

InteractiveBrokers

Annual Report 2022



Leading Growth as Interactive Brokers Connects Investors Around the World

Interactive Brokers expanded its business footprint around the world with its global product and service offerings.

Profitability and Financial Strength

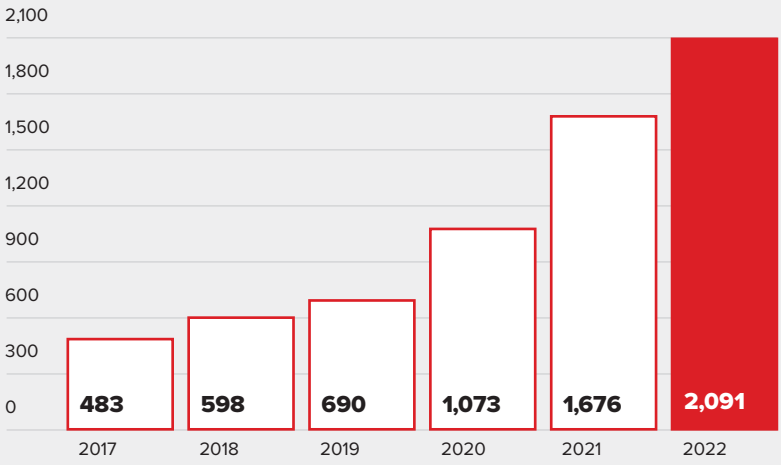
	2017	2022
Company Net Revenues	$1.7 billion	**$3.1 billion**
Company Pretax Margin	62%	**65%**
Company Pretax Profit	$1.0 billion	**$2.0 billion**
Equity Capital	$6.4 billion	**$11.6 billion**
Total Assets	$61.2 billion	**$115.1 billion**

Five years of growth

Five-Year Compound Annual Growth Rate

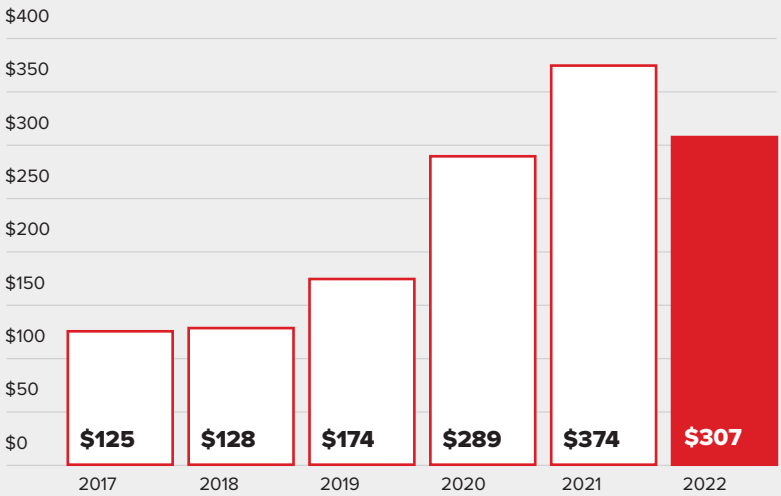
Client Accounts
(Thousands)

34%
GROWTH



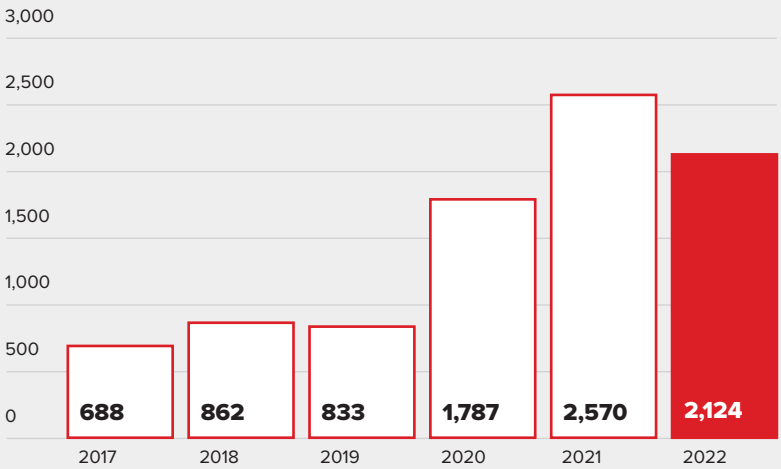
Client Equity
(Billions)

20%
GROWTH



Total Client DARTs
(Thousands)

25%
GROWTH



MARGIN LOAN RATES

Lowest Margin Loan Rates and Efficient Execution Prices Minimize Your Overall Trading Costs[1,2]

US Margin Loan Rates Comparison for IBKR Pro[3]

	$25K	$300K	$1.5M	$3.5M
Interactive Brokers[4]	**6.08%**	**5.75%**	**5.53%**	**5.42%**
E-Trade	12.95%	11.45%	N/A	N/A
Fidelity Investments	12.33%	11.08%	8.50%	8.50%
Charles Schwab	12.33%	11.08%	N/A	N/A
TD Ameritrade	13.50%	12.00%	N/A	N/A

Margin borrowing is only for sophisticated investors with high risk tolerance. You may lose more than your initial investment.
For additional information regarding margin loan rates, see ibkr.com/marginrates.

Each firm's information reflects the standard online margin loan rates obtained from their respective websites. Competitor rates and offers subject to change without notice. Services vary by firm.

1. According to StockBrokers.com Online Broker Survey 2023: Online Broker Reviews, February 6, 2023. "Professionals can take advantage of industry-leading commissions, including the lowest margin rates across all balance tiers".
2. Lower investment costs will increase your overall return on investment, but lower costs do not guarantee that your investment will be profitable.
3. Annual Percentage Rate (APR) on USD margin loan balances for **IBKR Pro** as of 02/07/2023. Interactive Brokers calculates the interest charged on margin loans using the applicable rates for each interest rate tier listed on its website. For additional information on margin loan rates, see ibkr.com/marginrates.
4. IBKR calculates the interest charged on margin loans using the applicable rates for each interest rate tier listed on its website. For additional information, see ibkr.com/interestrates.



CUSTOMER CASH INTEREST

IBKR Clients Earn up to 4.08% on Their USD Uninvested Cash Balance[1]

Clients receive interest at market-related rates on eligible cash balances in their securities accounts. These rates change on an equal basis with the federal funds rate.[2]

1. Credit interest rate for IBKR Pro accounts as of 02/07/2023
2. Restrictions apply. For additional information on interest rates, see ibkr.com/interestrates.



SMART ROUTING

Trading Costs are More Than Just Commissions

IBKR Pro offers IB SmartRouting,[SM] our tool that searches for the best price available at the time an order is entered, and seeks to immediately execute the order electronically.

For IBKR Pro clients, Interactive Brokers does not sell its customer order flow to high frequency traders. Orders go directly to an execution venue, including multiple exchanges, dark pools, and IBKR's own automated trading system (ATS).

To capture best price, all IBKR marketable options orders go through **our unique auction process,** which happens in less than one second.

- First, an order is auctioned off among over 20 top market makers.
- Next, the winning market maker chooses the exchange it wants to use to trade the order.
- Finally, Interactive Brokers posts the order at that exchange for a second auction: if there is a better price, the order receives the better price; if not, the original winner of the auction trades the order at that price.
- Similar auction procedures to those developed by Interactive Brokers have been listed in recent regulatory proposals.

Interactive Brokers has developed **order types that allow any of its customers to participate** in the auction process like a market maker.





IBKR GLOBALTRADER

Simple. Worldwide. Trading.

IBKR GlobalTrader is a simple mobile trading app to trade stocks and options around the world. Simply deposit in your local currency and trade global stocks and options across 90+ stock exchanges in the US, Canada, Europe and Asia.[1]

Highlights

Deposit Locally. Trade Globally.
Deposit in any of 26 different currencies and convert to the currency needed where you want to invest.

Options Wizard
Utilize our tool to learn more about options and how to trade them.

Worldwide Options Trading
Trade options on 30+ market centers using tools like the Options Wizard, which helps educate investors about options and how to trade them.

Unhappy with an Investment? Swap it.
Exchange any stock owned for the equivalent amount of another with a single tap.

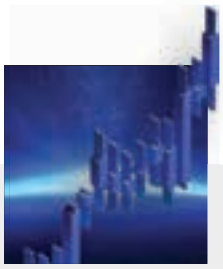
1. See globaltrader.ibkr.com for further details.

New Products and Services Add Capabilities Designed to Maximize Client Portfolio Performance



Fractional Shares Trading added for European stocks and ETFs

Clients now have the opportunity to invest across markets in a more affordable way. Pick any eligible US or European stock (or ETF, where available) and decide how much you want to invest. No stock is too expensive.



Overnight Trading Hours

Our clients can trade select US ETFs around the clock, enabling them to react immediately to market moving news, and offering clients in Asia access to US equity markets during their trading day.



Event Contracts

IBKR EventTrader is our web-based application for trading event contracts on select CME futures markets. Event contracts let investors trade their view on whether the price of key futures markets will move up or down by the end of each day's trading session. Because event contracts are connected to real-world events, they give clients a new way of gaining exposure to equity index, energy, metals and foreign currency futures markets, without having to be invested directly in them.

Futures are not suitable for all investors. The amount you may lose may be greater than your initial investment.
Before trading futures, please read the CFTC Risk Disclosure. A copy and additional information are available at ibkr.com



Podcasts

IBKR Podcasts is a new series that features interviews with executives, thought leaders, researchers and market experts from across the financial services industry. Episodes include discussions on topical themes regarding asset classes, global markets and trading.



Recurring Investments

Set up and execute a predetermined investment strategy by automatically investing funds on a recurring schedule. Select from almost any US and European shares, select how often you want to invest, and on the start date you choose, your trade will execute and then repeat according to your schedule. And with fractional share trading, even small balances can be put to work.



More from IBKR Campus

IBKR Economic Landscape was introduced as part of the Traders' Insight series on IBKR Campus. Hear insights from IBKR's Senior Economist on the state of the economy as well as on economic topics like inflation, key economic data, and FOMC meetings.

OPTIONS & FUTURES TRADING

Powerful Tools for Options and Futures[1]

Options

IBKR has the tools you need, from the Basics to Advanced Options Trading Worldwide[1]

Low Options Commissions

Options commissions range from **USD 0.15 to USD 0.65** per US options contract

Trade options globally on 30+ market centers.

Professional Trading Platforms

Powerful, award-winning trading platforms[2] and tools available on desktop, mobile, and web. View market data, positions and trade multiple asset classes and products side-by-side on a single screen.

IBKR Campus

Learn about trading, financial markets and IBKR's trading tools. Improve your understanding of markets and keep on top of current events.

Advanced Options Trading Tools

- OptionTrader
- Options Analytics
- Options Portfolio
- Options Strategy Builder
- Options Strategy Lab
- Probability Lab
- Volatility Lab
- Write Options Tool
- Rollover Options Tool



Options involve risk and are not suitable for all investors.

For information on the uses and risks of options, you can obtain a copy of the Options Clearing Corporation risk disclosure document titled Characteristics and Risks of Standardized Options by visiting ibkr.com/occ.

1. See ibkr.com/options
2. See ibkr.com/awards

Futures

Gain Exposure or Hedge Risk

Low Futures Commissions

Interactive Brokers' futures commissions range from **USD 0.25 to USD 0.85** per contract[1]

Multiple Futures Asset Classes

Gain exposure to a wide variety of commodities.

- Agriculture
- Cryptocurrency
- Currencies
- Energy
- Equity Indices
- Event Contracts
- Fixed Income
- Metals
- Softs
- Volatility Indices

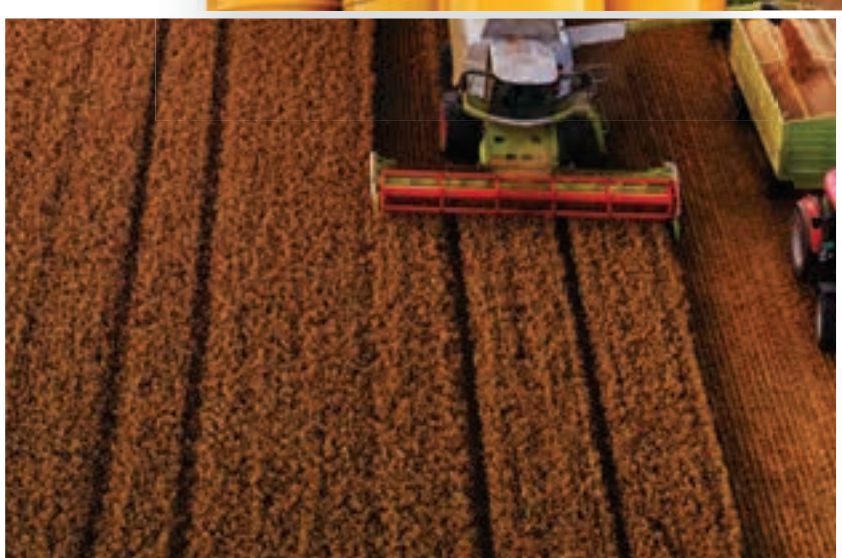
Professional Trading Platforms

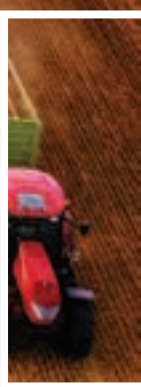
Powerful, award-winning trading platforms[2] and tools available on desktop, mobile, and web, with over 100 order types – from limit orders to complex algorithmic trading – to help you execute any trading strategy.

Advanced Futures Trading Tools

- ComboTrader
- SpreadTrader
- Index Arbitrage Meter







1. Plus exchange, regulatory and carrying fees
2. See ibkr.com/awards

OUR COMMITMENT TO ESG

Sustainability at Interactive Brokers

We recognize the importance of ESG in supporting our sustainability vision. Among other actions, we have created a dedicated ESG department to oversee our growing sustainability programs and ESG initiatives.

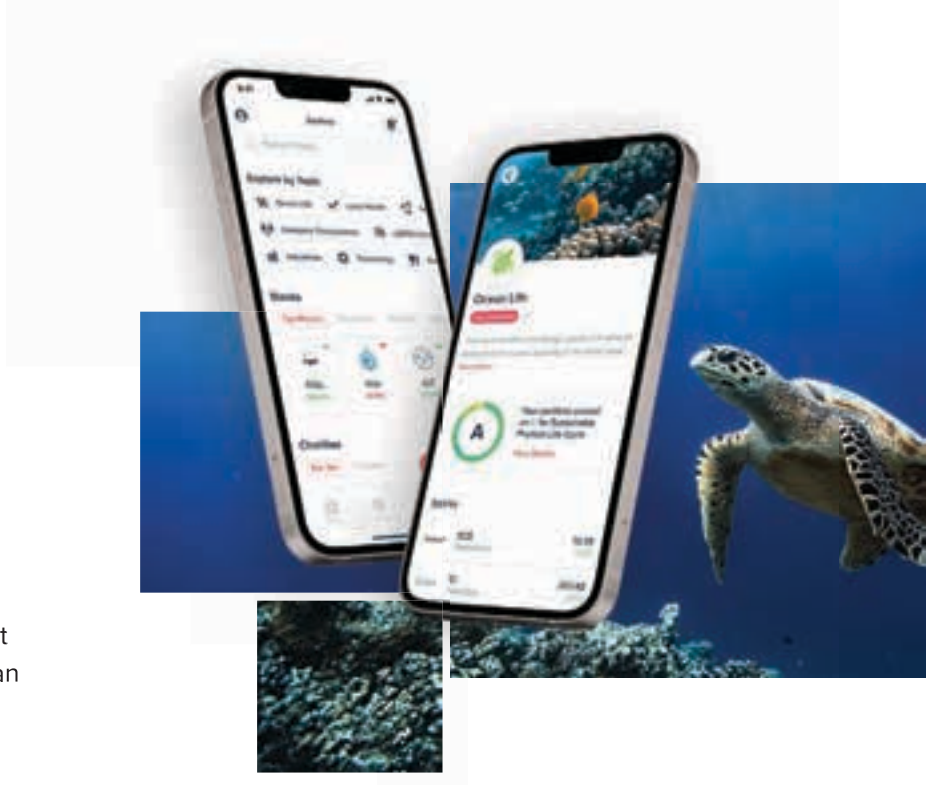
- We continue to **strengthen our corporate governance** and risk management processes, through the expansion of personnel, systems and technology.
- We have strengthened our procurement processes by the addition of a dedicated procurement department to ensure **responsible sourcing** and supply chain activity.
- We have taken steps to **reduce our global carbon footprint** and implement sustainable practices for our offices and data centers.
- We have significantly expanded our suite of **award-winning ESG investing and trading products over the last two years, including the IMPACT App,[1] Impact Dashboard and ESG Scores** to give our clients additional tools for making investment decisions.

IMPACT App

The IMPACT App is a simplified trading platform that allows users to seamlessly align their investments with their values.

Investors can select personally relevant investment criteria from 13 impact values, flag any investments based on company business practices, and score a portfolio based on how it aligns with their personal value preferences.

Donations to nonprofits, position swaps in the same dollar amount from one investment to another, and purchasing carbon offsets can all be done directly from the IMPACT app.



1. See impact.ibkr.com

Consistent Recognition as an Industry Leader

BROKERCHOOSER

2023 BrokerChooser Best Online Brokers

Best Online Broker
Best Stock Broker
Best Broker for Day Trading
Best Broker for Investing
#1 for Best Online Broker in Singapore
#1 for Online Brokers & Trading Platforms in the United Kingdom
#1 for Best Online Brokers in India
#1 for Best Brokers for ESG Investing

StockBrokers.com

2022 StockBrokers.com Awards

#1 for Professional Tools
#1 for Futures Trading
#1 for Offering of Investments
#1 International Trading
5 out of 5 stars Offering of Investments
5 out of 5 stars Research

BARRON'S

2022 Barron's Awards[1]

Rated #1 - Best Online Broker (5/5 stars)
Rated #1 for Active Traders
Rated #1 for Information

Investopedia

2022 Investopedia Awards

4.6/5 stars Overall
Best Broker for International Trading
Best Online Broker for Advanced Traders

ForexBrokers.com

2023 ForexBrokers.com Awards

#1 Offering of Investments
#1 Professional Trading
#1 Institutional Clients
#1 ESG Offerings
5 out of 5 stars Overall
5 out of 5 stars Commissions & Fees
5 out of 5 stars Offering of Investments
5 out of 5 stars Platforms and Tools
5 out of 5 stars Research

preqin

2022 Preqin Awards

Top Prime Broker
Top Hedge Fund Custodian

1. Barron's is a registered trademark of Dow Jones & Co. Inc. See ibkr.com/awards

February 24, 2023



Dear Shareholders:

In 2022 we continued on our winning ways, setting new highs for all of our metrics for profitability and financial strength.

Given rising interest rates and our cautious policy of not investing cash in distant maturities, we are able to offer over 4% interest on uninvested cash in our customers' brokerage accounts.

Since other banks and brokers are offering only a fraction of one percent, this should hopefully bring us many new customers.

Rereading my letters to you for the past two years, it gives me no joy to tell you that I was right about inflation, and my concerns about the mounting deficit fill me with dread as I look to the future.

Our only hope to avoid eventual collapse is to have an economy that grows faster than our spending.

But what can we reasonably expect? Given the mounting cost of debt service, and our stagnating economy, we'll surely add over 5% to our growing deficit this year.

Well, let's just kick the can down the road a bit further, maybe next year or the year after, AI and hydrogen energy will save us. I would not be so sure.

In all this economic uncertainty it would help a great deal to be able to set some realistic expectations that could help us prepare for what is to come.

Markets to the rescue!

Expect Interactive Brokers to reveal some new tools this year, to help you with your economic planning and hedge against the unexpected.

Sincerely,

Thomas Peterffy
Chairman

Interactive Brokers Group, Inc.

2022 Financial Information
Form 10-K

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

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the year ended December 31, 2022

Commission File Number: 001-33440

INTERACTIVE BROKERS GROUP, INC.

(Exact name of registrant as specified in its charter)

Delaware	**30-0390693**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

One Pickwick Plaza
Greenwich, Connecticut 06830
(Address of principal executive office)

(203) 618-5800
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol	Name of the exchange on which registered
Common Stock, par value $.01 per share	IBKR	The Nasdaq Global Select Market

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

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of ''large accelerated filer,'' ''accelerated filer'', ''smaller reporting company'' and ''emerging growth company'' in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes ☒ No ☐

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

The aggregate market value of the voting and non-voting common equity stock held by non-affiliates of the registrant was approximately $5,264,574,692 computed by reference to the $55.01 closing sale price of the common stock on the Nasdaq Global Select Market, on June 30, 2022, the last business day of the registrant's most recently completed second fiscal quarter.

As of February 21, 2023, there were 102,996,853 shares of the issuer's Class A common stock, par value $0.01 per share, outstanding and 100 shares of the issuer's Class B common stock, par value $0.01 per share, outstanding.

Documents Incorporated by Reference: Portions of Registrant's definitive proxy statement for its 2023 annual meeting of shareholders are incorporated by reference in Part III of this Form 10-K.

ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2022

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

We have included or incorporated by reference in this Annual Report on Form 10-K and from time to time our management may make statements that may constitute ‘‘forward-looking statements’’ within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are not historical facts, but instead represent only our beliefs regarding future events, many of which, by their nature, are inherently uncertain and outside our control. These statements include statements other than historical information or statements of current condition and may relate to our future plans and objectives and results, among other things and may also include our belief regarding the effect of various legal proceedings, as set forth under ‘‘Legal Proceedings and Regulatory Matters’’ in Part I, Item 3 of this Annual Report on Form 10-K, as well as statements about the objectives and effectiveness of our liquidity policies, statements about trends in or growth opportunities for our businesses, included in ‘‘Management’s Discussion and Analysis of Financial Condition and Results of Operations’’ in Part II, Item 7 of this Annual Report on Form 10-K. By identifying these statements for you in this manner, we are alerting you to the possibility that our actual results may differ, possibly materially, from the anticipated results indicated in these forward-looking statements. Important factors that could cause actual results to differ from those in the forward-looking statements include, among others, those discussed below and under ‘‘Risk Factors’’ in Part I, Item 1A of this Annual Report on Form 10-K and ‘‘Management’s Discussion and Analysis of Financial Condition and Results of Operations’’ in Part II, Item 7 of this Annual Report on Form 10-K.

Factors that could cause actual results to differ materially from any future results, expressed or implied, in these forward-looking statements include, but are not limited to, the following:

- general economic conditions in the markets where we operate;
- increased industry competition and downward pressures on electronic brokerage commissions and on bid/offer spreads in the remaining market making business we operate;
- risks inherent to the electronic brokerage and market making businesses;
- implied versus actual price volatility levels of the products in which we continue to make markets;
- the general level of interest rates;
- failure to protect or enforce our intellectual property rights in our proprietary technology;
- our ability to keep up with rapid technological change;
- system failures, cyber security threats and other disruptions;
- non-performance of third-party vendors;
- conflicts of interest and other risks due to our ownership and holding company structure;
- the loss of key executives and failure to recruit and retain qualified personnel;
- the risks associated with the expansion of our business;
- our possible inability to integrate any businesses we acquire;
- the impact of accounting standards issued but not yet adopted;
- compliance with laws and regulations, including those relating to the securities industry;
- the impact of the Coronavirus Disease 2019 (‘‘COVID-19’’) pandemic or another public health emergency; and
- other factors discussed under ‘‘Risk Factors’’ in Part I, Item 1A of this Annual Report on Form 10-K or elsewhere in this Annual Report on Form 10-K.

We undertake no obligation to publicly update or revise any forward-looking statements to reflect events or circumstances that may arise after the date of this Annual Report on Form 10-K.

PART I

ITEM 1. BUSINESS

Overview

Interactive Brokers Group, Inc. (‘‘IBG, Inc.’’ or the ‘‘Company’’) is an automated global electronic broker. We custody and service accounts for hedge and mutual funds, exchange-traded funds (‘‘ETFs’’), registered investment advisors, proprietary trading groups, introducing brokers and individual investors. We specialize in routing orders and executing and processing trades in stocks, options, futures, foreign exchange instruments (‘‘forex’’), bonds, mutual funds, ETFs and precious metals on more than 150 electronic exchanges and market centers in 33 countries and 26 currencies seamlessly around the world. In addition, our customers can use our trading platform to trade certain cryptocurrencies through a third-party cryptocurrency service provider that executes, clears and custodies the cryptocurrencies. In the United States of America (‘‘U.S.’’), we conduct our business primarily from our headquarters in Greenwich, Connecticut and from Chicago, Illinois. Abroad, we conduct our business through offices located in Canada, the United Kingdom, Ireland, Switzerland, Hungary, India, China (Hong Kong and Shanghai), Japan, Singapore and Australia. As of December 31, 2022, we had 2,820 employees worldwide.

IBG, Inc. is a holding company whose primary asset is the ownership of approximately 24.5% of the membership interests of IBG LLC, the current holding company for our businesses. IBG, Inc. is the sole managing member of IBG LLC.

When we use the terms ‘‘we,’’ ‘‘us,’’ ‘‘our,’’ and ‘‘IBKR,’’ we mean IBG, Inc. and its subsidiaries (including IBG LLC). Unless otherwise indicated, the terms ‘‘common stock’’ and ‘‘IBKR shares’’ refer to the Class A common stock of IBG, Inc.

