial market information and decision support tools to help clients analyze financial markets and make investment decisions. Similarly, our web-based financial information solutions consist of market data, decision-support tools and hosting services. Our robust instant messaging, or IM, system protects the privacy of clients' business information while allowing collaboration with other market participants in the industry through a secure, compliant channel.

We offer connectivity solutions to access markets and data through highly secure, resilient and low latency network options, as well as global co-location services, and the Direct Market Access network of over 150 venues and 600 market data and news feeds. Our consolidated feeds solution provides cost-effective access to a range of real-time data sources. Clients who have agreements with any of over 460 global exchanges, trading venues and data sources covering listed and OTC securities can receive consolidated real-time and/or delayed feeds of such financial data. Our Consolidated Feed service is complemented by our Tick History service, which provides access to tick and trade data for global securities to assist clients with "best execution" requirements, transaction cost analysis and advanced charting applications. Our networks are secure, purpose-built, private multi-participant networks that provide customers connectivity to global exchanges and content service providers via dedicated data circuits with a design that ensures no single point of failure exists across the networks.

We operate purpose-built data centers in the U.K. and Mahwah, New Jersey and we manage systems in a third-party data center in Illinois to meet the needs of a largely electronic customer base. We offer server colocation space at our data centers for market participants to house their servers and applications on equivalent terms.

Trayport

Trayport licenses its technology to serve brokers, exchanges and traders to facilitate electronic and hybrid trade execution primarily in the energy markets. Although our acquisition of Trayport is currently under regulatory review, Trayport expected to enable us to provide new technology and software-related services to our energy customers. For additional information regarding the Trayport acquisition, refer to Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations - Recent Developments", which is included in this Annual Report.

ICE Benchmark Administration (IBA)

IBA is the regulated administrator of a range of benchmarks. IBA has implemented processes, governance, systems and technology that enhance the transparency and security of benchmarks and services relied upon globally.

In February 2014, IBA was authorized by the FCA to commence administration of LIBOR as an independent and regulated benchmark administrator. Since authorization, IBA has been working with global industry associations, stakeholders and regulators to transition LIBOR and improve the integrity and transparency of the benchmark. IBA has established a robust oversight and governance framework, in addition to developing surveillance technology and analytical tools to operate the benchmark setting process.

In August 2014, IBA became the ICE Swap Rate, formerly ISDAFIX, administrator following appointment by the International Swaps and Derivatives Association, or ISDA. The ICE Swap Rate benchmark represents the average mid-market swap rate for major currencies at selected maturities on a daily basis. Market participants use the rate to price and settle swap contracts and as a reference rate for floating rate bonds.

In March 2015, IBA became the administrator of the gold price. The London Bullion Market Association, or LBMA, Gold Price replaced the Gold Fixing Price that had been in existence since September 1919. The price is set in London twice a day and provides a published benchmark price that is widely used as an international pricing medium by producers, consumers, investors and central banks.

In September 2016, IBA became the operator of the ISDA SIMM Crowdsourcing Utility, which is a utility for establishing risk buckets for credit and equity assets. Market participants use these risk buckets in the calculation of initial margin for uncleared derivatives trades.

In December 2016, IBA was named by ISDA to be the Secretary to the ISDA Credit Derivatives Determinations Committees (DCs). Following a transition period of approximately six months, as DC Secretary IBA will become responsible for maintaining and operating all infrastructure required to administer the DC process and ensuring that the process is robust, transparent and meets regulatory and governance standards. The terms for administering the DC process are still being negotiated.

Clearing Services

We currently operate six clearing houses. Our clearing strategy is designed to provide financial stability to the markets served by us while providing capital efficiency and meeting the risk management, capital and regulatory requirements of a global marketplace. Our clearing houses clear, settle and guarantee the financial performance of futures contracts and options on futures contracts. ICE Clear Europe also clears European CDS instruments, and ICE Clear Credit clears North American, European, Asian-Pacific and Emerging Market CDS instruments. Through each of our clearing houses, we maintain a system for the performance of obligations for the products we clear. This system is supported by several mechanisms, including:

- rigorous clearing membership requirements;
- daily mark-to-market of positions and settlement of variation margin;
- intraday monitoring of open positions and market conditions;
- the calculation and posting of original/initial margin deposits;
- limited contribution of the clearing house's capital;
- process for conducting regular stress testing;
- maintenance of guaranty funds in which clearing members maintain deposits to mutualize losses; and
- broad assessment powers, all of which cover financial losses beyond the pre-funded guaranty funds.

The amount of margin and guaranty fund deposits fluctuates over time as a result of, among other things, the extent of open positions held at any point in time by market participants and the volatility of the market as reflected in the applicable margin rates for such contracts.

Clearing House Risk Management Practices

Our clearing houses have an excellent track record of risk management, and have never experienced an incident of a clearing member default which has required the use of the guaranty funds of non-defaulting clearing members or the assets of the clearing house. We have extensive risk management procedures in place to ensure we protect the interests of our clearing members and clearing houses. Each of our clearing houses has instituted a multi-layered risk management system of rules, policies and procedures to protect itself in the event of a clearing member default, starting with membership criteria and continuing to powers of assessment in the event of a clearing member default, generally as follows:

To ensure performance, our clearing houses maintain extensive technology and quantitative risk management systems, as well as financial and operational requirements for clearing members and minimum margin requirements for our cleared products. Our clearing houses use software based on industry standard margining conventions and on our proprietary models uniquely customized to our products to determine the appropriate margin requirements for each clearing member by simulating the possible gains and losses of complex portfolios based on price movements. Our clearing houses' margin methodologies are independently validated on an annual basis.

In the event of a payment default by a member, the default procedures specified in the rules of that clearing house would apply. In general, the clearing houses would first apply assets of the defaulting member to cover the obligation. These include original/initial margin, variation margin, positions held at the clearing house and guaranty fund deposits of the clearing member. In addition, the clearing houses could make a demand for payment pursuant to any available guarantee provided by the parent or affiliate of the defaulting clearing member. If that is not sufficient, the clearing houses would use any designated contributions held by the clearing house itself, as applicable, the guaranty fund contributions of other members and funds collected through an assessment against all other non-defaulting members, to satisfy the remaining deficit, if any. As part of the powers and procedures designed to backstop financial obligations in the event of a default, each of our clearing houses may levy assessments on all of its clearing members if there are insufficient funds available to cover a deficit following the depletion of all assets in the guaranty fund.

Our risk management framework that applies to the clearing services for the CDS markets through ICE Clear Credit and ICE Clear Europe is separate from that of our futures and options or non-CDS clearing operations. We also offer clearing services for CDS markets through ICE Clear Credit. We have established separate CDS risk pools for ICE Clear Credit and ICE Clear Europe, including separate guaranty funds and margin accounts, meaning that the CDS positions are not combined with positions in our futures and options clearing houses. The CDS clearing houses have risk management systems that are designed specifically for CDS instruments and have independent governance structures. Our CDS clearing houses are open-access pursuant to regulatory requirements and therefore accept qualifying trades for clearing that are executed on other venues. As of December 31, 2016, our CDS clearing houses clear 455 single name instruments and 136 CDS indexes.

Our clearing houses require that each clearing member make deposits to the guaranty fund. The amounts in the guaranty fund serve to secure the obligations of a clearing member to our clearing houses and may be used to cover losses in excess of the margin and clearing firm accounts sustained by our clearing houses in the event of a default of a clearing member. As of December 31, 2016, we have made combined contributions to our clearing houses guaranty funds of $253 million. ICE Clear Europe has contributed $100 million of its own cash as part of its futures and options guaranty fund as of December 31, 2016 and has also contributed $50 million of its own cash as part of its CDS guaranty fund as of December 31, 2016. ICE Clear Credit has contributed $50 million of its own cash as part of its CDS guaranty fund as of December 31, 2016 and ICE Clear U.S. has contributed $50 million of its own cash as part of its futures and options guaranty fund as of December 31, 2016. ICE Clear Canada, ICE Clear Netherlands and ICE Clear Singapore have each also contributed a combined $3 million in cash to their respective guaranty funds. Each of these amounts are reflected as long-term restricted cash in the consolidated balance sheet.

To provide a tool to address the liquidity needs of our clearing houses and manage the liquidation of margin and guaranty fund deposits held in the form of cash and high quality sovereign debt, ICE Clear Europe, ICE Clear Credit and ICE Clear U.S. have entered into Committed Repurchase Agreement Facilities, or Committed Repo. Additionally, ICE Clear Credit has entered into Committed F/X Facilities to support these liquidity needs. As of December 31, 2016, the following facilities were in place:

ICE Clear Europe:	$1.05 billion in Committed Repo to finance U.S. dollar, euro and pound sterling sovereign debt deposits.
ICE Clear Credit:	$300 million in Committed Repo to finance U.S. dollar and euro sovereign debt deposits, €800 million in Committed Repo to finance euro sovereign debt deposits, and €1.0 billion in Committed F/X Facilities to finance euro payment obligations with U.S. dollar deposits.
ICE Clear U.S.:	$250 million in Committed Repo to finance U.S. dollar sovereign debt deposits.

Our Customer Base

Derivatives Markets

Customers in our derivatives markets include market participants seeking to trade and manage risk. They include those served by our energy, financial, and agricultural markets, including, commodity producers and consumers, financial institutions, money managers, trading firms, and other business entities.

Securities Trading and Listings

Securities trading and listings customers include various market participants in the equities markets, from financial institutions, institutional investors, wholesalers, hedge funds, quantitative funds, algorithmic traders and individual investors to companies looking to raise capital and list their securities on one of our equity exchanges. Our customers are also our members, which are entities registered as broker-dealers with the SEC that have obtained trading permits or licenses in accordance with, and subject to the rules of, the exchange in which they are members.

Our global listings businesses offer capital raising to and trading of over 2,400 companies globally, representing over $25 trillion in market capitalization as of December 31, 2016. NYSE’s listed companies represent a diverse range of sectors, including technology, financial services, consumer brands, industrial, transportation, media, energy and mining. These companies meet minimum initial and ongoing listings requirements, including governance and financial standards, as established by the exchange.

Data Services

ICE Data Services distributes data globally to every aspect of today’s financial services industry. Within the multitude of the trading environments (for example: commodity trading companies, proprietary trading firms, futures commission merchants), ICE services are used to execute trades more effectively. Buy side clients utilize our products in every aspect of their organizations, from security selection, risk management, and compliance of mission critical operations, such as fund valuation. In addition, our services are also used by hundreds of value added resellers, such as custodians, wealth managers, software providers, and other outsourcing organizations who use our products and services across their front, middle and back offices.

Product Development

We leverage our customer relationships, global distribution, technology infrastructure and software development capabilities to diversify our products and services. New product development is an ongoing process, and we are continually developing, evaluating and testing new products for introduction into our markets to better serve our client base. The majority of our product development relates to evaluating new contracts or new markets based on customer demand. New contracts often must be reviewed and approved by relevant regulators. Outside of third-party licensing costs, we typically do not incur separate, material costs for the development of new products - such costs are embedded in our normal costs of operation.

While we have historically developed our products and services internally, we also periodically evaluate and enter into strategic partnerships and licensing arrangements to develop meaningful new products and services.

Technology

Technology is a key component of our business strategy, and we regard effective execution of our technology initiatives as crucial to our success. Where feasible, we design and build our software systems and believe that having control over our technology allows us to be more responsive to the needs of our customers, better support the dynamic nature of our business and deliver the highest quality markets and data. Our proprietary systems are built using state-of-the-art technology. A significant number of our employees work in technology, including product management, project management, system architecture, software development, network engineering, information security, performance, systems analysis, quality assurance, database administration and customer technical support.

ICE Trading Platforms and Technology

The ICE trading platform supports trading in our cleared futures and options markets as well as our bilateral OTC markets. We also offer voice brokers a facility for submitting block trades for products that are eligible for clearing. Speed, reliability, scalability and capacity are critical performance criteria for electronic trading platforms. Connectivity to our trading platform for our markets is available through our web-based front-end, as well as multiple independent software vendors, or ISVs, and application programming interfaces, or APIs.

NYSE Trading Platforms and Related Technology

The NYSE electronic trading platform features an open system architecture that allows users to access our system via one of the many front-end trading applications developed by ISVs. For equity options, we offer a hybrid model of electronic and open outcry trading through NYSE Amex Options and NYSE Arca Options. We have developed a new integrated trading platform and matching engine known as NYSE Pillar and have migrated Arca Equities to this platform. In the future, we will complete the migration for the remaining four U.S. cash equities and equity options markets which currently operate on distinct platforms. The single specification will improve performance and reduce the cost and complexity of operating multiple equity and options trading systems.

ICE Data Services Technology

ICE Data Services technology supports solutions for mission-critical information, analytics and connectivity. Our technology centers around an integrated platform for the capture, maintenance and synthesis of information. This platform includes a single configurable data capture mechanism, a common data model, and a flexible multi-format delivery capability. The platform enables real-time processing and delivery of information, accelerates new product development, improves production reliability, and yields operating and cost efficiencies as the pre-existing heterogeneous environment is retired. Our information is delivered via real-time messaging protocols, files, web services and other on-demand facilities, and state-of-the-art front-ends.

Clearing Technology

A broad range of trade management and clearing services are offered through the integrated technology infrastructure that serves our clearing houses. ICE Clearing Systems encompass a number of integrated systems, including post-trade position management, risk management, settlement, treasury and reporting functions.

A core component of our derivatives clearing houses is the risk management of clearing firm members. Our extensive technology and rules-based risk system provides analytical tools to determine margin, to determine credit risk, and monitor risk of the clearing members. The risk system also monitors trading activities of the clearing members.

Cybersecurity

Cybersecurity is critical to our operations. We employ a defense-in-depth strategy, employing leading-edge security technology and processes including encryption, firewalls, virus prevention, intrusion prevention and detection systems and secured servers. Where our services are accessible via the Internet, we have implemented additional restrictions to limit access to specific approved networks. We also maintain insurance coverage that may, subject to the terms and conditions of the policy and payment of significant deductibles, cover certain aspects of cybersecurity issues. We monitor physical threats in addition to cyber threats and continuously review and update physical security and environmental controls to secure our office and data center locations.

Business Continuity Planning and Disaster Recovery

We maintain comprehensive business continuity and disaster recovery plans and facilities to provide nearly continuous availability of our markets in the event of a business disruption or disaster. We maintain incident and crisis management plans that address responses to disruptive events at any of our locations worldwide.

Intellectual Property

We rely on a wide range of intellectual property, both owned and licensed, for our electronic platforms. We own the rights to a large number of trademarks, service marks, domain names and trade names in the U.S., Europe and in other parts of the world. We have registered many of our trademarks in the U.S. and in certain other countries. We hold the rights to a number of patents and have made a number of patent applications in the U.S. and other countries. We also own the copyright to a variety of material. Those copyrights, some of which are registered, include software code, printed and online publications, websites, advertisements, educational material, graphic presentations and other literature, both textual and electronic. We attempt to protect our intellectual property rights by relying on trademarks, patents, copyrights, database rights, trade secrets, restrictions on disclosure and other methods.

This Annual Report also includes references to third party trademarks, trade names and service marks. Our use or display of any such trademarks, trade names or service marks is not an endorsement or sponsorship and does not indicate any relationship between us and the parties who own such marks and names.

Employees

As of December 31, 2016, we had a total of 5,631 employees, with 834 employees in Atlanta, 1,790 employees in New York, 967 employees in the U.K. and a total of 2,040 employees across our other offices around the world. Of our total employee base, less than 1% is subject to collective bargaining arrangements, and such relations are considered to be good.

Executive Officers of the Registrant

Information relating to our executive officers is included under “Executive Officers” in Part III, Item 10, “Directors, Executive Officers and Corporate Governance” of this Annual Report.

Regulation

Our markets are primarily subject to the jurisdiction of regulatory agencies in the U.S., U.K., the European Union, or EU, Canada and Singapore. Failure to satisfy regulatory requirements can or may give rise to sanctions by the applicable regulator.

Regulation of our Derivatives Business

Our regulated derivatives markets and clearing houses are based primarily in the U.S., U.K., EU, Canada and Singapore. Our U.S. futures exchange is subject to extensive regulation by the CFTC under the Commodity Exchange Act, or CEA. The CEA generally requires that futures trading in the U.S. be conducted on a commodity exchange registered as a Designated Contract Market, or DCM. As a registered DCM, ICE Futures U.S. is a self-regulatory organization, or SRO, that has instituted rules and procedures to comply with the core principles applicable to it under the CEA. In the U.K., ICE Futures Europe is a Recognized Investment Exchange, or RIE, in accordance with the Financial Services and Markets Act 2000, or FSMA. Like U.S. regulated derivatives markets, RIEs are SROs with surveillance and compliance responsibilities. ICE Clear Credit and ICE Clear U.S. are regulated by the CFTC as Derivatives Clearing Organizations, or DCOs. DCOs are subject to extensive regulation by the CFTC under the CEA. ICE Clear Europe, which is primarily regulated in the U.K. by the Bank of England as a Recognized Clearing House, or RCH, is also subject to regulation by the CFTC as a DCO. Both ICE Clear Credit and ICE Clear Europe are also regulated by the SEC as clearing agencies because they clear security-based swaps.

The Financial Stability Oversight Council, or FSOC, has designated ICE Clear Credit as a systemically important financial market utility under Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act. As such, ICE Clear Credit has access to the Federal Reserve System and holds deposits of $7.3 billion of its U.S. dollar cash in its cash accounts at the Federal Reserve as of December 31, 2016.

Regulation of our Securities Business

In our cash equities and options markets, the New York Stock Exchange, NYSE Arca and NYSE MKT are national securities exchanges and, as such, are SROs and subject to oversight by the SEC. Accordingly, our U.S. securities exchanges are regulated by the SEC and, in turn, are the regulators of their members. As national securities exchanges, the New York Stock Exchange, NYSE Arca and NYSE MKT must comply with, and enforce compliance by their members with, the Securities Exchange Act.

Regulation of our Data Business

As a result of our evaluated pricing operations, we have subsidiaries that are registered with the SEC under the Investment Advisers Act for their evaluated pricing services. The Investment Advisers Act imposes numerous obligations on registered investment advisers, including record-keeping, operational and marketing requirements, disclosure obligations and prohibitions on fraudulent activities. Investment advisers also are subject to certain state securities laws and regulations.