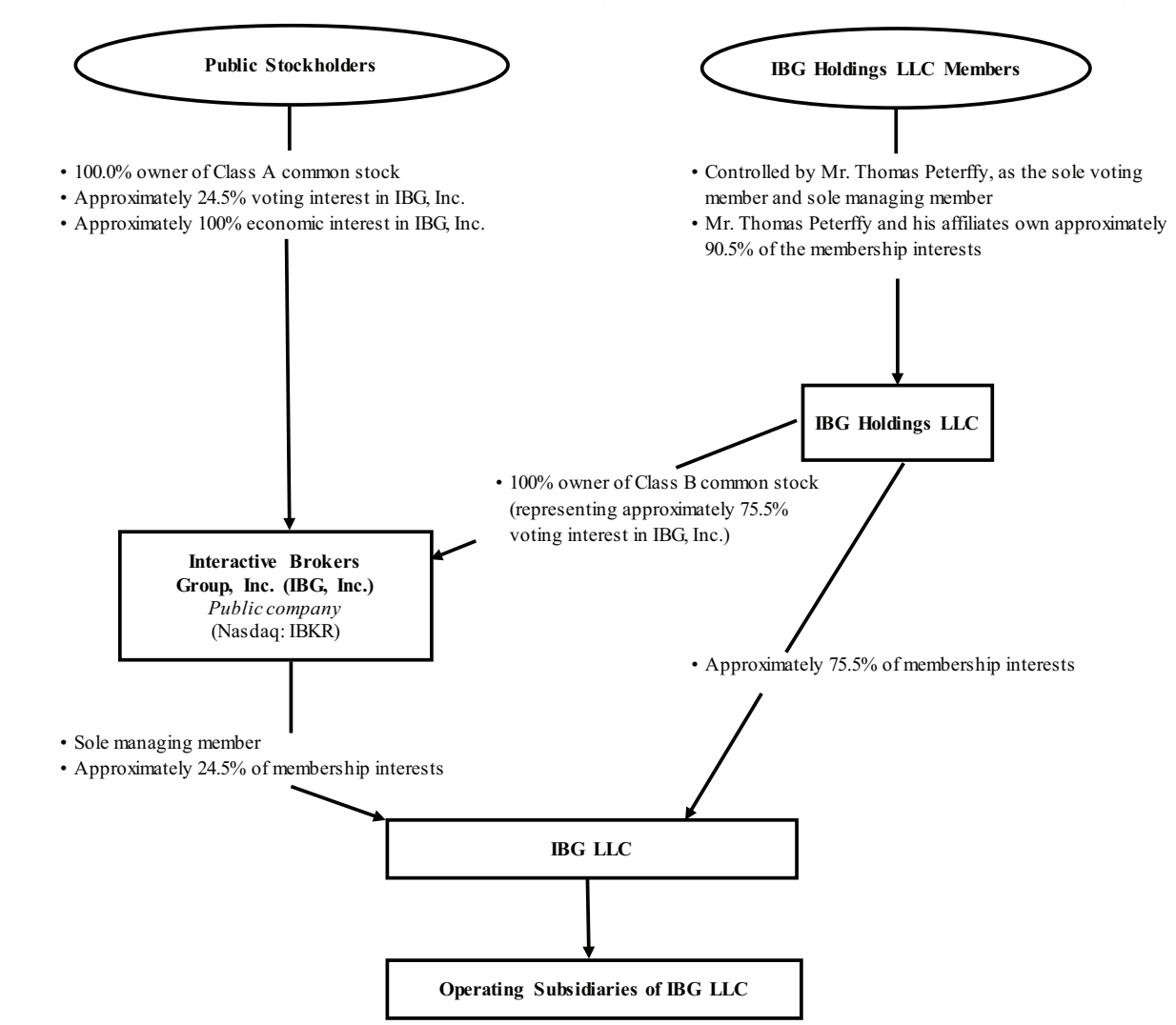
We trace our roots to the market making business founded by our Chairman, Mr. Thomas Peterffy, on the floor of the American Stock Exchange in 1977. Since our inception, we have focused on developing proprietary software to automate broker-dealer functions. We have been a pioneer in developing and applying technology as a financial intermediary to increase liquidity and transparency in the capital markets in which we operate. The proliferation of electronic exchanges and market centers since the early 1990s has allowed us to integrate our software with an increasing number of trading venues, creating automatically functioning, computerized platforms that require minimal human intervention. Over four decades of developing our automated trading platforms and automating many middle- and back-office functions have allowed us to become one of the lowest cost providers of broker-dealer services and to significantly increase the volume of trades we handle.

Our internet address is www.interactivebrokers.com and the investor relations section of our website is located at www.interactivebrokers.com/ir. We make available free of charge, on or through the investor relations section of our website, this Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as well as proxy statements, registration statements, prospectus supplements and Section 16 filings for our directors and officers, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the U.S. Securities and Exchange Commission (‘‘SEC’’). The SEC maintains an internet site, www.sec.gov, that contains annual, quarterly and current reports, proxy and information statements and other information that issuers file electronically with the SEC. Our electronic SEC filings are made available to the public on the SEC’s internet site. In addition, posted on our website are our Bylaws, our Amended and Restated Certificate of Incorporation, charters for the Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee of our board of directors, our Accounting Matters Complaint Policy, our Whistle Blower Hotline, our Corporate Governance Guidelines and our Code of Business Conduct and Ethics governing our directors, officers and employees. Within the time periods required by SEC and the Nasdaq Stock Market LLC’s Global Select Market (‘‘Nasdaq’’), we will post on our website any amendment to the Code of Business Conduct and Ethics and any waiver applicable to any executive officer, director or senior financial officer. In addition, our website includes information concerning purchases and sales of our equity securities by our executive officers and directors, as well as disclosure relating to certain non-GAAP financial measures, if any, (as defined in Regulation G) promulgated under the Securities Act of 1933, as amended (the ‘‘Securities Act’’) and the Securities Exchange Act of 1934, as amended (the ‘‘Exchange Act’’) that we may make public orally, telephonically, by webcast, by broadcast or by similar means from time to time.

Our Investor Relations Department can be contacted at Interactive Brokers Group, Inc., Two Pickwick Plaza, Greenwich, Connecticut 06830, Attn: Investor Relations, e-mail: investor-relations@interactivebrokers.com.

Our Organizational Structure and Overview of Recapitalization Transactions

The graphic below illustrates our current ownership structure and reflects current ownership percentages. The graphic below does not display the subsidiaries of IBG LLC.



Our primary assets are our ownership of approximately 24.5% of the membership interests of IBG LLC, the current holding company for our businesses, and our controlling interest and related contractual rights as the sole managing member of IBG LLC. The remaining approximately 75.5% of IBG LLC membership interests are held by IBG Holdings LLC (“Holdings”), a holding company that is owned directly and indirectly by our founder and Chairman, Mr. Thomas Peterffy and his affiliates, management and other employees of IBG LLC, and certain other members. The IBG LLC membership interests held by Holdings will be subject to purchase by us over time in connection with offerings by us of shares of our common stock.

The table below presents the amount of IBG LLC membership interests held by IBG, Inc. and Holdings as of December 31, 2022.

	IBG, Inc.	Holdings	Total
Ownership %	24.5%	75.5%	100.0%
Membership interests	102,927,703	316,609,102	419,536,805

Purchases of IBG LLC membership interests, held by Holdings, by the Company are governed by the exchange agreement among us, IBG LLC, Holdings and the historical members of IBG LLC, (the "Exchange Agreement"), a copy of which was filed as an exhibit to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2009 and filed with the SEC on November 9, 2009. The Exchange Agreement, as amended June 6, 2012, provides that the Company may facilitate the redemption by Holdings of interests held by its members through the issuance of shares of common stock through a public offering or directly to Holdings in exchange for the interests in IBG LLC being sold by Holdings. The common stock received from the Company is either distributed by Holdings to certain members in redemption of their Holdings interests or sold on behalf of such members in open market transactions, with the proceeds of such sales distributed by Holdings to certain members in redemption of their Holdings interests. From 2011 through 2022, the Company issued 37,478,697 shares of common stock (with a fair value of $1.7 billion) to Holdings in exchange for an equivalent number of shares of member interests in IBG LLC.

Nature of Operations

As an electronic broker, we execute, clear and settle trades globally for both institutional and individual customers. Capitalizing on our proprietary technology, our systems provide our customers with the capability to monitor multiple markets around the world simultaneously and to execute trades electronically in these markets at a low cost in multiple products and currencies from a single unified platform. We offer our customers access to all tradable classes of primarily exchange-listed products, including stocks, options, futures, forex, bonds, mutual funds, ETFs, precious metals and cryptocurrencies traded on more than 150 electronic exchanges and market centers in 33 countries and in 26 currencies seamlessly around the world. The ever-growing complexity of multiple market centers has provided us with opportunities to build and continuously adapt our order routing software to secure excellent execution prices.

Since the launching of our electronic brokerage business in 1993, we have grown to approximately 2.1 million institutional and individual brokerage customers. We provide our customers with what we believe to be one of the most effective and efficient electronic brokerage platforms in the industry.

We are able to provide our customers with high-speed trade execution at low commission rates, in large part because of our proprietary technology. As a result of our advanced electronic brokerage platform, we are especially attractive to sophisticated and active investors.

Our customers can access IBKR's premier technology through the following trading platforms:

- *Trader Workstation℠ (TWS)* – The TWS is our flagship desktop trading platform, designed for active traders and investors who trade multiple products and require power and flexibility. The TWS Mosaic interface provides intuitive out-of-the-box usability with quick and easy access to comprehensive trading, order management, chart, watchlist and portfolio tools all in a single, customizable workspace.
- *IBKR Mobile* – The IBKR Mobile app provides powerful trading tools and the same market-moving information as our desktop TWS trading platform. Our mobile app provides the functionality needed to trade and manage accounts from anywhere.
- *Client Portal* – Client Portal is a streamlined web-based platform. It gives the customer access to every resource they need to trade, monitor and manage their account.
- *IBKR GlobalTrader* – IBKR GlobalTrader is a simple mobile trading app to trade stocks and options worldwide. Customers can deposit in their local currency and trade stocks at 90+ exchanges and options at 30+ market centers around the world. Customers can also trade select U.S. ETFs around the clock, plus cryptocurrencies like Bitcoin, Bitcoin Cash, Ethereum and Litecoin – all from their mobile device.
- *IBKR APIs* – For our more sophisticated customers, IBKR APIs allows them to build custom trading applications and automate any part of the trading process to their specifications. We offer APIs for every experience level from our easy-to-use Excel API to our institutional grade FIX API.

Our key product offerings include:

- *IBKR Pro℠* is the core IBKR service designed for sophisticated investors. IBKR Pro℠ offers the lowest cost access to stocks, options, futures, forex, bonds, mutual funds, ETFs, precious metals and cryptocurrencies from a single unified platform with no added spreads, ticket charges, account minimums or platform fees.
- *IBKR Lite℠* provides unlimited commission-free trades on U.S. exchange-listed stocks and ETFs and low-cost access to global markets without required account minimums or platform fees to participating U.S. customers. IBKR Lite℠ was designed to meet the needs of investors who are seeking a simple, commission-free way to trade U.S. exchange-listed stocks and ETFs and do not wish to consider our efforts to obtain greater price improvement through our IB SmartRouting℠ system.
- *IBKR Universal account℠* – From a single point of entry in their IBKR Universal[1] account℠, our customers are able to transact in 26 currencies, across multiple classes of tradable, primarily exchange-listed products traded on more than 150 electronic exchanges and market centers in 33 countries around the world seamlessly. Our offering features a suite of cash management services, including:
  - *Interactive Brokers Debit Mastercard® and Interactive Brokers Canada Prepaid Mastercard® Card* – Interactive Brokers Debit Mastercard® and Interactive Brokers Canada Prepaid Mastercard® Card allow customers to spend and borrow directly against their account at lower interest rates than credit cards, personal loans and home equity lines of credit, with no monthly minimum payments and no late fees. Customers can use their card to make purchases and ATM withdrawals anywhere Debit Mastercard®[2] or Prepaid Mastercard®[2] are accepted around the world.
  - *Bill Pay* – Our Bill Pay program allows customers to make electronic or check payments to almost any company or individual in the U.S. The service can be configured for one-time or recurring payments and permits customers to schedule future payments.
  - *Direct Deposit and Mobile Check Deposit* – Our Direct Deposit program allows customers to automatically deposit paychecks, pension distributions and other recurring payments to their (non-retirement) brokerage account with us. In addition, U.S. customers can use our Mobile Check Deposit to directly deposit checks drawn on a U.S. bank.
  - *Request for Payment Service* – Through this new banking service, U.S. customers can make instant deposits, 24 hours a day, from their mobile banking app or other bank portal to fund their brokerage account with us. Funds deposited via Request for Payment are immediately available for trading. The service is available to customers with an account at J.P. Morgan Chase and, over time, other banks will be added.
- *Insured Bank Deposit Sweep Program* – Our Insured Bank Deposit Sweep Program provides eligible customers with up to $2,500,000 of Federal Deposit Insurance Corporation (‘‘FDIC’’) insurance on their eligible cash balances in addition to the existing $250,000 Securities Investor Protection Corporation (‘‘SIPC’’) coverage for total coverage of $2,750,000. Customers continue earning the same competitive interest rates currently applied to cash held in their brokerage accounts with us. We sweep each participating customer’s eligible cash balances daily to one or more banks, up to $246,500 per bank, allowing for the accrual of interest and keeping within the FDIC protected threshold. Cash balances above $2,750,000 remain subject to safeguarding under the SEC’s Customer Protection Rule 15c3-3.
- *Investors’ Marketplace℠* – The Investors’ Marketplace℠ is an expansion of our Money Manager Marketplace and our Hedge Fund Capital Introduction program. This program is the first electronic meeting place that brings together individual investors, financial advisors, money managers, fund managers, research analysts, technology providers, business developers and administrators, allowing them to interact to form connections and conduct business.

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[1] U.S. regulations require securities and commodities activities to be conducted in separate accounts. Universal account refers to the consolidation of these accounts for display purposes only, enabling clients the ability to use a single platform to conduct trading activity and view consolidated activity and position information for all products and services offered.

[2] Debit Mastercard® and Prepaid Mastercard® are trademarks registered to Mastercard International Incorporated Corporation, Delaware, 2000 Purchase Street, Purchase, New York 10577-2405.

- *Mutual Fund Marketplace* – The Mutual Fund Marketplace offers our customers access to more than 45,000 mutual funds worldwide, including more than 18,000 no-transaction-fee funds from more than 540 fund families.
- *Bond Marketplace* – The Bond Marketplace allows customers to search for the best yields from a vast universe of bonds from issuers in the Americas, Europe and Asia. We provide direct market access at a low cost to a wide array of corporate, government and municipal securities. Our customers obtain competitive bids and offers with low, transparent commissions and no hidden mark-ups.
- *Cryptocurrency* – Customers, including both individuals and advisors, can trade Bitcoin (BTC), Ethereum (ETH), Litecoin (LTC) and Bitcoin Cash (BCH) through Paxos Trust Company, which executes, clears and custodies the cryptocurrencies, alongside other asset classes on a single unified platform.
- *Fractional Trading* – Fractional Trading allows customers to buy and sell any eligible U.S. or European stock (or ETF, where available), using either a specified cash amount or fractional shares, which are stock units that amount to less than one full share. With fractional shares, there is no minimum for European shares and customers can invest in U.S. shares with as little as $1.00. This functionality allows customers to experiment with trading and investing without committing substantial sums of money and learn about building and rebalancing diversified portfolios.
- *U.S. Spot Gold* – Customers can trade U.S. Spot Gold alongside other asset classes from a single unified platform. In addition, our customers have access to efficient pricing in quantities as small as one ounce and can request physical delivery of their U.S. Spot Gold position.
- *No Transaction Fee Program for Exchange-Traded Funds* – We offer a no transaction fee program for ETFs that reimburses IBKR Pro[SM] customers and eligible non-U.S. customers for commissions paid on ETF shares held for at least 30 days.
- *Event Contracts* – IBKR EventTrader[SM] is our web-based platform for trading event contracts on select CME futures markets. IBKR EventTrader[SM] allows customers to trade their opinion about a specific question with a ‘‘yes’’ or ‘‘no’’ outcome.
- *Overnight Trading Hours* – Customers can trade select U.S. ETFs 23½ hours a day, five days a week, enabling them to react immediately to market-moving news and conveniently trade at almost any time. It also provides customers in Asia with access to the U.S. Equity markets during their trading day.

For all customers, our platform offers:

- *Low Costs* – We provide our customers with among the industry’s lowest overall transaction costs in two ways. First, we offer among the lowest execution, commission and financing costs in the industry. Second, our IBKR Pro[SM] customers benefit from our advanced routing of orders designed to achieve the best available trade price. In addition, customers earn interest on their uninvested cash balances above $10,000 (or the equivalent in foreign currency).
- *IB SmartRouting[SM]* – IB SmartRouting[SM] retains control of the customer’s order, continuously searches for the best available price and, unlike most other routers, dynamically routes and re-routes all or parts of a customer’s order to achieve optimal execution and among the lowest execution and commission costs in the industry. We offer Transaction Cost Analysis reporting to allow customers to track execution performance using multiple criteria. Our IBKR Pro[SM] customers benefit from our advanced order routing technology for all trades, while our IBKR Lite[SM] customers benefit from this technology for their trades in products not eligible for IBKR Lite[SM].
- *Automated Risk Controls* – Throughout the trading day, we calculate margin requirements for each of our customers on a real-time basis across all product classes and across all currencies. Our customers are alerted to approaching margin violations and if a customer’s equity falls below what is required to support that customer’s margin, we attempt to automatically liquidate positions to bring the customer’s account into margin compliance. This is done to protect us, as well as the customer, from excessive losses.

- *Flexible and Customizable System* – Our platform is designed to provide an efficient customer experience, beginning with a highly automated account opening process and ending with fast trade execution and reporting. Our sophisticated interface provides interactive real-time views of account balances, positions, profits or losses, buying power and ''what-if'' scenarios to enable our customers to more easily make informed investment decisions and trade effectively. Our system is configured to remember the user's preferences and is specifically designed for multi-screen systems. When away from their main workstations, customers can conveniently access their accounts through our IBKR Mobile platforms.

- *Securities Financing Services* – We offer a suite of automated Stock Borrow and Lending tools, including our depth of availability, transparent rates, global reach and dedicated service representatives. In addition, our Stock Yield Enhancement Program allows our customers to lend their fully-paid stock shares to us in exchange for cash or U.S. Treasury securities collateral. In turn, we lend these stocks in exchange for collateral and earn stock lending fees. We pay our customers interest on the collateral value generally equal to 50% of the income we earn from lending the shares. This allows customers holding fully-paid long stock positions to enhance their returns.

- *Block Trade Desk* – We offer broker-assisted trading through our *Corporate Bond* and *Stock and Option* block order desks. The desks help traders execute large or complex orders and monitor trades when customers are unable to do so. The desks source liquidity, bring SPX color from the pit, offer price discovery services, and help customers calibrate and execute complex algo trading strategies.

- *IBKR Campus* – IBKR Campus helps customers learn about the markets, products, and tools available through our platforms. IBKR Campus offers self-directed courses at the Traders' Academy; live and recorded webinars; our Traders' Insight market commentary blog; IBKR Podcasts, a new podcast series that interviews thought leaders from across the financial industry; the IBKR Quant Blog; and our Student Trading Lab, in which educators bring real-world trading experiences to their classroom. In addition, we provide content to Coursera, an online provider of learning content, for a certificate program called *Practical Guide to Trading*.

Promotional offerings include:

- *IBKR Refer a Friend Program* – Under the Refer a Friend program, we encourage existing customers to refer friends and family to IBKR. The referring customer can earn a flat fee payment of $200 while the new customer can receive up to $1,000 in IBKR stock. The specific program details and eligibility requirements are described on our website.

Analytical offerings on our platform include:

- *IBKR GlobalAnalyst℠* – Our IBKR GlobalAnalyst℠ tool, designed for investors who are interested in international portfolio diversification, helps find new opportunities to diversify an investor's portfolio and discover undervalued companies that may have greater growth potential. The relative value of global stocks by region, country, industry or individually can be compared, and metrics displayed in one of 26 currencies. IBKR GlobalAnalyst℠ can search across business sectors and allows for filtering by region, country and market capitalization.

- *PortfolioAnalyst®* – Our PortfolioAnalyst® reporting tool is designed to allow customers to evaluate the performance of their complete financial portfolio. The tool consolidates data from a customer's investment, checking, savings, annuity, incentive plans and credit card accounts, calculates GIPS® verified time-weighted and money-weighted returns, and offers robust reporting and benchmarking capabilities.

- *IB Risk Navigator℠* – We offer to all customers our real-time market risk management platform that unifies exposure across multiple asset classes around the globe. The system is capable of identifying overexposure to risk by starting at the portfolio level and drilling down into successively greater detail within multiple report views. Report data is updated every ten seconds or upon changes to portfolio composition. Predefined reports allow the summarization of a portfolio from different risk perspectives, providing views of Exposure, Value at Risk (''VaR''), Delta, Gamma, Vega and Theta, profit and loss, and position quantity measures. The system also offers customers the ability to modify positions through ''what-if'' scenarios that show hypothetical changes to the risk profile.

- *Mutual Fund/ETF Parser* – The Parser categorizes the individual component stocks within mutual funds and ETFs, giving an accurate, granular picture of the overall exposure to asset classes, industry sectors and companies.
- *Portfolio Builder* – Portfolio Builder supports our customers in setting up an investment strategy based on research and rankings from top buy-side providers and fundamental data; use filters to define the universe of equities that will comprise their strategy and back-test their strategy using up to three years of historical performance; work in hypothetical mode to adjust the strategy until the historical performance meets their standards; and with the click of a button let the system create the orders to invest in a strategy and track its performance in their portfolio.
- *Environmental, Social and Governance ("ESG") Tools*
  - *IMPACT by Interactive Brokers℠* – IMPACT by Interactive Brokers℠ ("IMPACT App") is a unique, simple and intuitive mobile app that helps customers easily align their portfolio with their values, with a goal to help shape the future they wish to see. The IMPACT App allows customers to select their personal investment criteria from thirteen impact values and principles: Clean Air, Pure Water, Ocean Life, Land Health, Consumer Safety, Ethical Leadership, Gender Equality, Racial Equality, LGBTQ Inclusion, Company Transparency, Sustainable Product Lifecycle, Mindful Business Models and Fair Labor & Thriving Communities. Customers can also exclude investments based on business practices they would like to avoid. Based on these preferences, the IMPACT App will show customers how investment opportunities and their portfolio align with their beliefs.
  - *Impact Dashboard* – The Impact Dashboard helps customers to evaluate and invest in companies that align with their values. Customers can select the values they care about from a list ranging from clean air to consumer safety and racial equality, and measure how both individual securities and their overall portfolio measure up against their criteria.
  - *ESG Scores* – ESG Scores from Refinitiv give customers a new set of tools for making investment decisions based on more than just financial factors. Companies are scored along several dimensions, such as reducing emissions and supporting human rights, and customers can easily see how companies rank both overall and on each dimension.
  - *Charitable Giving* – IBKR GIVE℠ supports U.S. customers in making charitable donations directly from the IMPACT App. Using a comprehensive directory of U.S. charities and non-profit organizations from GuideStar™ by Candid, IBKR GIVE℠ lets customers easily donate to a charity matching their values, or search for a non-profit of their choice.
  - *Carbon Offsets* – Using the IMPACT App, U.S. customers can offset their carbon emissions by purchasing carbon offsets and can use the Carbon Offsets tool to select from either greenhouse-gas emitting activities related to household, transportation and food, or enter a specific amount of carbon to offset. We source and retire the carbon credits at the appropriate registries enabling customers to fully or partially offset their carbon footprints.
  - *Socially Responsible Investing (SRI) Portfolios* – Interactive Advisors offers customers a selection of value portfolios grouped into Better Planet, Social Justice and Responsible Management categories. Customers can also customize any of their portfolios to exclude companies whose business practices concern them.
- *Interactive Analytics℠ and IB Option Analytics℠* – We offer our customers state-of-the-art tools, which include a customizable trading platform, advanced analytic tools and over 100 sophisticated order types and algorithms. We also provide a real-time option analytics window that displays values reflecting the rate of change of an option's price with respect to a unit change in each of several risk dimensions.

- *Probability Lab® (Patent Pending)* – The Probability Lab® provides customers with an intuitive, visual method to analyze market participants' future stock price forecasts based on current option prices. This tool compares a customer's stock price forecast versus that of the market and scans the entire option universe for the highest Sharpe ratio multi-leg option strategies that take advantage of the customer's forecast.
- *Goal Tracker* – Interactive Advisors' Goal Tracker projects the hypothetical performance of a portfolio and monitors how likely it is the portfolio might achieve the goal. Customers can adjust inputs, such as monthly contribution amount, goal target date, or the cost or outflow associated with the goal, to estimate the likelihood of achieving a goal.

We cater to various customer groups with specific service needs.

For advisors, we offer:

- *Model Portfolios* – Model Portfolios offer advisors an efficient and time-saving approach to investing customer assets. They allow advisors to create groupings of financial instruments based on specific investment themes, and then invest customer funds into these models.
- *IBKR Allocation Order Tool* – The IBKR Allocation Order Tool streamlines the creation, execution, and allocation of group orders. The tool provides advisors with a single screen to enter trade allocations quickly across many customer accounts, advisors or strategies; allocate total quantity or cash quantity for user-specified values proportionally or equally; and modify orders or allocations on the fly. In addition, customers can use the Allocation Order Tool to project, preview and allocate trades to take advantage of potential capital losses for all or some of an advisor's invested customers.
- *ESG Impact Profile* – The ESG Impact Profile helps advisors understand customer preferences for socially responsible and impact investing. Advisors' customers can select personal investment criteria from thirteen impact values and principles and exclude investments based on ten categories.
- *IBKR Client Risk Profile* – IBKR Client Risk Profile is designed to help advisors determine the most suitable investments for their customers, based on each customer's risk tolerance. This information is collected through a custom-designed questionnaire. Advisors can view the scores through the Advisor Portal and create custom pre-trade allocation groups and profiles in Trader Workstation℠ to place orders and allocate trades for customers with similar risk profiles.

For introducing brokers and advisors, we offer:

- *White Branding* – Our large financial advisor and broker-dealer customers may ''white brand'' our trading interface, account management and reports with their firm's identity. Broker-dealer customers can also select from among our modular functionalities, such as order routing, trade reporting or clearing, on specific products or exchanges where they may not have up-to-date technology to offer to their customers a complete global range of services and products.

For customers looking for online advisory services, we offer:

- *Interactive Advisors* – Interactive Advisors recruits registered financial advisors, vets them, analyzes their investment track records, and groups them by their risk profile. Investors who are interested in having their individual accounts robo-traded are grouped by their risk and return preferences. Investors can assign their accounts to be traded by one or more advisors. Interactive Advisors also offers our customers Smart Beta Portfolios which combine the benefits of actively managed fund stock selection techniques with passive ETFs low-cost automation to provide broad market exposure and potentially higher returns, as well as Socially Responsible Investing.

Technology

Our proprietary technology is the key to our success. We believe that integrating our system with electronic exchanges and market centers worldwide results in transparency, liquidity and efficiencies of scale. Together with the IB SmartRouting[SM] system and our low execution costs, this approach reduces overall transaction costs to our IBKR Pro[SM] customers and, in turn, increases our transaction volume and profits (customers who elect to use our IBKR Lite[SM] offering do not take advantage of our IB SmartRouting[SM] technology). Over the past four decades, we have developed an integrated trading system and communications network and have positioned our company as an efficient conduit for the global flow of risk capital across asset and product classes on electronic marketplaces around the world, permitting us to have one of the lowest cost structures in the industry. We believe that developing, maintaining and continuing to enhance our proprietary technology provides us and our customers with the competitive advantage of being able to adapt quickly to the changing environment of our industry and to take advantage of opportunities presented by new exchanges, products, pricing mechanisms or regulatory changes before our competitors.

Our proprietary technology infrastructure enables us to provide our customers with the ability to execute trades at among the lowest execution costs in the industry for comparable services. Customer trades are both automatically captured and reported in real time in our system. Our customers trade on more than 150 electronic exchanges and market centers in 33 countries around the world. These exchanges and market centers are all partially or fully electronic, meaning that customers can buy or sell a product traded on that exchange via an electronic link from their computer or mobile device through our system to the exchange. We offer our products and services through a global communications network that is designed to provide secure, reliable and timely access to the most current market information. We provide our customers with a variety of means to connect to our brokerage systems, including cross connects, dedicated point-to-point data lines, extranets, virtual private networks and the Internet.

Specifically, our customers receive worldwide electronic access through our Trader Workstation[SM] (our real-time Java-based trading platform), our proprietary Application Programming Interface (“API”), our IBKR Mobile app, our customer-portal-based Quick Trade or industry standard Financial Information Exchange (“FIX”) connectivity. Customers who want a professional quality trading application with a sophisticated user interface utilize our Trader Workstation[SM], which can be accessed through a desktop or variety of mobile devices. Customers interested in developing programmatic trading utilize our API, which supports multiple programming languages. Large institutions with FIX infrastructure prefer to use our FIX solution for seamless integration of their existing order gathering and reporting applications.

While many brokerages, including some online brokerages, rely on manual procedures to execute many day-to-day functions, we employ proprietary technology to automate, or otherwise facilitate, many of the following functions:

- account opening process;
- order routing and best execution;
- seamless trading across all types of securities, futures and currencies around the world from one account;
- order types and analytical tools offered to customers;
- securities lending and short stock availability;
- delivery of customer information, such as confirmations, customizable real-time account statements, audit trails and regulatory trade reporting;
- compliance;
- customer service; and
- risk management through automated real-time credit management of all new orders and margin monitoring.

Research and Development

One of our core strengths is our expertise in the rapid development and deployment of automated technology for the financial markets. Our core software technology is developed internally, and we do not generally rely on outside vendors for software development or maintenance. To achieve optimal performance from our systems and in response to changing market conditions, we continuously rewrite and upgrade our software. Use of the best available technology not only improves our performance but also helps us attract and retain talented developers. Our software development costs are relatively low because the employees who oversee the development of the software are often the same employees who design the application, evaluate its performance, and participate along with our quality assurance professionals in our robust quality assurance testing procedures. The involvement of our developers in each of these processes enables us to add features and further refine our software rapidly.

Our internally-developed, fully integrated trading and risk management systems are unique and transact across all product classes. These systems have the flexibility to assimilate new exchanges and new product classes without compromising transaction speed or fault tolerance. Fault tolerance, or the ability to maintain system performance despite exchange malfunctions or hardware failures, is crucial to ensuring best executions for our customers. Our systems are designed to detect exchange malfunctions and quickly take corrective actions by re-routing pending orders when possible.

Our company is technology-focused, and our management team is hands-on and technology-savvy. Most members of the management team participate in algorithm design and supervise the creation of detailed specifications for new applications. The development queue is prioritized and highly disciplined. Progress on programming initiatives is generally tracked on a bi-weekly basis by the Steering Committee and other committees consisting of senior executives. This enables us to prioritize key initiatives and achieve rapid results. All new business involves a software development project. We generally do not engage in any business that we cannot automate and incorporate into our platform prior to entering the business.

We achieve a rapid software development and deployment cycle by leveraging a highly integrated, object-oriented development environment. The software code is modular, with each object providing a specific function and being reusable in multiple applications. New software releases are tracked and tested with proprietary automated testing tools. We are not hindered by disparate and often limiting legacy systems assembled through acquisitions. Virtually all our software has been developed and maintained with a unified purpose.

For over four decades, we have built and continuously refined our automated and integrated, real-time systems for world-wide trading, risk management, clearing and cash management, among others. We have also assembled a proprietary connectivity network between us and exchanges and market centers around the world. Efficiency and speed in performing prescribed functions are always crucial requirements for our systems. As a result, our systems can assimilate market data, disseminate market prices to customers and update risk management information in real time, across tradable products in all available product classes and across multiple geographies.

Risk Management Activities

Our risk management policies are developed and implemented by our Steering Committee, which is chaired by our Chief Executive Officer and comprised of senior executives of our various operating subsidiaries. The core of our risk management philosophy is the utilization of our fully integrated computer systems to perform critical risk-management activities on a real-time basis. Our integrated risk management seeks to ensure that each customer's positions are continuously credit checked and brought into compliance if equity falls short of margin requirements, curtailing bad debt losses.

We calculate margin requirements for each of our customers on a real-time basis across all product classes (stocks, options, futures, forex, bonds, mutual funds, ETFs and other financial instruments) and across all currencies. Recognizing that our customers generally are experienced investors, we expect our customers to manage their positions proactively, and we provide tools to facilitate our customers' position management. However, if a customer's equity falls below what is required to support that customer's margin, we will automatically liquidate positions on a real-time basis to bring the customer's account into margin compliance. We do this to protect ourselves, as well as the customer, from excessive losses. These systems further contribute to our low-cost structure. The entire credit management process is automated.

As a safeguard, all liquidations are displayed on custom built liquidation monitoring screens that are part of the toolset our risk management professionals use to minimize market exposure. In addition, our risk management staff uses these displays to monitor the performance of our risk systems at all times across all open markets around the world. Should our systems absorb erroneous market data from exchanges that prompt liquidations, our risk specialists have the capability to temporarily halt liquidations that meet specific criteria. The liquidation halt function is highly restricted.

Our customer interfaces include color coding on the account screen and pop-up warning messages to notify customers that they are approaching their margin limits. This feature allows customers to take action, such as entering margin reducing trades, to avoid having their positions liquidated under our automated liquidation algorithm. These tools and real-time margining aid our customers in understanding their trading risk at any moment of the day and help us maintain low commissions.

We actively manage our global currency exposure on a continuous basis by maintaining our equity in a basket of currencies we call the GLOBAL. We define the GLOBAL as consisting of fractions of a U.S. dollar, Euro, Japanese yen, British pound, Swiss franc, Chinese renminbi, Indian rupee, Canadian dollar, Australian dollar and Hong Kong dollar. The currencies comprising the GLOBAL and their relative proportions can change over time. Additional information regarding our currency diversification strategy is set forth in ''Quantitative and Qualitative Disclosures about Market Risk'' in Part II, Item 7A of this Annual Report on Form 10-K.

With respect to our remaining market making activities, we employ certain hedging and risk management techniques to protect us from a severe market dislocation. Our automated system evaluates and monitors the risks inherent in our portfolio, assimilates market data and reevaluates the outstanding quotes in our portfolio many times per second. Our model automatically rebalances our positions throughout each trading day to manage risk exposures. Under risk management policies implemented and monitored primarily through our computer systems, reports to management, including risk profiles, profit and loss analysis and trading performance, are prepared on real-time and periodical bases. Although our remaining market making activities are completely automated, the trading process and risk exposures are monitored by a team of individuals who, in real-time, observe various risk parameters of our consolidated positions.

Operational Risk and Controls

We manage the operational risk inherent in our business and limit potential exposure to operational incidents by maintaining robust and comprehensive controls. Our control environment is designed to ensure that services and controls are resilient during periods of operational stress (e.g., extreme market volatility) and business disruptions. These controls are periodically assessed for both design appropriateness and operating effectiveness by our Enterprise Risk Management and Internal Audit functions. In addition, an Independent Service Auditor annually examines our brokerage operations system and the suitability of the design and operating effectiveness of the related controls (System and Organizational Controls 1 Report).

We have automated the full cycle of controls surrounding our businesses. Key automated controls include the following:

- Our technical operations team continuously monitors our network and the proper functioning of each of our nodes (exchanges and market centers, internet service providers (''ISPs''), leased customer lines and our own data centers) around the world.
- Our real-time credit manager software provides pre- and post-execution controls by:
  - testing every customer order to ensure that the customer's account holds enough equity to support the execution of the order, rejecting the order if equity is insufficient or directing the order to an execution destination without delay if equity is sufficient; and
  - continuously updating a customer account's equity and margin requirements and, if the account's equity falls below its minimum margin requirements, automatically issuing liquidating orders in a smart sequence designed to minimize the impact on the account's equity.
- Our clearing system captures trades in real-time and performs automated reconciliation of trades and positions, corporate action processing, customer account transfer, options exercise, securities lending and inventory management, allowing us to effectively manage operational risk.

- Our accounting system operates with automated data feeds from clearing and banking systems, allowing us to produce financial statements for all parts of our business every day by mid-day on the day following trade date.
- Our market making system continuously evaluates securities and futures products in which we provide bid and offer quotes and changes our bids and offers in such a way as to maintain an overall hedge and a low-risk profile. The speed of communicating with exchanges and market centers is maximized through continuous software and network engineering maintenance, thereby allowing us to achieve real-time controls over market exposure.

Transaction Processing

Our transaction processing is automated over the full life cycle of a trade. Our fully automated IB SmartRouting[SM] system searches for the best possible combination of prices available at the time a customer order is placed and immediately seeks to execute that order electronically or send it where the order has the highest possibility of execution at the best price. Our market making software generates and disseminates to the exchanges and market centers, in which we still operate, continuous bid and offer quotes on tradable, exchange-listed products.

When a trade is executed, our systems capture and deliver this information back to the source, either to the customer via the brokerage system or to the market making system, generally within a fraction of a second. Simultaneously, the trade record is written into our clearing system, where it flows through a chain of control accounts that allow us to reconcile trades, positions and money until the final settlement occurs. Our integrated software tracks other important activities, such as dividends, corporate actions, options exercises, securities lending, margining, risk management and funds receipt and disbursement.

IB SmartRouting[SM]

IB SmartRouting[SM] searches for the best destination price in view of the displayed prices, sizes and accumulated statistical information about the behavior of market centers at the time an order is placed, then immediately seeks to execute that order electronically. Unlike other smart routers, IB SmartRouting[SM] never relinquishes control of the order, and constantly searches for the best price. It continuously evaluates fast-changing market conditions and dynamically re-routes all or parts of the order seeking to achieve optimal execution. For example, for U.S. options, IB SmartRouting[SM] can represent each leg of a spread order independently, if needed, and in that event enters each leg at the best possible venue. IB SmartRouting Autorecovery[SM] re-routes a customer's U.S. options order in the case of an exchange malfunction, and we absorb the risk of double executions. In addition, IB SmartRouting[SM] checks each new order to see if it could be executed against any of its pending orders in our automated trading system (''ATS''). As the system continues to gain more users, IB Smart Routing[SM] and the IBKR ATS facilities become more important for customers in a world of multiple exchanges, market centers and penny-priced orders because it increases the possibility of best executions for our customers ahead of customers of other brokers. As a result of this feature, our customers have a greater chance of executing limit orders and can do so sooner than those who use less sophisticated routers.

Clearing and Margining

Our activities in the U.S. are entirely self-cleared. We are a clearing member of OCC (formerly known as the Options Clearing Corporation), The Depository Trust and Clearing Corporation, the Chicago Mercantile Exchange Clearing House, and ICE Clear U.S. In addition, we are fully or partially self-cleared in Canada, the United Kingdom, Switzerland, France, Germany, Belgium, Austria, the Netherlands, Norway, India, Hong Kong, Japan and Australia.

Customers

Our customers primarily fall into two groups based on services provided, both of which take advantage of our low commissions as well as our best price execution. Cleared customers, the large majority of our customers, use our trade execution and clearing services, low financing rates, high interest paid (when available) and, under our IBKR Lite[SM] offering, commission-free trades. Non-cleared customers use our trade execution services while choosing to clear with another prime broker or a custodian bank.

We currently service approximately 2.09 million cleared customer accounts and have customers residing in over 200 countries and territories around the world. Our target customer is one who requires the latest in trading technology and worldwide access, and who expects low overall transaction and financing costs. Our customers are mainly comprised of individuals, trading desk professionals, electronic retail brokers, hedge funds, mutual funds, financial advisors, proprietary trading firms and introducing brokers and banks that require global access. No single customer represented more than 1% of our commissions in 2022.

Human Capital

We aim to consistently attract, develop and retain key employees to achieve our objectives. As of December 31, 2022, we had 2,820 full-time employees worldwide. We offer competitive compensation and comprehensive benefit programs that aim to meet the needs of our employees. In support of our employees and their overall wellbeing, we recently added new benefits for our employees in the U.S. These benefits include a parental leave policy that increases paid leave time for same-sex, opposite-sex and domestic partnership couples; enhanced benefits related to childbearing and adoption; subsidized backup childcare support through a third-party provider; and healthcare travel reimbursement.

Social Initiatives

In response to the residual effects of the pandemic, we piloted new programs to support the well-being of our staff. These programs include a mental health program operated by an external specialist and a new communication and engagement platform with digital communities to support the external activities of interest to our staff. In 2022, we rolled out a global mentorship program and more than 120 mentors joined to provide peer-to-peer career support. We continue to solicit employee feedback on our programs through engagement surveys that help us refine our program initiatives.

Giving back to the communities where we operate is important to us. We continue to partner with Fidelity's Workplace Giving platform to allow our employees to support the local causes and community efforts that are most important to them. We have donated funds globally to support community efforts in alleviating poverty, disaster relief, education and medical research, among other causes.

Employee and Leadership Development

We are committed to the development of our employees by providing them a variety of opportunities to grow and succeed in their careers. Our Learning and Development team offers robust training programs globally. Our online training platform offers over 600 courses available on demand. In 2022, we launched a Leadership Training Series to support the development of our managers' communication and project management skills. Over 120 leaders across the Company have completed the training.

We require that our staff complete mandatory training in a number of areas to ensure that the Company complies with external regulations and internal policies. This training is hosted on our platform, and progress and completion of the training is closely monitored. Topics include a number of regulatory and compliance requirements, such as compliance with Anti-Money Laundering, Anti-Bribery and Corruption, and sanctions laws, as well as cybersecurity and privacy issues and concerns, all of which is in line with our internal policies. Training is administered to all relevant employees globally, reaching more than 98% of our staff. In 2022, our employees received an average of 14 hours of training, an 80% increase over the previous year.

We also provide internship programs for college and high school students to promote their early-stage career development through exposure to our projects and working culture.

Diversity, Equity and Inclusion

We believe that a diverse leadership and workforce enriches our employees' and customers' experience. As a global company, we have a diverse workforce worldwide. We have established several employee resource groups to promote personal growth and professional development for women, minorities and others at the Company. These include our Women's Resource Group, Military Veterans and Families Group, and Pride Network. Our recently launched global mentoring program helps support these efforts. Our Board of Directors includes two minority women.

In 2022, we completed research on colleges and universities with diverse student populations to recruit top technology and software engineering talent to further improve the makeup of our team. We continue to use specialty recruitment platforms and we have enhanced our job postings to attract a diverse workforce.

Environmental and Social

Our Board's ESG Committee provides ongoing leadership governance for ESG strategy and initiatives throughout the Company. Our Head of ESG and Sustainability oversees our sustainability programs and continues to work with our Chief Executive Officer and ESG Board Committee to advance our programs. In 2022, we added two global sustainability committees for thought leadership, advocacy and implementation of our new sustainability initiatives.

Recent Developments

We conducted a materiality assessment to identify key sustainability topics relevant to the Company to develop short- and long-term goals. As a result, we are focusing on three key areas: our environmental footprint; our internal and external people programs; and our corporate governance. In 2022, we drafted our Environmental and Social Policy Statement, Vendor Code of Conduct, and Procurement Policy, with implementation plans set for 2023. The three new policies align with and reinforce our Code of Business Conduct and Ethics. Additionally, in 2022, we updated our communications and improved access to our third-party service provider, EthicsPoint® by Navex, to encourage our employees, customers and vendors to report any potential concerns, including violations of legal requirements or unethical behavior.

We adopted a new procurement system in 2022 to evaluate vendors material to our business. Vendor lifecycle management includes vendor identification, risk assessment, due diligence, selection, onboarding, contracting, performance management, governance, compliance and offboarding of vendors and can track sustainability data and requirements.

Environment

In 2022, we invested in a Greenhouse Gas solution to help us inventory and analyze our Scope 1 and Scope 2 emissions. We continue to implement sustainable practices that help protect the environment. Most of our offices have completed an environmental review to assess current and best practices for energy, water and waste management. We also procured renewable power sources for 23 of our offices and data centers, representing about 46% of our operational footprint. The Company uses third-party providers for data centers. Worldwide, 64% of these data centers use renewable power provided directly through the landlord.

New ESG Tools and Features for our Customers

Over the last two years, we expanded our suite of ESG investing and trading products by creating new tools and adding ESG features to existing ones. New tools and features include the IMPACT App, the Impact Dashboard, ESG Scores, Charitable Giving - IBKR GIVE℠, and Interactive Advisors' Socially Responsible Investing Portfolios. These products and tools allow our customers to view their investments through a financial lens while determining how they align with their specific sustainability values. In addition, these tools provide conscientious investors with comprehensive data for making more informed investment decisions.

Competition

The market for electronic brokerage services is rapidly evolving and highly competitive, and we expect it to remain so. The environment in which we operate has a broad array of competitors ranging from large integrated banks to online brokers to early-stage private companies. Our primary competitors, both in the U.S. and abroad, are other companies that provide electronic brokerage, prime brokerage, and financial advisor and introducing broker products and services. We compete based on numerous factors, including transaction execution, customer experience, products and services, technological excellence and innovation, reputation, global access and price. Since our inception, we have been driven to transforming the electronic brokerage business through automation and innovation, with software development, product improvement, expansion of products and geographies, and management focus dedicated to this mission. We believe these are significant differentiators that set us apart from our competitors.

We experience competition in hiring and retaining qualified employees. The market for qualified personnel in our business is highly competitive and, at various times, the demand in the market for different functions and roles can become especially high, which may oblige us to pay more to attract and retain talent. We also compete on non-monetary forms of compensation, providing what we believe to be a robust set of benefits to our employees.

Regulation

Our securities and derivatives businesses are extensively regulated by U.S. federal and state regulators, foreign regulatory agencies, and numerous exchanges and self-regulatory organizations of which our subsidiaries are members. In the current era of heightened regulation of financial institutions, we expect to incur increasing compliance costs, along with the industry as a whole. Our approach has been to build many of our regulatory and compliance functions into our integrated order routing, custodial, customer onboarding and transaction processing systems, and augment these systems with experienced staff members.

Overview

As registered U.S. broker-dealers, Interactive Brokers LLC (''IB LLC''), IBKR Securities Services LLC (formerly, Timber Hill LLC) (''IBKRSS'') and Interactive Brokers Corp. are subject to the rules and regulations of the Exchange Act, and as members of various exchanges, we are also subject to such exchanges' rules and requirements. Additionally, IB LLC is subject to the Commodity Exchange Act and rules promulgated by the Commodity Futures Trading Commission (''CFTC'') and the various commodity exchanges of which it is a member. We are also subject to the requirements of various self-regulatory organizations such as the Financial Industry Regulatory Authority (''FINRA''), the Chicago Mercantile Exchange (''CME'') and the National Futures Association (''NFA''). Our foreign subsidiaries are similarly regulated under the laws and institutional frameworks of the countries in which they operate.

U.S. broker-dealers and futures commission merchants are subject to laws, rules and regulations that cover all aspects of the securities and derivatives business, including:

- sales methods;
- ''know your customer'' requirements;
- trade practices;
- use and safekeeping of customers' funds and securities;
- capital structure;
- risk management;
- record-keeping;
- financing of customers' purchases; and
- conduct of directors, officers and employees.

In addition, the businesses that we may conduct are limited by our arrangements with and our oversight by regulators. Participation in new business lines, including trading of new products or participation on new exchanges or in new countries often requires governmental and/or exchange approvals, which may take significant time and resources. As a result, we may be prevented from entering new businesses that may be profitable in a timely manner, or at all.

As certain of our subsidiaries are members of FINRA, we are subject to certain regulations regarding changes in control of our ownership. FINRA Rule 1017 generally provides that FINRA approval must be obtained in connection with any transaction resulting in a change in control of a member firm. FINRA defines control as ownership of 25% or more of the firm's equity by a single entity or person and would include a change in control of a parent company. As a result of these regulations, our future efforts to sell shares or raise additional capital may be delayed or prohibited by FINRA.

Net Capital Rule

The SEC, FINRA, CFTC and various other regulatory agencies within the U.S. have stringent rules and regulations with respect to the maintenance of specific levels of net capital by regulated entities. Generally, a

broker-dealer's capital is its net worth plus qualified subordinated debt less deductions for certain types of assets. The Net Capital Rule requires that at least a minimum part of a broker-dealer's assets be maintained in a relatively liquid form.

If these net capital rules are changed or expanded, or if there is an unusually large charge against our net capital, our operations that require the intensive use of capital would be limited. A large operating loss or charge against our net capital could adversely affect our ability to expand or even maintain these current levels of business, which could have a material adverse effect on our business and financial condition.

The U.S. regulators impose rules that require notification when net capital falls below certain predefined criteria. These rules also dictate the ratio of debt-to-equity in the regulatory capital composition of a broker-dealer, and constrain the ability of a broker-dealer to expand its business under certain circumstances. If a firm fails to maintain the required net capital, it may be subject to suspension or revocation of registration by the applicable regulatory agency, and suspension or expulsion by these regulators could ultimately lead to the firm's liquidation. Additionally, the Net Capital Rule and certain FINRA rules impose requirements that may have the effect of prohibiting a broker-dealer from distributing or withdrawing capital and requiring prior notice to U.S. regulators and approval from FINRA for certain capital withdrawals.

Our foreign subsidiaries are similarly regulated with regard to capital requirements in support of their brokerage activities.

As of December 31, 2022, aggregate excess regulatory capital for all of the operating subsidiaries was $8.7 billion.

IB LLC is subject to the Uniform Net Capital Rule (Rule 15c3-1) under the Exchange Act and to the CFTC's minimum financial requirements (Regulation 1.17) under the Commodities Exchange Act. Additionally, Interactive Brokers Canada Inc. (''IBC'') is subject to the Investment Industry Regulatory Organization of Canada (''IIROC'') risk adjusted capital requirement; Interactive Brokers (U.K.) Limited (''IBUK'') is subject to the U.K. Financial Conduct Authority (''FCA'') financial resources requirement; Interactive Brokers Ireland Limited (''IBIE'') is subject to the Central Bank of Ireland (''CBI'') financial resources requirement; IBKR Financial Services AG (''IBKRFS'') is subject to the Swiss Financial Market Supervisory Authority (''FINMA'') eligible equity requirement; Interactive Brokers Central Europe Zrt. (''IBCE'') is subject to the Hungarian National Bank (''MNB'') financial resource requirement; Interactive Brokers (India) Private Limited (''IBI'') is subject to the National Stock Exchange of India net capital requirements; Interactive Brokers Hong Kong Limited (''IBHK'') is subject to the Hong Kong Securities and Futures Commission (''SFC'') financial resource requirement; Interactive Brokers Securities Japan, Inc. (''IBSJ'') is subject to the Japanese Financial Services Agency (''FSA'') capital requirements; Interactive Brokers Singapore Pte. Ltd. (''IBSG'') is subject to the Monetary Authority of Singapore (''MAS'') capital requirements; and Interactive Brokers Australia Pty Limited (''IBA'') is subject to the Australian Securities Exchange (''ASX'') liquid capital requirement.

The table below summarizes capital, capital requirements and excess regulatory capital as of December 31, 2022.

	Net Capital/ Eligible Equity	Requirement	Excess
		(in millions)	
IB LLC	$6,425	$ 661	$5,764
IBKRFS	558	12	546
IBHK	945	200	745
Other regulated operating subsidiaries	1,851	255	1,596
	$9,779	$1,128	$8,651

As of December 31, 2022, all of the operating subsidiaries were in compliance with their respective regulatory capital requirements. For additional information regarding our net capital requirements see Note 16 – ''Regulatory Requirements'' to the audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Protection of Customer Assets

To conduct customer activities, IB LLC is obligated under rules mandated by its primary regulators, the SEC and the CFTC, to segregate cash or qualified securities belonging to customers. In accordance with the Securities Exchange Act of 1934, IB LLC is required to maintain separate bank accounts for the exclusive benefit of customers. In accordance with the Commodity Exchange Act, IB LLC is required to segregate all monies, securities and property received from commodities customers in specially designated accounts. IBC, IBUK, IBIE, IBCE, IBI, IBHK, IBSJ, IBSG and IBA are subject to similar requirements within their respective jurisdictions.

To further enhance the protection of our customers' assets, IB LLC performs daily (i.e., instead of the required weekly) customer reserve computations along with daily adjustments of the money set aside in safekeeping for our customers.

Supervision and Compliance

Our Compliance department supports and seeks to ensure proper operations of our business in accordance with applicable regulatory requirements. The philosophy of the Compliance department, and the Company as a whole, is to build automated systems to try to minimize manual steps in the compliance process and then to augment these systems with experienced staff members who apply their judgment where needed. We have built automated systems to handle wide-ranging compliance issues such as trade and audit trail reporting, financial operations reporting, enforcement of short sale rules, enforcement of margin rules and pattern day trading restrictions, review of employee correspondence, archival of required records, execution quality and order routing reports, approval and documentation of new customer accounts, surveillance of customer trading for market manipulation or abuse or violations of exchange rules, and anti-money laundering and anti-fraud surveillance in line with our anti-money laundering policies. Our automated operations and automated compliance systems provide substantial efficiencies to our Compliance department. As part of this continuing effort, we have implemented a robust case management and surveillance system and increased our Compliance staffing over the past several years to meet the growing regulatory burdens faced by all industry participants.