Regulatory Reform

Domestic and foreign policy makers have undertaken ongoing reviews of their legal frameworks governing financial markets following the 2009 financial crisis, and have either passed new laws and regulations, or are in the process of debating and/or enacting new laws and regulations that apply to our business and to our customers' businesses. Our key areas of focus on these evolving efforts are:

- The synchronization of regulations globally. Global regulations have not been fully harmonized and several of the Markets in Financial Instruments Directive II's, or MIFID II, regulations are counter to U.S. rules. In addition, as a result of the U.S. elections, there is potential for further divergence between MIFID II and U.S. rules if the new administration makes changes to financial regulations while the EU continues with MIFID implementation.
- The harmonization of regulations relating to margin in the U.S. and EU. In March 2016, the European Commission adopted a decision relating to U.S. CFTC regulatory equivalence and margin treatment for clearing houses. The equivalence decision allows European clearing houses to margin customers at a one day gross margin period of risk (equivalent to the U.S. rules for clearing houses) and, with respect to CFTC regulated products, requires U.S. clearing houses to margin proprietary positions at a two day net margin period of risk (equivalent to the European rules for clearing houses). U.S. clearing houses are also required to demonstrate implementation of specific anti-procyclicality measures, equivalent to European regulatory standards. The equivalence decision exempts U.S. agricultural products (including ICE Futures U.S.'s coffee, cocoa, cotton and sugar contracts) from these changes. Pursuant to the recognition afforded under the equivalence decision, European customers will be able to continue to access our CFTC regulated U.S. clearing houses with respect to CFTC regulated products. Similarly, ICE Clear Europe will be able to margin customers in a manner similar to U.S. clearing houses.
- We continue to gain recognition of our businesses in foreign jurisdictions. In September 2016, the Bank of England authorized ICE Clear Europe as a central counterparty clearing house, or CCP, in accordance with European Market Infrastructure Regulation, or EMIR. Additionally, in September 2016, ESMA granted recognition to ICE Clear Credit as a third-country CCP for products regulated by the CFTC. The European Securities and Markets Authority, or ESMA, also issued ICE Clear Credit further relief for security-based swaps, which are regulated by the SEC, while the European Commission works toward an equivalence determination with respect to the recently finalized SEC regulations. In December 2016, ESMA granted recognition to ICE Clear US as a third-country CCP for products regulated by the CFTC.
- The non-discriminatory access provisions of MiFID II as currently drafted, would require our European exchanges and CCPs to offer access to third parties on commercially reasonable terms. In addition, MiFID II could require our European exchanges to allow participants to trade and/or clear at other venues, which may encourage competing venues to offer our products. In June 2016, the European Union approved a twelve-month postponement of MiFID II implementation and compliance to January 1, 2018.
- The implementation of capital charges in Basel III, particularly the Supplemental Leverage Ratio with respect to certain clearing members of central counterparties. These new standards may impose burdensome capital requirements on our clearing members and customers that may disincentivize clearing.
- The adoption and implementation of position limit rules in the U.S. and Europe, which could have an impact on our commodities business if comparable trading venues in foreign jurisdictions are not subject to equivalent rules. In December 2016, the CFTC re-proposed the position limit rules as opposed to finalizing the rule. Conversely, position limits will be implemented in Europe beginning January 2018 under MiFID II.
- The proposed European financial transaction taxes are uncertain. In September 2015, 11 European nations, including France, Germany and the Netherlands, met to discuss implementing a financial transaction tax on equities and derivatives trading. While certain of the participants reached a broad political agreement on instituting the tax, many details are left to be concluded, including how to assess the tax at a member state level. Implementation of a financial

transaction tax could have a distortive effect on our European operations if adopted.

- The EU Benchmark Regulation, or BMR, was adopted in June 2016, and requires any entity using a benchmark provided by a third country benchmark administrator to register with ESMA. ICE Data Services plans to apply to ESMA for recognition. As the recognition process is new, the timeframe for registration is currently unknown.

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- Brexit timing and implications have not yet been determined. We are monitoring the impact to our business of the U.K. leaving the EU. The impact to our business and corresponding regulatory changes are uncertain at this time, and may not be known in the near future.

Please see the discussion below and Item 1(A) "- Risk Factors" in this Annual Report for additional description of regulatory and legislative risks and uncertainties.

Corporate Citizenship

We strive to create long-term value for our shareholders and maintain high ethical and business standards. We are active in the communities where we operate and support charitable organizations through a combination of financial resources and through employee participation. We also operate the ICE NYSE Foundation that has a commitment to supporting our communities, financial literacy and veterans' programs. We also host programs for our issuers on governance topics to provide a forum for advancing their efforts on environmental, social and governance matters. We provide additional information in our Sustainability Report, which can be located in the Corporate Citizenship section of our website.

With regard to environmental markets, we own Climate Exchange PLC and are today the leading operator of global emissions and environmental products markets, which enabled us to expand and support the development of emissions markets. We have invested further to develop new environmental products on our exchanges, including carbon emissions, aviation allowances, renewable energy certificate contracts, California carbon allowance contracts and biofuel products related to renewable identification numbers.

Available Information

Our principal executive offices are located at 5660 New Northside Drive, 3rd Floor, Atlanta, Georgia 30328. Our main telephone number is 1-770-857-4700, and our website is www.intercontinentalexchange.com.

We are required to file reports and other information with the SEC. A copy of this Annual Report on Form 10-K, as well as any future Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to such reports are available free of charge, on our website (www.theice.com) as soon as reasonably practicable after we file such reports with, or furnish such reports to, the SEC. A copy of these filings is also available at the SEC's website (www.sec.gov). The reference to our website address and to the SEC's website address do not constitute incorporation by reference of the information contained on the website and should not be considered part of this report. You may read and copy any documents filed by us at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room.

In addition, we have posted on our website the charters for our (i) Audit Committee, (ii) Compensation Committee, (iii) Nominating and Corporate Governance Committee and (iv) Risk Committee, as well as our Code of Business Conduct and Ethics, which includes information regarding our whistleblower hotline information, Board of Directors Governance Principles and Board Communication Policy. We will provide a copy of these documents without charge to stockholders upon request.

ITEM 1(A). RISK FACTORS

The risks and uncertainties described below are those that we currently believe may materially affect us. Other risks and uncertainties that we do not presently consider to be material or of which we are not presently aware may become important factors that affect us in the future. If any of the risks discussed below actually occur, our business, financial condition, operating results or cash flows could be materially adversely affected. Accordingly, you should carefully consider the following risk factors, as well as other information contained in or incorporated by reference in this Annual Report.

Global economic, political, financial market and social events or conditions may impact volatility that may negatively impact our business.

Global economic conditions will impact our business. Adverse macroeconomic conditions, including recessions, inflation, high unemployment, currency fluctuations, actual or anticipated large-scale defaults or failures, or slowdown of global trade could decrease consumer and corporate confidence and reduce consumer, government and corporate spending. If our customers reduce spending, workforce, trading activity or demand for financial data as a result of challenges in the prevailing economic markets, our revenues will decline. Further, NYSE's revenue increases when more companies are willing to go public and stagnation or a decline in the initial public offering market would have an adverse effect on our revenues. A prolonged decrease in the number of initial public offerings could also negatively impact the growth of our transaction revenues since initial public offerings are typically actively traded following the offering date.

A significant portion of our revenues are derived from fees for transactions executed and cleared in our markets. We derived 43%, 56% and 61% of our consolidated revenues, less transaction-based expenses, from our transaction-based business in 2016, 2015 and 2014, respectively. In particular, we derive a significant percentage of the consolidated revenues from our transaction-based business from trading in ICE Brent Crude futures and options contracts, North American natural gas futures and options contracts, sugar futures and options contracts, equity transactions and short term interest rates contracts, including the Euribor and Short Sterling futures and options contracts. The trading volumes in our markets could decline substantially if our market participants reduce their level of trading activity for any reason, including the factors referenced above that impact volatility, and:

- a reduction in the number of market participants that use our platform;
- a reduction in trading demand by customers or a decision to curtail or cease hedging or speculative trading;
- regulatory or legislative changes impacting our customers and financial markets;
- heightened capital requirements or mandated reductions in leverage resulting from new regulation;
- defaults by clearing or exchange members or the inability of participants to pay out contractual obligations;
- changes to our contract specifications that are not viewed favorably by our market participants; or
- reduced access to or availability of capital required to fund trading activities.

A reduction in our overall trading volume could render our markets less attractive to market participants as a source of liquidity, which could result in further loss of trading volume and associated transaction-based revenues. A reduction in trading volumes could also result in a corresponding decrease in the demand for our market data, which would further reduce our overall revenue.

In addition, recent economic weakness and uncertainty in various markets throughout the world have resulted or may result in decreased revenues or growth rates. For example, the U.K.'s June 2016 vote to leave the European Union (commonly known as "Brexit") and the uncertainty surrounding the U.K.'s exit from the European Union could negatively impact markets and cause weaker macroeconomic conditions that could continue for the foreseeable future. Such economic weakness and uncertainty may adversely affect demand for our products and services.

Our businesses and those of many of our clients have been and continue to be subject to increased legislation and regulatory scrutiny, and we face the risk of changes to this regulatory environment and business in the future.

We are and will continue to be subject to extensive regulation in many jurisdictions around the world, and in particular in the U.S. and the U.K. where the largest portions of our operations are conducted. We face the risk of significant actions by regulatory and taxing authorities in all jurisdictions in which we conduct our businesses and hold investments that may affect our business, the activity of our market participants, and as a consequence, our results. Among other things, as a result of regulators and tax authorities enforcing existing laws and regulations, we could be censured, fined, prohibited from engaging in some of our business activities, subjected to limitations or conditions on our business activities, including fair, reasonable and nondiscriminatory pricing restrictions (known as FRAND), or subjected to new or substantially higher taxes or other governmental charges in connection with the conduct of our business or with respect to our employees, including settlement payments, interest payments and penalty payments. In many cases, our activities may be subject to overlapping and divergent regulation in different jurisdictions.

There is also the risk that new laws or regulations or changes in enforcement practices applicable to our businesses or those of our clients could be imposed. This could adversely affect our ability to compete effectively with other institutions that are not affected in the same way or impact our clients' overall trading volume through our exchanges and demand for our market data and other services. In addition, regulation imposed on financial institutions or market participants generally, such as enhanced regulatory capital requirements, could adversely impact levels of market activity and price volatility more broadly, and thus impact our businesses. Notwithstanding the recent U.S. Presidential election, it is unknown at this time to what extent new legislation will be passed into law or pending or new regulatory proposals will be adopted or modified, or the effect that such passage, adoption or modification will have, positively or negatively, on our industry or on us.

These developments could impact our profitability in the affected jurisdictions, or even make it uneconomical for us to continue to conduct all or certain of our businesses in such jurisdictions, or could cause us to incur significant costs associated with changing our business practices, restructuring our businesses, or moving all or certain of our businesses and our employees to other jurisdictions, including liquidating assets or raising capital in a manner that adversely increases our funding costs or otherwise adversely affects our stockholders and creditors. In addition, certain developments could increase our liability for performing our oversight requirements.

U.S. and European legal and regulatory developments in response to the global financial crisis, in particular the Dodd-Frank Act, EMIR, MiFID II and the benchmark regulation, have significantly altered and propose to further alter the regulatory framework within which we operate and may adversely affect our competitive position and profitability. Among the aspects of these enacted and proposed legal and regulatory changes most likely to affect our businesses are: position limit rules in the U.S. and Europe, non-discriminatory access provisions of MiFID II, interoperability and margin rules in EMIR, enhanced regulatory capital liquidity and leverage rules in Basel III and Capital Requirements Directive IV, access rules under the benchmark regulation, the non-harmonization of margin requirements, implementation of a financial transaction tax, access to our benchmarks and maintaining our exchanges' abilities to operate as SROs with related immunity for the discharge of their regulatory functions. As the operator of global businesses, the lack of harmonization in international financial reform efforts could impact our business as our clearing houses and exchanges are subject to regulation in multiple jurisdictions.

The Dodd-Frank Act established enhanced regulatory requirements for non-bank financial institutions designated as "systemically important" by the FSOC. ICE Clear Credit has been designated as a systemically important financial market utility by the FSOC and as a result, is subject to additional oversight by the CFTC.

Other enacted and proposed legal and regulatory changes not discussed above may also adversely affect our competitive position and profitability. See Item 1 "- Business - Regulation" above for additional information regarding the current and proposed laws and regulations that impact our business, including risks to our business associated with these laws and regulations.

Systems failures in the derivatives and securities trading industry could negatively impact us.

High-profile system failures in the derivatives and securities trading industry, like the one we suffered at NYSE on July 8, 2015, could negatively impact our business and result in regulatory investigations, fines and penalties. Further, regulators have imposed new requirements for trading platforms that have been costly for us to implement, or that could result in a decrease in demand for some of our services. In particular, the SEC's Regulation Systems Compliance and Integrity, or Regulation SCI, and the CFTC's system safeguards regulations subject portions of our securities and derivatives trading platforms and other technological systems related to our clearing houses, trade repositories and the U.S. Swap Execution Facility, or SEF, to more extensive regulation and oversight. Ensuring our compliance with the requirements of Regulation SCI and the CFTC's system safeguards regulations requires significant implementation costs as well as increased ongoing administrative expenses and burdens. If system failures in the industry continue to occur, it is also possible that investor confidence in the trading industry could diminish, leading to decreased trading volume and revenue. Whether or not any of our own systems experience material failures, any of these developments could adversely affect our business, financial condition and operating results.

Our business is subject to the impact of financial markets volatility, including the prices and interest rates underlying our derivative products, due to conditions that are beyond our control.

Trading volume in our markets and products is largely driven by the degree of volatility - the magnitude and frequency of fluctuations - in prices and levels of the underlying commodities, securities, indices, financial benchmarks or other instruments. Volatility increases the need to hedge price risk and creates opportunities for investment and speculative or arbitrage trading. Were there to be a sustained period of stability in the prices or levels of the underlying commodities, securities, indices, benchmarks or other instruments of our products, we could experience lower trading volumes, slower growth or declines in revenues.

Factors that are particularly likely to affect price and interest rate levels and volatility, and thus trading volumes, include:

- global and domestic economic, political and market conditions;
- concerns over inflation, deflation, legislative and regulatory changes, government fiscal and monetary policy - including actions by the Federal Reserve, other foreign monetary units governing bodies, and investor and consumer confidence levels;
- weather conditions including hurricanes and other significant events, natural and other unnatural disasters like large oil spills that impact the production of commodities, and, in the case of energy commodities, production, refining and distribution facilities for oil and natural gas;
- war, acts of terrorism and any unforeseen market closures or disruptions in trading;
-

real and perceived changes in the supply and demand of commodities underlying our products, particularly energy and agricultural products, including changes as a result of technological improvements or the development of alternative energy sources; and

- credit quality of market participants, the availability of capital and the levels of assets under management.

Any one or more of these factors, which are beyond our control, may reduce trading activity, which could make our markets less attractive as a source of liquidity, and in turn could further discourage existing and potential market participants and thus accelerate a decline in the level of trading activity and potentially related services such as data or clearing. If any of these unfavorable conditions were to persist over a lengthy period of time and trading volumes were to decline substantially and for a long enough period, the critical mass of transaction volume necessary to support viable markets could be jeopardized. Because our cost structure is largely fixed, if demand for our current products and services decline for any reason, we may not be able to adjust our cost structure to counteract the associated decline in revenues, which would cause our net income to decline.

Owning clearing houses exposes us to risks, including risk related to defaults by clearing members, risks related to investing margin and guaranty funds, and the cost of operating the clearing houses.

There are risks inherent in operating a clearing house, including exposure to the market and counterparty risk of clearing members, market liquidity risks, defaults by clearing members and risks associated with investing margin or guaranty fund assets provided by clearing members to our clearing houses, which could subject our business to substantial losses. For example, clearing members have transferred an aggregate amount of cash in ICE Clear Europe relating to margin and guaranty funds of $29.5 billion as of December 31, 2016 and a total of $55.2 billion for all of our clearing houses as of December 31, 2016. ICE Clear Europe and ICE Clear U.S. use third party investment managers for investment of cash assets and may add or change the investment managers from time to time. To the extent available, ICE Clear Credit holds the U.S. dollar cash that clearing members transfer to satisfy their original margin and guaranty fund requirements at its account at the Federal Reserve. With respect to other clearing member cash posted, ICE Clear Credit currently self-manages the majority of such cash and ICE Clear Credit uses external investment managers to invest the remainder of such cash margin and guaranty fund deposits.

We have an obligation to return margin payments and guaranty fund contributions to clearing members to the extent that the relevant member’s risk based on its open contracts to the clearing house is reduced. If a number of clearing members substantially reduce their open interest or default, the concentration of risks within our clearing houses will be spread among a smaller pool of clearing members, which would make it more difficult to absorb and manage risk in the event of a further clearing member’s default.

Although our clearing houses have policies and procedures to help ensure that clearing members can satisfy their obligations, such policies and procedures may not succeed in preventing losses after a member or a counterparty’s default. In addition, although we believe that we have carefully analyzed the process for setting margins and our financial safeguards, it is a complex process and there is no guarantee that our procedures will adequately protect us from the risks of clearing these products. We cannot assure you that these measures and safeguards will be sufficient to protect us from a default or that we will not be materially and adversely affected in the event of a significant default. We have contributed a limited amount of our own capital to the guaranty fund of the clearing houses that could be used in the event of a default. Furthermore, the default of any one of the clearing members could subject our business to substantial losses and cause our customers to lose confidence in the guarantee of our clearing houses.

A decline in the value of securities held as margin or guaranty fund contributions by our clearing houses or default by a sovereign government issuer could pose additional risks of default by clearing members.

Our clearing houses hold a substantial amount of assets as margin or guaranty fund contributions, which comprise U.S. and other sovereign treasury securities. As of December 31, 2016, our clearing houses held $40.1 billion of non-cash margin or guaranty fund contributions in U.S. and other sovereign treasury securities: $29.0 billion of this amount was comprised of U.S. Treasury securities, $2.0 billion of French Treasury securities, $1.7 billion of German Treasury securities, $1.1 billion of U.K. Treasury securities, $933 million of Italian Treasury securities, and $5.4 billion of other European, Japanese and Tri-Party Treasury securities. Sovereign treasury securities have historically been viewed as one of the safest and most liquid securities for clearing houses to hold due to the perceived credit worthiness of major governments, although the markets for such securities have experienced significant volatility during the past decade and as of late due to on-going financial challenges in some of the major European countries and leading up to the U.S. government’s negotiations regarding taxation, spending cuts and raising the debt ceiling, which is the maximum amount of debt that the U.S. government can legally incur. In addition, if there is a collapse of the euro, our clearing houses would face significant expenses in changing their systems and such an event could cause a credit contraction and major swings in asset prices and exchange rates. To mitigate this risk, our clearing houses

currently apply a discount or “haircut” to the market values for all sovereign securities held as margin or guaranty fund contributions; however, market conditions could change more quickly than we adjust the amount of the haircuts and the haircuts could be insufficient in the event of a sudden market event.
Notwithstanding the current intraday margin and valuation checks conducted by our clearing houses and our policies and practices to limit exposures, our clearing houses will need to continue to monitor the volatility and value of sovereign treasury securities. If the value of these securities declines significantly, our clearing houses will need to collect additional margin or

guaranty fund contributions from their clearing members, which may be difficult for the members to supply in a time of financial stress affected by an actual or threatened default by a sovereign government. In addition, our clearing houses may be required to impose a more significant discount on the value of sovereign treasury securities posted as margin or guaranty fund contributions if there is uncertainty regarding the future value of these securities, which would trigger the need for additional margin or guaranty fund contributions by the clearing members. If a clearing member cannot supply the additional margin or guaranty fund contributions, which may include cash in a currency acceptable to the clearing house, the clearing house would deem the clearing member in default. If any clearing members default as a result of the reduction in our valuation of margin or guaranty fund contributions, our clearing houses and trading business could suffer substantial losses as a result of the loss of any capital that has been contributed to the clearing house’s guaranty funds and a loss of confidence by clearing members in the clearing house, resulting in a reduction in volumes of future cleared transactions.

Further, our clearing houses invest large sums through reverse repo transactions in connection with their clearing operations and may hold sovereign securities as security in connection with such investment transactions. Our clearing houses may also make time deposits with banks that are secured only to the value of FDIC insurance or other national deposit guarantee schemes, which is small, and therefore, our deposits may in significant part be lost in the event one of these banks becomes insolvent.

Owning and operating equity exchanges exposes us to additional risks, including the regulatory responsibilities to which these businesses are subject.

Owning and operating equity exchanges for which the revenues are primarily derived from market data, listing fees and trading activity, exposes us to additional risks. Adverse economic conditions and regulatory changes similar to those discussed above could result in decreased trading volume, discourage market participants from listing on our equity exchanges or cause them to forgo new offerings. Any of these could reduce our revenues, including market data revenue.

Our exchanges are operated as for-profit businesses but have certain regulatory responsibilities that must be fulfilled. Specifically, our exchanges are responsible for enforcing listed company compliance with applicable listing standards, overseeing regulatory policy determinations, rule interpretation and regulation-related rule development, and conducting trading reviews. Any failure by one of our exchanges with self-regulatory responsibility to comply with, and enforce compliance by their members, with exchange rules and securities laws could significantly harm our reputation, prompt regulatory scrutiny, result in the payment of fines or penalties and adversely affect our business, financial condition and operating results.

We must allocate significant resources to fulfill our self-regulatory responsibilities. The for-profit exchanges’ goal of maximizing stockholder value might contradict the exchanges’ self-regulatory responsibilities. The listing of our common stock on the NYSE could potentially create a conflict between the exchange’s regulatory responsibilities to vigorously oversee the listing and trading of securities, on the one hand, and our commercial and economic interest, on the other hand. While we have structural protections to minimize these potential conflicts, we cannot be sure that such measures will be successful.

Further, changes in the rules and operations of our securities markets must be reviewed and approved by the SEC. Approval of such changes by the SEC cannot be guaranteed and the SEC could delay either the approval process or the initiation of the public comment process. Any denial or delay in approving changes could have an adverse effect on our business, financial condition and operating results.

Our compliance and risk management methods, as well as our fulfillment of our regulatory obligations, might not be effective, which could lead to enforcement actions by our regulators.

Our ability to comply with complex and changing laws and rules is largely dependent on our establishment and maintenance of compliance, audit and reporting systems that can quickly adapt and respond, as well as our ability to attract and retain qualified compliance and other risk management personnel. While we have policies and procedures to identify, monitor and manage our risks and regulatory obligations, we cannot assure you that our policies and procedures will always be effective or that we will always be successful in monitoring or evaluating the risks to which we are or may be exposed. Regulators periodically review our exchanges’ ability to self-regulate and our compliance with a variety of laws and regulations including self-regulatory standards. In particular, certain of our businesses acquired in the NYSE acquisition are subject to public notice procedures prior to making changes in operations, policies and procedures. If we fail to comply with any of these obligations, regulators could take a variety of actions that could impair our ability to conduct our business.

Our acquisitions expose us to new regulatory requirements. For example, as a result of our acquisitions of Interactive Data and Securities Evaluations, we now operate two SEC registered investment advisers, called Interactive Data Pricing and Reference Data LLC, or PRD LLC, and Securities Evaluations with respect to their provision of evaluated pricing services. Investment advisers are subject to significant regulatory obligations under the Investment Advisers Act of 1940, or Investment Advisers Act.

Prior to these acquisitions, none of our businesses were registered under the Investment Advisers Act. Compliance with the Investment Advisers Act and other regulatory requirements gives rise to costs and expenses that may be material.

Our regulators have broad enforcement powers to censure, fine, issue cease-and-desist orders or prohibit us from engaging in some of our businesses. For example, we paid a $5 million penalty to the SEC in 2014 and a $3 million penalty to the CFTC in 2015 as a result of enforcement actions brought by these regulators. In December 2015, NYSE received an inquiry from the enforcement staff of the SEC regarding a July 8, 2015 outage on the NYSE markets, during which trading was suspended for approximately 3.5 hours in all symbols. The investigation proceeded throughout 2016 and on December 29, 2016, NYSE received a Wells Notice stating that the staff have made a preliminary determination to recommend that the SEC file an enforcement action in connection with how NYSE responded on July 8, 2015 to the circumstances leading into the suspension of trading that day. The results of the Wells Notice and any enforcement action related to the July 8, 2015 outage are unknown at this time.

In addition, we have several other on-going investigations and inquiries from the SEC and other regulators that could lead to additional Wells Notices or enforcement actions. We will continue to face the risk of significant intervention by regulatory authorities, including extensive examination and surveillance activity. Any such matters may result in material adverse consequences to our results of operations, financial condition or ability to conduct our business, including adverse judgments, settlements, fines, penalties, injunctions, restrictions on our business activities or other relief. Our involvement in any such matters, even if the matters are ultimately determined in our favor, could also cause significant harm to our reputation and divert management attention from the operation of our business. Further, any settlement, consent order or adverse judgment in connection with any formal or informal proceeding or investigation by government or regulatory agencies may result in additional litigation, investigations or proceedings as other litigants and government or regulatory agencies begin independent reviews of the same businesses or activities.

Finally, the implementation of new legislation or regulations, or changes in or unfavorable interpretations of existing regulations by courts or regulatory bodies, could require us to incur significant compliance costs and impede our ability to remain competitive and grow our business.

We face intense competition.

We face intense competition in all aspects of our business and our competitors, both domestic and international, are numerous. We currently compete with:

- regulated, diversified futures exchanges globally that offer trading in a variety of asset classes similar to those offered by us, such as energy, agriculture, equity and equity index, credit, and interest rate derivatives markets and foreign exchange;
- exchanges offering listing and trading of cash equities, exchange-traded funds, closed-end funds and other structured products similar to those offered by us;
- market data and information vendors;
- interdealer brokers active in the global credit derivatives markets;
- existing and newly formed electronic trading platforms, service providers and other exchanges;
- other clearing houses; and
- consortiums of our customers, members or market participants that may pool their trading activity to establish new exchanges, trading platforms or clearing facilities.

Trends towards the globalization of capital markets have resulted in greater mobility of capital, greater international participation in markets and increased competition among markets in different geographical areas. Competition in the market for derivatives trading and clearing and in the market for cash equity listings, trading and execution have intensified as a result of consolidation, as the markets become more global in connection with the increase in electronic trading platforms and the desire by existing exchanges to diversify their product offerings. Finally, many of our competitors are our largest customers or are owned by our customers and may prioritize their internalization and alternative trading system businesses ahead of their exchange-based market making business.

We also face pricing competition in many areas of our business. A decline in our fees due to competitive pressure, the inability to successfully launch new products or the loss of customers due to competition could lower our revenues, which would adversely affect our profitability. For example, Interactive Data's business has benefited from a high renewal rate in its subscription based business but we cannot assure you that this will continue. We also cannot assure you that we will be able to continue to expand our product offerings, or that we will be able to retain our current customers or attract new customers. If we are not able to compete successfully our business could be materially impacted, including our ability to sustain as an operating entity.

In our listings business, the legal and regulatory environment in the U.S., and the market perceptions about that environment, may make it difficult for our U.S. equity exchanges to compete with non-U.S. equity exchanges for listings. For example, negative perceptions regarding compliance costs associated with adherence to corporate governance requirements have and may continue to discourage listings on U.S. equity exchanges by both U.S. and foreign private issuers. Any failure by our exchanges to successfully compete for any reason could adversely impact our revenue derived from listing fees and the associated trading, execution and market data fees.

We may have difficulty maintaining our growth effectively.

We have achieved a tremendous amount of growth since becoming a public company in 2005. Our growth is highly dependent on customer demand for our core products and services, favorable economic conditions and our ability to invest in our personnel, facilities, infrastructure and financial and management systems and controls. Adverse economic conditions could reduce customer demand for our products and services, which may place a significant strain on our management and resources and could force us to defer existing or future planned opportunities. In addition, we may not be successful in executing on our strategies to support our growth organically or, as described above, through acquisitions, other investments or strategic alliances.

We may not be successful in offering new products or technologies or in identifying opportunities.

We intend to launch new products and continue to explore and pursue other opportunities to strengthen our business and grow our company. We may spend substantial time and money developing new product offerings or improving current product offerings. If these offerings are not successful, we may miss a potential market opportunity and not be able to recover the costs of such initiatives. Obtaining any required regulatory approval associated with these offerings may also result in delays or restrictions on our ability to fully benefit from these offerings. Further, we may enter into or increase our presence in markets that already possess established competitors who may enjoy the protection of high barriers to entry. Attracting customers in certain countries may also be subject to a number of risks, including currency exchange rate risk, difficulties in enforcing agreements or collecting receivables, longer payment cycles, compliance with the laws or regulations of these countries, and political and regulatory uncertainties.

In addition, in light of consolidation in the exchange, data services and clearing sectors and competition for opportunities, we may be unable to identify strategic opportunities or we may be unable to negotiate or finance any future acquisition successfully. Our competitors could merge, making it more difficult for us to find appropriate entities to acquire or merge with and making it more difficult to compete in our industry due to the increased resources of our merged competitors. Also, offering new products and pursuing acquisitions requires substantial time and attention of our management team, which could prevent them from successfully overseeing other initiatives that are necessary for our success.

We have made substantial progress toward developing and deploying new technology platforms to improve our equity exchange business and data services business. We may experience disruptions or encounter unexpected challenges in deploying these new systems. Further, the costs to complete the remaining work may exceed our current expectations. Any significant cost increases or disruptions to product quality, sales effectiveness or client service or to our other business operations could have an adverse effect on our operations and results of operations.

We may fail to complete or realize the anticipated cost savings, growth opportunities and synergies and other benefits anticipated from our recent acquisitions and future acquisitions, which could adversely affect the value of our common stock.

We have completed many acquisitions and plan to continue to pursue acquisitions and joint ventures when we deem it appropriate. The success of our acquisitions will depend, in part, on our ability to integrate these businesses into our existing operations and realize anticipated cost savings, revenue synergies and growth opportunities. We generally set aggressive timelines for realizing savings, which assumes we successfully undertake a variety of actions (including, but not limited to, integrating technology, eliminating redundancies and effecting organizational restructurings) that are themselves subject to a variety of risks and may be subject to regulatory approvals that we do not control. The process of integrating acquired companies is time consuming and could disrupt each company’s ongoing businesses, produce unforeseen regulatory and operating difficulties (including inconsistencies in standards, controls, procedures and policies that adversely affect relationships with market participants, regulators and others), require substantial resources and expenditures, and divert the attention of management from the ongoing operation of the business.

There is a risk, however, that we may not integrate these acquired companies in a manner that permits our expected cost savings and revenue synergies to be fully realized in the time periods expected, or at all. In addition, a variety of factors, including but not limited to regulatory conditions, governmental competition approvals, currency fluctuations, and difficulty integrating technology platforms, may adversely affect our ability to complete our acquisitions or realize our anticipated cost savings and synergies. For example, the CMA in the U.K. has ordered a divestment of Trayport and we are currently in the process of appealing their decision. If our appeal is successful, the matter will be sent back to the CMA for additional review and if we are not successful, we will be forced to sell Trayport. If a sale is required, there is no certainty of the price we could receive and we may also suffer a loss due to currency fluctuations between the U.S. dollar and the pound sterling. As of December 31, 2016, the accumulated other comprehensive loss from foreign currency translation for Trayport was $117 million, due to the decrease in the pound sterling, which is Trayport's functional currency, compared to the U.S. dollar since the acquisition date. If we are required to sell Trayport, we would include the accumulated translation adjustment when computing the gain or loss from the sale.

We may also not realize anticipated growth opportunities and other benefits from strategic investments or strategic joint ventures or alliances that we have entered into or may enter into for a number of reasons, including regulatory or government approvals or changes, global market changes, contractual obligations, competing products and, in some instances, our lack of or limited control over the management of the business. Further, strategic initiatives that have historically been successful may not continue to be successful due to competitive threats, changing market conditions or the inability for the parties to extend the relationship into the future.

We continue to look for strategic growth opportunities in line with our business strategy and will pursue acquisitions when we believe that they are in our best interests. We may be very acquisitive. As a result of any future acquisition, we may issue additional shares of our common stock that dilute our stockholders' ownership interest, expend cash, incur debt, assume actual and contingent liabilities, inherit existing or pending litigation or create additional expenses related to amortizing intangible assets. Further, we cannot assure you that any such financing or equity investments will be available with terms that will be favorable to us, or available at all.

If we are unable to keep up with rapid changes in technology and client preferences, we may not be able to compete effectively.

To remain competitive, we must continue to enhance and improve the responsiveness, functionality, accessibility and reliability of our electronic platforms and our proprietary and acquired technology. The financial services industry is characterized by rapid technological change, change in use patterns, change in client preferences, frequent product and service introductions and the emergence of new industry standards and practices. These changes could render our existing proprietary technology uncompetitive or obsolete.

Further, we use some open-source software in our technology, most often as small components within a larger product or service, to augment algorithms, functionalities or libraries we create, and we may use more open-source software in the future. Open-source code is also contained in some third-party software we rely on. We could be subject to suits by parties claiming breach of the terms of the license for such open-source software. The terms of many open-source licenses are ambiguous and have not been interpreted by U.S. or other courts, and these licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to commercialize our products and services.

We cannot assure you that we will successfully implement new technologies or adapt our proprietary technology to our clients' requirements or emerging industry standards in a timely and cost-effective manner. Any failure to remain abreast of industry standards in technology and to be responsive to client preferences could cause our market share to decline and negatively impact our revenues.

Our business may be harmed by computer and communications systems failures and delays.

Our business depends on the integrity, reliability and security of our computer and communication systems. We support and maintain many of the systems that comprise our electronic platforms and our failure to monitor or maintain these systems, or to find replacements for defective components within a system in a timely and cost-effective manner when necessary, could have a material adverse effect on our ability to conduct our business. Our customers rely on us for the delivery of time-sensitive, up-to-date and high-quality financial market data, analytics, and related solutions. Our timely, reliable delivery of high-quality products and services is subject to an array of technical production processes that enable our delivery platforms to leverage an extensive range of content databases. Our redundant systems or disaster recovery plans may prove to be inadequate in the event of a systems failure or cyber-security breach. Our systems, or those of our third party providers, may fail or be shut down or, due to capacity constraints, may operate slowly, causing one or more of the following:

- unanticipated disruption in service to our participants;
- slower response time and delays in our participants’ trade execution and processing;

- failed settlement by participants to whom we provide trade confirmation or clearing services;
- incomplete or inaccurate accounting, recording or processing of trades;
- failure to complete the clearing house margin settlement process resulting in significant financial risk;
- distribution of inaccurate or untimely market data to participants who rely on this data in their trading activity; and
- financial loss.

We could experience system failures due to power or telecommunications failures, human error on our part or on the part of our vendors or participants, natural disasters, fire, sabotage, hardware or software malfunctions or defects, computer viruses, cyber-attacks, intentional acts of vandalism or terrorism and similar events. If any one or more of these situations were to arise, they could result in damage to our business reputation and participant dissatisfaction with our electronic platform, which could prompt participants to trade elsewhere or expose us to litigation or regulatory sanctions. As a consequence, our business, financial condition and results of operations could suffer materially.

Our regulated business operations generally require that our trade execution and communications systems be able to handle anticipated present and future peak trading volume. Heavy use of computer systems during peak trading times or at times of unusual market volatility could cause those systems to operate slowly or even to fail for periods of time. However, we cannot assure you that our estimates of future trading volume will be accurate or that our systems will always be able to accommodate actual trading volume without failure or degradation of performance.

Although many of our systems are designed to accommodate additional volume and products and services without redesign or replacement, we will need to continue to make significant investments in additional hardware and software and telecommunications infrastructure to accommodate the increases in volume of order and trading transaction traffic and to provide processing and clearing services to third parties. If we cannot increase the capacity and capabilities of our systems to accommodate an increasing volume of transactions and to execute our business strategy, our ability to maintain or expand our businesses would be adversely affected.

Our systems and those of our third party service providers may be vulnerable to security risks, hacking and cyber-attacks, especially in light of our role in the global financial marketplace, which could result in wrongful use of our information, or which could make our participants reluctant to use our electronic platform.

The secure transmission of confidential information and the ability to reliably transact on our electronic platforms and provide financial data services are critical elements of our operations. Some of our products and services involve the storage and transmission of proprietary information and sensitive or confidential client data, including client portfolio information. If anyone gains improper access to our electronic platforms, networks or databases, they may be able to steal, publish, delete or modify our confidential information or that of a third party. Our networks and those of our participants, third party service providers and external market infrastructures may be vulnerable to compromise, security technology failure, social engineering, denial of service attacks, or other security failures resulting in loss of data integrity, information disclosure, unavailability, or fraud. Recently, the financial services industry has been targeted for purposes of political protest, activism and fraud. Further, former employees of certain companies in the financial sector have misappropriated trade secrets or stolen source code in the past, and we could be a target for such illegal acts in the future. There also may be system or network disruptions if new or upgraded systems are defective or not tested and installed properly.

Although we have not been the victim of cyber-attacks or other cyber incidents that have had a material impact on our operations or financial condition, we have from time to time experienced cyber security events including distributed denial of service attacks, malware infections, phishing, web attacks and other information technology incidents that are typical for a financial services company of our size. For example, we experienced a distributed denial of service attack against our website in November 2016 that activated automated mitigation response and was reportable to regulatory authorities. We operate an Information Security program that is designed to prevent, detect, track, and mitigate cyber incidents and that has detected and mitigated such incidents in the past. Although we intend to continually implement new industry standard security measures as they develop in the future to maintain the effectiveness of our Information Security program, we cannot assure you that these measures will be sufficient to protect our business against attacks, losses or reduced trading volume in our markets as a result of any security breach, hacking or cyber-attack. Any such attacks could result in reputational damage, cause system failures or delays that could cause us to lose customers, cause us to experience lower current and future trading volumes or incur significant liabilities, or have a negative impact on our competitive position. Additionally, current and future security measures may involve significant costs to purchase and maintain, which could adversely impact our net income.

We currently have a substantial amount of outstanding indebtedness which could restrict our ability to engage in additional transactions or incur additional indebtedness.

Following our acquisition of NYSE and Interactive Data, we have a significant amount of indebtedness outstanding on a consolidated basis. As of December 31, 2016, we had $6.4 billion of outstanding debt. This level of indebtedness could have important consequences to our business, including making it more difficult to satisfy our debt obligations, increasing our vulnerability to general adverse economic and industry conditions, limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate and restricting us from pursuing certain business opportunities. As we use our available resources to reduce and refinance our consolidated debt, our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate and our ability to pursue future business opportunities may be further restrained. In addition, the terms of our debt facilities contain affirmative and negative covenants, including a leverage ratio test and certain limitations on the incurrence of additional debt or the creation of liens and other matters.

Our long-term debt is currently rated by Moody’s Investor Services and Standard & Poor’s. These ratings agencies regularly evaluate us and our credit ratings based on a number of quantitative and qualitative factors, including our financial strength and conditions affecting the financial services industry generally. Our credit ratings remain subject to change at any time, and it is possible that a ratings agency may take action to downgrade our credit ratings in the future. In particular, our inability to sustain reduced debt on a consolidated basis may result in a downgrade of our credit ratings. A significant downgrade of our credit rating could impact the regulatory status of our clearing houses, make parties less willing to do business with us, and could negatively impact our ability to access the capital markets and increase the cost of any future debt funding we may obtain.

Damage to our reputation resulting from our administration of LIBOR or other benchmarks could adversely affect our business.