Our electronic brokerage subsidiaries have Chief Compliance Officers who report to the Chief Executive Officer or business head for their subsidiary, and to the Global Chief Regulatory Officer (or regional Compliance Head). In the U.S., the Chief Compliance Officer and certain other senior staff members are FINRA and NFA registered principals with supervisory responsibility over the compliance aspects of our businesses. Similar roles are undertaken by staff in certain non-U.S. locations as well. Staff members in the Compliance department and in other departments are also registered with FINRA, NFA or other regulatory organizations.

Patriot Act and Increased Anti-Money Laundering ("AML") and "Know Your Customer" Obligations

Registered broker-dealers traditionally have been subject to a variety of rules that require that they ''know their customers'' and monitor their customers' transactions for suspicious activities. Under the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (the ''USA Patriot Act''), broker-dealers are subject to even more stringent requirements. Likewise, the SEC, CFTC, foreign regulators, and the various exchanges and self-regulatory organizations, of which our operating subsidiaries are members, have passed numerous AML and customer due diligence rules. Significant criminal and civil penalties can be imposed for violations of the USA Patriot Act, and significant fines and regulatory penalties can also be imposed for violations of other governmental and self-regulatory organization AML rules.

As required by the USA Patriot Act and other rules, we have established comprehensive AML and customer identification procedures; designated AML Compliance Officers for each electronic brokerage subsidiary; provided formal AML training to our AML, client facing, and other relevant employees; and conducted regular independent audits of our AML programs. Our AML screening is conducted using a mix of automated and manual reviews and has been structured to comply with regulations in various jurisdictions. We collect required information through our new account opening process and screen accounts against databases for the purposes of identity verification and for review of potential negative information and appearance on government sanction lists, including the Office of Foreign Assets and Control, Specially Designated Nationals and Blocked Persons lists and several other global, U.N., EU and other non-U.S. sanction lists. Additionally, we have designed and implemented restrictions to prevent certain types of high-risk activity, including potentially manipulative patterns of trading or higher risk patterns of money movement. We generate and review a sophisticated suite of surveillance reports and queues to identify potential money laundering, market manipulation or abuse, fraud and other suspicious activities.

Dodd-Frank Reform Act

The Dodd-Frank Wall Street Reform and Consumer Protection Act imposes strict reporting and disclosure requirements on the financial services industry. We maintain a robust system for evidence of our supervisory review of controls over financial reporting and management monitors accounting and regulatory rulemaking developments for their potential effect on our financial statements and internal controls over financial reporting.

Business Continuity Planning

Federal regulators and industry self-regulatory organizations have passed a series of rules in the past several years requiring regulated firms to maintain business continuity plans that describe what actions firms would take in the event of a disaster (such as a fire, natural disaster, climate-related event or terrorist incident) that might significantly disrupt operations. We have developed business continuity plans that describe steps that we and our employees would take in the event of various scenarios. We have built backup capabilities for key operations performed at our regional offices in North America, Europe and Asia that would be utilized in the event of a significant outage at our main data center or primary office locations. In addition, we have strengthened our technical infrastructure and have built redundancy of systems so that most operations can be handled from multiple offices or remotely. In light of the COVID-19 pandemic, we have substantially enhanced this infrastructure and our remote access capabilities so that most employees, including all with critical job functions, can work remotely. We continually evaluate opportunities to further our business continuity planning efforts.

Foreign Regulation

Our international subsidiaries are subject to extensive regulation in the various jurisdictions where they have operations. The most significant of our international subsidiaries are: IBC, registered to do business in Canada as an investment dealer; IBUK, registered to do business in the U.K. as a broker; IBIE, registered in Ireland as an investment firm; IBKRFS, registered to do business in Switzerland as a securities dealer; IBCE, registered in Hungary as an investment firm; IBI, registered to do business in India as a stock broker; IBHK, registered to do business in Hong Kong as a securities dealer; IBSJ, registered in Japan as a financial instruments firm; IBSG, registered in Singapore as a capital markets firm; and IBA, registered to do business in Australia as a securities dealer and futures broker. See the ‘‘Net Capital’’ section above in this Item 1, for regulatory requirements related to our foreign subsidiaries.

Executive Officers and Directors of Interactive Brokers Group, Inc.

The table below presents the names, ages and positions of our current directors and executive officers as of December 31, 2022.

Name	Age	Position
Thomas Peterffy	78	Chairman of the Board of Directors
Earl H. Nemser	76	Vice Chairman and Director
Milan Galik	56	Chief Executive Officer, President and Director
Paul J. Brody	62	Chief Financial Officer, Treasurer, Secretary and Director
Thomas A. Frank	67	Executive Vice President and Chief Information Officer
Lawrence E. Harris	66	Director
Gary Katz	62	Director
Philip Uhde	37	Director
William Peterffy	33	Director
Nicole Yuen	60	Director
Jill Bright	60	Director

Thomas Peterffy – Mr. Peterffy, our founder, has been at the forefront of applying computer technology to automate trading and brokerage functions since he emigrated from Hungary to the United States in 1965. In 1977, after purchasing a seat on the American Stock Exchange and trading as an individual marker maker in equity options, Mr. Peterffy was among the first to apply a computerized mathematical model to continuously value equity option prices. By 1986, Mr. Peterffy developed and employed a fully integrated, automated market making system for stocks, options and futures. As this pioneering system extended around the globe, online brokerage functions were added and, in 1993, Interactive Brokers was formed.

Earl H. Nemser – Mr. Nemser has been our Vice Chairman since November 2006. Mr. Nemser has been the Vice Chairman of IBG LLC and its predecessors since 1988 and serves as a director and/or officer for various subsidiaries of IBG LLC. Mr. Nemser serves as an Independent Advisor to the law firm Dechert LLP. Mr. Nemser served as Special Counsel to Dechert LLP from January 2005 to October 2018. Prior to such time, Mr. Nemser served as Partner at the law firms of Swidler Berlin Shereff Friedman, LLP from 1995 to December 2004 and Cadwalader, Wickersham & Taft LLP prior to 1995. Mr. Nemser received a Bachelor of Arts degree in economics from New York University in 1967 and a Juris Doctor, magna cum laude, from Boston University School of Law in 1970.

Milan Galik – Mr. Galik joined us in 1990 as a software developer and has served as the Chief Executive Officer of the Company since October 2019. Mr. Galik has also served as President of the Company and IBG LLC since October 2014. Mr. Galik served as Senior Vice President, Software Development of IBG LLC from October 2003 to October 2014. In addition, Mr. Galik has served as Vice President of IBKR Securities Services LLC since April 1998 and serves as a member of the board of directors of the Boston Options Exchange. Mr. Galik received a Master of Science degree in electrical engineering from the Technical University of Budapest in 1990.

Paul J. Brody – Mr. Brody has been our Chief Financial Officer, Treasurer and Secretary since November 2006. Mr. Brody joined the Company in 1987 and has served as Chief Financial Officer of IBG LLC since December 2003. Mr. Brody serves as a director and/or officer for various of our subsidiaries. From 2005 to 2012, Mr. Brody served as a director, and for a portion of the time as member Vice Chairman, of The Options Clearing Corporation, of which Interactive Brokers LLC and IBKR Securities Services LLC are members. Mr. Brody also served as a director of Quadriserv Inc., an electronic securities lending platform provider, from 2009 to 2015. Mr. Brody received a Bachelor of Arts degree in economics from Cornell University in 1982.

Thomas A. Frank – Dr. Frank joined us in 1985 and has served since July 1999 as Executive Vice President and Chief Information Officer of Interactive Brokers LLC. In addition, Dr. Frank has served as Vice President of IBKR Securities Services LLC since December 1990. Dr. Frank has served as a director of The Options Clearing Corporation, since 2015. Dr. Frank received a Ph.D. in physics from the Massachusetts Institute of Technology in 1985.

Lawrence E. Harris – Dr. Harris has been a director since July 2007 and lead independent director since July 2012. Dr. Harris is a professor of Finance and Business Economics at the University of Southern California, where he holds the Fred V. Keenan Chair in Finance at the Marshall School of Business. Dr. Harris also serves as trustee of the Clipper Fund, director of the Selected Funds, and as the research coordinator of the Institute for Quantitative Research in Finance. Dr. Harris formerly served as Chief Economist of the U.S. Securities and Exchange Commission. Dr. Harris earned his Ph.D. in Economics from the University of Chicago, and is a CFA charterholder. Dr. Harris is an expert in the economics of securities market microstructure and the uses of transactions data in financial research. Dr. Harris has written extensively about trading rules, transaction costs, index markets, and market regulation. Dr. Harris is also the author of the widely respected textbook *Trading and Exchanges: Market Microstructure for Practitioners*.

Gary Katz – Mr. Katz has been a director since January 2017. Mr. Katz was the President and Chief Executive Officer of the International Securities Exchange (“ISE”) from 2008 to 2016 and a co-founder of ISE. Mr. Katz was one of the principal developers of the unique options market structure – an auction market on an electronic platform – used by three options exchanges (ISE, ISE Gemini and ISE Mercury) and was named as inventor or co-inventor on six patents that the ISE received or applied for relating to its proprietary trading system and technology. Mr. Katz served on the Executive Board of Eurex and on the Board of Directors of The Options Clearing Corporation, where he chaired the Board’s newly formed Technology Committee. Mr. Katz also served on the Board of Directors of Direct Edge. Mr. Katz graduated from New York University with a master’s degree in Statistics with Distinction and a bachelor’s degree from Queens College. Mr. Katz is currently Chairman of the board of Farmer’s Pantry LLC, a company in the consumer goods industry and also serves on the board of STRS, LLC, a start-up in the financial industry meeting the unique needs of credit card issuers and merchants. Mr. Katz is also Chairman of Mercaz Academy, a private elementary school located in central Long Island, New York.

Philip Uhde – Mr. Uhde is an investor. From 2012 through 2020 he managed Echinus Partners, an approximately $1.5 billion investment partnership making concentrated, long-term investments in the public markets. Mr. Uhde has led many investments in financial services companies, including Moody's, S&P Global, Fimalac (Fitch), Visa, Mercadolibre, Guidewire and Interactive Brokers. Prior to founding Echinus Partners, Mr. Uhde was a member of the investment team at SPO Partners, an investment partnership founded in 1969. Mr. Uhde received a BA in Economics and East Asian Studies from Yale University in 2008. During the course of his investment in Interactive Brokers, Mr. Uhde has made in-depth studies into various aspects of the Company's business with numerous recommendations to management.

William Peterffy – Mr. William Peterffy is the Chair of the Investment Committee of the Peterffy Foundation where he oversees its investment portfolio. Mr. William Peterffy joined IBG LLC in 2019 to lead its Environmental, Social and Governance (ESG) efforts. Mr. William Peterffy joined the Company's Board of Directors as an observer in 2019. Mr. William Peterffy is also a member of the Board of Trustees of the Collective Heritage Institute (commonly known as Bioneers) and focuses his efforts on sustainability issues. Prior to joining IBG LLC, Mr. William Peterffy worked as an investment analyst within the hedge fund industry. Mr. William Peterffy is the son of our Chairman, Mr. Thomas Peterffy.

Nicole Yuen – Ms. Yuen is a seasoned investment banker with more than 20 years of experience. Ms. Yuen most recently served as Managing Director, Head of Equities – North Asia and Vice Chairman – Greater China for Credit Suisse. During Ms. Yuen's 6-year tenure, she led the build-out of Credit Suisse's brokerage business in mainland China and oversaw the bank's equities business in North Asia. Ms. Yuen is a non-executive director of Aberdeen New Dawn Investment Trust PLC.

Jill Bright – Ms. Bright has over three decades of experience in human resources management and administration. She has served as Chief Administrative Officer for LionTree LLC as well as for Condé Nast, led Human Resources & Administration for Sotheby's and spent over five years in Human Resources at American Express. She is currently a Board Director and Chair of the Compensation Committee for WOW Internet & Cable and also serves on the boards of two private companies, NYC-based Simulmedia and Grand Rapids-based Service Express. Ms. Bright completed her MBA at New York University's Stern School of Business and was appointed to the Quadrennial Advisory Commission, evaluating and making compensation recommendations for elected New York City Officials under Mayor de Blasio.

ITEM 1A. RISK FACTORS

We face a variety of risks that are substantial and inherent in our businesses, including market, liquidity, credit, operational, legal and regulatory. In addition to the risks identified elsewhere in this Annual Report on Form 10-K, the following risk factors apply to our business results of operations and financial condition:

Risks Related to Our Company Structure

Future sales of our common stock in the public market could lower our stock price, and any additional capital raised by us through the sale of equity or convertible securities may dilute your ownership in us.

The members of Holdings have the right to cause the redemption of their Holdings membership interests over time in connection with offerings of shares of our common stock. We intend to sell additional shares of common stock in public offerings in the future, which may include offerings of our common stock to finance future purchases of IBG LLC membership interests which, in turn, will finance corresponding redemptions of Holdings membership interests. These offerings and related transactions are anticipated to occur at least annually into the future. The size and occurrence of these offerings may be affected by market conditions. We may also issue additional shares of common stock or convertible debt securities to finance future acquisitions or business combinations. We currently have approximately 103 million outstanding shares of common stock. Assuming no anti-dilution adjustments based on combinations or divisions of our common stock, the offerings referred to above could result in the issuance by us of up to an additional approximately 317 million shares of common stock. It is possible, however, that such shares could be issued in one or a few large transactions.

We cannot predict the size of future issuances of our common stock or the effect, if any, that future issuances and sales of shares of our common stock may have on the market price of our common stock. Sales of substantial amounts of our common stock (including shares issued in connection with an acquisition), or the perception that such sales could occur, may cause the market price of our common stock to decline.

Control by Mr. Thomas Peterffy of a majority of the combined voting power of our common stock may give rise to conflicts of interests and could discourage a change of control that other stockholders may favor, which could negatively affect our stock price, and adversely affect stockholders in other ways.

Mr. Thomas Peterffy, our founder and Chairman, and his affiliates beneficially own approximately 90.5% of the economic interests and all of the voting interests in Holdings, which owns all of our Class B common stock, representing approximately 75.5% of the combined voting power of all classes of our voting stock. As a result, Mr. Peterffy has the ability to elect all of the members of our board of directors and thereby to control our management and affairs, including determinations with respect to acquisitions, dispositions, material expansions or contractions of our business, entry into new lines of business, borrowings, issuances of common stock or other securities, and the declaration and payment of dividends on our common stock. In addition, Mr. Peterffy is able to determine the outcome of all matters requiring stockholder approval and will be able to cause or prevent a change of control of our company or a change in the composition of our board of directors and could preclude any unsolicited acquisition of our company. The concentration of ownership could discourage potential takeover attempts that other stockholders may favor and could deprive stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company and this may adversely affect the market price of our common stock.

Moreover, because of Mr. Peterffy's substantial ownership, we are eligible to be and are, treated as a ''controlled company'' for purposes of the Nasdaq Marketplace Rules. As a result, we are not required by Nasdaq to have a majority of independent directors or to maintain Compensation and Nominating and Corporate Governance Committees composed entirely of independent directors to continue to list the shares of our common stock on Nasdaq. Our Compensation Committee is comprised of Messrs. Thomas Peterffy (Chairman of the Compensation Committee), Earl H. Nemser (our Vice Chairman) and Milan Galik (our Chief Executive Officer). Mr. Peterffy's membership on the Compensation Committee may give rise to conflicts of interests in that Mr. Peterffy is able to influence all matters relating to executive compensation, including his own compensation.

We are dependent on IBG LLC to distribute cash to us in amounts sufficient to pay our tax liabilities and other expenses.

We are a holding company and our primary assets are our approximately 24.5% equity interest in IBG LLC and our controlling interest and related rights as the sole managing member of IBG LLC and, as such, we operate and control all of the business and affairs of IBG LLC and are able to consolidate IBG LLC's financial results into our financial statements. We have no independent means of generating revenues. IBG LLC is treated as a partnership for U.S. federal income tax purposes and, as such, is not subject to U.S. federal income tax. Instead, its taxable income is allocated on a pro rata basis to Holdings and us. Accordingly, we incur income taxes on our proportionate share of the net taxable income of IBG LLC, and also incur expenses related to our operations. We intend to cause IBG LLC to distribute cash to its members in amounts at least equal to that necessary to cover their tax liabilities, if any, with respect to the earnings of IBG LLC. To the extent we need funds to pay such taxes, or for any other purpose, and IBG LLC is unable to provide such funds, it could have a material adverse effect on our business, financial condition and results of operations.

We are required to pay Holdings for the benefit relating to additional tax depreciation or amortization deductions we claim as a result of the tax basis step-up our subsidiaries received in connection with our initial public offering ("IPO") and certain subsequent redemptions of Holdings membership interests.

In connection with our IPO, we purchased interests in IBG LLC from Holdings for cash. In connection with redemptions of Holdings membership interests, we acquired additional interests in IBG LLC by issuing shares of Class A common stock in exchange for an equivalent number of shares of member interests in IBG LLC (the ''Redemptions''). In addition, IBG LLC membership interests held by Holdings may be sold in the future to us and financed by our issuances of shares of our common stock. The initial purchase and the Redemptions did, and the subsequent purchases may, result in increases in the tax basis of the tangible and intangible assets of IBG LLC and its subsidiaries that otherwise would not have been available. Such increase will be approximately equal to the amount by which our stock price at the time of the purchase exceeds the income tax basis of the assets of IBG LLC underlying the IBG LLC interests acquired by us. These increases in tax basis will result in increased deductions in computing our taxable income and resulting tax savings for us generally over the 15-year period which commenced with the initial purchase and subsequent purchases, respectively. We have agreed to pay 85% of these tax savings, if any, to Holdings as they are realized as additional consideration for the IBG LLC interests that we acquire, with the balance to be retained by us.

As a result of the IPO and the Redemptions by Holdings, the increase in the tax basis attributable to our interest in IBG LLC is $1.9 billion. The tax savings that we would actually realize as a result of this increase in tax basis likely would be significantly less than this amount multiplied by our effective tax rate due to a number of factors, including the allocation of a portion of the increase in tax basis to foreign or non-depreciable fixed assets, the impact of the increase in the tax basis on our ability to use foreign tax credits and the rules relating to the amortization of intangible assets, for example. Based on facts and assumptions as of December 31, 2022, including that subsequent purchases of IBG LLC interests will occur in fully taxable transactions, the potential tax basis increase resulting from the historical and future purchases of the IBG LLC interests held by Holdings could be as much as $11.4 billion. The actual increase in tax basis depends, among other factors, upon the price of shares of our common stock at the time of the purchase and the extent to which such purchases are taxable and, as a result, could differ materially from this amount. Our ability to achieve benefits from any such increase, and the amount of the payments to be made under the Tax Receivable Agreement, depends upon a number of factors, as discussed above, including the timing and amount of our future income.

The tax basis increase of $11.4 billion assumes that (a) all remaining IBG LLC membership interests held by Holdings are purchased by us in one or more taxable transactions and (b) such purchases in the future are made at prices that reflect the closing share price as of December 31, 2022.

If the Internal Revenue Service (“IRS”) successfully challenges the tax basis increase, under certain circumstances, we could be required to make payments to Holdings under the Tax Receivable Agreement in excess of our cash tax savings.

Certain provisions in our amended and restated certificate of incorporation may prevent efforts by our stockholders to change our direction or management.

Provisions contained in our amended and restated certificate of incorporation could make it more difficult for a third-party to acquire us, even if doing so might be beneficial to our stockholders. For example, our amended and restated certificate of incorporation authorizes our board of directors to determine the rights, preferences, privileges and restrictions of unissued series of preferred stock, without any vote or action by our stockholders. We could issue a series of preferred stock that could impede the completion of a merger, tender offer or other takeover attempt. These provisions may discourage potential acquisition proposals and may delay, deter or prevent a change of control of us, including through transactions, and, in particular, unsolicited transactions, that some or all of our stockholders might consider to be desirable. As a result, efforts by our stockholders to change our direction or management may be unsuccessful.

Risks Related to Our Business

Our business may be harmed by global events beyond our control, including overall slowdowns in securities trading.

Like other brokerage and financial services firms, our business and profitability are directly affected by elements that are beyond our control, such as economic and political conditions, broad trends in business and finance, changes in volume of securities and futures transactions, changes in the markets in which such transactions occur and changes in how such transactions are processed. A weakness in securities markets, such as a slowdown causing reduction in trading volume in U.S. or foreign securities and derivatives, has historically resulted in reduced transaction revenues and would have a material adverse effect on our business, financial condition and results of operations.

Our business could be harmed by a systemic market event.

Some market participants could be overleveraged. In case of sudden, large price movements, such market participants may not be able to meet their obligations to brokers who, in turn, may not be able to meet their obligations to their counterparties. As a result, the financial system or a portion thereof could collapse, and the impact of such an event could be catastrophic to our business.

The impact of the COVID-19 pandemic or another public health emergency may have a material adverse impact on our business and results of operations.

In March 2020, the World Health Organization recognized the outbreak of COVID-19 caused by a novel strain of the coronavirus as a pandemic. The pandemic has affected all countries in which we operate. The response of governments and societies to the COVID-19 pandemic, which included temporary closures of certain businesses; social distancing; travel restrictions, ‘‘shelter in place’’ and other governmental regulations; and reduced consumer spending due to job losses, significantly impacted volatility in the financial, commodities and energy markets, and general economic conditions. These measures may have negatively impacted businesses, market participants, our counterparties and customers, and the global economy and could continue to do so for a prolonged period of time.

Our net interest income and profitability could be negatively affected by lower benchmark interest rates caused by central banks lowering target benchmark rates in an attempt to buffer their economies from new COVID-19 outbreaks or another public health emergency.

A substantial portion of our employees were impacted by local COVID-19 restrictions. After such restrictions were lifted, we reopened our offices to all employees and adopted a hybrid work model for our offices globally. As a result, any disruption to our information technology systems, including from cyber incidents, could have a material adverse effect on our business. We have taken measures to maintain the health and safety of our employees, but widespread illness could negatively affect staffing levels within certain functions or locations. In addition, our ability to recruit, hire and onboard employees could be negatively impacted by new COVID-19 restrictions or another public health emergency.

The impact of the COVID-19 pandemic, including from subsequent outbreaks or new variants, or from another public health emergency, on our future financial results could be significant but currently cannot be quantified, as it will depend on numerous evolving factors that cannot be accurately predicted, including, but not limited to, the duration and spread of the pandemic; its impact on our customers, employees and vendors; governmental regulations in response to the pandemic; and the overall impact of the pandemic on the economy and society, among other factors. Any of these events, alone or in combination with others, could exacerbate many of the risk factors discussed or incorporated by reference herein and could have a material adverse effect on our business, financial condition and results of operations.

Our future success will depend on our response to the demand for new services, products and technologies.

The demand for our services that rely on electronic communications gateways, is characterized by:

- rapid technological change;
- changing customer demands;
- the need to enhance existing services and products or introduce new services and products; and
- evolving industry standards.

New services, products and technologies may render our existing services, products and technologies less competitive. Our future success will depend, in part, on our ability to respond to the demand for new services, products and technologies on a timely and cost-effective basis and to adapt to technological advancements and changing standards to address the increasingly sophisticated requirements and varied needs of our customers and prospective customers. We cannot assure you that we will be successful in developing, introducing or marketing new services, products and technologies. In addition, we may experience difficulties that could delay or prevent the successful development, introduction or marketing of these services and products, and our new service and product enhancements may not achieve market acceptance. Any failure on our part to anticipate or respond adequately to technological advancements, customer requirements or changing industry standards, or any significant delays in the development, introduction or availability of new services, products or enhancements could have a material adverse effect on our business, financial condition and results of operations.

Our reliance on our computer software could cause us great financial harm in the event of any disruption or corruption of our computer software. We may experience technology failures while developing our software.

We rely on our computer software to receive and properly process internal and external data. Any disruption in the proper functioning of our software due to, for example, erroneous or corrupted data, or cyber-attacks, may cause us to make erroneous trades or suspend our services and could cause us great financial harm. To maintain our competitive advantage, our software is under continuous development. As we identify and enhance our software, there is risk that software failures may occur and result in service interruptions and have other unintended consequences.

We depend on our proprietary technology, and our future results may be impacted if we cannot maintain technological superiority in our industry.

Our success in the past has largely been attributable to our sophisticated proprietary technology that has taken many years to develop. We have benefited from the fact that the type of proprietary technology equivalent to that which we employ has not been widely available to our competitors. If our technology becomes more widely available to our current or future competitors for any reason, our operating results may be adversely affected. Additionally, adoption or development of similar or more advanced technologies by our competitors may require that we devote substantial resources to the development of more advanced technology to remain competitive. The markets in which we compete are characterized by rapidly changing technology, evolving industry standards and changing trading systems, practices and techniques. Although we have been at the forefront of many of these developments in the past, we may not be able to keep up with these rapid changes in the future, develop new technology, realize a return on amounts invested in developing new technologies or remain competitive in the future.

The loss of our key employees would materially adversely affect our business.

Our key executives have substantial experience and have made significant contributions to our business, and our continued success is dependent upon the retention of our key management executives, as well as the services provided by our staff of trading system, technology and programming specialists and a number of other key managerial, marketing, planning, financial, technical and operations personnel. The loss of such key personnel could have a material adverse effect on our business. Growth in our business is dependent, to a large degree, on our ability to retain and attract such employees.

We may not pay dividends on our common stock at any time in the foreseeable future.

As a holding company for our interest in IBG LLC, we will be dependent upon the ability of IBG LLC to generate earnings and cash flows and distribute them to us so that we may pay any dividends to our stockholders. To the extent (if any) that we have excess cash, any decision to declare and pay dividends in the future will be made at the discretion of our board of directors and will depend on, among other things, our results of operations, financial conditions, cash requirement, contractual restrictions and other factors that our board of directors may deem relevant. Since the second quarter of 2011, we have declared and paid a quarterly cash dividend of $0.10 per share. Although not required, we currently intend to pay quarterly dividends of $0.10 per share to our common stockholders for the foreseeable future.

Our future efforts to sell shares or raise additional capital may be delayed or prohibited by regulations.

As certain of our subsidiaries are members of FINRA, we are subject to certain regulations regarding changes in control of our ownership. FINRA Rule 1017 generally provides that FINRA approval must be obtained in connection with any transaction resulting in a change in control of a member firm. FINRA defines control as ownership of 25% or more of the firm's equity by a single entity or person and would include a change in control of a parent company. IBC, IBUK, IBIE, IBKRFS, IBCE, IBHK, and IBSG are subject to similar change in control regulations promulgated by the IIROC in Canada, the FCA in the United Kingdom, the CBI in Ireland, the CSSF in Luxembourg, the FINMA in Switzerland, the MNB in Hungary, the SFC in Hong Kong, and the MAS in Singapore, respectively. As a result of these regulations, our future efforts to sell shares or raise additional capital may be delayed or prohibited. We may be subject to similar restrictions in other jurisdictions in which we operate.