Our subsidiary IBA is the administrator for various benchmarks, including LIBOR. IBA’s administration of LIBOR is the result of the LIBOR scandal, which was a series of fraudulent actions taken by banks that were submitting false LIBOR rates to profit from trades, or to give the impression that the banks were more creditworthy than they were. Any failures or negative publicity resulting from our administration of LIBOR or other benchmarks could result in a loss of confidence in the administration of these benchmarks and could harm our reputation.

Fluctuations in foreign currency exchange rates may adversely affect our financial results.

Since we conduct operations in several different countries, including the U.S., U.K., Continental Europe and Canada, substantial portions of our revenues, expenses, assets and liabilities are denominated in U.S. dollars, pounds sterling, euros and Canadian dollars. Because our consolidated financial statements are presented in U.S. dollars, we must translate non-U.S. dollar denominated revenues, income and expenses, as well as assets and liabilities, into U.S. dollars at exchange rates in effect during or at the end of each reporting period. Therefore, increases or decreases in the value of the U.S. dollar against the other currencies may affect our net operating revenues, operating income and the value of balance sheet items denominated in foreign currencies.

The European debt crisis and related European financial restructuring efforts have contributed to instability in global credit markets and resulted in a decline in the value of the pounds sterling and euro relative to the U.S. dollar. In addition, Brexit and the outcome of the U.S. presidential election each have caused, and may continue to cause, significant volatility in currency exchange rates, especially among the U.S. dollar, the British pound sterling and the euro. If global economic and market conditions, or economic conditions in the U.K., Continental Europe, the U.S. or other key markets remain uncertain or deteriorate further, the value of the pound sterling and euro and the global credit markets may further weaken. General financial instability in countries in the European Union, including Greece, could have a contagion effect on the region and contribute to the general instability and uncertainty in the European Union. Events that adversely affect our U.K. and Continental European clients and suppliers could in turn have a materially adverse effect on our international business results and our results of operations.

For additional information on our foreign currency exchange rate risk, refer to “- Foreign Currency Exchange Rate Risk” in Item 7A - Quantitative and Qualitative Disclosures About Market Risk, which are included in this Annual Report.

We may be required to recognize impairments of our goodwill, other intangible assets or investments.

The determination of the value of goodwill and other intangible assets requires the use of estimates and assumptions that affect our consolidated financial statements. As of December 31, 2016, we had goodwill of $12.3 billion and net other intangible assets of $10.4 billion relating to our acquisitions and our purchase of trademarks and Internet domain names from various third parties. We recorded a $33 million impairment loss on our Creditex customer relationship intangible asset during 2016, primarily due to the sale of our Creditex U.S. voice broker operations and the discontinuance of our Creditex U.K. voice brokerage operations in 2016. As of December 31, 2016, we have $432 million in long-term investments relating to our equity security investment in Cetip, S.A., or Cetip. We recorded a $190 million impairment loss on our investment in Cetip during 2013 primarily due to the devaluation of the Brazilian real. As of December 31, 2016, our investment in Cetip included an accumulated unrealized gain of $108 million.

We cannot assure you that we will not experience future events that may result in asset impairments. An impairment of the value of our existing goodwill, other intangible assets and other investments and assets could have a significant negative impact on our future operating results.

For additional information on our goodwill, other intangible assets and investments including impairment, refer to notes 5 and 7 to our consolidated financial statements and "- Critical Accounting Policies - Goodwill and Other Identifiable Intangible Assets" in Item 7 "- Management's Discussion and Analysis of Financial Condition and Results of Operations", which are included in this Annual Report.

We may face liability for content contained in our data products and services.

We may be subject to claims for breach of contract, defamation, libel, copyright or trademark infringement, fraud or negligence, or based on other theories of liability, in each case relating to the data, articles, commentary, ratings, information or other content we distribute in our financial data services. If such data or other content or information that we distribute has errors, is delayed or has design defects, we could be subject to liability or our reputation could suffer. We could also be subject to claims based upon the content that is accessible from our corporate website or those websites that we own and operate through links to other websites. Use of our products and services as part of the investment process creates the risk that clients, or the parties whose assets are managed by our clients, may pursue claims against us for significant amounts. Any such claim, even if the outcome were ultimately favorable to us, could involve a significant commitment of our management, personnel, financial and other resources. Such claims and lawsuits could have a material adverse effect on our business, financial condition or results of operations and a negative impact on our reputation. In addition, we license and redistribute data and content from various third parties and the terms of these licenses change frequently. Our data and content suppliers may audit our use and our clients' use and payment for data and content and may assert that we or our clients owe additional amounts under the terms of the license agreements, that we inappropriately distributed the third party's data or that we or our clients used the data or content in a manner that exceeded the scope of the license agreement. We may incur costs to investigate any such allegations and may be required to make unexpected payments to these data and content suppliers and these costs and payments could be material.

A failure to protect our intellectual property rights, or allegations that we have infringed the intellectual property rights of others, could adversely affect our business.

Our business is dependent on proprietary technology and other intellectual property that we own or license from third parties, including trademarks, service marks, trade names, trade secrets, copyrights and patents. We cannot assure you that the steps that we have taken or will take in the future will prevent misappropriation of our proprietary technology or intellectual property. Additionally, we may be unable to detect the misappropriation or unauthorized use of our proprietary technology and intellectual property. Our failure to adequately protect our proprietary technology and intellectual property could harm our reputation and affect our ability to compete effectively. Further, we may need to resort to litigation to enforce our intellectual property rights, which may require significant financial and managerial resources. As a result, we may choose not to enforce our infringed intellectual property rights, depending on our strategic evaluation and judgment regarding the best use of our resources, the relative strength of our intellectual property portfolio and the recourse available to us.

In addition, our competitors, as well as other companies and individuals, may have obtained, and may be expected to obtain in the future, patent rights related to the types of products and services we offer or plan to offer. We cannot assure you that we are or will be aware of all patents that may pose a risk of infringement by our products and services. As a result, we may face allegations that we have infringed the intellectual property rights of third parties which may be costly for us to defend against. If one or more of our products or services is found to infringe patents held by others, we may be required to stop developing or marketing the products or services, obtain licenses to develop and market the products or services from the holders of the patents or redesign the products or services in such a way as to avoid infringing the patents. We also could be required to pay damages if we were found to infringe patents held by others, which could materially adversely affect our business, financial condition and operating results.

We cannot assess the extent to which we may be required in the future to obtain licenses with respect to patents held by others, whether such licenses would be available or, if available, whether we would be able to obtain such licenses on commercially reasonable terms. If we were unable to obtain such licenses, we may not be able to redesign our products or services at a reasonable cost to avoid infringement, which could materially adversely affect our business, financial condition and operating results.

We rely on third party providers and other suppliers for a number of services that are important to our business. An interruption or cessation of an important service, data or content supplied by any third party, or the loss of an exclusive license, could have a material adverse effect on our business.

We depend on a number of suppliers, such as online service providers, hosting service and software providers, data processors, software and hardware vendors, banks, local and regional utility providers, and telecommunications companies, for elements of our trading, clearing, data services and other systems. We rely on access to certain data used in our business through licenses with third parties, and we rely on a large international telecommunications company for the provision of hosting services. We also depend on third-party suppliers for data and content, including data received from certain competitors, clients, various government and public record services and financial institutions, used in our products and services. Some of this data is exclusive to particular suppliers and may not be obtained from other suppliers. In addition, our data suppliers could enter into exclusive contracts with our competitors without our knowledge. The general trend toward industry consolidation may increase the risk that these services may not be available to us in the future. If these companies were to discontinue providing services to us for any reason or fail to provide the type of service agreed to, we would likely experience significant disruption to our business and may be subject to litigation by our clients or increased regulatory scrutiny or regulatory fines. Our third party data suppliers perform audits on us from time to time in the ordinary course of business to determine if data we license for redistribution has been properly accounted for in accordance with the terms of the applicable license agreement. As a result of these audits, we may incur additional expenses.

Many of our clients also rely on third parties to provide them with systems necessary to access our trading platform. If these companies were to discontinue providing services to our clients for any reason, we may experience a loss of revenue associated with our clients' inability to transact with our businesses. We hold exclusive licenses to list various index futures and contracts. In the future, litigation or regulatory action may limit the right of owners to grant exclusive licenses for index futures and contracts trading to a single exchange, and our competitors may succeed in providing economically similar products in a manner or jurisdiction not otherwise covered by our exclusive license. MiFID II introduced a harmonized approach to the licensing of services relating to commodity derivatives across Europe and the legislation requires open access to any benchmarks (a benchmark is an index or other measure used to determine the value of a financial instrument, for example, LIBOR or the S&P 500) used in Europe. If unlicensed trading of any index product where we hold an exclusive license were permitted, we could lose trading volume for these products which would adversely affect our revenues associated with the license and the related index products.

We are subject to significant litigation and liability risks.

Many aspects of our business, and the businesses of our participants, involve substantial risks of liability. These risks include, among others, potential liability from disputes over terms of a trade and the claim that a system failure or delay caused monetary loss to a participant or that an unauthorized trade occurred. For example, dissatisfied market participants that have traded on our electronic platform or those on whose behalf such participants have traded, may make claims regarding the quality of trade execution, or allege improperly confirmed or settled trades, abusive trading practices, security and confidentiality breaches, mismanagement or even fraud against us or our participants. In addition, because of the ease and speed with which sizable trades can be executed on our electronic platform, participants can lose substantial amounts by inadvertently entering trade orders or by entering them inaccurately. A large number of significant error trades could result in participant dissatisfaction and a decline in participant willingness to trade in our electronic markets. In addition, we are subject to various legal disputes, some of which we are involved in due to acquisition activity. We could incur significant expenses defending claims, even those without merit, which could adversely affect our financing condition and operating results. An adverse resolution of any lawsuit or claim against us may require us to pay substantial damages or impose restrictions on how we conduct business, either of which could adversely affect our business, financial condition and operating results. See note 13 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for a summary of our legal proceedings and claims.

We may be at greater risk from terrorism than other companies.

Given our prominence in the global securities industry and the location of many of our properties and personnel in U.S. and European financial centers, including lower Manhattan, we may be more likely than other companies to be a direct target of, or an indirect casualty of, attacks by terrorists or terrorist organizations, or other extremist organizations that employ threatening or harassing means to achieve their social or political objectives.

It is impossible to predict the likelihood or impact of any terrorist attack on the securities industry generally or on our business. In the event of an attack or a threat of an attack, our security measures and contingency plans may be inadequate to prevent significant disruptions in our business, technology or access to the infrastructure necessary to maintain our business. Damage to our facilities due to terrorist attacks may be significantly in excess of insurance coverage, and we may not be able to insure against some damage at a reasonable price or at all. The threat of terrorist attacks may also negatively affect our ability to attract and retain employees. In addition, terrorist attacks may cause instability or decreased trading in the securities markets, including trading on exchanges. Any of these events could adversely affect our business, financial condition and operating results.

Owning and operating voice broker businesses exposes us to additional risk, and these businesses are largely dependent on their broker-dealer clients.

Our voice broker business is primarily transaction-based, and it provides brokerage services to clients primarily in the form of agency transactions, although it also engages in a limited number of matched principal transactions. In agency transactions, customers pay transaction fees for trade execution services in which we connect buyers and sellers who settle their transactions directly. In matched principal transactions (also known as "risk-less principal" transactions), we agree to buy instruments from one customer and sell them to another customer. The amount of the fee generally depends on the spread between the buy and sell price of the security that is brokered. With respect to matched principal transactions, a counterparty to a matched principal transaction may fail to fulfill its obligations, or we may face liability for an unmatched trade. We also face the risk of not being able to collect transaction or processing fees charged to customers for brokerage services and processing services we provide.

We are a holding company and depend on our subsidiaries for dividends, distributions and other payments.

We are a legal entity separate and distinct from our operating subsidiaries. Our principal source of cash flow, including cash flow to pay dividends to our stockholders and principal and interest on our outstanding debt, is dividends from our subsidiaries. There are statutory and regulatory limitations on the payment of dividends by certain of our subsidiaries to us. If our subsidiaries are unable to make dividend payments to us and sufficient cash or liquidity is not otherwise available, we may not be able to make dividend payments to our stockholders, principal and interest payments on our outstanding debt or repurchase shares of our common stock, which could have a material adverse effect on our business, financial condition and operating results. Further, we have guaranteed the payment of certain obligations by our subsidiary, NYSE Holdings, LLC. This guarantee may require us to provide substantial funds or assets to creditors of our subsidiaries at a time when we are in need of liquidity to fund our own obligations and may affect our ability to make dividend payments to our stockholders, principal and interest payments on our outstanding debt or repurchase shares of our common stock.

Provisions of our organizational documents and Delaware law may delay or deter a change of control of ICE.

Our organizational documents contain provisions that may have the effect of discouraging, delaying or preventing a change of control of, or unsolicited acquisition proposals for, ICE. These provisions make a change of control less likely, which may be contrary to the desires of certain of our stockholders. Many of these provisions are required by relevant regulators in connection with our ownership and operation of U.S. and European equity exchanges. For example, our organizational documents include provisions that generally restrict any person (either alone or together with its related persons) from (i) voting or causing the voting of shares of stock representing more than 10% of our outstanding voting capital stock (including as a result of any agreement by any other persons not to vote shares of stock) or (ii) beneficially owning shares of stock representing more than 20% of the outstanding shares of any class or series of our capital stock. Further, our organizational documents generally limit the ability of stockholders to call special stockholders' meetings or act by written consent, and generally authorize our board of directors, without stockholder approval, to issue and fix the rights and preferences of one or more series of preferred stock. In addition, provisions of Delaware law may have a similar effect, such as provisions limiting the ability of certain interested stockholders, as defined under Delaware law, from causing the merger or acquisition of a corporation against the wishes of the board of directors.

ITEM 1 (B). UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

The net book value of our property was $1.1 billion as of December 31, 2016. Our intellectual property is described under the heading in Item 1 "- Business -Technology". In addition to our intellectual property, our other primary assets include buildings, computer equipment, corporate aircraft, software, and internally developed software. We own an array of computers and related equipment.

Our headquarters and principal executive offices are located in Atlanta, Georgia and New York, New York. We currently occupy 270,000 square feet of office space in Atlanta in a building that we own that serves as our Atlanta headquarters. Our New York headquarters are located at 11 Wall Street, where we occupy 370,000 square feet of office space in a building we own. In total, we maintain 2.6 million square feet in offices primarily throughout the U.S., U.K., continental Europe, Asia, Israel and Canada. Our principal offices consist of the properties described below.

Location	Owned/Leased	Lease Expiration	Approximate Size
5660 New Northside Drive Atlanta, Georgia	Owned	N/A	270,000 sq. ft.
11 Wall Street New York, New York	Owned	N/A	370,000 sq. ft.
Basildon, U.K.	Owned	N/A	315,000 sq. ft.
Mahwah, New Jersey	Leased	2029	395,000 sq. ft.
60 Codman Hill Road Boxborough, Massachusetts	Leased	2018	100,000 sq. ft.
55 East 52nd Street New York, New York	Leased	2028	93,000 sq. ft.
32 Crosby Drive Bedford, Massachusetts	Leased	2026	82,000 sq. ft.
Milton Gate London, U.K.	Leased	2024	70,000 sq. ft.
Fitzroy House London, U.K.	Leased	2025	65,000 sq. ft.
100 Church Street New York,	Leased	2024	65,000 sq. ft.

New York			
Sandweg 94 Frankfurt, Germany	Leased	2019	60,000 sq. ft.
353 North Clark Street Chicago, Illinois	Leased	2027	57,000 sq. ft.

In addition to the above, we currently lease an aggregate of 687,000 square feet of administrative, sales and disaster preparedness facilities in various cities around the word. We believe that our facilities are adequate for our current operations and that we will be able to obtain additional space as and when it is needed.

ITEM 3. LEGAL PROCEEDINGS

We are subject to legal proceedings and claims that arise in the ordinary course of business. Typically, we do not believe that the resolution of these ordinary course matters will have a material adverse effect on our consolidated financial condition, results of operations, or liquidity. It is possible, however, that future results of operations for any particular quarterly or annual period could be materially and adversely affected by any developments relating to the legal proceedings and claims. See note 13 to the consolidated financial statements in Part II, Item 8 of this Annual Report for a summary of our legal proceedings and claims.

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

Stock Split

On November 3, 2016, a 5-for-1 split of our common stock was effected in the form of a four share stock dividend per share of common stock to shareholders of record as of the close of market on October 27, 2016. The new shares began trading on a split-adjusted basis on November 4, 2016. All share and earnings per share information has been retroactively adjusted to reflect the stock split.

Approximate Number of Holders of Common Stock

As of February 3, 2017, there were approximately 583 holders of record of our common stock.

Dividends

The declaration of dividends is subject to the discretion of our board of directors, and may be affected by various factors, including our future earnings, financial condition, capital requirements, share repurchase activity, levels of indebtedness, credit ratings and other considerations our board of directors deem relevant. Our board of directors has adopted a quarterly dividend declaration policy providing that the declaration of any dividends will be determined quarterly by the board or audit committee of the board of directors taking into account such factors as our evolving business model, prevailing business conditions and our financial results and capital requirements, without a predetermined annual net income payout ratio. During the year ended December 31, 2016, on a post-split basis, we paid dividends of $0.68 per share of our common stock in the aggregate, including quarterly dividend for each quarter in 2016 of $0.17 per share, for an aggregate payout of $409 million in 2016, which includes the payment of dividend equivalents. Refer to note 10 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for details on the amounts of our quarterly dividend payouts for the last two years.

As a holding company, we have no operations and rely upon dividends from our subsidiaries in order to provide liquidity necessary to service our debt obligations and make dividend payments to our shareholders. We and our subsidiaries are all required to comply with legal and regulatory restrictions, including restrictions contained in applicable general corporate laws, regarding the declaration and payment of dividends. These laws may limit our or our subsidiaries' ability to declare and pay dividends from time to time.

None of the indentures governing our and our subsidiaries' outstanding indebtedness contain specific covenants restricting our ability, or the ability of our subsidiaries, to pay dividends absent a default on such indebtedness. Our senior unsecured revolving credit facility in the aggregate amount of $3.4 billion, however, limits our ability to declare and make dividend payments, and other distributions of our cash, property or assets, if a default under the applicable facility has occurred and is continuing, or would occur as a result of our declaration and payment of any dividend or other distribution. Our senior unsecured revolving credit facility contains customary financial and operating covenants that place restrictions on our operations, including our maintenance of specified total leverage and interest coverage ratios, which could indirectly affect our ability to pay dividends. Refer to note 9 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on our debt facilities.

Price Range of Common Stock

Our common stock trades on the New York Stock Exchange under the ticker symbol "ICE". On February 3, 2017, our common stock traded at a high of $59.00 per share and a low of $58.45 per share. The following table sets forth the quarterly high and low sale prices for the periods indicated for our common stock on the New York Stock Exchange, on a post-split basis.