Regulatory and legal uncertainties could harm our business.

The securities and derivatives businesses are heavily regulated. Firms in financial service industries have been subject to an increasingly regulated environment over recent years, and penalties and fines sought by regulatory authorities have increased accordingly. Our broker-dealer subsidiaries are subject to regulations in the U.S. and abroad covering all aspects of their business. Regulatory bodies include, in the U.S., the SEC, FINRA, the Board of Governors of the Federal Reserve System, the Chicago Board Options Exchange, the CME, the CFTC, and the NFA; in Canada, the IIROC and various Canadian securities commissions; in the United Kingdom, the FCA; in Ireland, the CBI; in Switzerland, the FINMA; in Hungary; the MNB; in India, the Securities and Exchange Board of India; in Hong Kong, the SFC; in Japan, the Financial Supervisory Agency and the Japan Securities Dealers Association; in Singapore, the MAS; and in Australia, the Australian Securities and Investment Commission. Our mode of operation and profitability may be directly affected by additional legislation changes in rules promulgated by various domestic and foreign government agencies and self-regulatory organizations that oversee our businesses, and changes in the interpretation or enforcement of existing laws and rules, including the potential imposition of transaction taxes. Noncompliance with applicable laws or regulations could result in sanctions being levied against us, including fines and censures, suspension or expulsion from a certain jurisdiction or market or the revocation or limitation of licenses. Noncompliance with applicable laws or regulations could adversely affect our reputation, prospects, revenues and earnings. In addition, changes in current laws or regulations or in governmental policies could adversely affect our business, financial condition and results of operations.

We are subject to regulatory oversight and examination by numerous governmental and self-regulatory authorities. As announced on August 10, 2020, we agreed to settle certain matters related to our historical anti-money laundering and Bank Secrecy Act practices and procedures with FINRA, the SEC and the CFTC. As part of the settlements, we agreed to pay penalties of $15 million to FINRA, $11.5 million to the SEC and $11.5 million to the CFTC, plus approximately $700,000 in disgorgement. In addition, we agreed to continue the retention of an independent consultant to review the implementation of our enhanced compliance practices and procedures. We are also cooperating with a United States Department of Justice inquiry concerning these matters, and while its outcome cannot be predicted, we do not believe that the resolution of this inquiry is likely to have a materially adverse effect on our financial results.

Domestic and foreign stock exchanges, other self-regulatory organizations and state and foreign securities commissions can censure, fine, issue cease-and-desist orders, suspend or expel a broker-dealer or any of its officers or employees. Our ability to comply with all applicable laws and rules is largely dependent on our internal systems to ensure compliance, as well as our ability to attract and retain qualified compliance personnel. We could be subject to disciplinary or other actions in the future due to claimed noncompliance, which could have a material adverse effect on our business, financial condition and results of operations. To continue to operate and to expand our services internationally, we may have to comply with the regulatory controls of each country in which we conduct, or intend to conduct business, the requirements of which may not be clearly defined. The varying compliance requirements of these different regulatory jurisdictions, which are often unclear, may limit our ability to continue existing international operations and further expand internationally.

Our direct market access clearing and non-clearing brokerage operations face intense competition.

With respect to our direct market access brokerage business, the market for electronic and interactive bidding, offering and trading services in connection with equities, options and futures is rapidly evolving and intensely competitive. We expect competition to continue and intensify in the future. Our current and potential future competition principally comes from five categories of competitors:

- prime brokers who, in an effort to satisfy the demands of their customers for hands-on electronic trading facilities, universal access to markets, smart routing, better trading tools, and lower commissions and financing rates, have embarked upon building such facilities and product and service enhancements;
- direct market access and online equity brokers, and online options and futures firms;
- zero commission brokers, while technically not offering direct market access, who use simplified interfaces and a limited product offering to attract new market participants;
- software development firms and vendors who create global trading networks and analytical tools and make them available to brokers; and
- traditional brokers.

In addition, we compete with financial institutions, mutual fund sponsors and other organizations, many of which provide online, direct market access or other investing services. A number of brokers provide our technology and execution services to their customers, and these brokers can become our competitors if they develop their own technology. Some of our competitors in this area have greater name recognition, longer operating histories and significantly greater financial, technical, marketing and other resources than we have and offer a wider range of services and financial products than we do. Some of our competitors may also have an ability to charge lower or zero commissions. We cannot assure you that we will be able to compete effectively or efficiently with current or future competitors. These increasing levels of competition in the online trading industry could significantly harm this aspect of our business.

We are subject to potential losses as a result of our clearing and execution activities.

As a clearing member firm providing financing services to certain of our brokerage customers, we are ultimately responsible for their financial performance in connection with various securities and derivatives transactions. Our clearing operations require a commitment of our capital and, despite safeguards implemented by our software, involve risks of losses due to the potential failure of our customers to perform their obligations under these transactions. If our customers default on their obligations, we remain financially liable for such obligations, and although these obligations are collateralized, we are subject to market risk in the liquidation of customer collateral to satisfy those obligations. There can be no assurance that our risk management procedures will be adequate. Any liability arising from clearing operations could have a material adverse effect on our business, financial condition and results of operations.

As a clearing member firm of securities and derivatives clearing houses in the U.S. and abroad, we are also exposed to clearing member credit risk. Securities and derivatives clearing houses require member firms to deposit cash, stock and/or government securities for margin requirements and to clearing funds. If a clearing member defaults in its obligations to the clearing house in an amount larger than its own margin and clearing fund deposits, the shortfall is absorbed pro rata from the deposits of the other clearing members. Many clearing houses of which we are members also have the authority to assess their members for additional funds if the clearing fund is depleted. A large clearing member default could result in a substantial cost to us if we are required to pay such assessments.

We are exposed to risks associated with our international operations.

During 2022, approximately 31% of our net revenues were generated by our operating subsidiaries outside the U.S. We are exposed to risks and uncertainties inherent in doing business in international markets, particularly in the heavily regulated brokerage industry. Such risks and uncertainties include political, economic and financial instability; unexpected changes in regulatory requirements, tariffs and other trade barriers; exchange rate fluctuations; applicable currency controls; and difficulties in staffing, including reliance on newly hired local experts, and managing foreign operations. These risks could cause a material adverse effect on our business, financial condition and results of operations.

We do not have fully redundant systems. System failures could harm our business.

If our systems fail to perform, we could experience unanticipated disruptions in operations, slower response times or decreased customer service and customer satisfaction. Our ability to facilitate transactions successfully and provide high quality customer service also depends on the efficient and uninterrupted operation of our computer and communications hardware and software systems. Our service has experienced periodic system interruptions, which we believe will continue to occur from time to time. Our systems and operations are also potentially vulnerable to damage or interruption from human error, cyber-attacks, natural disasters, power loss, telecommunication failures, break-ins, sabotage, computer viruses, intentional acts of vandalism and similar events. We do not have fully redundant systems, and our formal business continuity plan does not include restoration of all services. Our backup services are currently limited to U.S. and major European markets. We currently have limited separate backup facilities dedicated to our non-U.S. operations. It is our intention to provide for and progressively deploy backup facilities for our global facilities over time. In addition, we do not carry business interruption insurance to compensate for losses that could occur to the extent not required. Any system failure that causes an interruption in our service or decreases the responsiveness of our service could impair our reputation, damage our brand name and materially adversely affect our business, financial condition and results of operations.

Failure of third-party systems on which we rely could adversely affect our business.

We rely on certain third-party computer systems or third-party service providers, including clearing systems, exchange systems, banking systems, cryptocurrency systems, Internet services, third-party identity verification services, co-location facilities, communications facilities and other facilities. Any interruption in these third-party services, or deterioration in their performance, could be disruptive to our business. If our arrangement with any third-party is terminated, we may not be able to find an alternative source of systems support on a timely basis or on commercially reasonable terms. This could have a material adverse effect on our business, financial condition and results of operations.

Internet-related issues may reduce or slow the growth in the use of our services in the future.

Critical issues concerning the commercial use of the Internet, such as ease of access, security, privacy, reliability, cost, and quality of service, remain unresolved and may adversely impact the growth of Internet use. If Internet usage continues to increase rapidly, the Internet infrastructure may not be able to support the demands placed on it by this growth, and its performance and reliability may decline. Although our larger institutional customers use leased data lines to communicate with us, our ability to increase the speed with which we provide services to consumers and to increase the scope and quality of such services is limited by and dependent upon the speed and reliability of our customers' access to the Internet, which is beyond our control. If periods of decreased performance, outages or delays on the Internet occur frequently or other critical issues concerning the Internet are not resolved, overall Internet usage or usage of our web-based products could increase more slowly or decline, which could have a material adverse effect on our business, financial condition and results of operations.

Our computer infrastructure may be vulnerable to security breaches. Any such problems could jeopardize confidential information transmitted over the Internet, cause interruptions in our operations or cause us to have liability to third persons.

Our computer infrastructure is potentially vulnerable to physical or electronic computer break-ins, cyber-attacks, viruses and similar disruptive problems and security breaches. Any such problems or security breaches could cause us to have liability to one or more third parties, including our customers, and disrupt our operations. A party able to circumvent our security measures could misappropriate proprietary information or customer information, jeopardize the confidential nature of information transmitted over the Internet or cause interruptions in our operations. Concerns over the security of Internet transactions and the privacy of users could also inhibit the growth of the Internet or the electronic brokerage industry in general, particularly as a means of conducting commercial transactions. To the extent that our activities involve the storage and transmission of proprietary information such as personal financial information, security breaches could expose us to a risk of financial loss, litigation and other liabilities. Our estimated annual losses from reimbursements to customers whose accounts have been negatively affected by unauthorized access have historically been less than $ 500,000 annually and were significantly reduced since the widespread introduction of our Secure Login System. Our current insurance program may protect us against some, but not all, of such losses. Any of these events, particularly if they (individually or in the aggregate) result in a loss of confidence in our company or electronic brokerage firms in general, could have a material adverse effect on our business, financial condition and results of operations.

We may not be able to protect our intellectual property rights or may be prevented from using intellectual property necessary for our business.

We rely primarily on trade secret, contract, copyright, patent and trademark laws to protect our proprietary technology. It is possible that third parties may copy or otherwise obtain and use our proprietary technology without authorization or otherwise infringe on our rights. We may also face claims of infringement that could interfere with our ability to use technology that is material to our business operations.

In the future, we may have to rely on litigation to enforce our intellectual property rights, protect our trade secrets, determine the validity and scope of the proprietary rights of others or defend against claims of infringement or invalidity. Any such litigation, whether successful or unsuccessful, could result in substantial costs and the diversion of resources and the attention of management, any of which could negatively affect our business.

We are subject to risks relating to litigation and potential securities laws liability.

We are exposed to substantial risks of liability under federal and state securities laws, other federal and state laws and court decisions, as well as rules and regulations promulgated by the SEC, the CFTC, the Federal Reserve, state securities regulators, self-regulatory organizations and foreign regulatory agencies. We are also subject to the risk of litigation and claims that may be without merit. We could incur significant legal expenses in defending ourselves against and resolving lawsuits or claims. An adverse resolution of any future lawsuits or claims against us could result in a negative perception of the Company and have a material adverse effect on our business, financial condition and results of operations. See ''Legal Proceedings and Regulatory Matters'' in Part I, Item 3 of this Annual Report on Form 10-K.

We are subject to counterparty risk whereby defaults by parties with whom we do business can have an adverse effect on our business, financial condition and results of operations.

We are exposed to the risk of loss if a customer, counterparty or issuer fails to perform its obligations under contractual terms. Our counterparty risk is primarily from margin loans extended to customers, securities purchased under agreements to resell (''repos''), securities borrowing and lending arrangements, cash and/or collateral deposited with clearing houses, exchanges, banks, securities firms and other financial counterparties, all of which may result in credit exposure in the event the counterparty defaults on their obligations to us due to bankruptcy, lack of liquidity, operational failure or other reasons.

Our customer margin credit exposure is to a great extent mitigated by our policy of automatically evaluating each account throughout the trading day and closing out positions automatically for accounts that are found to be under-margined. While this methodology is effective in most situations, it may not be effective in situations in which no liquid market exists for the relevant securities or commodities or in which, for any reason, automatic liquidation for certain accounts has been disabled. If no liquid market exists or automatic liquidation has been disabled, we are subject to risks inherent in extending credit, especially during periods of rapidly declining markets. Any loss or expense incurred due to defaults by our customers in failing to repay margin loans or to maintain adequate collateral for these loans would cause harm to our business, financial condition and results of operations.

Repos are collateralized by securities with a market value in excess of the obligation under the contract and are cleared and marked to market through a central clearing counterparty.

Securities lending agreements are collateralized by deposits of cash or securities. We attempt to minimize credit risk associated with these activities by monitoring collateral values daily and requiring additional collateral to be deposited with or returned to us as permitted under contractual provisions. Similarly, over-the-counter transactions, such as contracts for differences (''CFDs''), are marked to market daily and are conducted with counterparties that have undergone a thorough credit review. Any loss or expense incurred due to defaults by our counterparties in failing to fulfill their contractual obligations would cause harm to our business, financial condition and results of operations.

In addition, as a clearing member of several central clearing houses, we participate in the mutualization of risk and could incur financial losses in the event of default by other clearing members. Although we regularly review our credit exposures, default risk may arise from events or circumstances that are difficult to detect or foresee.

Any future acquisitions may result in significant transaction expenses, integration and consolidation risks and risks associated with entering new markets, and we may be unable to profitably operate our consolidated company.

Although our growth strategy has not focused historically on acquisitions, we may in the future engage in evaluations of potential acquisitions and new businesses. We may not have the financial resources necessary to consummate any acquisitions in the future or the ability to obtain the necessary funds on satisfactory terms. Any future acquisitions may result in significant transaction expenses and risks associated with entering new markets in addition to integration and consolidation risks. Because acquisitions historically have not been a core part of our growth strategy, we have little experience in successfully utilizing acquisitions. We may not have sufficient management, financial and other resources to integrate any such future acquisitions or to successfully operate new businesses and we may be unable to profitably operate our expanded company.

Because our revenues and profitability depend on trading volume and interest rate levels, they are prone to significant fluctuations and are difficult to predict.

Our revenues are dependent on the level of trading activity on securities and derivatives exchanges in the U.S. and abroad, and on the general level of interest rates. In the past, our revenues and operating results have varied significantly from period to period primarily due to movements and trends in the underlying markets and to fluctuations in trading and interest rate levels. As a result, period to period comparisons of our revenues and operating results may not be meaningful, and future revenues and profitability may be subject to significant fluctuations or declines.

We may incur material trading losses from our market making activities.

A portion of our revenues and operating profits is derived from our trading as principal in our role as a market maker. We may incur trading losses relating to these activities since each primarily involves the purchase or sale of securities for our own account. In any period, we may incur trading losses in a significant number of securities for a variety of reasons including:

- price changes in securities;
- lack of liquidity in securities in which we have positions; and
- the required performance of our market making obligations.

These risks may limit or restrict our ability to either resell securities we purchased or to repurchase securities we sold. In addition, we may experience difficulty borrowing securities to make delivery to purchasers to whom we sold short, or lenders from whom we have borrowed. From time to time, we may have large position concentrations in securities of a single issuer or issuers engaged in a specific industry or traded in a particular market. Such a concentration could result in higher trading losses than would occur if our positions and activities were less concentrated.

In our role as a market maker, we attempt to derive a profit from the difference between the prices at which we buy and sell, or sell and buy, securities. However, competitive forces often require us to match the quotes other market makers display and to hold varying amounts of securities in inventory. By having to maintain inventory positions, we are subjected to a high degree of risk. We cannot assure you that we will be able to manage such risk successfully or that we will not experience significant losses from such activities, which could have a material adverse effect on our business, financial condition and results of operations.

Reduced spreads in securities pricing, levels of trading activity and trading through market makers could harm our business.

Computer-generated buy/sell programs and other technological advances and regulatory changes in the marketplace may continue to tighten spreads on securities transactions. Tighter spreads and increased competition could make our remaining market making activities less profitable.

We may incur losses in our market making activities in the event of failures of our proprietary pricing model.

Our market making activities are substantially dependent on the accuracy of our proprietary pricing mathematical model, which continuously evaluates and monitors the risks inherent in our portfolio, assimilates market data and reevaluates our outstanding quotes many times per second. Our model is designed to automatically rebalance our positions throughout the trading day to manage risk exposures on our positions in options, futures and the underlying securities. In the event of a flaw in our pricing model and/or a failure in the related software, our pricing model may lead to unexpected and/or unprofitable trades, which may result in material trading losses.

The valuation of the financial instruments we hold may result in large and occasionally anomalous swings in the value of our positions and in our earnings in any period.

The market prices of our long and short positions are reflected on our books at closing prices which are typically the last trade price before the official close of the primary exchange on which each such security trades. If prices of derivatives and their underlying securities close out of alignment, there may be large and occasionally anomalous swings in the value of our positions daily and, accordingly, in our earnings in any period. This is especially true on the last business day of each calendar quarter.

We are exposed to losses due to lack of perfect information.

As market makers, we provide liquidity by buying from sellers and selling to buyers. Quite often, we trade with others who have different information than we do, and as a result, we may accumulate unfavorable positions preceding large price movements in companies. Should the frequency or magnitude of these events increase, our losses will likely increase correspondingly.

Rules governing designated market makers may require us to make unprofitable trades or prevent us from making profitable trades.

Designated market makers are granted certain rights and have certain obligations to ''make a market'' in a particular security. They agree to specific obligations to maintain a fair and orderly market. In acting as a designated market maker, we are subjected to a high degree of risk by having to support an orderly market. In this role, we may at times be required to make trades that adversely affect our profitability. In addition, we may at times be unable to trade for our own account in circumstances in which it may be to our advantage to trade, and we may be obligated to act as a principal when buyers or sellers outnumber each other. In those instances, we may take a position counter to the market, buying or selling securities to support an orderly market. Additionally, the rules of the markets which govern our activities as a designated market maker are subject to change. If these rules are made more stringent, our trading revenues and profits as a designated market maker could be adversely affected.

We rely on a third party to provide our customers the ability to access cryptocurrency trading and custody services.

We have entered into an agreement with a Cryptocurrency Service Provider (''CSP''), which provides (i) a cryptocurrency exchange platform and services whereby investors can buy and sell certain cryptocurrencies from or to other customers of the CSP or liquidity providers and (ii) custody services for certain cryptocurrencies (collectively, the ''Exchange Services''), enabling our customers to trade and custody Bitcoin (BTC), Ethereum (ETH), Litecoin (LTC), Bitcoin Cash (BCH) and potentially other cryptocurrencies, (collectively, ''Cryptocurrency Assets'') via the CSP. We provide only a platform and an interface for our customers to access the Exchange Services provided by the CSP. We have no custody or control over the Cryptocurrency Assets our customers hold in their accounts at the CSP. A disruption in our partnership with the CSP or in the Exchange Services provided by the CSP could have adverse effects on our customers' confidence in our cryptocurrency offering through the CSP and on our business.

A data breach at the CSP may result in irreversible losses, which would adversely affect our customers and our business.

Access to the Cryptocurrency Assets is controllable only by the possessor of the unique private key relating to the digital wallet in which such Cryptocurrency Assets are held. To the extent any of the CSP's private keys are lost, destroyed, unable to be accessed by the CSP, or otherwise compromised and no backup of such private key is accessible, the CSP will be unable to access the Cryptocurrency Assets held in the respective wallets. In addition, neither the CSP nor any cryptocurrency custodian can provide absolute assurance that any or all of the CSP's wallets will not be hacked or compromised such that the private keys are obtained by a third-party or otherwise compromised in a manner such that Cryptocurrency Assets are sent to one or more addresses that the CSP does not control, which could result in the loss of some or all of the Cryptocurrency Assets that the CSP holds in custody on behalf of our customers. The CSP's failure to safeguard the Cryptocurrency Assets may result in losses to our customers which could have adverse effects on our customers' confidence in our cryptocurrency offering through the CSP and on our business.

We may encounter technical issues which would result in disruption or interruption of our customers' access to their CSP accounts.

Both we and the CSP rely on computer software, hardware and telecommunications infrastructure and networking to provide the respective services to our customers with respect to trading and custody of the Cryptocurrency Assets. These computer-based systems and services are inherently vulnerable to disruption, delay, or failure, which may cause our customers to lose access to our trading platform and the Exchange Services provided by the CSP. Any such disruption could have an adverse effect on our customers' confidence in our cryptocurrency offering through the CSP and an adverse effect on our business.

Changes in laws and regulations regarding cryptocurrency may negatively impact our ability to enable our customers to buy, hold and sell cryptocurrencies in the future and may adversely affect our business.

Regulation of the cryptocurrency industry continues to evolve and is subject to change. Securities and commodities laws and regulations and other bodies of laws can apply to certain cryptocurrency assets. These laws and regulations are complex and the interpretations of them may be subject to challenge by the relevant regulators. Future regulatory developments, including the treatment of certain cryptocurrency assets for U.S. federal income tax and foreign tax purposes, could have an adverse effect on our cryptocurrency offering through the CSP and on our business.

A loss event incurred by the CSP may adversely impact our operating results.

In March 2022, the SEC published Staff Accounting Bulletin No. 121 (''SAB 121''), which provides interpretive accounting and disclosure guidance to entities that have obligations to safeguard crypto-assets held for their platform users, whether directly or through an agent or another third party acting on its behalf. SAB 121 requires an entity to recognize a liability to reflect its obligation to safeguard the crypto-assets held for its platform users and a corresponding safeguarding asset on its balance sheet, even when the entity does not control the crypto-assets.

We operate a trading platform that allows our customers to access a digital asset exchange and custody services provided by a third-party CSP to buy, sell and hold crypto-assets in an account in the customer's name at the CSP. We do not provide execution, custody or safeguarding services for the customers' crypto-assets and do not maintain (or have access to) the cryptographic key information and wallets necessary to access the crypto-assets, nor do we have any legal title or claim to those crypto-assets. The CSP is responsible for securing the customers' crypto-assets and protecting them from loss or theft. The agreement the customer signs with IB LLC before the customer is permitted to access the CSP's services through IB LLC's platform provides that:

> [Customer] acknowledges and agrees that [IB LLC] is not responsible for any trading or other losses (including, without limitation, losses due to theft, fraud, cybersecurity breach, loss of control of private keys, or any other loss arising from trading or holding digital assets with [the CSP]) resulting directly or indirectly from or in connection with [Customer's] relationship with [the CSP] and/or [Customer's] trading or holding of digital assets, including activity or holdings in the [CSP] Account.

Even though the Company is not responsible for the custody or safeguarding of crypto-assets, the Company is deemed to be in scope of SAB 121.

Pursuant to SAB 121, we measure the crypto-asset safeguarding liability and the corresponding safeguarding asset at the fair value of the crypto-assets held by the CSP for our customers. Because, under the guidance, the measurement of the safeguarding asset shall take into account any potential loss events, if the CSP were to suffer a loss event that impacted our customers' crypto-assets held by the CSP, then (subject to consultation with the SEC's Office of the Chief Accountant) we may be required to recognize a reduction in the value of the safeguarding asset at the time of the CSP's loss event, without recognizing a corresponding reduction in the value of the safeguarding liability, even though we have no legal obligation to our customers with respect to the crypto-assets held by the CSP. The recognition of such loss event could have a material adverse effect on our results of operations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our headquarters are located in Greenwich, Connecticut. We lease office and data center facilities in 27 cities throughout the world where we conduct our operations as set forth below. We believe our present facilities, together with our current options to extend lease terms, are adequate for our current needs.

The table below presents certain information with respect to our leased facilities as of December 31, 2022.

Location	Space (sq. feet)	Principal Usage
North America		
Greenwich, CT	163,510	Headquarters
Chicago, IL	100,871	Office space and data center
New York, NY	16,940	Office space
Other (9 locations)	39,262	Office space and data center
Europe		
Zug, Switzerland	39,240	Office space and data center
Budapest, Hungary	36,202	Office space
Dublin, Ireland	17,982	Office space
London, United Kingdom	12,969	Office space
Tallinn, Estonia	12,731	Office space
Other (2 locations)	10,610	Office space
Asia - Pacific		
Mumbai, India	81,553	Office space
Hong Kong	26,020	Office space and data center
Other (6 locations)	18,974	Office space

ITEM 3. LEGAL PROCEEDINGS AND REGULATORY MATTERS

The securities and commodities industry is highly regulated and many aspects of our business involve substantial risk of liability. In past years, there has been an increasing incidence of litigation involving the brokerage industry, including class action suits that generally seek substantial damages, including in some cases punitive damages. Compliance and trading problems that are reported to federal, state and provincial regulators, exchanges or other self-regulatory organizations by dissatisfied customers are investigated by such regulatory bodies, and, if pursued by such regulatory body or such customers, may rise to the level of arbitration or disciplinary action. We are also subject to periodic regulatory audits and inspections.

Like other brokerage firms, we have been named as a defendant in lawsuits and from time to time we have been threatened with, or named as a defendant in arbitrations and administrative proceedings. We may in the future become involved in additional litigation or regulatory proceedings in the ordinary course of our business, including litigation or regulatory proceedings that could be material to our business.

For more information regarding pending and threatened legal actions and proceedings see Note 14 - "Commitments, Contingencies, and Guarantees" to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Pending Regulatory Inquiries

Our businesses are heavily regulated by state, federal and foreign regulatory agencies as well as numerous exchanges and self-regulatory organizations. Most of our companies are regulated under some or all of the following: state securities laws, U.S. and foreign securities, commodities and financial services laws and the rules of the more than 150 exchanges, market centers and self-regulatory organizations of which one or more of our companies may be members. In the current era of heightened regulatory scrutiny of financial institutions, we have incurred increased compliance costs, along with the industry as a whole. Increased regulation also creates increased barriers to entry. We have built and continue to build human and automated infrastructure in light of increasing regulatory scrutiny, which provides us with a possible advantage over potential newcomers to the business.