	Common Stock Market Price	
	High	Low
Year Ended December 31, 2015		
First Quarter	$ 48.01	$ 40.45
Second Quarter	$ 48.59	$ 44.23
Third Quarter	$ 49.28	$ 44.06
Fourth Quarter	$ 53.35	$ 44.93
Year Ended December 31, 2016		
First Quarter	$ 53.78	$ 45.79
Second Quarter	$ 54.39	$ 45.88
Third Quarter	$ 57.40	$ 50.18
Fourth Quarter	$ 59.86	$ 52.27

Equity Compensation Plan Information

The following table provides information about our common stock that has been or may be issued under our equity compensation plans as of December 31, 2016:

•Intercontinental Exchange Holdings, Inc. 2013 Omnibus Employee Incentive Plan
•Intercontinental Exchange Holdings, Inc. 2013 Omnibus Non-Employee Director Incentive Plan
•Intercontinental Exchange Holdings, Inc. 2009 Omnibus Incentive Plan
•Intercontinental Exchange Holdings, Inc. 2003 Restricted Stock Deferral Plan for Outside Directors
•Intercontinental Exchange Holdings, Inc. 2000 Stock Option Plan
•Creditex Amended and Restated 1999 Stock Option/Stock Issuance Plan
•NYSE Amended and Restated Omnibus Incentive Plan

•NYSE 2006 Stock Incentive Plan
The 2000 Stock Option Plan and the Creditex Amended and Restated 1999 Stock Option/Stock Issuance Plan were retired on May 14, 2009 when our shareholders approved the 2009 Omnibus Incentive Plan. The 2009 Omnibus Incentive Plan was retired on May 17, 2013 when our shareholders approved the Intercontinental Exchange Holdings, Inc. 2013 Omnibus Employee Incentive Plan. No future grants will be made from the retired ICE or Creditex plans. Certain grants continue to be made to legacy NYSE employees under the NYSE Amended and Restated Omnibus Incentive Plan. Other than the grants to legacy NYSE employees under the NYSE Amended and Restated Omnibus Incentive Plan, all future grants to employees will be made under the Intercontinental Exchange Holdings, Inc. 2013 Omnibus Employee Incentive Plan and all future grants to directors will be made under the Intercontinental Exchange Holdings, Inc. 2013 Omnibus Non-Employee Director Incentive Plan.

Plan Category	Number of securities to be issued upon exercise of outstanding options and rights (a) (3)		Weighted average exercise price of outstanding options (b) (3)		Number of securities available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c) (3)
Equity compensation plans approved by security holders(1)	10,303,567	(1)	$ 36.12	(1)	14,344,458
Equity compensation plans not approved by security holders(2)	122,220	(2)	$ 14.05	(2)	—
TOTAL	10,425,787		$ 36.05		14,344,458

(1) The 2000 Stock Option Plan was approved by our stockholders in June 2000. The 2009 Omnibus Incentive Plan was approved by our stockholders on May 14, 2009. The Intercontinental Exchange Holdings, Inc. 2013 Omnibus Employee Incentive Plan and the Intercontinental Exchange Holdings, Inc. 2013 Omnibus Non-Employee Director Incentive Plan were approved by our stockholders in May 2013. The shareholders of NYSE approved the NYSE Amended and Restated Omnibus Incentive Plan on April 25, 2013. Of the 10,303,567 securities to be issued upon exercise of outstanding options and rights, 3,866,750 are options with a weighted average exercise price of $36.12 and the remaining 6,436,817 securities are restricted stock shares that do not have an exercise price. Of the 6,436,817 restricted stock shares to be issued, 353,560 shares were originally granted under the NYSE Amended and Restated Omnibus Incentive Plan.

(2) This category includes the 2003 Restricted Stock Deferral Plan for Outside Directors and the Creditex Amended and Restated 1999 Stock Options/Stock Issuance Plan. It also includes the NYSE 2006 Stock Incentive Plan, subsequent to our acquisition of NYSE. Of the 122,220 securities to be issued upon exercise of outstanding options and rights, 11,955 are options with a weighted average exercise price of $14.05 and the remaining 110,265 securities are restricted stock shares that do not have an exercise price. None of the 11,955 options to be issued were originally granted under the 2006 NYSE Stock Incentive Plan. For more information concerning these plans, see note 10 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report.

(3) The share and per share amounts in the table above reflect the 5-for-1 stock split that was effected in the fourth quarter of 2016.

Stock Repurchases

The table below sets forth the information with respect to purchases made by or on behalf of ICE or any "affiliated purchaser" (as defined in Rule 10b-18(a)(3) under the Exchange Act) of our common stock during the three months ended December 31, 2016, on a post-split basis.

Period (2016)	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly	Approximate dollar value of shares that may yet be

			announced plans or programs(1)	purchased under the plans or programs (in millions)(1)
October 1 - October 31	292,255	$53.47	292,255	$984
November 1 - November 30	322,056	$54.77	614,311	$967
December 1 - December 31	288,609	$57.83	902,920	$950
Total	902,920	$55.42	902,920	$950

(1) Refer to note 10 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for details on our stock repurchase plans.

ITEM 6. SELECTED FINANCIAL DATA

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The following tables present our selected consolidated financial data as of and for the dates and periods indicated. We derived the selected consolidated financial data set forth below for the years ended December 31, 2016, 2015 and 2014 and as of December 31, 2016 and 2015 from our audited consolidated financial statements, which are included elsewhere in this Annual Report. We derived the selected consolidated financial data set forth below for the years ended December 31, 2013 and 2012 and as of December 31, 2014, 2013 and 2012 from our audited consolidated financial statements, which are not included in this Annual Report. The selected consolidated financial data presented below is not indicative of our future results for any period. The selected consolidated financial data set forth below should be read in conjunction with our consolidated financial statements and related notes and Item 7, "- Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Annual Report.

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(In millions, except for per share data)				
Consolidated Statement of Income Data[(1)]					
Revenues:					
Transaction and clearing, net[(2)]	$3,384	$3,228	$3,144	$1,393	$1,185
Data services	1,978	871	691	246	161
Listings	419	405	367	33	—
Other revenues	177	178	150	58	17
Total revenues	5,958	4,682	4,352	1,730	1,363
Transaction-based expenses[(2)]	1,459	1,344	1,260	132	—
Total revenues, less transaction-based expenses	4,499	3,338	3,092	1,598	1,363
Operating expenses:					
Compensation and benefits	945	611	592	302	251
Professional services	137	139	181	54	33
Acquisition-related transaction and integration costs[(3)]	80	88	129	143	19
Technology and communication	374	203	188	63	46
Rent and occupancy	70	57	78	39	19
Selling, general and administrative	116	116	143	51	37
Depreciation and amortization	610	374	333	156	131
Total operating expenses	2,332	1,588	1,644	808	536
Operating income	2,167	1,750	1,448	790	827
Other expense, net[(4)]	138	97	41	286	37
Income from continuing operations before income tax expense	2,029	1,653	1,407	504	790
Income tax expense	580	358	402	184	228
Income from continuing operations	1,449	1,295	1,005	320	562
Income (loss) from discontinued operations, net of tax[(5)]	—	—	11	(50)	—
Net income	$1,449	$1,295	$1,016	$270	$562
Net income attributable to non-controlling interest	(27)	(21)	(35)	(16)	(10)
Net income attributable to ICE[(6)]	$1,422	$1,274	$981	$254	$552
Basic earnings (loss) per share attributable to ICE common shareholders[(7)]:					
Continuing operations[(6)]	$2.39	$2.29	$1.70	$0.78	$1.52
Discontinued operations[(5)]	—	—	0.02	(0.13)	—
Basic earnings per share	$2.39	$2.29	$1.72	$0.65	$1.52
Basic weighted average common shares outstanding[(8)]	595	556	570	392	364
Diluted earnings (loss) per share attributable to ICE common shareholders[(7)]:					
Continuing operations[(6)]	$2.37	$2.28	$1.69	$0.77	$1.50
Discontinued operations[(5)]	—	—	0.02	(0.13)	—
Diluted earnings per share	$2.37	$2.28	$1.71	$0.64	$1.50
Diluted weighted average common shares outstanding[(8)]	599	559	573	396	367
Dividend per share[(7)]	$0.68	$0.58	$0.52	$0.13	$—

(1) We acquired several companies during the periods presented and have included the financial results of these companies in our consolidated financial statements effective from the respective acquisition dates. Refer to note 3 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on some of these acquisitions, including the acquisitions of Interactive Data on December 14, 2015 and NYSE on November 13, 2013.

(2)

Our transaction and clearing fees are presented net of rebates paid to our customers. We also report transaction-based expenses relating to Section 31 fees and payments made for routing services and to certain U.S. equities liquidity providers. For a discussion of these rebates, see Item 7 "- Management's Discussion and Analysis of Financial Condition and Results of Operations - Segment Reporting - Trading and Clearing Segment" included elsewhere in this Annual Report.

(3) Acquisition-related transaction and integration costs relate to acquisitions and other strategic opportunities. The acquisition-related transaction costs include fees for investment banking advisors, lawyers, accountants, tax advisors and public relations firms, deal-related bonuses to certain of our employees, as well as costs associated with credit facilities and other external costs directly related to the transactions. We also incurred integration costs during the years ended December 31, 2016, 2015, 2014 and 2013 relating to our NYSE acquisition and during the year ended December 31, 2016 relating to our Interactive Data acquisition, primarily related to employee termination costs, lease terminations costs, costs incurred relating to the IPO of Euronext, transaction-related bonuses and professional services costs incurred relating to the integrations.

(4) Other expense, net during the year ended December 31, 2013 includes a $190 million impairment loss on our Cetip investment and a $51 million expense relating to the early payoff of outstanding debt.

(5) During the year ended December 31, 2014, we sold 100% of our wholly-owned subsidiary, Euronext, in connection with Euronext's IPO, and we sold our entire interest in three companies that comprised the former NYSE Technologies (NYFIX, Metabit and Wombat). We treated the sale of these entities as discontinued operations for all periods presented from their acquisition on November 13, 2013 to their dispositions. See Item 7 "- Management's Discussion and Analysis of Financial Condition and Results of Operations - Discontinued Operations" and note 16 to our consolidated financial statements and related notes, both of which are included elsewhere in this Annual Report, for more information regarding their presentation as discontinued operations.

(6) Our results include certain items that are not reflective of our cash operations and core business performance. Excluding these items, net of taxes, net income attributable to ICE for the year ended December 31, 2016 would have been $1.7 billion; and, basic earnings per share and diluted earnings per share attributable to ICE common shareholders would have been $2.80 and $2.78, respectively. See Item 7 "- Management's Discussion and Analysis of Financial Condition and Results of Operations - Non-GAAP Financial Measures" included elsewhere in this Annual Report for more information on these items.

(7) Figures have been retroactively adjusted to reflect the 5-for-1 stock split effected in the fourth quarter of 2016.

(8) The weighted average common shares outstanding increased in 2016 primarily due to the stock issued for the Interactive Data and Trayport acquisitions and increased in 2014 primarily due to stock issued for the NYSE acquisition. On a post-split basis, we issued 211.9 million shares of our common stock to NYSE stockholders, 32.3 million shares of our common stock to Interactive Data stockholders and 12.6 million shares of our common stock to Trayport stockholders, weighted to show these additional shares outstanding for all periods after the respective acquisition dates.

	As of December 31,				
	2016	2015	2014	2013	2012
	(In millions)				
Consolidated Balance Sheet Data					
Cash and cash equivalents(1)	$407	$ 627	$ 652	$ 961	$1,612
Margin deposits and guaranty fund assets(2)	55,150	51,169	47,458	42,216	31,883
Total current assets	57,133	53,313	50,232	44,269	33,750
Goodwill and other intangible assets, net(1)	22,711	22,837	16,315	18,512	2,737
Total assets	82,003	77,987	68,254	64,422	37,215
Margin deposits and guaranty fund liabilities(2)	55,150	51,169	47,458	42,216	31,883
Total current liabilities	58,617	54,743	50,436	44,321	32,246
Short-term and long-term debt(1)	6,364	7,308	4,277	5,058	1,132
Equity(1)	15,754	14,840	12,392	12,381	3,677

(1) The increases in our equity, goodwill and other intangible assets, and debt as of December 31, 2015 primarily relates to our acquisitions of Interactive Data and Trayport. The decrease in our cash and cash equivalents and the increases in our equity, goodwill and other intangible assets, and debt as of December 31, 2013 primarily relates to our acquisition of NYSE. Refer to notes 3, 7 and 9 to our consolidated financial statements and related notes,

which are included elsewhere in this Annual Report, for more information on these items.

(2) Clearing members of our clearing houses are required to deposit original margin and variation margin and to make deposits to a guaranty fund. The cash deposits made to these margin accounts and to the guaranty fund are recorded in the consolidated balance sheet as current assets with corresponding current liabilities to the clearing members that deposited them. Refer to note 12 to our

consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on these items.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements for many reasons. See the factors set forth under the heading "Forward Looking Statements" at the beginning of this Annual Report and in Item 1(A) under the heading "Risk Factors." The following discussion is qualified in its entirety by, and should be read in conjunction with, the more detailed information contained in Item 6 "Selected Financial Data" and our consolidated financial statements and related notes included elsewhere in this Annual Report.

Overview

We are a leading global operator of regulated exchanges, clearing houses and listings venues, and a provider of data services for commodity and financial markets. We operate regulated marketplaces for listing, trading and clearing a broad array of derivatives and securities contracts across major asset classes, including energy and agricultural commodities, interest rates, equities, equity derivatives, exchange traded funds, credit derivatives, bonds and currencies. We offer end-to-end market data services to support the trading, investment, risk management and connectivity needs of customers across virtually all asset classes.

Our exchanges include futures exchanges in the U.S., U.K., Continental Europe, Canada and Singapore, and cash equities, equity options and bond exchanges in the U.S. We also operate OTC markets for physical energy and CDS trade execution. To serve global derivatives markets, we operate central counterparty clearing houses in the U.S., U.K., Continental Europe, Canada and Singapore. We offer a range of data services for global financial and commodity markets, including pricing and reference data, exchange data, analytics, feeds, desktops and connectivity solutions. Through our markets, clearing houses, listings and data services, we provide end-to-end solutions for our customers through liquid markets, benchmark products, access to capital markets, and related services to support their ability to manage risk and raise capital. Our business is currently conducted as two reportable business segments, our Trading and Clearing segment and our Data and Listings segment, and the majority of our identifiable assets are located in the U.S. and U.K.

Recent Developments

Stock Split

On November 3, 2016, a 5-for-1 split of our common stock was effected in the form of a four share stock dividend per share of common stock to shareholders of record as of the close of market on October 27, 2016. The new shares began trading on a split-adjusted basis on November 4, 2016. All share and earnings per share information has been retroactively adjusted to reflect the stock split. We retired all of our outstanding treasury shares effective October 27, 2016, the record date.

Acquisitions

On October 3, 2016, we acquired from S&P Global 100% of Standard & Poor's Securities Evaluations, Inc., or SPSE, and 100% of Credit Market Analysis for $431 million in cash. The cash consideration was funded from borrowings under our commercial paper program. SPSE, which has been renamed Securities Evaluations, is a provider of fixed income evaluated pricing and Credit Market Analysis is a provider of independent data for the OTC markets, including credit derivatives and bonds. Securities Evaluations and Credit Market Analysis are part of the suite of pricing and analytics products and services that comprise ICE Data Services. In order to comply with an Order of the Securities and Exchange Commission, services offered by Securities Evaluations will be managed and operated separately from the existing fixed income evaluated pricing services offered by Interactive Data, as we work through an integration approach. The acquisitions will enable us to offer customers new data and valuation services. Refer to note 3 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on this acquisition and the other acquisitions discussed below.

On June 30, 2016, we acquired a majority equity position in MERSCORP Holdings, Inc., owner of Mortgage Electronic Registrations Systems, Inc., or collectively "MERS". MERS is a privately held, member-based organization that owns and manages the MERS® System and is made up of thousands of lenders, servicers, sub-servicers, investors and government institutions. In addition, we have entered into a software development agreement to rebuild the MERS® System to benefit the U.S. residential mortgage finance market. The MERS® System is a national electronic registry that tracks the changes in servicing rights and beneficial ownership interests in U.S.-based mortgage loans. This new infrastructure is expected to shift its operation to an ICE data center in the first half of 2018.

The terms of the MERS acquisition include a right for us to purchase all of the remaining equity interests of MERS after we satisfy our deliverables under the software development agreement. In addition, the MERS equity holders may exercise a put option to require us to purchase all of the remaining equity interests of MERS. Each of these terms is subject to certain price provisions. Because we do not have the ability to control MERS' operations, we have recorded the purchase as an equity method investment and our ratable share of net income (loss) in MERS in future periods will be recorded in our consolidated statements of income as equity earnings of our unconsolidated subsidiaries, below operating income in other income (loss).

On December 14, 2015, we acquired 100% of Interactive Data in a stock and cash transaction. The total purchase price was $5.6 billion comprised of cash consideration of $4.1 billion and 32.3 million shares of our common stock, on a post-split basis, and their results are included in our consolidated results effective from the acquisition date. The cash consideration is gross of $301 million of cash held by Interactive Data on the date of the acquisition. The cash consideration was funded from $2.5 billion of net proceeds received on November 24, 2015 in connection with the offering of new senior notes and $1.6 billion of borrowing under our commercial paper program.

On December 11, 2015, we acquired 100% of Trayport in a stock transaction. Trayport is a software company that licenses its technology to serve exchanges, OTC brokers and traders to facilitate electronic and hybrid trade execution primarily in the energy markets. The total purchase price was $620 million, comprised of 12.6 million shares of our common stock, on a post-split basis, and their results are included in our consolidated results effective from the acquisition date.

The U.K. Competition and Markets Authority, or the CMA, undertook a review of our acquisition of Trayport under the merger control laws of the U.K. During the pendency of the review, we did not integrate Trayport into our existing business operations. On October 17, 2016, the CMA issued its findings and ordered a divestment of Trayport to remedy what the CMA indicated it believed to be a substantial lessening of competition in the supply of trade execution services and trade clearing services to energy traders in the European Economic Area. In November 2016, we filed an appeal to challenge the CMA's decision. The outcome of the appeal is expected to be determined in 2017. If our appeal is successful, the matter will be sent back to the CMA for additional review. If our appeal is not successful, we will be forced to sell Trayport and there is no certainty of the price we could receive if a sale were required. The timing of a final decision is uncertain at this time.

The functional currency of Trayport is the pound sterling, as this is the currency in which Trayport operates. The $620 million in Trayport net assets were recorded on our December 11, 2015 opening balance sheet at a pound sterling/U.S. dollar exchange rate of 1.5218 (£407 million). Because our consolidated financial statements are presented in U.S. dollars, we must translate the Trayport net assets into U.S. dollars at exchange rates in effect at the end of each reporting period. Therefore, increases or decreases in the value of the U.S. dollar against the pound sterling will affect the value of the Trayport balance sheet, with gains or losses included in the cumulative translation adjustment account, a component of equity. As of the result of the decrease in the pounds sterling/U.S. dollar exchange rate to 1.2336 as of December 31, 2016, the portion of our equity attributable to the Trayport net assets in accumulated other comprehensive loss from foreign currency translation was $117 million as of December 31, 2016. If we are required to sell Trayport, we would include the accumulated translation adjustment when computing the gain or loss from the sale.

Creditex Customer Relationship Intangible Asset Impairment

In August 2016, we sold certain of Creditex's U.S. voice brokerage operations to Tullett Prebon. During the third quarter of 2016, we discontinued Creditex's U.K. voice brokerage operations. We continue to operate Creditex's electronically traded markets and systems, post-trade connectivity platforms and intellectual property.

We continued to monitor potential impairment triggering events in our CDS trade execution business during 2016, including the impacts of divesting the brokerage business, changes in the business and regulatory climate in which the remaining business operates, the volatility in the capital markets, our recent operating performance and our current financial projections. Based on an analysis of these factors, it was determined that the carrying value of the CDS Creditex customer relationship intangible asset was not fully recoverable and an impairment of the asset was recorded in September 2016 for $33 million. The impairment was recorded as amortization expense in the accompanying consolidated statements of income for the year ended December 31, 2016. As of December 31, 2016, the remaining Creditex customer relationship intangible asset is $14 million and will continue to be amortized over the remaining useful life through August 2020.

Consolidated Financial Highlights

The following charts and table summarize our results and significant changes in our consolidated financial performance for the periods presented (dollars in millions, except per share amounts):

	Year Ended December 31,			Year Ended December 31,		
	2016	2015	Change	2015	2014	Change
Total revenues, less transaction-based expenses	$4,499	$3,338	35 %	$3,338	$3,092	8 %
Total operating expenses	$2,332	$1,588	47 %	$1,588	$1,644	(3)%
Adjusted operating expenses[(1)]	$1,947	$1,365	43 %	$1,365	$1,389	(2)%
Operating income	$2,167	$1,750	24 %	$1,750	$1,448	21 %
Adjusted operating income[(1)]	$2,552	$1,973	29 %	$1,973	$1,703	16 %
Operating margin	48 %	52 %	(4 pts)	52 %	47 %	5 pts
Adjusted operating margin[(1)]	57 %	59 %	(2 pts)	59 %	55 %	4 pts
Other expense, net	$138	$97	42 %	$97	$41	134 %
Income tax expense	$580	$358	62 %	$358	$402	(11)%
Effective tax rate	29 %	22 %	7 pts	22 %	29 %	(7 pts)
Net income from continuing operations	$1,449	$1,295	12 %	$1,295	$1,005	29 %
Adjusted net income from continuing operations attributable to ICE[(1)]	$1,665	$1,359	23 %	$1,359	1,104	23 %
Net income attributable to ICE	$1,422	$1,274	12 %	$1,274	$981	30 %
Diluted earnings per share attributable to ICE common shareholders from continuing operations	$2.37	$2.28	4 %	$2.28	$1.69	35 %
Adjusted diluted earnings per share attributable to ICE common shareholders from continuing operations[(1)]	$2.78	$2.43	14 %	$2.43	$1.92	27 %
Cash flows from operating activities of continuing operations	$2,149	$1,311	64 %	$1,311	$1,463	(10)%

[(1)] The adjusted numbers in the charts and table above are calculated by excluding items that are not reflective of our cash operations and core business performance, net of taxes, as applicable. As a result, these adjusted numbers are not calculated in accordance with U.S. GAAP. See "- Non-GAAP Financial Measures" below.

- Total revenues, less transaction-based expenses, increased $1.2 billion for the year ended December 31, 2016, from the comparable period in 2015, primarily due to our acquisitions of Interactive Data, Trayport, Securities Evaluations and Credit

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Market Analysis, and to a lesser extent, revenue increases in our exchange-related data services and Brent crude and agricultural transaction and clearing. We recognized $1.1 billion in Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis data services revenues for the year ended December 31, 2016, compared to $50 million in Interactive Data and Trayport data services revenues for the year ended December 31, 2015, subsequent to their acquisitions in December 2015. Partially offsetting the revenue increases were unfavorable foreign exchange effects of $59 million arising from the strengthening U.S. dollar (primarily impacting revenues billed in pounds sterling), for the year ended December 31, 2016 from the comparable period in 2015.

- Total revenues, less transaction-based expenses, increased $246 million for the year ended December 31, 2015, from the comparable period in 2014, primarily due to increases in our data services revenues, listings revenues and Brent crude transaction and clearing revenues. The data services fee revenues increase was partially due to $50 million in data services revenues from Interactive Data and Trayport during the year ended December 31, 2015, subsequent to their acquisitions. These revenue increases were partially offset by decreases in certain interest rate transaction and clearing revenues compared to the prior year period. Also partially offsetting the revenue increases were unfavorable foreign exchange effects of $55 million arising from the strengthening U.S. dollar (primarily impacting revenues billed in pounds sterling and euros), for the year ended December 31, 2015 from the comparable period in 2014.
- Total operating expenses increased $744 million for the year ended December 31, 2016, from the comparable period in 2015, primarily due to increased operating expenses relating to Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis and $33 million relating to the Creditex customer relationship intangible asset impairment recorded in September 2016. Excluding acquisition-related transaction and integration costs, we recognized $812 million in Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis operating expenses for the year ended December 31, 2016, compared to $39 million in Interactive Data and Trayport operating expenses for the year ended December 31, 2015, subsequent to their acquisitions in December 2015. These increases were partially offset by decreases in professional services expenses and selling, general and administrative expenses for the year ended December 31, 2016, from the comparable period in 2015. Also partially offsetting the operating expense increases were favorable foreign exchange effects of $40 million arising from the strengthening U.S. dollar (primarily impacting operating expenses incurred in pounds sterling) for the year ended December 31, 2016, from the comparable period in 2015.
- Total operating expenses decreased $56 million for the year ended December 31, 2015, from the comparable period in 2014, primarily due to decreases in acquisition-related transaction and integration costs, professional services expenses, rent and occupancy expenses, and selling, general and administrative expenses. Operating expenses also decreased due to the impact of a strengthening U.S. dollar on our foreign currency exchange rates (primarily for those operating expenses incurred in pounds sterling and euros), which reduced our operating expenses by $17 million for the year ended December 31, 2015, from the comparable period in 2014. These decreases were partially offset by increases in depreciation expenses compared to the prior year period primarily due to fixed asset additions relating to the NYSE integration and real estate expenditures relating primarily to the Atlanta and New York headquarters. We also had increases in operating expenses during the year ended December 31, 2015 of $39 million from Interactive Data and Trayport (excluding acquisition-related transaction and integration costs), subsequent to their acquisitions.
- The lower effective tax rate and income tax expense for the year ended December 31, 2015 are primarily due to the deferred tax benefit associated with future U.K. income tax rate reductions along with certain favorable settlements with various taxing authorities.

Business Environment and Market Trends

Our business environment has been characterized by industry consolidation and increasing competition among global markets for trading, clearing and listings; the globalization of exchanges, customers and competitors; market participants' rising demand for speed, data capacity and connectivity, which requires ongoing investment in technology; evolving and disparate regulation across multiple jurisdictions; and increasing focus on capital and cost efficiencies.

Price volatility increases the need to hedge risk and creates demand among market participants for the exchange of risk through trading and clearing. Market liquidity is one of the primary market attributes for attracting and maintaining customers and is an important indicator of a market's strength. In addition, the ability to evolve existing products to serve emerging needs, develop new products and respond to competitive dynamics in pricing, exclusivity and consolidation is important to our business. Changes in these and other factors could cause our revenues to fluctuate from period to period and these fluctuations may affect the reliability of period to period comparisons of our revenues and operating results. For additional information regarding the factors that affect our results of operations, see Item 1(A) “Risk Factors” included elsewhere in this Annual Report.

The implementation of new laws or regulations or the uncertainty around potential changes may impact participation in our markets, or the demand for our clearing and data services either favorably or unfavorably. Many of the recent changes with regard to global financial reform have emphasized the importance of transparent markets, centralized clearing and access to data, all of which are important aspects of our product offering. However, some of the proposed rules have yet to be implemented and some rules that have already been propagated are being reconsidered. In Europe, final regulations related to Mifid II have not yet been implemented and significant uncertainties and ambiguities remain around such regulations. As this is established, legislative and regulatory actions may change the way we conduct our business and may create uncertainty for market participants, which could affect trading volumes or demand for market data. As a result, it is difficult to predict all of the effects that the legislation and its implementing regulations will have on us. As discussed more fully in Item 1 "- Business - Regulation" included elsewhere in this Annual Report, the implementation of MiFID II and other regulations may result in operational, regulatory and/or business risk.

In recent years, low interest rates and uncertainty in the financial markets continued to reflect the impact of a relatively slow or yet to occur global economic recovery. Lower growth in Asia and the European Union may also continue to affect global financial markets. In addition, economic and regulatory uncertainty, coupled with periods of high market volatility around geopolitical events, low interest rates and low oil and natural gas prices has affected our clients' activities in recent years. The duration of these trends will determine the continued impact on our business across trading and listings. We have diversified our business so that we are not dependent on volatility or trading activity in any one asset class. In addition, we have increased our portion of non-transaction and clearing revenues from 13% in 2012 to 57% in 2016. This non-transaction revenue includes data services, listings and other revenues. We continue to focus on our strategy to grow each of our revenue streams, as well as on our company-wide expense reduction initiatives and our synergies in connection with our acquisitions in order to mitigate these uncertainties and to build on our growth opportunities by leveraging our proprietary data, clearing and markets.

In recent years, financial institutions and corporations have acted to control spending, including on financial information and related services. Yet many of the data products and services we sell are required for our clients' business operations regardless of market volatility or shifts in business profitability levels. While we expect that cost containment pressures will continue, we anticipate that there will continue to be growth in the financial information services sector driven by a number of global trends, including the following: increasing global regulatory demands; greater use of fair value accounting standards and reliance on independent valuations; greater emphasis on risk management; market fragmentation driven by regulatory changes; the move to passive investing and indexation; ongoing growth in the size and diversity of financial markets; increased electronification of fixed income and other less automated markets; the development of new data products; the demand for greater data capacity and connectivity; new entrants; and increasing demand for outsourced services by financial institutions. We contract with clients through data fixed-fee subscriptions, variable fees based on usage or a combination of fixed-fee subscription and usage-based fees. In addition, some of our data services generate one-time or non-recurring revenue, such as one-time purchases of historical data, set-up services or implementation fees.

Segment Reporting

We operated as a single reportable business segment as of December 31, 2015 but began operating as two operating segments in the first quarter of 2016 following our acquisition of Interactive Data. As of December 31, 2016, we continue to operate as two business segments: our Trading and Clearing segment and our Data and Listings segment. This presentation is reflective of how our chief operating decision maker reviews and operates our business. Our Trading and Clearing segment comprises our transaction-based execution and clearing businesses. Our Data and Listings segment comprises our subscription-based data services and securities listings businesses. Our chief operating decision maker does not review total assets, intersegment revenues/expenses or statements of income below operating income by segments; therefore, such information is not presented below.

While revenues are allocated directly to segments, a significant portion of our operating expenses are not solely related to a specific segment because the expenses serve functions that are necessary for the operation of both segments. Because these expenses do not relate to a single segment, we have employed a reasonable allocation method to allocate expenses between the segments for presentation purposes. We have elected to use a pro-rata revenue approach as the allocation method for the expenses that do not relate solely to one segment. Further, precise allocation of expenses to specific revenue streams within these segments is not reasonably possible. Accordingly, we did not allocate expenses to specific revenue streams within the segments.

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Trading and Clearing Segment

The following charts and table present our selected statements of income data for our Trading and Clearing segment, from continuing operations (dollars in millions):

(1) The adjusted numbers in the chart above are calculated by excluding items that are not reflective of our cash operations and core business performance, net of taxes, as applicable. As a result, these adjusted numbers are not calculated in accordance with U.S. GAAP. See “- Non-GAAP Financial Measures” below.

	Year Ended December 31, 2016	2015	Change	Year Ended December 31, 2015	2014	Change
Revenues:						
Brent crude futures and options contracts	$299	$263	14 %	$263	$231	13 %
Other oil futures and options contracts	118	112	5	112	99	14
Gasoil futures and options contracts	98	93	4	93	82	14
Natural gas futures and options contracts	208	199	4	199	194	3
Power futures and options contracts	83	79	5	79	77	3
Emissions and other energy futures and options contracts	59	58	—	58	71	(17)
Sugar futures and options contracts	109	110	—	110	95	16
Other agricultural and metals futures and options contracts	119	101	17	101	96	6
Interest rates futures and options contracts	177	206	(13)	206	268	(24)
Other financial futures and options contracts	141	136	4	136	128	5
Cash equities and equity options	1,780	1,676	6	1,676	1,593	5
Credit default swaps	143	149	(4)	149	161	(7)
Other transactions	50	46	8	46	49	(6)
Transaction and clearing, net	3,384	3,228	5	3,228	3,144	3
Other revenues	177	178	—	178	150	18
Revenues	3,561	3,406	5	3,406	3,294	3
Transaction-based expenses	1,459	1,344	9	1,344	1,260	7
Revenues, less transaction-based expenses	2,102	2,062	2 %	2,062	2,034	1 %
Other operating expenses	624	670	(7)%	670	735	(9)%
Acquisition-related transaction and integration costs	10	28	(64)%	28	64	(57)%
Depreciation and amortization (including impairment)	246	217	13 %	217	212	2 %
Operating expenses	880	915	(4)%	915	1,011	(10)%
Operating income	$1,222	$1,147	7 %	$1,147	$1,023	12 %

Transaction and Clearing Revenues

Overview

Our transaction and clearing revenues are reported on a net basis, except for the NYSE transaction-based expenses discussed below, and consist of fees collected from our derivatives trading and clearing, and from our cash trading and equity options exchanges. In our derivatives markets, we earn transaction and clearing revenues from both counterparties to each contract that is traded and/or cleared, and in our equity and equity options markets, we receive trade execution fees as well as routing fees related to orders in our markets which are routed to other markets for execution.

Rates per-contract are driven by the number of contracts or securities traded and the fees charged per contract, net of certain rebates. Our per-contract transaction and clearing revenues will depend upon many factors, including, but not limited to, market conditions, transaction and clearing volume, product mix, pricing, applicable revenue sharing and market making agreements, and new product introductions. Because transaction and clearing revenues are generally assessed on a per-contract basis, revenues and profitability fluctuate with changes in contract volume and, though not to the same degree, due to product mix.

For the years ended December 31, 2016, 2015 and 2014, 19%, 20% and 26%, respectively, of our Trading and Clearing segment revenues, less transaction-based expenses, were billed in pounds sterling or euros. As the pound sterling or euro exchange rate changes, the U.S. equivalent of revenues denominated in foreign currencies changes accordingly. Due to the weakening of the pound sterling and euro the last two years compared to the U.S. dollar, our Trading and Clearing segment revenues, less transaction-based expenses, decreased $35 million for the year ended December 31, 2016 from the comparable period in 2015, and decreased $49 million for the year ended December 31, 2015 from the comparable period in 2014. See Item 3 "- Quantitative and Qualitative Disclosures About Market Risk - Foreign Currency Exchange Rate Risk" below for additional information on the impact of currency fluctuations.

Our transaction and clearing fees are presented net of rebates. We recorded rebates of $674 million, $563 million and $466 million for the years ended December 31, 2016, 2015 and 2014, respectively. We offer rebates in certain of our markets primarily to support market liquidity and trading volume by providing qualified participants in those markets a discount to the applicable commission rate. Such rebates are calculated based on volumes traded. The increase in the rebates is due primarily to an increase in the number of participants in the rebate programs offered on various contracts, an increase in our traded volume and an increase in the number of rebate programs.

Commodities Markets

We operate global crude oil and refined oil futures markets, including the ICE Brent, ICE WTI and ICE Gasoil futures and options contracts, as well as over 400 refined oil futures products that relate to our benchmark futures contracts. The ICE Brent crude futures contract is relied upon by a broad range of global market participants, including oil producing nations and multinational companies, to price and hedge their crude oil production and consumption. ICE Gasoil is a key refined oil benchmark in Europe and Asia. Total oil volume and revenues increased 12% and 10%, respectively, for the year ended December 31, 2016, from the comparable period in 2015, and increased 17% and 14%, respectively, for the year ended December 31, 2015, from the comparable period in 2014.

In 2016, ICE Brent crude futures and options contracts produced the twentieth consecutive year of record volume. ICE Brent crude futures and options volume increased 15% for the year ended December 31, 2016, from the comparable period in 2015, and increased 14% for the year ended December 31, 2015, from the comparable period in 2014. ICE WTI crude futures and options volume increased 16% for the year ended December 31, 2016, from the comparable period in 2015, and increased 26% for the year ended December 31, 2015, from the comparable period in 2014. ICE Brent crude and ICE WTI crude futures and options volume increased primarily due to increased oil price volatility; broader market volatility in oil products, equities and foreign exchange rates; acts of central governments; outcomes of elections; and uncertainty around OPEC policy.

Our global natural gas futures and options volume declined 2% and revenues increased 4% for the year ended December 31, 2016, from the comparable period in 2015, respectively, and volume declined 4% and revenues increased 3% for the year ended December 31, 2015, from the comparable period in 2014, respectively. Global natural gas volume declined the last two years due to lower price volatility related to high natural gas supplies but revenues increased due to geographic product mix.

Total volume and revenues in our agricultural and metals futures and options markets increased 11% and 8%, respectively, for the year ended December 31, 2016, from the comparable period in 2015, and increased 13% and 11%, respectively, for the year ended December 31, 2015, from the comparable period in 2014. Volume in our largest agricultural contract, sugar futures and options, remained flat for the year ended December 31, 2016, from the comparable period in 2015, and increased 18% for the year ended December 31, 2015, from the comparable period in 2014. Volume in our other agricultural and metal futures and options volume increased 21% for the year ended December 31, 2016, from the comparable period in 2015 and increased 9% for the year ended December 31, 2015, from the comparable period in 2014. The increases in agricultural volume were primarily driven by increased price volatility due to changing supply and demand expectations largely related to weather and production levels.

Financial Markets

Financial futures and options volume increased 10% and revenues decreased 6%, respectively, for the year ended December 31, 2016, from the comparable period in 2015, and decreased 9% and 14%, respectively, for the year ended December 31, 2015, from the comparable period in 2014. Interest rate futures and options volume increased 12% for the year ended December 31, 2016, from the comparable period in 2015, and decreased 11% for the year ended December 31, 2015, from the comparable period in 2014. Interest rate futures and options volume increased for the year ended December 31, 2016 primarily due to uncertainty around central bank actions, economic data during 2016, and the U.K.'s decision to exit the European Union. Revenues decreased while volume increased for the interest rates futures and options for the year ended December 31, 2016 primarily due to the impact of foreign currency translation and increased market making rebates that apply at higher volume levels.

Other financial futures and options volume increased 5% for the year ended December 31, 2016, from the comparable period in 2015, and decreased 4% for the year ended December 31, 2015, from the comparable period in 2014. Other financial futures and options volume increased for the year ended December 31, 2016 primarily due to changes in price volatility in equity indexes driven by equity market volatility. Volume in our MSCI futures and options contracts increased 49% for the year ended December 31, 2016, from the comparable period in 2015, due to global equity market volatility.

Cash equities handled volume increased 6% for the year ended December 31, 2016, from the comparable period in 2015, primarily due to increased market volatility during the first half of 2016. Cash equities handled volume increased 13% for the year ended December 31, 2015, from the comparable period in 2014, primarily due to increased market volatility throughout 2015. Cash equities revenues, net of transaction-based expenses, were $223 million, $220 million and $188 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Equity options volume decreased 5% for the year ended December 31, 2016, compared to the same period in 2015, and decreased 20% for the year ended December 31, 2015, from the comparable period in 2014. Equity options revenues, net of transaction-based expenses, were $98 million, $112 million and $145 million for the years ended December 31, 2016, 2015 and 2014, respectively. Equity options volume and revenues decreased the last several years primarily due to the restructuring of the NYSE Amex Options business. While revenues declined the last several years, the overall financial contribution of equity options was consistent with the prior years due to the retention of a higher percentage of profits from NYSE Amex Options driven by our repurchase of the equity in the exchange from the minority shareholders.