We receive many regulatory inquiries each year in addition to being subject to frequent regulatory examinations. The great majority of these inquiries do not lead to fines or any further action against us. We are generally the subject of regulatory inquiries regarding subjects including, but not limited to: audit trail reporting, trade reporting, best execution and order execution procedures, display of market data, short sales, margin lending, exchange fees charged to customers, anti-money laundering or potentially manipulative trading by customers, procedures for accounts managed by independent financial advisors or referred by third parties, technology development practices, record-keeping, business continuity planning and other topics of recent regulatory interest. The Company has procedures for evaluating whether potential regulatory fines are probable, estimable and material and for updating its contingency reserves and disclosures accordingly. In the current climate, we expect to pay significant and increasing regulatory fines on various topics on an ongoing basis, as other regulated financial services businesses do. The amount of any fines, and when and if they will be incurred, typically is impossible to predict given the nature of the regulatory process.

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

Common Stock Information

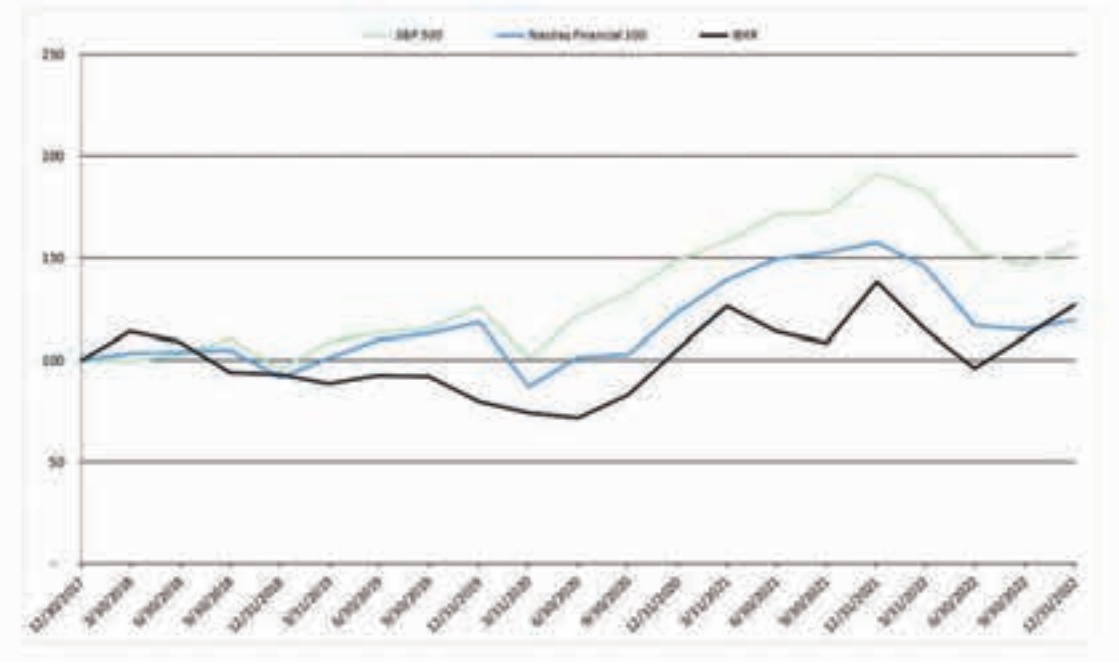
Interactive Brokers Group Inc.'s Class A common stock trades under the symbol "IBKR" on Nasdaq. As of February 16, 2023, there were 26 holders of record, which does not reflect those shares held beneficially or those shares held in "street" name. Accordingly, the number of beneficial owners of our common stock exceeds this number.

Dividends and Other Restrictions

We currently intend to pay quarterly dividends of $0.10 per share to our common stockholders for the foreseeable future.

Stockholder Return Performance Graph

The graph below compares cumulative total stockholder return on our common stock, the S&P 500 Index and the Nasdaq Financial-100 Index from December 31, 2017 to December 31, 2022. The comparison assumes $100 was invested on December 31, 2017 in our common stock and each of the foregoing indices and assumes reinvestment of dividends before consideration of income taxes.



- The Nasdaq Financial-100 Index includes 100 of the largest domestic and international financial securities listed on The Nasdaq Stock Market based on market capitalization. They include companies classified according to the Industry Classification Benchmark as Financials, which are included within the Nasdaq Bank, Nasdaq Insurance, and Nasdaq Other Finance Indexes.
- The S&P 500 Index includes 500 large cap common stocks actively traded in the U.S. The stocks included in the S&P 500 are those of large publicly held companies that trade on either of the two largest American stock markets, the New York Stock Exchange and Nasdaq.

The stock performance depicted in the graph above is not to be relied upon as indicative of future performance. The stock performance graph shall not be deemed to be incorporated by reference into any of our filings under the Securities Act or the Exchange Act, except to the extent that we specifically incorporate the same by reference, nor shall it be deemed to be "soliciting material" or to be "filed" with the SEC or subject to Regulations 14A or 14C or to the liabilities of Section 18 of the Exchange Act.

Use of Proceeds

On July 27, 2020, the Company filed a Prospectus Supplement on Form 424B (File Number 333-240121) with the SEC to re-register up to 990,000 shares of common stock, offering the opportunity for eligible persons to receive awards in the form of an offer to receive such shares by participating in one or more promotions that are designed to attract new customers to the Company's brokerage platform, increase assets held with the Company's brokerage business and enhance customer loyalty. From 2019 through 2022, the Company issued 320,000 shares to IBG LLC for distribution to eligible customers of certain of its subsidiaries.

On August 1, 2022, the Company filed a Prospectus Supplement on Form 424B5 (File Number 333-240121) with the SEC to issue 3,271,390 shares of common stock (with a fair value of $192 million) in exchange for an equivalent number of shares of member interests in IBG LLC.

As a consequence of these redemption transactions, and distribution of shares to employees, IBG, Inc.'s interest in IBG LLC has increased to approximately 24.5%, with Holdings owning the remaining 75.5% as of December 31, 2022. The redemptions also resulted in an increase in the Holdings interest held by Mr. Thomas Peterffy and his affiliates from approximately 84.6% at the IPO to approximately 90.5% as of December 31, 2022. See Note 4 – ''Equity and Earnings per Share'' and Note 10 – ''Employee Incentive Plans'' to the financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Securities Authorized for Issuance under Equity Compensation Plans

The table below presents information about shares of common stock available for future awards under all the Company's equity compensation plans as of December 31, 2022. The Company has not made grants of common stock outside of its equity compensation plans.

	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options warrants and rights	Number of securities remaining available for future awards under equity compensation plans[(1)]
Equity compensation plans approved by security holders	N/A	N/A	1,235,009
Total	—	—	1,235,009

(1) Amount represents restricted stock units available for future issuance of grants under the Company's amended 2007 Stock Incentive Plan. The Company intends to submit for shareholder approval to authorize additional restricted stock units in the future as needed to maintain its equity compensation plans.

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

The following discussion should be read in conjunction with the audited consolidated financial statements and the related notes in Part II, Item 8, of this Annual Report on Form 10-K. In addition to historical information, the following discussion also contains forward-looking statements that include risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those set forth under the heading ''Risk Factors'' in Part I, Item 1A of this Annual Report on Form 10-K.

Business Overview

We are an automated global electronic broker. We custody and service accounts for hedge and mutual funds, ETFs, registered investment advisers, proprietary trading groups, introducing brokers and individual investors. We specialize in routing orders and executing and processing trades in stocks, options, futures, forex, bonds, mutual funds, ETFs and precious metals on more than 150 electronic exchanges and market centers in 33 countries and 26 currencies seamlessly around the world. In addition, our customers can use our trading platform to trade certain cryptocurrencies through a third-party cryptocurrency service provider that executes, clears and custodies the cryptocurrencies.

As an electronic broker, we execute, clear and settle trades globally for both institutional and individual customers. Capitalizing on our proprietary technology, our systems provide our customers with the capability to monitor multiple markets around the world simultaneously and to execute trades electronically in these markets at a low cost, in multiple products and currencies from a single trading account. The ever-growing complexity of multiple market centers across diverse geographies provides us with ongoing opportunities to build and continuously adapt our order routing software to secure excellent execution prices.

Since our inception in 1977, we have focused on developing proprietary software to automate broker-dealer functions. The proliferation of electronic exchanges and market centers since the early 1990s has allowed us to integrate our software with an increasing number of trading venues, creating one automatically functioning, computerized platform that requires minimal human intervention.

Our customer base is diverse with respect to geography and type. Currently, approximately 79% of our customers reside outside the U.S. in over 200 countries and territories, and over 50% of new customers come from outside the U.S. Approximately 59% of our customers' equity is in institutional accounts such as hedge funds, financial advisors, proprietary trading desks and introducing brokers. Specialized products and services that we have developed successfully attract these accounts. For example, we offer prime brokerage services, including financing and securities lending, to hedge funds; our model portfolio technology and automated share allocation and rebalancing tools are particularly attractive to financial advisors; and our trading platform, global access and low pricing attract introducing brokers.

Business Environment

Equities markets around the world were predominantly down in 2022, with major equity market indices in the U.S., Europe and Asia falling by double digits. This declining market backdrop occurred in the face of inflation, rising interest rates worldwide, fears of recession and unpredictable geopolitical uncertainty. Individual investors, who had helped drive equities markets higher in the prior year, were less engaged with them as economic conditions weakened in 2022.

The following is a summary of the key economic drivers that affect our business and how they compared to the prior year:

Global trading volumes. According to industry data, in 2022 average daily volume in U.S. exchange-listed equity-based options increased by 5%, U.S. futures by 19% and U.S. listed cash equities volume by 4%, over the prior year.

Various market cross-currents led to mixed results across our major product types: customer options, futures and foreign exchange volumes were up 3%, 33% and 18%, respectively, while stock volumes declined 58% compared to 2021. Volumes rose in financial futures, particularly foreign exchange and equity index futures, as higher inflation, a stronger U.S. dollar and investors looking to benefit from rising volatility drove this increase during the period. While stock trading volumes remain significantly higher than pre-pandemic levels, in 2022 they were below the unusually high levels of stock trading seen in 2021, a period dominated by trading in ''meme'' stocks and low-priced stocks generally.

Note that while U.S. options, futures and cash equities volumes are readily comparable measures, they reflect most but not all of the global volumes that generate our commission revenue. See ''Trading Volumes and Customer Statistics'' below in this Item 7 for additional details regarding our trade volumes, contract and share volumes, and customer statistics.

Volatility. U.S. market volatility, as measured by the average Chicago Board Options Exchange Volatility Index (''VIX®''), rose 32%, from an average of 19.7 in 2021 to 26.0 in 2022. Volatility increased as numerous cross-currents, from inflationary pressures, changing central interest rate policies, unpredictable world economies and geopolitical uncertainty, impacted markets worldwide.

In general, higher volatility improves our performance because it often correlates positively with customer trading activity across product types. In 2022, higher options and futures volumes in a period of elevated volatility demonstrated the continuing benefit of more participants in the financial markets and their increasing comfort with these exchange-listed derivative products, which can be used to manage risk amid heightened and ongoing geopolitical and interest rate uncertainty.

Interest Rates. In 2022, interest rates rose in a steady series of increases from the zero to 0.25% range that had been targeted for two years prior to March 2022. Over the course of 2022, the U.S. Federal Reserve increased the federal funds rate seven times, ending 2022 with a target range of 4.25% to 4.50%. By year end, the U.S. Treasury yield curve became inverted, with long-term rates markedly lower than short-term rates. In nearly every country, interest rates also rose in 2022 as central banks sought to control inflationary pressures.

Higher U.S. benchmark rates have boosted the interest we earn on our segregated cash, the majority of which is invested in U.S. government securities and related instruments. The environment of uncertainty over future U.S. Federal Reserve rate policy has led us to maintain a short duration investment profile, so that additional rate increases present more opportunities for interest-sensitive assets. Further, our margin balances are tied to benchmark rates, so rising rates have also improved the interest we earn on margin lending to our customers. We continue to offer among the lowest rates in the industry on margin lending, and we believe our low rates are an important feature that attracts customers to our platform.

Increasing rates also increase our interest expense. For example, in U.S. dollars we pay interest to customers when the federal funds effective rate is above 0.50%, which it has been since May 2022. Central banks in many other countries have also increased their interest rates in recent months. We believe the attractive rates we pay on customer cash are another important feature that draws customers to our platform.

Net interest income on customer cash and margin loan balances increased significantly compared to the prior year as the average federal funds effective rate increased to 1.68% in 2022 from 0.08% in 2021. During an extended period prior to 2022, the interest we paid on customer cash balances and earned on customer margin loans and investment of customer segregated funds resulted in spreads that were compressed at low benchmark rates. Benchmark interest rates over 50 basis points eliminate this spread compression and lead to higher net interest income.

Higher interest rates contributed to a 45% rise in net interest income over the prior year. Combined with increases in average interest-earning assets, particularly in segregated cash balances, these higher rates led to a widening of our net interest margin from 1.17% in 2021 to 1.53% in 2022.

Currency fluctuations. As a global electronic broker trading on exchanges around the world in multiple currencies, we are exposed to foreign currency risk. We actively manage this exposure by keeping our equity in proportion to a defined basket of 10 currencies we call the ‘‘GLOBAL’’ to diversify our risk and to align our hedging strategy with the currencies that we use in our business. Because we report our financial results in U.S. dollars, the change in the value of the GLOBAL versus the U.S. dollar affects our earnings. In 2022, the value of the GLOBAL, as measured in U.S. dollars, decreased 1.85% compared to its value at December 31, 2021, which had a negative impact on our comprehensive earnings for the current year. A discussion of our approach for managing foreign currency exposure is contained in Part I, Item 7A of this Quarterly Report on Form 10-Q entitled ‘‘Quantitative and Qualitative Disclosures about Market Risk.’’

Financial Overview

We report non-GAAP financial measures, which exclude certain items that may not be indicative of our core operating results and business outlook and are useful in evaluating the operating performance of our business. See the ‘‘Non-GAAP Financial Measures’’ section below in this Item 7 for additional details.

Diluted earnings per share were $3.75 for the year ended December 31, 2022 (‘‘current year’’), compared to $3.24 for the year ended December 31, 2021 (‘‘prior year’’). Adjusted diluted earnings per share were $4.05 for the current year, compared to $3.37 for the prior year. The calculation of diluted earnings per share is detailed in Note 4 – ‘‘Equity and Earnings Per Share’’ to the audited consolidated financial statements, in Part II, Item 8 of this Annual Report on Form 10-K.

For the current year, our net revenues were $3,067 million and income before income taxes was $1,998 million, compared to net revenues of $2,714 million and income before income taxes of $1,787 million in the prior year. Adjusted net revenues were $3,213 million and adjusted income before income taxes was $2,144 million, compared to adjusted net revenues of $2,780 million and adjusted income before income taxes of $1,853 million in the prior year.

The financial highlights for the current year were:

- Net interest income increased 45% from the prior year to $1,668 million, driven by higher benchmark interest rates and customer credit balances, despite a decline in margin lending balances.
- Commission revenue decreased 2% from the prior year to $1,322 million on lower customer stock trading volumes, partially offset by higher futures and options volumes.
- Other income decreased $105 million from the prior year. This decrease was mainly comprised of (1) $63 million related to our currency diversification strategy and (2) $39 million related to our U.S. government securities portfolio; partially offset by (3) a $16 million gain related to our strategic investment in Up Fintech Holding Limited (‘‘Tiger Brokers’’).
- Pretax profit margin was 65%, down from 66% in the prior year. Adjusted pretax profit margin was 67% for both years.

In connection with our currency diversification strategy as of December 31, 2022, approximately 24% of our equity was denominated in currencies other than the U.S. dollar. In the current year, our currency diversification strategy decreased our comprehensive earnings by $211 million (compared to a decrease of $134 million in the prior year), as the U.S. dollar value of the GLOBAL decreased by approximately 1.85%, compared to its value as of December 31, 2021. The effects of our currency diversification strategy are reported as (1) a component of other income (loss of $100 million) in the consolidated statements of comprehensive income and (2) other comprehensive income (‘‘OCI’’) (loss of $111 million) in the consolidated statements of financial condition and the consolidated statements of comprehensive income. The full effect of the GLOBAL is captured in comprehensive income.

Certain Trends and Uncertainties

We believe that our current operations may be favorably or unfavorably impacted by the following trends that may affect our financial condition and results of operations:

- Retail participation in the equity markets has fluctuated in the past due to investor sentiment, market conditions and a variety of other factors. Retail transaction volumes may not be sustainable and are not predictable.
- Consolidation among market centers may adversely affect the value of our IB SmartRouting[SM] software.
- Price competition among broker-dealers may continue to intensify.
- Benchmark interest rates have fluctuated over the past years due to economic conditions. Changes in interest rates may not be predictable.
- Fiscal and/or monetary policy may change and impact the financial services business and securities markets.
- New legislation or modifications to existing regulations and rules could occur in the future. Scrutiny of payment for order flow and order routing practices by regulatory and legislative authorities has increased.
- The COVID-19 pandemic precipitated unprecedented market conditions with equally unprecedented social and community challenges. The impact of the COVID-19 or another public health emergency going forward will depend on numerous evolving factors that cannot be accurately predicted, including the duration and spread of the pandemic, governmental regulations in response to the pandemic, and the effectiveness of vaccinations and other medical advancements.
- We continue to be exposed to the risks and uncertainties of doing business in international markets, particularly in the heavily regulated brokerage industry. Such risks and uncertainties include political, economic and financial instability, and foreign policy changes. For example, tensions between the U.S. and China have escalated recently, and changes in Chinese governmental oversight of Hong Kong and in the Chinese and Hong Kong capital markets could result in adverse effects on our business and loss of assets we hold in the region. Additionally, although our direct and indirect exposures to Russia and Ukraine are not material, the war in Ukraine and related sanctions have created substantial uncertainty in the global economy and financial markets. We continue to monitor the war and assess any potential impact to our business, including effects relating to currency control restrictions imposed by the Central Bank of Russia and restrictions by the Moscow Stock Exchange regarding the sale of assets by non-Russian residents.
- Our remaining market making activities will continue to be impacted by market structure changes, market conditions, the level of automation of competitors, and the relationship between actual and implied volatility in the equities markets.

See ‘‘Risk Factors’’ in Part I, Item 1A of this Annual Report on Form 10-K for a discussion of other risks that may affect our financial condition and results of operations.

Trading Volumes and Customer Statistics

The tables below present historical trading volumes and customer statistics for our business. Trading volumes are the primary driver in our business. Information on our net interest income can be found elsewhere in this report.

TRADE VOLUMES:
(in thousands, except %)

Period	Cleared Customer Trades	% Change	Non-Cleared Customer Trades	% Change	Principal Trades	% Change	Total Trades	% Change	Avg. Trades per U.S. Trading Day
2018	328,099		21,880		18,663		368,642		1,478
2019	302,289	(8%)	26,346	20%	17,136	(8%)	345,771	(6%)	1,380
2020	620,405	105%	56,834	116%	27,039	58%	704,278	104%	2,795
2021	871,319	40%	78,276	38%	32,621	21%	982,216	39%	3,905
2022	735,619	(16%)	70,049	-11%	32,863	1%	838,531	(15%)	3,347

CONTRACT AND SHARE VOLUMES:
(in thousands, except %)

TOTAL

Period	Options (contracts)	% Change	Futures[(1)] (contracts)	% Change	Stocks (shares)	% Change
2018	408,406		151,762		210,257,186	
2019	390,739	(4%)	128,770	(15%)	176,752,967	(16%)
2020	624,035	60%	167,078	30%	338,513,068	92%
2021	887,849	42%	154,866	(7%)	771,273,709	128%
2022	908,415	2%	207,138	34%	330,035,586	(57%)

ALL CUSTOMERS

Period	Options (contracts)	% Change	Futures[(1)] (contracts)	% Change	Stocks (shares)	% Change
2018	358,852		148,485		198,909,375	
2019	349,287	(3%)	126,363	(15%)	167,826,490	(16%)
2020	584,195	67%	164,555	30%	331,263,604	97%
2021	852,169	46%	152,787	(7%)	766,211,726	131%
2022	873,914	3%	203,933	33%	325,368,714	(58%)

CLEARED CUSTOMERS

Period	Options (contracts)	% Change	Futures[(1)] (contracts)	% Change	Stocks (shares)	% Change
2018	313,795		146,806		194,012,882	
2019	302,068	(4%)	125,225	(15%)	163,030,500	(16%)
2020	518,965	72%	163,101	30%	320,376,365	97%
2021	773,284	49%	151,715	(7%)	752,720,070	135%
2022	781,373	1%	202,145	33%	314,462,672	(58%)

(1) Futures contract volume includes options on futures.

PRINCIPAL TRANSACTIONS

Period	Options (contracts)	% Change	Futures[1] (contracts)	% Change	Stocks (shares)	% Change
2018	49,554		3,277		11,347,811	
2019	41,452	(16%)	2,407	(27%)	8,926,477	(21%)
2020	39,840	(4%)	2,523	5%	7,249,464	(19%)
2021	35,680	(10%)	2,079	(18%)	5,061,983	(30%)
2022	34,501	(3%)	3,205	54%	4,666,872	(8%)

(1) Futures contract volume includes options on futures.

CUSTOMER STATISTICS:

Year over Year	2022	2021	% Change
Total Accounts (in thousands)	2,091	1,676	25%
Customer Equity (in billions)[1]	$306.7	$373.8	(18%)
Cleared DARTs (in thousands)[2]	1,887	2,300	(18%)
Total Customer DARTs (in thousands)[2]	2,124	2,570	(17%)
Cleared Customers			
Commission per Cleared Commissionable Order[3]	$ 2.83	$ 2.37	19%
Cleared Avg. DARTs per Account (Annualized)	206	339	(39%)

(1) Excludes non-customers.

(2) Daily average revenue trades (''DARTs'') are based on customer orders.

(3) Commissionable order – a customer order that generates commissions.

Results of Operations

The table below presents our consolidated results of operations for the periods indicated. The period-to-period comparisons below of financial results are not necessarily indicative of future results.

	Year-Ended December 31,		
	2022	2021	2020
	(in millions, except share and per share amounts)		
Revenues			
Commissions	$ 1,322	$ 1,350	$ 1,112
Other fees and services	184	218	175
Other income (loss)	(107)	(2)	59
Total non-interest income	1,399	1,566	1,346
Interest income	2,686	1,372	1,133
Interest expense	(1,018)	(224)	(261)
Total net interest income	1,668	1,148	872
Total net revenues	3,067	2,714	2,218
Non-interest expenses			
Execution, clearing and distribution fees	324	236	293
Employee compensation and benefits	454	399	325
Occupancy, depreciation and amortization	90	80	69
Communications	33	33	26
General and administrative	165	176	236
Customer bad debt	3	3	13
Total non-interest expenses	1,069	927	962
Income before income taxes	1,998	1,787	1,256
Income tax expense	156	151	77
Net income	1,842	1,636	1,179
Less net income attributable to noncontrolling interests	1,462	1,328	984
Net income available for common stockholders	$ 380	$ 308	$ 195
Earnings per share			
Basic	$ 3.78	$ 3.27	$ 2.44
Diluted	$ 3.75	$ 3.24	$ 2.42
Weighted average common shares outstanding			
Basic	100,460,016	94,167,572	79,939,289
Diluted	101,299,609	95,009,880	80,638,908
Comprehensive income			
Net income available for common stockholders	$ 380	$ 308	$ 195
Other comprehensive income			
Cumulative translation adjustment, before income taxes	(26)	(22)	26
Income taxes related to items of other comprehensive income	—	—	—
Other comprehensive income (loss), net of tax	(26)	(22)	26
Comprehensive income available for common stockholders	$ 354	$ 286	$ 221
Comprehensive income attributable to noncontrolling interests			
Net income attributable to noncontrolling interests	$ 1,462	$ 1,328	$ 984
Other comprehensive income - cumulative translation adjustment	(85)	(75)	98
Comprehensive income attributable to noncontrolling interests	$ 1,377	$ 1,253	$ 1,082

The table below presents our consolidated results of operations as a percent of our total net revenues for the periods indicated.

	Year Ended December 31,		
	2022	2021	2020
Revenues			
Commissions	43%	50%	50%
Other fees and services	6%	8%	8%
Other income (loss)	(3%)	0%	3%
Total non-interest income	46%	58%	61%
Interest income	88%	51%	51%
Interest expense	(33%)	(8%)	(12%)
Total net interest income	54%	42%	39%
Total net revenues	100%	100%	100%
Non-interest expenses			
Execution, clearing and distribution fees	11%	9%	13%
Employee compensation and benefits	15%	15%	15%
Occupancy, depreciation and amortization	3%	3%	3%
Communications	1%	1%	1%
General and administrative	5%	6%	11%
Customer bad debt	0%	0%	1%
Total non-interest expenses	35%	34%	43%
Income before income taxes	65%	66%	57%
Income tax expense	5%	6%	3%
Net income	60%	60%	53%
Less net income attributable to noncontrolling interests	48%	49%	44%
Net income available for common stockholders	12%	11%	9%

Year Ended December 31, 2022 (“current year”) compared to the Year Ended December 31, 2021 (“prior year”)

Net Revenues

Total net revenues, for the current year, increased $353 million, or 13%, compared to the prior year, to $3,067 million. The increase in net revenues was due to higher net interest income, partially offset by lower other income, other fees and services, and commissions.

Commissions

We earn commissions primarily from our cleared customers for whom we act as an executing and clearing broker and also from our non-cleared customers for whom we act as an execution-only broker. Our commission structure allows customers to choose between (1) an all-inclusive fixed, or ‘‘bundled’’, rate; (2) a tiered, or ‘‘unbundled’’, rate that offers lower commissions for high volume customers where we pass through regulatory and exchange fees; and (3) our IBKR Lite[SM] offering, which provides commission-free trades on U.S. exchange-listed stocks and ETFs. Instead of commission revenue, IBKR Lite[SM] trades generate payments from market makers and others to whom we route these orders, which are reported in commissions. Our commissions are geographically diversified. In 2022, 2021, and 2020 we generated 37%, 39% and 29%, respectively, of commissions from operations conducted by our subsidiaries outside the U.S.

Commissions for the current year decreased $28 million, or 2%, compared to the prior year, to $1,322 million, driven by lower customer trading volumes in stocks, partially offset by higher volumes in futures and options. Total customer futures and options contract volumes increased 33% and 3%, respectively, while stock share volume decreased 58% from unusually high trading volume, primarily in ‘‘meme’’ stocks and low-priced stocks generally, in the prior year. Total DARTs for cleared and execution-only customers, for the current year, decreased 17% to 2.1 million, compared to 2.6 million for the prior year. DARTs for cleared customers, i.e., customers for whom we execute trades, as well as clear and carry positions, for the current year, decreased 18% to 1.9 million, compared to 2.3 million for the prior year. Average commission per commissionable order for cleared customers, for the current year, increased 19% to $2.83, compared to $2.37 for the prior year, as our customers' trading volume mix resulted in higher per order commissions in options, stocks and forex.