CDS clearing revenues were $107 million, $100 million and $97 million for the years ended December 31, 2016, 2015 and 2014, respectively. The notional value of CDS cleared during the same periods were $11.5 trillion, $11.9 trillion and $13.7 trillion, respectively. Buyside participation at our U.S. CDS clearing house, ICE Clear Credit, reached record levels in terms of number of participants and notional cleared due to increased participation from both U.S. and European buyside customers due to greater regulatory certainty, the breadth of products offered, and cost efficient margining in the U.S. relative to Europe.

CDS trade execution revenues were $36 million, $49 million and $64 million for the years ended December 31, 2016, 2015 and 2014, respectively. The notional value of the underlying CDS traded was $417.2 billion, $867.7 billion and $1.0 trillion for the years ended December 31, 2016, 2015 and 2014, respectively. CDS trading remains muted due to financial reform implementation and lower volatility in corporate credit markets. The decrease in the CDS trade execution revenues for the year ended December 31, 2016 is also impacted by the sale and discontinuance of our U.S. and U.K. CDS voice brokerage operations in the third quarter of 2016.

Other Revenues

Other revenues include interest income on certain clearing margin deposits, regulatory penalties and fines, fees for use of our facilities, regulatory fees charged to member organizations of our U.S. securities exchanges, designated market maker service fees, exchange membership fees and agricultural grading and certification fees. The increase in other revenues for the year ended December 31, 2015, from the comparable period in 2014, is primarily due to increases in the interest income recognized on certain clearing margin deposits and fees earned on non-cash collateral placed by clearing members primarily due to fee changes and increased clearing margin deposits.

Selected Operating Data
The following charts and table present trading activity and open interest in our futures and options markets by commodity type based on the total number of contracts traded, as well as futures and options rate per contract (in millions, except for percentages and rate per contract amounts):
Volume
and Rate
per
Contract

	Year Ended December 31,			Year Ended December 31,		
	2016	2015	Change	2015	2014	Change
Number of contracts traded:						
Brent crude futures and options	227	197	15 %	197	174	14 %
Other oil futures and options	96	86	12	86	69	24
Gasoil futures and options	66	64	5	64	53	19
Natural gas futures and options	221	226	(2)	226	235	(4)
Power futures and options	28	29	(3)	29	28	2
Emissions and other energy futures and options	10	9	11	9	10	(11)
Sugar futures and options	43	43	—	43	36	18
Other agricultural and metals futures and options	57	47	21	47	44	9
Interest rates futures and options	412	370	12	370	415	(11)
Other financial futures and options	151	144	5	144	150	(4)
Total	1,311	1,215	8 %	1,215	1,214	— %
Rate per contract:						
Energy futures and options rate per contract	$1.33	$1.32	1 %	$1.32	$1.32	— %
Agricultural and metals futures and options rate per contract	$2.27	$2.34	(3)%	$2.34	$2.38	(2)%
Interest rates and other financial futures and options rate per contract	$0.54	$0.63	(14)%	$0.63	$0.67	(6)%

Open interest is the aggregate number of contracts (long or short) that clearing members hold either for their own account or on behalf of their clients. Open interest refers to the total number of contracts that are currently open — in other words, contracts that have been traded but not yet liquidated by either an offsetting trade, exercise, expiration or assignment. Open interest is also a measure of the future activity remaining to be closed out in terms of the number of contracts that members and their clients continue to hold in the particular contract and by the number of contracts held for each contract month listed by the exchange. The following table presents our year-end open interest for our futures and options contracts (in thousands, except for percentages).

Open
Interest

	As of December 31, 2016	2015	Change	As of December 31, 2015	2014	Change
Open interest — in thousands of contracts:						
Brent crude futures and options	3,723	3,642	2 %	3,642	3,804	(4)%
Other oil futures and options	5,105	4,930	4	4,930	4,763	4
Gasoil futures and options	854	750	14	750	526	43
Natural gas futures and options	17,334	17,769	(2)	17,769	20,517	(13)
Power futures and options	7,204	7,524	(4)	7,524	7,167	5
Emissions and other energy futures and options	1,549	1,718	(10)	1,718	1,660	4
Sugar futures and options	1,649	1,769	(7)	1,769	1,479	20
Other agricultural and metals futures and options	2,271	2,108	8	2,108	1,828	15
Interest rates futures and options	13,943	19,143	(27)	19,143	13,042	47
Other financial futures and options	5,470	4,691	17	4,691	4,925	(5)
Total	59,102	64,044	(8)%	64,044	59,711	7 %

The following charts and table present selected cash and equity options trading data. All trading volume below is presented as net daily trading volume and is single counted.

	Year Ended December 31, 2016	2015	Change	Year Ended December 31, 2015	2014	Change
Cash products (shares in millions):						
NYSE listed (tape A) issues:						
Handled volume	1,269	1,203	5 %	1,203	1,063	13 %
Matched volume	1,256	1,185	6 %	1,185	1,039	14 %
Total NYSE listed consolidated volume	3,918	3,685	6 %	3,685	3,391	9 %
Share of total matched consolidated volume	32.1 %	32.2 %	(0.1) pts	32.2 %	30.6 %	1.5 pts
NYSE Arca, NYSE MKT and regional listed (tape B) issues:						
Handled volume	372	310	20 %	310	258	20 %
Matched volume	360	296	22 %	296	244	21 %
Total NYSE Arca, NYSE MKT and regional listed consolidated volume	1,536	1,355	13 %	1,355	1,099	23 %
Share of total matched consolidated volume	23.4 %	21.8 %	1.6 pts	21.8 %	22.2 %	(0.4) pts
Nasdaq listed (tape C) issues:						
Handled volume	186	217	(14)%	217	204	6 %
Matched volume	177	206	(14)%	206	189	9 %
Total Nasdaq listed consolidated volume	1,907	1,894	1 %	1,894	1,955	(3)%
Share of total matched consolidated volume	9.3 %	10.9 %	(1.6) pts	10.9 %	9.7 %	1.2 pts
Total cash volume handled	1,828	1,730	6 %	1,730	1,525	13 %
Total cash market share matched	24.4 %	24.3 %	0.1 pts	24.3 %	22.8 %	1.5 pts
Equity options (contracts in thousands):						
NYSE equity options	2,719	2,867	(5)%	2,867	3,577	(20)%
Total equity options volume	14,391	14,793	(3)%	14,793	15,258	(3)%
NYSE share of total equity options	18.9 %	19.4 %	(0.5) pts	19.4 %	23.4 %	(4.0) pts
Revenue capture or rate per contract:						
Cash products revenue capture (per 100 shares)	$0.049	$0.050	(4)%	$0.050	$0.050	1 %
Equity options rate per contract	$0.143	$0.156	(8)%	$0.156	$0.158	(2)%

Handled volume represents the total number of shares of equity securities, ETFs and crossing session activity internally matched on our exchanges or routed to and executed on an external market center. Matched volume represents the total number of shares of equity securities, ETFs and crossing session activity executed on our exchanges.

Transaction-Based Expenses

Our equities and equity options markets pay fees to the SEC pursuant to Section 31 of the Exchange Act. Section 31 fees collected from customers are recorded on a gross basis as a component of transaction and clearing fee revenue. These Section 31 fees are designed to recover the government's costs of supervising and regulating the securities markets and securities professionals. We, in turn, collect activity assessment fees, which are included in transaction and clearing revenues in our consolidated statements of income, from member organizations clearing or settling trades on the equities and options exchanges and recognize these amounts when invoiced. The activity assessment fees are designed so that they are equal to the Section 31 fees which are included in transaction-based expenses in our consolidated statements of income. As a result, activity assessment fees and Section 31 fees do not have an impact on our net income. Activity assessment fees received are included in cash at the time of

receipt and, as required by law, the amount due to the SEC is remitted semi-annually and recorded as an accrued liability until paid. As of December 31, 2016, the accrued liability related to the un-remitted SEC Section 31 fees was $131 million.

We also incur liquidity payments made to cash and options trading customers and routing charges made to other exchanges that are included in transaction-based expenses. We incur routing charges when we do not have the best bid or offer in the market for a security that a customer is trying to buy or sell on one of our securities exchanges. In that case, we route the customer's order to the external market center that displays the best bid or offer. The external market center charges us a fee per share (denominated in tenths of a cent per share) for routing to its system. We record routing charges on a gross basis as a component of transaction and clearing fee revenue.

Operating Expenses, Operating Income and Operating Margin

Trading and Clearing segment operating expenses decreased $35 million for the year ended December 31, 2016, from the comparable period in 2015 (with the decrease being partially offset by the $33 million Creditex customer relationship intangible asset impairment expense recorded in September 2016), and decreased $96 million for the year ended December 31, 2015, from the comparable period in 2014. See "- Consolidated Operating Expenses" below.

Trading and Clearing segment operating income increased $75 million for the year ended December 31, 2016, from the comparable period in 2015, and increased $124 million for the year ended December 31, 2015, from the comparable period in 2014. Trading and Clearing segment operating margins were 58%, 56% and 50% for the years ended December 31, 2016, 2015 and 2014, respectively. The operating income and operating margin increases the last two years were driven by the revenue increases and operating expense decreases discussed above.

Trading and Clearing segment adjusted operating expenses were $770 million, $809 million and $868 million for the years ended December 31, 2016, 2015 and 2014, respectively. Trading and Clearing segment adjusted operating income was $1.3 billion, $1.3 billion and $1.2 billion for the years for the years ended December 31, 2016, 2015 and 2014, respectively. Trading and Clearing segment adjusted operating margins were 63%, 61% and 57% for the years for the years ended December 31, 2016, 2015 and 2014, respectively. See "- Non-GAAP Financial Measures" below.

Data and Listings

The following presents our selected statements of income data for our Data and Listings segment, from continuing operations (dollars in millions):

(1) The adjusted numbers in the chart above are calculated by excluding items that are not reflective of our cash operations and core business performance, net of taxes, as applicable. As a result, these adjusted numbers are not calculated in accordance with U.S. GAAP. See “- Non-GAAP Financial Measures” below.

	Year Ended December 31,			Year Ended December 31,		
	2016	2015	Change	2015	2014	Change
Revenues:						
Pricing and analytics	$858	$151	469 %	$151	$26	491 %
Desktops and connectivity	585	250	134	250	219	14
Exchange data	535	470	14	470	446	5
Data services	1,978	871	127	871	691	26
Listings	419	405	4	405	367	10
Revenues	2,397	1,276	88	1,276	1,058	21
Other operating expenses	1,018	456	123	456	448	2
Acquisition-related transaction and integration costs	70	60	17	60	120	(7)
Depreciation and amortization	364	157	133	157	65	30
Operating expenses	1,452	673	116	673	633	6
Operating income	$945	$603	57 %	$603	$425	42 %

Data Services Revenues

The Data and Listings segment represents subscription-based, or recurring, revenue businesses that relate to data services and listings services offered across ICE, NYSE and ICE Data Services. Through ICE Data Services, we generate revenues from a range of data services, including the dissemination of our exchange and evaluated pricing data and analytics, desktops and connectivity and exchange market data. Through NYSE, NYSE MKT and NYSE Arca, we generate listings revenue related to the provision of listings services for public companies and ETFs, and related corporate actions for listed companies.

Our pricing and analytics services consist of an extensive set of independent evaluated pricing services focused primarily on fixed income and international equity securities, valuation services, reference data, market data, end of day pricing, fixed income, equity portfolio analytics and risk management analytics. We also serve as an administrator of regulated benchmarks, including LIBOR, the ICE Swap Rate and the LBMA Gold Price. Our index services offer a range of products across fixed income, energy, equities, ETFs and other asset classes to provide the methodology, pricing and licensing of key benchmarks.

Our desktop and connectivity services comprise technology-based information platforms, feeds and connectivity. These include trading applications, desktop solutions and data feeds to support trading, voice brokers and investment functions. Our desktop and web-based applications deliver real-time market information, analytical and decision support tools to support trading and investment decisions. Through our consolidated feeds, clients receive consolidated real-time and/or delayed financial data from global exchanges, trading venues and data sources for exchange-traded and OTC markets. Our connectivity services offer a secure, resilient, private multi-participant network that provides connectivity to global exchanges and content service providers. Our connectivity infrastructure managed services solution also offers colocation space, direct exchange access, proximity hosting and support services that enable access to real-time exchange data and facilitates low latency electronic trading.

Our exchange data primarily represents subscription fees for the provision of our market data that is created from activity in our Trading and Clearing segment. In our derivatives markets, exchange data fees primarily relate to subscription fees charged for customer and license access from third party data vendors, or quote vendors such as Thomson Reuters and Bloomberg, and from end users, as well as view-only data access, direct access services, terminal access, daily indices, forward curves and other valuation services, and end of day reports.

We earn exchange data fees relating to our cash equity and options markets, and related data and network services. We collect cash trading market data fees principally for consortium-based data products and, to a lesser extent, for NYSE proprietary data products. Consortium-based data fees are determined by the securities industry plans and are charged to vendors based on their redistribution of data. Consortium-based data revenues (net of administrative costs) are distributed to participating securities markets on the basis of a formula set by the SEC under Regulation NMS. Last trade prices and quotes in New York Stock Exchange-listed, NYSE MKT-listed, and NYSE Arca-listed securities are disseminated through “Tape A” and “Tape B,” which constitute the majority of our revenues from consortium-based market data revenues.

Our data services revenues increased during the year ended December 31, 2016, from the comparable period in 2015, primarily due to the acquisitions of Interactive Data and Trayport in December 2015, the acquisitions of Securities Evaluations and Credit Market Analysis in October 2016, the high retention rate of existing customers, the addition of new customers, increased usage by existing customers and the development of new and enhanced products designed to efficiently deliver more value to our customers. These increases were partially offset due to the impact of foreign currency translation. We recognized $1.1 billion in data services revenues for Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis during the year ended December 31, 2016, compared to $50 million in data services revenues for Interactive Data and Trayport during year ended December 31, 2015, subsequent to their acquisitions dates.

Our data services revenues increased during the year ended December 31, 2015, from the comparable period in 2014, primarily due to the addition of new users, increased usage by customers, expanded product offerings, fee increases and the addition of SuperDerivatives and ICE Benchmark Administration for all of 2015 and Interactive Data and Trayport subsequent to their acquisitions in December 2015.

For the years ended December 31, 2016, 2015 and 2014, 12%, 4% and 4%, respectively, of our Data and Listings segment revenues were billed in pounds sterling or euros (all relating to our data services revenues). As the pound sterling or euro exchange rate changes, the U.S. equivalent of revenues denominated in foreign currencies changes accordingly. Due to the weakening of the pound sterling and euro the last two years compared to the U.S. dollar, our data services revenues decreased $24 million for the year ended December 31, 2016 from the comparable period in 2015, and decreased $6 million for the year ended December 31, 2015 from the comparable period in 2014. See Item 3 "- Quantitative and Qualitative Disclosures About Market Risk - Foreign Currency Exchange Rate Risk" below for additional information on the impact of currency fluctuations.

Listings Revenues

We recognize listings revenues in our securities markets from two types of fees applicable to companies listed on our cash equities exchanges - original listing fees and annual listing fees. Original listing fees consist of two components: initial listing fees and fees related to other corporate-related actions. Initial listing fees, subject to a minimum and maximum amount, are based on the number of shares that a company initially lists. Initial listing fees are recognized as revenue on a straight-line basis over estimated service periods of nine years for NYSE and five years for NYSE Arca and NYSE MKT. U.S. companies pay annual fees based on the number of outstanding shares the company has and non-U.S. companies pay annual fees based on the number of outstanding shares the company has issued or held in the U.S. Annual fees are recognized as revenue on a pro rata basis over the calendar year.

In addition, other corporate actions-related listing fees are paid by listed companies in connection with actions involving the issuance of new shares, such as stock splits, rights issues and sales of additional securities, as well as mergers and acquisitions. Other corporate actions-related listing fees are recognized as revenue on a straight-line basis over estimated service periods of six years for NYSE and three years for NYSE Arca and NYSE MKT. Unamortized balances are recorded as deferred revenue in our consolidated balance sheet.

Listings revenues increased for the last two years primarily due to the amortization of the original listing fees earned since the acquisition of NYSE and due to additional annual listing fee revenue from new customers. The listings unamortized deferred revenue balance as of December 31, 2016 of $149 million relates to original and other corporate action listing fees incurred and billed and not yet recognized as revenue subsequent to the November 13, 2013 acquisition through December 31, 2016.

Operating Expenses, Operating Income and Operating Margin

Data and Listings segment operating expenses increased $779 million for the year ended December 31, 2016, from the comparable period in 2015, and increased $40 million for the year ended December 31, 2015, from the comparable period in 2014. The increases primarily relate to the $812 million in operating expenses recognized relating to Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis for the year ended December 31, 2016, compared to $39 million in operating expenses recognized relating to Interactive Data and Trayport for the year ended December 31, 2015 (both excluding acquisition-related transaction and integration costs). See "- Consolidated Operating Expenses" below for further details on the Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis operating expenses.

Data and Listings segment operating income increased $342 million for the year ended December 31, 2016, from the comparable period in 2015, and increased $178 million for the year ended December 31, 2015, from the comparable period in 2014. Data and Listings segment operating margins were 39%, 47% and 40% for the years ended December 31, 2016, 2015 and 2014, respectively. The operating income increases the last two years were driven by the acquisitions discussed above.

Data and Listings segment adjusted operating expenses were $1.2 billion, $556 million and $521 million for the years ended December 31, 2016, 2015 and 2014, respectively. Data and Listings adjusted operating income was $1.2

billion, $720 million and $537 million for the years for the years ended December 31, 2016, 2015 and 2014, respectively. Data and Listings adjusted operating margins were 51%, 56% and 51% for the years for the years ended December 31, 2016, 2015 and 2014, respectively. See “- Non-GAAP Financial Measures” below.

Consolidated Operating Expenses

The majority of our operating expenses do not vary directly with changes in our volume and revenues, except for certain technology and communication expenses and a portion of our compensation expense that is tied directly to our financial performance, as discussed below. The following chart and table present our operating expenses from continuing operations (dollars in millions):

	Year Ended December 31,			Year Ended December 31,		
	2016	2015	Change	2015	2014	Change
Compensation and benefits	$945	$611	55 %	$611	$592	3 %
Professional services	137	139	(1)	139	181	(23)
Acquisition-related transaction and integration costs	80	88	(9)	88	129	(32)
Technology and communication	374	203	84	203	188	8
Rent and occupancy	70	57	21	57	78	(27)
Selling, general and administrative	116	116	—	116	143	(19)
Depreciation and amortization	610	374	63	374	333	12
Total operating expenses	$2,332	$1,588	47 %	$1,588	$1,644	(3)%

We expect our operating expenses to increase in absolute terms in future periods in connection with our acquisitions and growth of our business, and to vary from year to year based on the type and level of our acquisitions and other investments.

For the years ended December 31, 2016, 2015 and 2014, 18%, 12% and 18%, respectively, of our consolidated operating expenses were incurred in pounds sterling or euros. As the pound sterling or euro exchange rate changes, the U.S. equivalent of operating expenses denominated in foreign currencies changes accordingly. Due to the weakening of the pound sterling and euro the last two years compared to the U.S. dollar, our consolidated operating expenses decreased $40 million for the year ended December 31, 2016 from the comparable period in 2015, and decreased $17 million for the year ended December 31, 2015 from the comparable period in 2014. See Item 3 "- Quantitative and Qualitative Disclosures About Market Risk - Foreign Currency Exchange Rate Risk" below for additional information on the impact of currency fluctuations.