Other Fees and Services

We earn fee income on services provided to customers, which includes market data fees, risk exposure fees, payments for order flow from exchange-mandated programs, minimum activity fees, and other fees and services charged to customers.

Other fees and services, for the current year decreased $34 million, or 16%, compared to the prior year, to $184 million, driven by a $15 million decrease in minimum activity fees, which were discontinued for most account types effective July 1, 2021, a $15 million decrease in IPO-related fee income, and a $5 million decrease in exposure fees as customers reduced risk; partially offset by a $4 million increase in FDIC sweep fees due to higher benchmark interest rates.

Other Income (Loss)

Other income consists of foreign exchange gains (losses) from our currency diversification strategy, gains (losses) from principal transactions, gains (losses) from our equity method investments, and other revenue not directly attributable to our core business offerings. A discussion of our approach to managing foreign currency exposure is contained in Part II, Item 7A of this Annual Report on Form 10-K entitled ‘‘Quantitative and Qualitative Disclosures about Market Risk.’’

Other income, for the current year, decreased $105 million, compared to the prior year, to a loss of $107 million. This decrease was mainly comprised of $63 million related to our currency diversification strategy, a $39 million mark-to-market loss on our U.S. government securities portfolio in the current year, and $7 million related to trading activities; partially offset by a $16 million smaller loss related to our strategic investment in Up Fintech Holding Limited (‘‘Tiger Brokers’’).

Interest Income and Interest Expense

We earn interest on margin lending to customers secured by marketable securities these customers hold with us; from our investments in U.S. and foreign government securities; from borrowing and lending securities; on deposits (in positive interest rate currencies) with banks; and on certain customers' cash balances in negative rate currencies. We pay interest on customer cash balances (in sufficiently positive interest rate currencies); for borrowing and lending securities; on deposits (in negative interest rate currencies) with banks; and on our borrowings.

Net interest income (interest income less interest expense), for the current year, increased $520 million, or 45%, compared to the prior year, to $1,668 million. The increase in net interest income was driven by higher benchmark interest rates and customer credit balances, despite a decline in margin lending balances.

Net interest income on customer balances, for the current year, increased $503 million, compared to the prior year, driven by an increase in the average federal funds effective rate to 1.68% from 0.08% in the prior year and a $10.9 billion increase in average customer credit balances; despite a $2.3 billion decrease in average margin lending balances. See the ‘‘Business Environment’’ section above in this Item 7 for a further discussion about the change in interest rates in the current year.

We earn income on securities loaned and borrowed to support customer long and short stock holdings in margin accounts. In addition, our Stock Yield Enhancement Program provides an opportunity for customers with fully-paid stock to allow us to lend it out. We pay customers a rebate on the cash collateral generally equal to 50% of the income we earn from lending the shares. We place cash and/or U.S. Treasury securities, as collateral securing the loans in the customer's account, in segregated accounts, or at an affiliate acting as collateral agent for the benefit of our customer.

In the current year, average securities borrowed balances increased 8%, to $4.0 billion, and average securities loaned balances decreased 7%, to $10.1 billion, compared to the prior year. Net interest earned from securities lending is affected by the level of demand for securities positions held by our customers that investors are looking to sell short. During the current year, net interest earned from securities lending transactions decreased $155 million, or 27%, compared to the prior year. Securities lending opportunities maintained a strong pace during the current year, despite fewer opportunities than the prior year. However, the rise in benchmark interest rates rise has shifted the interest reported as generated by lending securities to interest income on segregated cash (see further explanation below). It should be noted that securities lending transactions entered into to support customer activity may produce interest income (expense) that is offset by interest expense (income) related to customer balances.

The Company measures return on interest-earning assets using net interest margin (''NIM''). NIM is computed by dividing the annualized net interest income by the average interest-earning assets for the period. Interest-earning assets consist of cash and securities segregated for regulatory purposes (including U.S. government securities and securities purchased under agreements to resell), customer margin loans, securities borrowed, other interest-earning assets (solely firm assets) and customer cash balances swept into FDIC-insured banks as part of our Insured Bank Deposit Sweep Program. Interest-bearing liabilities consist of customer credit balances, securities loaned, and other interest-bearing liabilities.

Yields are generally a reflection of benchmark interest rates in each currency in which the Company and its customers hold cash balances. Because a meaningful portion of customer cash and margin loans are denominated in currencies other than the U.S. dollar, changes in U.S. benchmark interest rates do not impact the total amount of segregated cash and securities, customer margin loans and customer credit balances. Furthermore, because interest, when benchmark rates are at sufficiently high levels, is paid only on eligible cash credit balances (i.e., balances over $10 thousand or equivalent, in securities accounts with over $100 thousand in equity, and in smaller accounts at reduced rates), changes in benchmark interest rates are not passed through to the total amount of customer credit balances. Finally, the Company's policies with respect to currencies with negative interest rates impact the overall yields on segregated cash and customer credit balances as effective interest rates in those currencies fluctuate.

Securities lending generates (1) net interest earned on lending a security, which is based on supply and demand for that security, and (2) interest earned on the cash collateral deposited for the loan of that security, which is based on benchmark interest rates. Because cash collateral from securities lending is held in specially designated bank accounts for the benefit of customers, in accordance with the U.S. customer protection rules, interest on this collateral is reported as net interest on segregated cash. Generally, as benchmark interest rates rise, an increasing portion of the interest earned on securities lending transactions is classified as net interest income on ''Segregated cash and securities, net'' instead of net interest income on ''Securities borrowed and loaned, net''.

The table below presents net interest income information corresponding to interest-earning assets and interest-bearing liabilities for the periods indicated.

	Year-Ended December 31,		
	2022	2021	2020
		(in millions)	
Average interest-earning assets			
Segregated cash and securities	$ 51,644	$40,328	$41,898
Customer margin loans	43,402	45,681	28,960
Securities borrowed	3,961	3,677	4,235
Other interest-earning assets	9,000	7,029	5,593
FDIC sweeps[1]	2,229	2,663	2,882
	$110,235	$99,376	$83,568
Average interest-bearing liabilities			
Customer credit balances	$ 90,172	$79,297	$67,540
Securities loaned	10,095	10,871	5,702
Other interest-bearing liabilities	4	109	215
	$100,271	$90,277	$73,457
Net Interest income			
Segregated cash and securities, net	$ 742	$ (9)	$ 166
Customer margin loans[2]	1,083	535	380
Securities borrowed and loaned, net	413	568	343
Customer credit balances, net[2]	(763)	33	(46)
Other net interest income[1,3]	207	36	55
Net interest income[3]	$ 1,682	$ 1,163	$ 898
Net interest margin ("NIM")	1.53%	1.17%	1.07%
Annualized Yields			
Segregated cash and securities	1.44%	-0.02%	0.40%
Customer margin loans	2.50%	1.17%	1.31%
Customer credit balances	0.85%	-0.04%	0.07%

(1) Represents the average amount of customer cash swept into FDIC-insured banks as part of our Insured Bank Deposit Sweep Program. This item is not recorded in the Company's consolidated statements of financial condition. Income derived from program deposits is reported in other net interest income in the table above.

(2) Interest income and interest expense on customer margin loans and customer credit balances, respectively, are calculated on daily cash balances within each customer's account on a net basis, which may result in an offset of balances across multiple account segments (e.g., between securities and commodities segments).

(3) Includes income from financial instruments that has the same characteristics as interest, but is reported in other fees and services and other income in the Company's consolidated statements of comprehensive income. For the years ended December 31, 2022, 2021, and 2020, $10 million, $15 million and $21 million were reported in other fees and services, respectively. For the years ended December 31, 2022, 2021, and 2020, $4 million, $0 million and $5 million were reported in other income, respectively.

Non-Interest Expenses

Non-interest expenses, for the current year, increased $142 million, or 15%, compared to the prior year, to $1,069 million, mainly due to an $88 million increase in execution, clearing and distribution fees; a $55 million increase in employee compensation and benefits; and a $10 million increase in occupancy, depreciation and amortization; partially offset by a $11 million decrease in general and administrative expenses. As a percentage of total net revenues, non-interest expenses were 35% for the current year and 34% for the prior year.

Execution, Clearing and Distribution Fees

Execution, clearing and distribution fees include the costs of executing and clearing trades, net of liquidity rebates received from various exchanges and market centers, as well as regulatory fees and market data fees. Execution fees are paid primarily to electronic exchanges and market centers on which we trade. Clearing fees are paid to clearing houses and clearing agents. Market data fees are paid to third parties to receive streaming price quotes and related information.

Execution, clearing and distribution fees, for the current year, increased $88 million, or 37%, compared to the prior year, to $324 million, primarily driven by an $86 million increase in exchange fees on higher customer trading volumes in futures, which carry higher fees, and lower liquidity rebates; and a $12 million increase in regulatory fees due to higher SEC and FINRA fee rates; partially offset by a $6 million decrease in market data fees and a $3 million decrease in clearing and depository fees on lower options fee rates. As a percentage of total net revenues, execution, clearing and distribution fees were 11% for the current year and 9% for the prior year.

Employee Compensation and Benefits

Employee compensation and benefits include salaries, bonuses and other incentive compensation plans, group insurance, contributions to benefit programs and other related employee costs.

Employee compensation and benefits expenses, for the current year, increased $55 million, or 14%, compared to the prior year, to $454 million, associated with a 16% increase in the average number of employees to 2,721 for the current year, compared to 2,336 for the prior year. We continued to add staff worldwide in software development and compliance. As we continue to grow, our focus on automation has allowed us to maintain a relatively small staff. As a percentage of total net revenues, employee compensation and benefits expenses were 15% for both the current year and the prior year. Employee compensation and benefits expenses as a percentage of adjusted net revenues were 14% for both the current year and the prior year.

Occupancy, Depreciation and Amortization

Occupancy expenses consist primarily of rental payments on office and data center leases and related occupancy costs, such as utilities. Depreciation and amortization expenses result from the depreciation of fixed assets, such as computing and communications hardware, as well as amortization of leasehold improvements and capitalized in-house software development.

Occupancy, depreciation and amortization expenses, for the current year, increased $10 million, or 13%, compared to the prior year, to $90 million, mainly due to higher costs related to the expansion of our physical space for both offices and data centers. As a percentage of total net revenues, occupancy, depreciation and amortization expenses were 3% for both the current year and the prior year.

Communications

Communications expenses consist primarily of the cost of voice and data telecommunications lines supporting our business, including connectivity to exchanges and market centers around the world.

Communications expenses, for the current year, were unchanged, at $33 million. As a percentage of total net revenues, communications expenses were 1% for both the current year and the prior year.

General and Administrative

General and administrative expenses consist primarily of advertising; professional services expenses, such as legal and audit work; legal and regulatory matters; and other operating expenses.

General and administrative expenses, for the current year, decreased $11 million, or 6%, compared to the prior year, to $165 million, primarily due to the non-recurrence of $19 million in costs for Brexit-related regulatory onboarding to bring our new brokerage operations on line in Europe incurred in the prior year and a $3 million decrease in legal and consulting expenses; partially offset by a $3 million increase in advertising expenses and a $5 million increase in software and network related expenses. As a percentage of total net revenues, general and administrative expenses were 5% for the current year and 6% for the prior year.

Customer Bad Debt

Customer bad debt expense consists primarily of losses incurred by customers in excess of their assets with us, net of amounts recovered by us. Customer bad debt expense, for the current year, was unchanged at $3 million.

Income Tax Expense

We pay U.S. federal, state and local income taxes on our taxable income, which is proportional to the percentage we own of IBG LLC. Also, our operating subsidiaries are subject to income tax in the respective jurisdictions in which they operate.

Income tax expense, for the current year, increased $5 million, or 3%, compared to the prior year, to $156 million, primarily due to (1) higher income before income taxes at our operating subsidiaries outside the U.S.; (2) higher income before income taxes subject to U.S. income tax at IBG, Inc., additionally increased by IBG, Inc.'s higher average ownership percentage of IBG LLC, which rose from 22.6% to 24.0%; and (3) $6 million higher expense related to the remeasurement of deferred tax assets related to the step-up in basis arising from the acquisition of interests in IBG LLC, due to changes in the Company's effective tax rates; partially offset by (4) the non-recurrence of an $8 million tax settlement in the prior year; and (5) the non-recurrence of $6 million in expenses related to the repositioning of European operations in the aftermath of Brexit in the prior year.

The table below presents information about our income tax expense for the periods indicated.

	Year-Ended December 31,		
	2022	2021	2020
	(in millions, except %)		
Consolidated			
Consolidated income before income taxes	$1,998	$1,787	$1,256
IBG, Inc. stand-alone income before income taxes	2	—	(4)
Operating subsidiaries income before income taxes	$1,996	$1,787	$1,260
Operating subsidiaries			
Income before income taxes	$1,996	$1,787	$1,260
Income tax expense	69	76	38
Net income available to members	$1,927	$1,711	$1,222
IBG, Inc.			
Average ownership percentage in IBG LLC	24.0%	22.6%	19.2%
Net income available to IBG, Inc. from operating subsidiaries	$ 463	$ 383	$ 237
IBG, Inc. stand-alone income before income taxes	4	—	(3)
Income before income taxes	467	383	234
Income tax expense	87	75	39
Net income available to common stockholders	$ 380	$ 308	$ 195
Consolidated income tax expense			
Income tax expense attributable to operating subsidiaries	$ 69	$ 76	$ 38
Income tax expense attributable IBG, Inc.	87	75	39
Consolidated income tax expense	$ 156	$ 151	$ 77

Operating Results

Income before income taxes, for the current year, increased $211 million, or 12%, compared to the prior year, to $1,998 million. Pretax profit margin was 65% for the current year and 66% for the prior year.

Comparing our operating results for the current year to the prior year using non-GAAP financial measures, adjusted net revenues were $3,213 million, up 16%; adjusted income before income taxes was $2,144 million, up 16%; and adjusted pre-tax profit margin was 67% for both the current year and the prior year. See the "Non-GAAP Financial Measures" section below in this Item 7 for additional details.

Noncontrolling Interest

We are the sole managing member of IBG LLC and, as such, operate and control all of the business and affairs of IBG LLC and its subsidiaries and consolidate IBG LLC's financial results into our financial statements. As of December 31, 2022, we held approximately 24.5% ownership interest in IBG LLC. Holdings holds approximately 75.5% ownership interest in IBG LLC. We reflect Holdings' ownership as a noncontrolling interest in our consolidated statements of financial condition, consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows. Our share of IBG LLC's net income, excluding Holdings' noncontrolling interest, for the current year was approximately 24.0%, compared to approximately 22.6% for the prior year.

Year Ended December 31, 2021 compared to the Year Ended December 31, 2020

For a discussion of changes for the year ended December 31, 2021 compared to the Year Ended December 31, 2020 refer to the Annual Report on Form 10-K filed with the SEC on February 25, 2022.

Non-GAAP Financial Measures

We use certain non-GAAP financial measures as additional measures to enhance the understanding of our financial results. These non-GAAP financial measures include adjusted net revenues, adjusted income before income taxes, adjusted net income available for common stockholders, and adjusted diluted earnings per share (''EPS''). We believe that these non-GAAP financial measures are important measures of our financial performance because they exclude certain items that may not be indicative of our core operating results and business outlook. We believe these non-GAAP financial measures are useful to investors and analysts in evaluating the operating performance of the business.

- We define adjusted net revenues as net revenues adjusted to remove the effect of our currency diversification strategy, our net mark-to-market gains (losses) on investments, and the remeasurement of our Tax Receivable Agreement (''TRA'') liability.
- We define adjusted income before income taxes as income before income taxes adjusted to remove the effect of our currency diversification strategy, our net mark-to-market gains (losses) on investments, the remeasurement of our TRA liability, customer compensation expenses, and unusual bad debt expense.
- We define adjusted net income available to common stockholders as net income available for common stockholders adjusted to remove the after-tax effects attributable to IBG, Inc. of our currency diversification strategy, our net mark-to-market gains (losses) on investments, the remeasurement of our TRA liability, customer compensation expenses, unusual bad debt expense, and the remeasurement of certain deferred tax assets.
- We define adjusted diluted EPS as adjusted net income available for common stockholders divided by the diluted weighted average number of shares outstanding for the period.

Mark-to-market on investments represents the net mark-to-market gains (losses) on investments in equity securities that do not qualify for equity method accounting which are measured at fair value, on our U.S. government and municipal securities portfolios, which are typically held to maturity, and on certain other investments, including equity securities taken over by the Company from customers related to unusual losses on margin loans.

Remeasurement of our TRA liability represents the change in the amount payable to IBG Holdings LLC under the TRA, primarily due to changes in the Company's effective tax rates, which is related to the remeasurement of the deferred tax assets described below. For further information refer to Note 4 – Equity and Earnings per Share under Part II, Item 8 – Financial Statements and Supplementary Data of this Annual Report on Form 10-K.

Customer compensation expenses were incurred to compensate certain affected customers in connection with their losses on West Texas Intermediate Crude Oil contracts on April 20, 2020, as described below.

Unusual bad debt expense includes material losses on margin loans resulting from unusual events that occur in the marketplace. For the year-ended December 31, 2020, unusual bad debt expense reflects losses incurred by futures customers in excess of the equity in their accounts related to the West Texas Intermediate Crude Oil event described below.

Remeasurement of certain deferred tax assets represents the change in the unamortized balance of deferred tax assets related to the step-up in basis arising from the acquisition of interests in IBG LLC, primarily due to changes in the Company's effective tax rates. For further information refer to Note 4 – Equity and Earnings per Share under Part II, Item 8 – Financial Statements and Supplementary Data of this Annual Report on Form 10-K.

We also report compensation and benefits expenses as a percent of adjusted net revenues, as we believe this measure is useful to investors and analysts in evaluating the growth of our work force in relation to the growth of our core revenues.

These non-GAAP financial measures should be considered in addition to, rather than as a substitute for, measures of financial performance prepared in accordance with GAAP[1].

West Texas Intermediate Crude Oil Event

On April 20, 2020 the energy markets exhibited extraordinary price activity in the New York Mercantile Exchange (''NYMEX'') West Texas Intermediate Crude Oil futures contract. The price of the May 2020 physically-settled futures contract dropped to an unprecedented negative price. This price was the basis for determining the settlement price for cash-settled futures contracts traded on the CME Globex and also for a separate, expiring cash-settled futures contract listed on the Intercontinental Exchange Europe (''ICE Europe''). Several of the Company's customers held long positions in these CME and ICE Europe contracts, and as a result they incurred losses, including losses in excess of the equity in their accounts. The Company fulfilled the required variation margin settlements with the respective clearinghouses on behalf of its customers. The Company subsequently compensated certain affected customers in connection with their losses resulting from the contracts settling at a price below zero. As a result, the Company recognized an aggregate loss of approximately $104 million in the prior year, of which $103 million is included in general and administrative expenses and $1 million in customer bad debt expense in the consolidated statements of comprehensive income.

The tables below present a reconciliation of consolidated GAAP to non-GAAP financial measures for the periods indicated.

	Year-Ended December 31,		
	2022	2021	2020
		(in millions)	
Adjusted net revenues			
Net revenues - GAAP	$3,067	$2,714	$2,218
Non-GAAP adjustments			
Currency diversification strategy, net	100	37	19
Mark-to-market on investments	52	30	(36)
Remeasurement of TRA liability	(6)	(1)	3
Total non-GAAP adjustments	146	66	(14)
Adjusted net revenues	$3,213	$2,780	$2,204
Adjusted income before income taxes			
Income before income taxes - GAAP	$1,998	$1,787	$1,256
Non-GAAP adjustments			
Currency diversification strategy, net	100	37	19
Mark-to-market on investments	52	30	(36)
Remeasurement of TRA liability	(6)	(1)	3
Customer compensation expense	—	—	103
Bad debt expense	—	—	1
Total non-GAAP adjustments	146	66	90
Adjusted income before income taxes	$2,144	$1,853	$1,346
Adjusted pre-tax profit margin	67%	67%	61%

[1] Refers to generally accepted accounting principles in the United States.

	Year-Ended December 31,		
	2022	2021	2020
	(in millions)		
Adjusted net income available for common stockholders			
Net income available for common stockholders - GAAP	$380	$308	$195
Non-GAAP adjustments			
Currency diversification strategy, net	24	8	4
Mark-to-market on investments	13	7	(7)
Remeasurement of TRA liability	(6)	(1)	3
Customer compensation expense	—	—	20
Bad debt expense	—	—	—
Income tax effect of above adjustments[1]	(7)	(3)	(3)
Remeasurement of deferred income taxes	7	1	(11)
Total non-GAAP adjustments	30	12	6
Adjusted net income available for common stockholders	$410	$320	$201

Note: Amounts may not add due to rounding.

	Year-Ended December 31,		
	2022	2021	2020
	(in dollars, except share amounts)		
Adjusted diluted EPS			
Diluted EPS - GAAP	$ 3.75	$ 3.24	$ 2.42
Non-GAAP adjustments			
Currency diversification strategy, net	0.24	0.09	0.05
Mark-to-market on investments	0.12	0.07	(0.08)
Remeasurement of TRA liability	(0.06)	(0.01)	0.04
Customer compensation expense	—	—	0.24
Bad debt expense	—	—	0.00
Income tax effect of above adjustments[1]	(0.07)	(0.03)	(0.04)
Remeasurement of deferred income taxes	0.07	0.01	(0.14)
Total non-GAAP adjustments	0.30	0.13	0.08
Adjusted diluted EPS	$ 4.05	$ 3.37	$ 2.49
Diluted weighted average common shares outstanding	101,299,609	95,009,880	80,638,908

Note: Amounts may not add due to rounding.

1 The income tax effect is estimated using the statutory income tax rates applicable to the Company.

Liquidity and Capital Resources

We maintain a highly liquid balance sheet. The majority of our assets consist of investments of customer funds, collateralized receivables arising from customer-related and proprietary securities transactions, and exchange-listed marketable securities, which are marked-to-market daily. Collateralized receivables consist primarily of customer margin loans, securities borrowed, and securities purchased under agreements to resell. As of December 31, 2022, total assets were $115.1 billion of which approximately $114.2 billion, or 99.2%, were considered liquid.

Decisions on the allocation of capital are based upon, among other things, prudent risk management guidelines, potential liquidity and cash flow needs for current and future business activities, regulatory capital requirements, and projected profitability. Our Treasury department, Market Risk Committee, Enterprise Risk Management department and other management control groups assist in evaluating, monitoring and controlling the impact that our business activities have on our financial condition, liquidity and capital structure. The objective of these policies is to support our business strategies while ensuring ongoing and sufficient liquidity. Our significant capital comprises an aggregate across our many regulated subsidiaries, and in addition to supporting our current and future expansion plans we believe this financial strength provides our customers with a source of confidence.

Daily monitoring of liquidity needs and available collateral levels is undertaken to help ensure that an appropriate liquidity cushion, in the form of cash and unpledged collateral, is maintained at all times. We actively manage our excess liquidity and maintain significant borrowing capabilities through the securities lending markets and in the form of credit facilities with banks. As a general practice, we maintain sufficient levels of cash on hand to provide us with a buffer should we need immediately available funds for any reason. In addition, pursuant to our liquidity risk management plan we perform periodic liquidity stress tests, which are designed to identify and reserve liquid assets that would be available under market or idiosyncratic stress events. Based on our current level of operations, we believe our cash flows from operations, available cash and available borrowings will be adequate to meet our future liquidity needs for more than the next twelve months.

As of December 31, 2022, liability balances in connection with payables to customers were higher than the average monthly balance during the current year and our securities loaned and short-term borrowings were lower than their respective average monthly balances during the current year.

Cash and cash equivalents held by our non-U.S. operating subsidiaries as of December 31, 2022 were $1,394 million ($1,058 million as of December 31, 2021). These funds are primarily intended to finance each individual operating subsidiary's local operations, and thus would not be available to fund U.S. domestic operations unless repatriated through payment of dividends to IBG LLC. As of December 31, 2022, we had no intention to repatriate any amounts from non-U.S. operating subsidiaries. With the enactment of the U.S. Tax Cuts and Jobs Act on December 22, 2017, we recognized a liability for the one-time transition tax on deemed repatriation of earnings of some of our foreign subsidiaries for the year ended December 31, 2017. As a result, in the event dividends were to be paid to the Company in the future by a non-U.S. operating subsidiaries, the Company would not be required to accrue and pay income taxes on such dividends, except for foreign taxes in the form of dividend withholding tax, if any, imposed on the recipient of the distribution or dividend distribution tax imposed on the payor of the distribution.

Historically, our consolidated equity has consisted primarily of accumulated retained earnings, which to date have been sufficient to fund our operations and growth. Our consolidated equity increased 14% to $11.6 billion as of December 31, 2022, from $10.2 billion as of December 31, 2021. This increase is attributable to total comprehensive income, partially offset by distributions and dividends paid during 2022.

Cash Flows

The table below presents our cash flows from operating activities, investing activities and financing activities for the periods indicated.

	Year-Ended December 31,		
	2022	2021	2020
		(in millions)	
Net cash provided by operating activities	$3,968	$5,896	$8,068
Net cash used in investing activities	(67)	(188)	(50)
Net cash used in financing activities	(470)	(523)	(229)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	(111)	(97)	124
Increase in cash, cash equivalents and restricted cash	$3,320	$5,088	$7,913

Our cash flows from operating activities are largely a reflection of the changes in customer credit and margin loan balances. Our cash flows from investing activities are primarily related to other investments, capitalized internal software development, purchases and sales of memberships, trading rights and shares at exchanges where we trade, and strategic investments where such investments may enable us to offer better execution alternatives to our current and prospective customers, allow us to influence exchanges to provide competing products at better prices using sophisticated technology, or enable us to acquire either technology or customers faster than we could develop them on our own. Our cash flows from financing activities are comprised of short-term borrowings, capital transactions and payments made to Holdings under the Tax Receivable Agreement. Short-term borrowings from banks and through our senior notes program are part of our daily cash management in support of operating activities. Capital transactions consist primarily of quarterly dividends paid to common stockholders and related distributions paid to Holdings.