Compensation and Benefits Expenses

Compensation and benefits expense is our most significant operating expense and includes non-capitalized employee wages, bonuses, non-cash or stock compensation, certain severance costs, benefits and employer taxes. The bonus component of our compensation and benefits expense is based on both our financial performance and the individual employee performance and the performance-based restricted stock compensation expense is also based on our financial performance. Therefore, our compensation and benefits expense will vary year to year based on our financial performance and fluctuations in the number of employees.

Compensation and benefits expenses increased for the last two years primarily due to increases in employee headcount. Our employee headcount increased primarily due to the acquisitions of Interactive Data, Trayport, Securities Evaluations, Credit Market Analysis, SuperDerivatives, Singapore Mercantile Exchange and Holland Clearing House, converting contractor roles to employees at NYSE, and hiring for clearing, technology, regulation and compliance. Headcount increased from 2,879 employees at December 31, 2013 (excluding the Euronext and NYSE Technologies employees) to 2,902 employees as of December 31, 2014, increased to 5,549 employees as of December 31, 2015, and increased to 5,631 employees as of December 31, 2016. We recognized $342 million in compensation and benefits expenses relating to the Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis acquisitions during the year ended December 31, 2016, compared to $17 million in compensation and benefits expenses relating to Interactive Data and Trayport during the year ended December 31, 2015, subsequent to their acquisitions. The employee increases associated with these acquisitions were partially offset by employee terminations for the years ended December 31, 2016, 2015 and 2014 for NYSE and for the year ended December 31, 2016 for Interactive Data, in connection with our integrations.

We recorded $33 million, $20 million and $99 million in NYSE and Interactive Data employee severance costs during the years ended December 31, 2016, 2015 and 2014, respectively, with such costs included in the acquisition-related transaction and integration costs discussed below and primarily related to executive departures. In addition, we incurred non-acquisition related employee severance costs of $10 million, $3 million and $4 million for the years ended December 31, 2016, 2015 and 2014, respectively. Non-cash compensation expenses recognized in our consolidated financial statements for employee stock options and restricted stock were $123 million, $111 million and $82 million for the years ended December 31, 2016, 2015 and 2014, respectively. The increases in non-cash compensation expenses primarily relates to a greater number of employees receiving non-cash awards due to the headcount increases discussed above.

Professional Services Expenses

This expense includes fees for consulting services received on strategic and technology initiatives, temporary labor, as well as regulatory, legal and accounting fees. This expense may fluctuate as a result of changes in consulting and technology services, temporary labor, and regulatory, accounting and legal proceedings.

We recognized $34 million in professional services expenses relating to Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis during the year ended December 31, 2016, compared to $2 million in professional services expenses for Interactive Data and Trayport during the year ended December 31, 2015, subsequent to their acquisitions. Excluding the impact of the acquisitions, professional services expenses decreased the last two years primarily due to the continued reduction in professional services and contractors at NYSE. We eliminated or replaced certain contractor positions with full time employees at NYSE. In addition, during the year ended December 31, 2016, we recorded a credit from a third party service provider related to fees charged during 2015, and we incurred lower legal fees during the year ended December 31, 2016, from the comparable period in 2015. Legal fees, which are included in professional services expenses, primarily related to class action lawsuits in which NYSE is a defendant.

Acquisition-Related Transaction and Integration Costs

We incurred $80 million in acquisition-related transaction and integration costs during the year ended December 31, 2016, primarily relating to our integration of Interactive Data and NYSE, legal and professional fees related to the Trayport CMA review, our investment in MERS, our acquisitions of Securities Evaluations and Credit Market Analysis, and various other potential and discontinued acquisitions. Of this amount, $41 million was primarily related to fees for investment banking advisors, lawyers, accountants, tax advisors and other external costs directly related to the completed 2016 acquisitions and to other transactions. We incurred $39 million for Interactive Data and NYSE integration costs during the year ended December 31, 2016, primarily relating to employee and lease termination costs and professional services costs. As of December 31, 2016, the integration of NYSE has been completed and we will no longer include any NYSE integration costs in the future.

We incurred $88 million in acquisition-related transaction and integration costs during the year ended December 31, 2015, primarily relating to our acquisitions of Interactive Data and Trayport and the integration of NYSE. Of this amount, $46 million was primarily related to fees for investment banking advisors, lawyers, accountants, tax advisors and other external costs directly related to the Interactive Data and Trayport acquisitions and to other transactions. We incurred $42 million for NYSE integration costs during the year ended December 31, 2015, primarily relating to employee and lease termination costs and professional services costs.

We incurred $129 million in acquisition-related transaction and integration costs during the year ended December 31, 2014, primarily relating to our acquisition and integration of NYSE and the acquisitions of ICE Futures Singapore, SuperDerivatives, ICE Clear Netherlands and True Office. Of this amount, $6 million was related to fees for investment banking advisors, lawyers, accountants, tax advisors and public relations firms, and other external costs directly related to the transactions. The remaining $123 million was for NYSE integration costs incurred during the year ended December 31, 2014, primarily relating to employee termination costs, costs incurred relating to the Euronext IPO and sale, costs incurred relating to the sale of NYSE Technologies, and professional service costs.

We expect to continue to explore and pursue various potential acquisitions and other strategic opportunities to strengthen our competitive position and support our growth. As a result, we may incur acquisition-related transaction costs in future periods. See "- Non-GAAP Financial Measures" below.

Technology and Communication Expenses

Technology support services consist of costs for running our wholly-owned data centers, hosting costs paid to third-party data centers, and maintenance of our computer hardware and software required to support our technology. These costs are driven by system capacity, functionality and redundancy requirements. Communication expenses consist of costs for network connection for our electronic platforms, telecommunications costs, and fees paid for access to external market data. This expense also includes licensing and other fee agreement expenses which may be impacted by growth in electronic contract volume, our capacity requirements, changes in the number of telecommunications hubs and connections with customers to access our electronic platforms directly.

We recognized $162 million in technology and communication expenses relating to Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis during the year ended December 31, 2016, compared to $8 million in technology and communication expenses for Interactive Data and Trayport during the year ended December 31, 2015, subsequent to their acquisitions. In addition, during the last two years, we incurred increased hardware and software support costs related to our trading and clearing platforms and our data services.

Rent and Occupancy Expenses

This expense consists of costs related to leased and owned property including rent, maintenance, real estate taxes, utilities and other related costs. We have significant operations located in and around Atlanta, New York, London and Boston with smaller offices located throughout the world. See "Item 2 - Properties" above for additional information regarding our leased and owned property.

We recognized $28 million in rent and occupancy expenses relating to Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis during the year ended December 31, 2016, compared to $1 million in rent and occupancy expenses for Interactive Data and Trayport during the year ended December 31, 2015, subsequent to their acquisitions. Excluding the impact of the acquisitions, rent and occupancy expenses decreased the last two years primarily due to reduced rent and occupancy costs realized due to the continued consolidation of our New York, Atlanta and London office locations.

Selling, General and Administrative Expenses

This expense relates to expenses from marketing, advertising, public relations, insurance, bank service charges, dues and subscriptions, travel and entertainment, non-income taxes and other general and administrative costs.

We recognized $22 million in selling, general and administrative expenses relating to Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis during the year ended December 31, 2016, compared to $1 million in selling, general and administrative expenses for Interactive Data and Trayport during the year ended December 31, 2015, subsequent to their acquisitions. Excluding the impact of the acquisitions, selling, general and administrative expenses decreased the last two years primarily due to the release of non-income tax-related reserves and lower marketing expenses.

Depreciation and Amortization Expenses

Depreciation and amortization expense results from depreciation of long-lived assets such as buildings, leasehold improvements, planes, furniture, fixtures and equipment over their estimated useful lives. This expense includes amortization of intangible assets obtained in our acquisitions of businesses, as well as on various licensing agreements, over their estimated useful lives. Intangible assets subject to amortization consist primarily of customer relationships, trading products with finite lives and technology. This expense also includes amortization of internally developed and purchased software over their estimated useful lives.

We recorded amortization expenses on the intangible assets acquired as part of our acquisitions, as well as on the other intangible assets, of $356 million, $160 million and $151 million for the years ended December 31, 2016, 2015 and 2014, respectively. We recognized $182 million and $8 million in amortization expenses on the Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis intangible assets during the years ended December 31, 2016 and 2015, respectively. We recorded an impairment of the Creditex customer relationship intangible asset of $33 million during the year ended December 31, 2016, which was recorded as amortization expense. See "- Recent Developments - Creditex Customer Relationship Intangible Asset Impairment" above. The increases in amortization expenses for the year ended December 31, 2016 discussed above were partially offset by a reduction in amortization expenses recorded on intangible assets which became fully amortized during 2016, primarily related to certain of the NYSE intangible assets.

We recorded depreciation expenses on our fixed assets of $254 million, $213 million and $182 million for the years ended December 31, 2016, 2015 and 2014, respectively. We recognized $42 million and $2 million in depreciation expenses on the Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis during the years ended December 31, 2016 and 2015, respectively. In addition to the impact of the acquisitions, depreciation expenses increased for the year ended December 31, 2015 primarily due to additional fixed asset additions and capitalized internally developed software, including additions relating to the NYSE integration and real estate expenditures during the last several years relating primarily to the Atlanta, New York and London headquarters.

Non-Operating Income (Expenses)

Income and expenses incurred through activities outside of our core operations are considered non-operating. The following tables present our non-operating income (expenses) (dollars in millions):

	Year Ended December 31,			Year Ended December 31,		
	2016	2015	Change	2015	2014	Change
Other income (expense):						
Interest expense	$(178)	$(97)	83 %	$(97)	$(96)	1 %
Other income, net	40	—	n/a	—	55	n/a
Total other expense, net	$(138)	$(97)	42 %	$(97)	$(41)	134 %
Net income attributable to non-controlling interest	$(27)	$(21)	28 %	$(21)	$(35)	(39)%

Interest expense increased for the year ended December 31, 2016, from the comparable period in 2015, primarily due to the interest expense we recognized on the additional debt incurred to finance the Interactive Data acquisition in December 2015. Interest expense increased for the year ended December 31, 2015, from the comparable period in 2014, primarily due to interest expense that we recognized relating to new debt we incurred for the Interactive Data acquisition during the fourth quarter of 2015, partially offset by the repayment of $1.0 billion in NYSE EUR Notes on June 30, 2015. See "- Debt" below.

We account for our investment in Cetip as an available-for-sale investment and it is classified as a long-term investment in our consolidated balance sheet. We recognized dividend income primarily received relating to our Cetip investment in other income, which was $19 million, $16 million and $23 million for the years ended December 31, 2016, 2015 and 2014, respectively. We account for our investments in MERS and The Options Clearing Corporation, or OCC, as equity method investments. We recognized $25 million, $6 million and $25 million in equity income related to these investments during the years ended December 31, 2016, 2015 and 2014, respectively, as other income.

During the year ended December 31, 2015, we incurred $15 million in settlements and accruals for various outstanding legal matters (net of insurance proceeds), which was recorded in other expense.

We incurred foreign currency transaction losses of $1 million, $14 million and $2 million for the years ended December 31, 2016, 2015 and 2014, respectively. Foreign currency gains and losses are recorded in other income (expense) and relate to the settlement of foreign currency assets, liabilities and payables that occur through our foreign operations that are received in non-functional currencies due to the increase or decrease in the period-end foreign currency exchange rates between periods. See Item 7A

"- Quantitative and Qualitative Disclosures About Market Risk - Foreign Currency Exchange Rate Risk" included elsewhere in this Annual Report for more information on these items.

For consolidated subsidiaries in which our ownership is less than 100%, and for which we have control over the assets, liabilities and management of the entity, the outside stockholders' interests are shown as non-controlling interests. During the years ended December 31, 2015 and 2014, we repurchased the remaining ownership of NYSE Amex Options from the minority owners. Effective from July 1, 2015, all of the profits from NYSE Amex Options are retained by us as we now own 100% of NYSE Amex Options. See note 13 to our consolidated financial statements and related notes, which are included elsewhere is this Annual Report, for additional information on NYSE Amex Options. The decrease in the net income attributable to non-controlling interest for the year ended December 31, 2015, from the comparable period in 2014, is primarily due to a decrease in the net income relating to the NYSE Amex Options minority ownership interest primarily due to the reduction in the minority ownership percentage.

Income Tax Provision

Consolidated income tax expense from continuing operations was $580 million, $358 million and $402 million for the years ended December 31, 2016, 2015 and 2014, respectively. The change in consolidated income tax expense between years is primarily due to the tax impact of changes in our pre-tax income and the changes in our effective tax rate each year. Our effective tax rate from continuing operations was 29%, 22% and 29% for the years ended December 31, 2016, 2015 and 2014, respectively. The effective tax rates for the years ended December 31, 2016, 2015 and 2014 were lower than the federal statutory rate primarily due to favorable foreign income tax rate differentials and favorable tax law changes, partially offset by state income taxes. Favorable foreign income tax rate differentials result primarily from lower tax rates in the U.K and various other lower tax jurisdictions as compared to the tax rates in the U.S.

During the fourth quarter of 2015, the U.K. reduced the corporate income tax rate from 20% to 19% effective April 1, 2017 and to 18% effective April 1, 2020. During the third quarter of 2016, the U.K. further reduced their corporate income tax rate from 18% to 17% effective April 1, 2020. The reduction in the future U.K. corporate income tax rates resulted in deferred tax benefits. The impact of the deferred tax benefit for the years ended December 31, 2016 and 2015 lower the effective tax rate by 2% and 4%, respectively. The increase in the effective tax rate for the year ended December 31, 2016, from the comparable period in 2015, is primarily due to the tax impact of foreign versus U.S. based pre-tax income, lower deferred tax benefit associated with the future U.K. income tax rate reduction, and greater favorable settlements with various taxing authorities in 2015, partially offset by a tax benefit from the early adoption of ASU 2016-09 in 2016. The decrease in the effective tax rate for the year ended December 31, 2015, from the comparable period in 2014, is primarily due to the deferred tax benefit associated with future U.K. income tax rate reductions along with certain favorable settlements with various taxing authorities. See note 11 to our consolidated financial statements and related notes, which are included elsewhere is this Annual Report, for additional information on these tax items.

Discontinued Operations

On November 13, 2013, we acquired 100% of NYSE for $11.1 billion, comprised of cash consideration of $2.7 billion and 211.9 million shares of our common stock, on a post-split basis, and their results are included in our consolidated results effective from the acquisition date. NYSE owned and operated Euronext, which was comprised of continental European-based exchanges. On June 24, 2014, we sold an aggregate 65.8 million shares of common stock of Euronext, representing 94% of all outstanding shares, in three transactions. The three transactions include our sale of 42.2 million shares of Euronext common stock in an initial public offering, or IPO, at €20 per share, 23.4 million shares of Euronext common stock to a group of European institutional investors at €19.20 per share, and 0.2 million shares of Euronext common stock to eligible Euronext employees at €16 per share. On December 9, 2014, we sold our remaining 4.2 million shares of Euronext common stock, representing 6% of the outstanding shares of Euronext, for €95 million ($118 million). We no longer hold any shares of Euronext stock and these four transactions generated an aggregate €1.5 billion ($2.1 billion) of net cash proceeds for us. The net cash proceeds received included cash of $220 million distributed from Euronext as part of the separation of Euronext from us.

NYSE previously operated a commercial technology business, NYSE Technologies, which offered transaction, data and infrastructure services, and managed solutions for market participants. During the year ended December 31, 2014, we sold NYFIX, Metabit and Wombat, the three companies that comprised NYSE Technologies. These sales completed our previously announced intention to divest non-core NYSE Technologies assets.

The results of Euronext, NYFIX, Metabit and Wombat are reflected as discontinued operations in the consolidated financial statements. We used the net cash proceeds from the IPO and sales to repay debt, invest in growth initiatives, pursue strategic investments and return capital to shareholders via dividends and share repurchases. See "- Debt" below. Also, refer to note 16 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on the IPO and sales and the presentation of the results as discontinued operations.

There was no gain or loss recognized on the Euronext IPO or on the sale of the NYSE Technologies companies, as any differences in the carrying value of these net assets was adjusted in the NYSE purchase price allocation. The results below include external advisory costs and professional services costs related to the sales of Euronext and NYSE Technologies of $51 million for the year ended December 31, 2014, which have been included with acquisition-related transaction and integration costs, below, from discontinued operations. The results below also include deal-related compensation and severance costs related to the sales of Euronext and NYSE Technologies of $42 million for the year ended December 31, 2014, which have also been included with acquisition-related transaction and integration costs, below, from discontinued operations. Results of discontinued operations were as follows for the year ended December 31, 2014 (in millions):

	Year Ended December 31, 2014
Revenues:	
European equity derivatives futures and options contracts	$ 45
European cash equities	116
Total transaction and clearing fees, net	161
Market data fees	60
Listing fees	19
Other revenues	112
Total revenues	352
Transaction-based expenses	5
Total revenues, less transaction-based expenses	347
Compensation and benefits	105
Technology and communication	31
Professional services	31
Rent and occupancy	12
Acquisition-related transaction and integration costs	103
Selling, general, administrative	16
Depreciation and amortization	16
Total operating expenses	314
Operating income	33
Other income, net	5
Income tax expense	27
Income from discontinued operations, net of tax	$ 11

Quarterly Results of Operations

The following quarterly unaudited consolidated statements of income data has been prepared on substantially the same basis as our audited consolidated financial statements and includes all adjustments, consisting only of normal recurring adjustments, necessary for the fair presentation of our consolidated results of operations for the quarters presented. The historical results for any quarter do not necessarily indicate the results expected for any future period. This unaudited condensed consolidated quarterly data should be read together with our consolidated financial statements and related notes included elsewhere in this Annual Report. The following table sets forth quarterly consolidated statements of income data (in millions):

	Three Months Ended,							
	December 31, 2016 (1)	September 30, 2016 (1)	June 30, 2016 (1)	March 31, 2016 (1)	December 31, 2015 (1)	September 30, 2015	June 30, 2015	March 31, 2015
Revenues:								
Brent crude futures and options contracts	$75	$ 70	$ 72	$ 82	$ 64	$ 65	$ 60	$ 74
Other oil futures and options contracts	32	30	27	29	26	27	26	33
Gasoil futures and options contracts	25	25	24	24	24	24	21	24
Natural gas futures and options contracts	54	46	51	57	52	46	43	58
Power futures and options contracts	21	18	23	21	20	17	21	21
Emissions and other energy futures and options contracts	17	10	15	17	16	13	12	17
Sugar futures and options contracts	18	25	34	32	23	30	30	27
Other agricultural and metals futures and options contracts	29	27	33	30	25	23	27	26
Interest rates futures and options contracts	40	37	44	56	57	43	50	56
Other financial futures and options contracts	34	33	36	38	33	38	32	33
Cash equities and equity options	426	410	454	490	428	457	379	412
Credit default swaps	34	35	34	40	34	38	34	43
Other transactions	13	11	13	13	12	10	12	12
Total transaction and clearing, net	818	777	860	929	814	831	747	836
Pricing and analytics	234	209	211	204	63	36	27	25
Desktops and connectivity	149	144	147	145	76	58	58	58
Exchange data	132	136	139	128	118	115	120	117
Total data services (1)	515	489	497	477	257	209	205	200
Listings	105	106	105	103	102	101	101	101
Other revenues	46	44	42	45	46	46	43	43
Total revenues	1,484	1,416						