Year Ended December 31, 2022: Our cash, cash equivalents and restricted cash (i.e., cash and cash equivalents that are subject to withdrawal or usage restrictions) increased by $3,320 million to $28.6 billion for the year ended December 31, 2022. We raised $3,968 million in net cash from operating activities. We used net cash of $537 million in our investing and financing activities, primarily for distributions to noncontrolling interests, short-term borrowings, dividends paid to our common stockholders and payments made under the Tax Receivable Agreement. Investing activities mainly consisted of purchases of other investments and property, equipment and intangible assets.

Year Ended December 31, 2021:

For a discussion of changes in cash flows for the year ended December 31, 2021 refer to our Annual Report on Form 10-K filed with the SEC on February 25, 2022.

Year Ended December 31, 2020:

For a discussion of changes in cash flows for the year ended December 31, 2020 refer to our Annual Report on Form 10-K filed with the SEC on February 26, 2021.

Senior Notes

In 2020, IBG LLC initiated a program to offer senior notes in private placements to certain qualified customers of IB LLC. IBG LLC intends to use the proceeds for general financing purposes when interest spread opportunities arise. The senior notes are offered at an issue price of $1 thousand per note at an interest rate calculated by adding the benchmark rate to a rate (spread) that IBG LLC announces from time to time. The benchmark rate is the effective federal funds rate as reported by the Federal Reserve Bank of New York on the morning of the date of the offering. The senior notes mature no later than the thirtieth day following the issuance date, and IBG LLC, at its option, may redeem the senior notes at any time, at a redemption price equal to 100% of the principal amount of the senior notes to be redeemed, plus accrued and unpaid interest. During the year ended December 31, 2022, the Company did not issue any senior notes.

Regulatory Capital Requirements

As of December 31, 2022, all operating subsidiaries were in compliance with their respective regulatory capital requirements. For additional information regarding our regulatory capital requirements see Note 16 – "Regulatory Requirements" to the audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Capital Expenditures

Our capital expenditures are comprised of compensation costs of our software engineering staff for development of software for internal use and expenditures for computer, networking and communications hardware, and leasehold improvements. These expenditure items are reported as property, equipment, and intangible assets. Capital expenditures for property, equipment, and intangible assets were approximately $69 million, $77 million and $50 million for the three years ended December 31, 2022, 2021, and 2020, respectively. In the future, we plan to meet capital expenditure needs with cash from operations and cash on hand, as we continue our focus on technology infrastructure initiatives to further enhance our competitive position. In response to changing economic conditions, we believe we have the flexibility to modify our capital expenditures by adjusting them (either upward or downward) to match our actual performance. If we pursue any additional strategic acquisitions, we may incur additional capital expenditures.

Contractual Obligations Summary

Our contractual obligations principally include obligations associated with our outstanding indebtedness and interest payments as of December 31, 2022.

	Payments Due by Year			
	Total	2023-2024	2025-2026	Thereafter
			(in millions)	
Payable to Holdings under Tax Receivable Agreement[1]	$214	$ 50	$26	$138
Operating leases	159	56	40	63
Transition Tax liability[2]	44	26	18	—
Total contractual cash obligations	$417	$132	$84	$201

(1) As of December 31, 2022, contractual amounts owed under the Tax Receivable Agreement of $214 million have been recorded in payable to affiliate in the consolidated financial statements, representing management's best estimate of the amounts currently expected to be owed under the Tax Receivable Agreement. Through December 31, 2022, approximately $243 million of cumulative cash payments have been made.

(2) The Tax Act implemented a modified territorial tax system that includes a one-time transition tax on deemed repatriated earnings of foreign subsidiaries to be paid over an eight-year period starting in 2018. We believe this tax will not have a material impact on our liquidity.

Seasonality

Our businesses are subject to seasonal fluctuations, reflecting varying numbers of market participants at times during the year, varying numbers of trading days from quarter-to-quarter, and declines in trading activity due to holidays. Typical seasonal trends may be superseded by market or world events, which can have a significant impact on prices and trading volume.

Inflation

Although we cannot accurately anticipate the effects of inflation on our operations, we believe that, for the three most recent years, inflation has not had a material impact on our results of operations, though it may be a contributing factor to general uncertainty in the markets in the foreseeable future. Statements about future inflation are subject to the risk that actual inflation and its effects may differ, possibly materially, due to, among other things, changes in economic growth, impact of supply chain disruptions, unemployment and consumer demand.

Investments in U.S. Government Securities

We invest in U.S. government securities to satisfy U.S. regulatory requirements. As a broker-dealer, unlike banks, we are required to mark these investments to market even though we intend to hold them to maturity. Sudden increases (decreases) in interest rates will cause mark-to-market losses (gains) on these securities, which are recovered (eliminated) if we hold them to maturity, as currently intended. The impact of changes in interest rates is further described in Part II, Item 7A of this Annual Report on Form 10-K entitled ''Quantitative and Qualitative Disclosures about Market Risk.''

Strategic Investments and Acquisitions

We regularly evaluate potential strategic investments and acquisitions. We hold strategic investments in certain electronic trading exchanges, including BOX Options Exchange, LLC. We also hold strategic investments in certain businesses, including Tiger Brokers, an online stock brokerage established for Chinese retail and institutional customers, in which we have a beneficial ownership interest of 7.6%.

We intend to continue making acquisitions on an opportunistic basis, generally only when the acquisition candidate will, in our opinion, enable us to offer better execution alternatives to our current and prospective customers, allow us to influence exchanges to provide competing products at better prices using sophisticated technology, or enable us to acquire either technology or customers faster than we could develop them on our own.

As of December 31, 2022, there were no other definitive agreements with respect to any material acquisition.

Certain Information Concerning Off-Balance-Sheet Arrangements

We may be exposed to a risk of loss not reflected in our consolidated financial statements for futures products, which represent our obligations to settle at contracted prices, and which may require us to repurchase or sell in the market at prevailing prices. Accordingly, these transactions result in off-balance sheet risk, as our cost to liquidate such futures contracts may exceed the amounts reported in our consolidated statements of financial condition.

Critical Accounting Policies and Estimates

Our consolidated financial statements have been prepared in accordance with U.S. GAAP, which requires management to make estimates and assumptions that affect the reported amounts and disclosures in the consolidated financial statements and accompanying notes. These estimates and assumptions are based on judgment and the best available information at the time. Therefore, actual results could differ materially from those estimates. We believe that the critical policies listed below represent the most significant estimates used in the preparation of our consolidated financial statements. See Note 2 – "Significant Accounting Policies" to the audited consolidated financial statements for a summary of our significant accounting policies in Part II, Item 8 of this Annual Report on Form 10-K.

Contingencies

Our policy is to estimate and accrue for potential losses that may arise out of litigation and regulatory proceedings, to the extent that such losses are probable and can be estimated. Significant judgment is required in making these estimates and our final liabilities may ultimately be materially different. Our total liability accrued with respect to litigation and regulatory proceedings is determined on a case by case basis and represents an estimate of probable losses based on, among other factors, the progress of each case, our experience with and industry experience with similar cases and the opinions and views of internal and external legal counsel.

Given the inherent difficulty of predicting the outcome of litigation and regulatory matters, particularly in cases or proceedings in which substantial or indeterminate damages or fines are sought, or where cases or proceedings are in the early stages, we cannot estimate losses or ranges of losses for cases or proceedings where there is only a reasonable possibility that a loss may be incurred.

Income Taxes

Our income tax expense, deferred tax assets and liabilities, and reserves for unrecognized tax benefits are based on enacted tax laws and reflect management's best assessment of estimated future taxes to be paid. We are subject to income taxes in both the U.S. and numerous foreign jurisdictions. Determining income tax expense requires significant judgment and estimates.

Deferred income tax assets and liabilities arise from temporary differences between the tax and financial statement recognition of the underlying assets and liabilities. In evaluating our ability to recover our deferred tax assets within the jurisdictions from which they arise, we consider all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax-planning strategies, and results of recent operations.

In projecting future taxable income, historical results are adjusted for changes in accounting policies and incorporate assumptions including the amount of future state, federal and foreign pre-tax operating income, the reversal of temporary differences, and the implementation of feasible and prudent tax-planning strategies. These assumptions require significant judgment about the forecasts of future taxable income and are consistent with the plans and estimates we are using to manage the underlying businesses. In evaluating the objective evidence that historical results provide, three years of cumulative operating income (loss) are considered. Deferred income taxes have not been provided for U.S. tax liabilities or for additional foreign taxes on the unremitted earnings of foreign subsidiaries that have been indefinitely reinvested.

The calculation of our tax liabilities involves dealing with uncertainties in the application of complex tax laws and regulations in a multitude of jurisdictions across our global operations. Changes in tax laws and rates could also affect recorded deferred tax assets and liabilities in the future. We record tax liabilities in accordance with Financial Accounting Standards Board (''FASB'') ASC Topic 740 and adjust these liabilities when management's judgment changes as a result of the evaluation of new information not previously available. Because of the complexity of some of these uncertainties, the ultimate resolution may result in payments that are different from the current estimates of these tax liabilities. These differences will be reflected as increases or decreases to income tax expense in the period in which new information becomes available.

We recognize that a tax benefit from an uncertain tax position may be recognized only when it is more likely than not that the position will be sustained upon examination, including resolutions of any related appeals or litigation processes, based on the technical merits. A tax position that meets this standard is measured at the largest amount of benefit that will more likely than not be realized on settlement.

Accounting Pronouncements Issued but Not Yet Adopted

For additional information regarding FASB Accounting Standards Updates (''ASU''s) that have been issued but not yet adopted and that may impact the Company, refer to Note 2 – ''Significant Accounting Policies'' to the audited consolidated financial statements in Part II, Item 8 of this annual Report on form 10-K.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to various market risks. Our exposures to market risks arise from assumptions built into our pricing models, equity price risk, foreign currency exchange rate fluctuations related to our international operations, changes in interest rates and risks relating to the extension of margin credit to our customers.

Market risk refers to the risk that a change in the level of one or more market prices, rates, indices, implied volatilities (the price volatility of the underlying instrument imputed from option prices), correlations or other market factors, such as market liquidity, will result in losses for a position or portfolio. Generally, we incur trading-related market risk as a result of our remaining market making activities, where the substantial majority of our Value-at-Risk (''VaR'') for market risk exposures is generated. In addition, we incur non-trading-related market risk primarily from investment activities and from foreign currency exposure held in the equity of our foreign subsidiaries, i.e., our non-U.S. brokerage subsidiaries and information technology subsidiaries, and held to meet target balances in our currency diversification strategy.

We use various risk management tools in managing our market risk, which are embedded in our real-time market making systems. We employ certain hedging and risk management techniques to protect us from a severe market dislocation. Our risk management policies are developed and implemented by our Steering Committee, which is chaired by our Chief Executive Officer and comprised of senior executives of our various operating subsidiaries. The strategy of our remaining market making activities is to calculate quotes a few seconds ahead of the market and execute small trades at a tiny but favorable differential as a result. This strategy is made possible by our proprietary pricing model, which evaluates and monitors the risks inherent in our portfolio, assimilates external market data and reevaluates the outstanding quotes in our portfolio many times per second. Our model automatically rebalances our positions throughout each trading day to manage risk exposures on our options and futures positions and the underlying securities and will price the increased risk that a position would add to the overall portfolio into the bid and offer prices we post. Under risk management policies implemented and monitored primarily through our computer systems, reports to management, including risk profiles, profit and loss analysis and trading performance, are prepared on a real-time basis as well as daily and periodical bases. Although our remaining market making activities are completely automated, the trading process and our risk are monitored by a team of individuals who, in real-time, observe various risk parameters of our consolidated positions. Our assets and liabilities are marked-to-market daily for financial reporting purposes and re-valued continuously throughout the trading day for risk management and asset/liability management purposes.

We use a covariant VaR methodology to measure, monitor and review the market risk of our market making portfolios, with the exception of fixed income products, and our currency exposures. The risk of fixed income products, which comprise primarily U.S. government securities, is measured using a stress test.

Pricing Model Exposure

As described above, our proprietary pricing model, which continuously evaluates and monitors the risks inherent in our portfolio, assimilates external market data and reevaluates the outstanding quotes in our entire portfolio many times per second. Certain aspects of the model rely on historical prices of securities. If the behavior of price movements of individual securities diverges substantially from what their historical behavior would predict, we might incur trading losses. We attempt to limit such risks by diversifying our portfolio across many different options, futures and underlying securities and avoiding concentrations of positions based on the same underlying security. Historically, our losses from these events have been immaterial in comparison to our annual trading profits.

Foreign Currency Exposure

As a result of our international activities and accumulated earnings in our foreign subsidiaries, our income and equity are exposed to fluctuations in foreign exchange rates. For example, some of our European and Asian operations are conducted by our Swiss subsidiary, IBKRFS. IBKRFS is regulated by the Swiss Financial Market Supervisory Authority as a securities dealer and its financial statements are presented in Swiss francs. Accordingly, IBKRFS is exposed to certain foreign exchange risks as described below:

- IBKRFS buys and sells securities denominated in various currencies and carries bank balances and borrows and lends such currencies in its regular course of business. At the end of each accounting period, IBKRFS' assets and liabilities are revalued into Swiss francs for presentation in its financial statements. The resulting foreign currency gains or losses are reported in IBKRFS' income statement and, as translated into U.S. dollars for U.S. GAAP purposes, in our consolidated statements of comprehensive income as a component of other income.
- IBKRFS' financial statements are presented in Swiss francs (i.e., its functional currency) as noted above. At the end of each accounting period, IBKRFS' equity is translated at the then prevailing exchange rate into U.S. dollars and the resulting translation gain or loss is reported as OCI in our consolidated statements of financial condition and consolidated statements of comprehensive income. OCI is also produced by our other non-U.S. subsidiaries.

Historically, we have taken the approach of not hedging the above exposures, based on the notion that the cost of constantly hedging over the years would amount to more than the random impact of rate changes on our non-U.S. dollar balances. For instance, an increase in the value of the Swiss franc would be unfavorable to the earnings of IBKRFS but would be counterbalanced to some extent by the fact that the translation gain or loss into U.S. dollars is likely to move in the opposite direction.

Our risk management systems incorporate cash forex to hedge our currency exposure at little or no cost. Currency spot positions entered into as part of our currency diversification strategy are held by the parent holding company, IBG LLC. In connection with the development of our currency diversification strategy, we determined to base our equity in GLOBALs, a basket of currencies.

Because we conduct business in many countries and many currencies and because we consider ourselves a global enterprise based in a diversified basket of currencies rather than a U.S. dollar based company, we actively manage our global currency exposure by maintaining our equity in GLOBALs. The U.S. dollar value of the GLOBAL decreased 1.85% as of December 31, 2022 compared to December 31, 2021. As of December 31, 2022, approximately 24% of our equity was denominated in currencies other than the U.S. dollar.

The table below presents a comparison of the U.S. dollar equivalent of the GLOBAL for the periods indicated.

		As of 12/31/2021				As of 12/31/2022				
Currency	**Composition**	**FX Rate**	**GLOBAL in USD Equiv.**	**% of Comp.**	**Net Equity (in USD millions)**	**FX Rate**	**GLOBAL in USD Equiv.**	**% of Comp.**	**Net Equity (in USD millions)**	**CHANGE in % of Comp.**
USD	**0.72**	1.0000	0.720	74.4%	$ 7,605	1.0000	0.720	75.8%	$ 8,803	1.4%
EUR	**0.09**	1.1372	0.102	10.6%	1,081	1.0704	0.096	10.1%	1,178	-0.4%
JPY	**3.91**	0.0087	0.034	3.5%	359	0.0076	0.030	3.1%	365	-0.4%
GBP	**0.02**	1.3527	0.027	2.8%	286	1.2099	0.024	2.5%	296	-0.2%
CHF	**0.02**	1.0963	0.022	2.3%	232	1.0816	0.022	2.3%	265	0.0%
CNH	**0.13**	0.1572	0.020	2.1%	216	0.1445	0.019	2.0%	230	-0.1%
INR	**1.10**	0.0134	0.015	1.5%	156	0.0121	0.013	1.4%	163	-0.1%
CAD	**0.02**	0.7912	0.012	1.2%	125	0.7385	0.011	1.2%	135	-0.1%
AUD	**0.02**	0.7266	0.011	1.1%	115	0.6816	0.010	1.1%	125	0.0%
HKD	**0.04**	0.1283	0.004	0.5%	47	0.1281	0.004	0.5%	55	0.0%
			0.968	**100.0%**	**$10,222**		**0.950**	**100.0%**	**$11,615**	**0.0%**

The effects of our currency diversification strategy appear in two places in the consolidated financial statements: (1) as a component of other income in the consolidated statements of comprehensive income and (2) as OCI in the consolidated statements of financial condition and the consolidated statements of comprehensive income. The full effect of the GLOBAL is captured in the consolidated statements of comprehensive income.

Reported results on a comprehensive basis reflect the U.S. GAAP convention that requires the reporting of currency translation results contained in OCI as part of reportable earnings.

Interest Rate Risk

We had no variable-rate debt outstanding as of December 31, 2022.

We pay our customers interest based on benchmark overnight interest rates in various currencies, when interest rates are above a benchmark rate plus a small spread, on cash balances above $10 thousand (or equivalent) in securities accounts holding more than $100 thousand and at lower, tiered rates for accounts holding less than $100 thousand (or equivalent) net asset value. In currencies with negative rates, we pass through the cost of holding certain cash balances to our customers; therefore, we charge our customers interest on these cash balances. In a normal rate environment, we typically invest a portion of these funds in U.S. government securities with maturities of up to two years. If interest rates were to increase rapidly and substantially, our net interest income would not increase proportionally with the interest rates for the portion of the funds invested at fixed yields. In addition, the mark-to-market changes in the value of these fixed rate securities will be reflected in other income, instead of net interest income. Our margin balances are priced to a benchmark rate plus a spread, with a minimum charge of 0.75% in U.S. dollars and most foreign currencies. At negative or near-zero benchmark rates, our interest sensitivity to rate increases is limited to the extent that a higher benchmark rate plus a spread may still be below the minimum charge.

Based on customer balances and investments outstanding as of December 31, 2022, and assuming reinvestment of maturing instruments in instruments of short-term duration, an unexpected increase of 0.25% over current U.S. dollar interest rate levels would increase our net interest income by approximately $49 million on an annualized basis, assuming the full effect of reinvestment at higher rates. A 0.25% increase in all the relevant non-U.S. dollar benchmark rates would increase our net interest income by $25 million on an annualized basis. Our interest rate sensitivity estimate contains separate assumptions for U.S. dollar rates from other currencies' rates and it isolates the effects of a rate increase on reinvestments. We do not approximate mark-to-market impact from interest rate changes; if U.S. government securities whose prices were to fall under these scenarios were held to maturity, as intended, then the reduction in other income would be temporary, as the securities would mature at par value.

We also face the potential for reduced net interest income from customer deposits and margin loans if benchmark rates were to fall. Based on customer balances and investments outstanding as of December 31, 2022, and assuming reinvestment of maturing instruments in instruments of short-term duration, an unexpected decrease in U.S. dollar interest rates of 0.25% would decrease our net interest income by approximately $49 million on an annualized basis, assuming the full effect of reinvestment at lower rates. A 0.25% decrease in all the relevant non-U.S. dollar benchmark rates would decrease our net interest income by $25 million on an annualized basis.

We also face interest rate risk due to positions carried for our remaining market making activities to the extent that long or short stock positions may have been established for future or forward dates on options or futures contracts and the value of such positions is impacted by interest rates. The amount of such risk cannot be quantified, however, the current low level of market making positions does not indicate a material potential exposure.

Dividend Risk

We face dividend risk in our remaining market making activities as we derive revenues and incur expenses in the form of dividend income and expense, respectively, from our inventory of equity securities, and must make payments in lieu of dividends on short positions in equity securities within our portfolio. Projected future dividends are an important component of pricing equity options and other derivatives, and incorrect projections may lead to trading losses. The amount of such risk cannot be quantified, however, the current low level of market making positions does not indicate a material potential exposure.

Margin Loans

We extend margin loans to our customers, which are subject to various regulatory requirements. Margin loans are collateralized by cash and securities in the customers' accounts. The risks associated with margin credit increase during periods of fast market movements or in cases where collateral is concentrated and market movements occur. During such times, customers who utilize margin loans and who have collateralized their obligations with securities may find that the securities have a rapidly depreciating value and may not be sufficient to cover their obligations in the event of a liquidation. We are also exposed to credit risk when our customers execute transactions, such as short sales of options and equities that can expose them to risk beyond their invested capital.

We expect this kind of exposure to increase with the growth of our overall business. Because we indemnify and hold harmless our clearing houses and counterparties from certain liabilities or claims, the use of margin loans and short sales may expose us to significant off-balance-sheet risk if collateral requirements are not sufficient to fully cover losses that customers may incur and those customers fail to satisfy their obligations. As of December 31, 2022, we had $38.8 billion in margin loans extended to our customers. The amount of risk to which we are exposed from the margin loans we extend to our customers and from short sale transactions by our customers is unlimited and not quantifiable as the risk is dependent upon analysis of a potentially significant and undeterminable rise or fall in stock prices. Our account level margin requirements meet or exceed those required by Regulation T of the Board of Governors of the Federal Reserve and FINRA portfolio margin rules, as applicable. As a matter of practice, we enforce real-time margin compliance monitoring and liquidate customers' positions if their equity falls below required margin requirements.

We have a comprehensive policy implemented in accordance with regulatory standards to assess and monitor the suitability of investors to engage in various trading activities. To mitigate our risk, we also continuously monitor customer accounts to detect excessive concentration, large orders or positions, patterns of day trading and other activities that indicate increased risk to us.

Our credit exposure is to a great extent mitigated by our real-time margining system, which automatically evaluates each account throughout the trading day and closes out positions automatically for accounts that are found to be under-margined. While this methodology is effective in most situations, it may not be effective in situations where no liquid market exists for the relevant securities or commodities or where, for any reason, automatic liquidation for certain accounts has been disabled. Our Risk Management Committee continually monitors and evaluates our risk management policies, including the implementation of policies and procedures to enhance the detection and prevention of potential events to mitigate margin loan losses.

Value-at-Risk

We estimate VaR using a historical approach, which uses the historical daily price returns of underlying assets as well as estimates of the end of day implied volatility for options. Our one-day VaR is defined as the unrealized loss in portfolio value that, based on historically observed market risk factors, would have been exceeded with a frequency of one percent, based on a calculation with a confidence interval of 99%.

Our VaR model generally takes into account exposures to equity and commodity price risk and foreign exchange rates.

We use VaR as one of a range of risk management tools. Among their benefits, VaR models permit the estimation of a portfolio's aggregate market risk exposure, incorporating a range of varied market risks and portfolio assets. One key element of the VaR model is that it reflects risk reduction due to portfolio diversification or hedging activities. However, VaR has various strengths and limitations, which include, but are not limited to: use of historical changes in market risk factors, which may not be accurate predictors of future market conditions, and may not fully incorporate the risk of extreme market events that are outsized relative to observed historical market behavior or reflect the historical distribution of results beyond the confidence interval; and reporting of losses in a single day, which does not reflect the risk of positions that cannot be liquidated or hedged in one day. A small proportion of market risk generated by trading positions is not included in VaR. The modeling of the risk characteristics of some positions relies on approximations that, under certain circumstances, could produce significantly different results from those produced using more precise measures. VaR is most appropriate as a risk measure for trading positions in liquid financial markets and will understate the risk associated with severe events, such as periods of extreme illiquidity.

The VaR calculation simulates the performance of the portfolio based on several years of daily price changes of the underlying assets and determines the VaR as the calculated loss that occurs at the 99^{th} percentile.

Since the reported VaR statistics are estimates based on historical data, VaR should not be viewed as predictive of our future revenues or financial performance or of our ability to monitor and manage risk. There can be no assurance that our actual losses on a particular day will not exceed the indicated VaR or that such losses will not occur more than one time in 100 trading days. VaR does not predict the magnitude of losses which, should they occur, may be significantly greater than the VaR amount.

Stress Test

We estimate the market risk of our fixed income portfolio using a risk analysis model provided by a leading external vendor. For corporate bonds, this stress test is configured to calculate the change in value of each fixed income security in the portfolio over one day in five scenarios each of which represents a parallel shift of the U.S. Treasury yield curve. The scenarios are shifts of +/- 100 and +/- 200 basis points. For U.S. government securities, the stress test is configured to calculate the change in value of each fixed income security in the portfolio over one day in three scenarios each of which represents a parallel shift of the U.S. Treasury yield curve. The scenarios are shifts of +/−50 basis points.

VaR and Stress Test Measures

Market Risk Category	At December 31, 2022	At December 31, 2021	Average 2022	High 2022
		(in millions)		
Trading[1]				
Equities and Currencies[2]	$ 8	$ 8	$ 7	$ 8
Trading Total	$ 8	$ 8	$ 7	$ 8
Non-Trading[1]				
Equities and Currencies	$26	$18	$20	$26
Fixed Income, Other[3],[4]	9	14	12	16
Non-Trading Total	$35	$32	$32	$42

(1) The product categories displayed in the table as ''Trading'' reflect activities undertaken in the Company's market making activities.

The ''Non-trading'' category reflects investment activities and foreign currency exposures of the Company's non-market making subsidiaries (i.e., its brokerage subsidiaries and information technology subsidiaries). This category also includes corporate activities in foreign exchange designed to achieve the Company's currency diversification strategy.

The average and high VaR amounts for equities and currencies are based on end of day calculations performed in 2022. The fixed income stress amounts are based on the four quarter ending calculations performed in 2022.

(2) Equities and currencies held for market making purposes are combined because these products are part of an integrated, hedged market making portfolio, on which the risk is measured using VaR.

(3) The Non-Trading – Fixed Income, Other category contains primarily U.S. government securities held in segregated safekeeping accounts for the exclusive benefit of our brokerage customers, on which the risk is measured using a stress test analysis.

(4) As a result of the active rising interest rate environment, in 2022, we changed our methodology for risk computed under a stress test. Prior period amounts have been updated to conform to the current period presentation.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of
Interactive Brokers Group, Inc.
Greenwich, CT

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial condition of Interactive Brokers Group, Inc. and subsidiaries (the ''Company'') as of December 31, 2022 and 2021, the related consolidated statements of comprehensive income, cash flows and changes in equity, for each of the three years in the period ended December 31, 2022, and the related notes (collectively referred to as the ''financial statements''). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 24, 2023, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Income taxes — Refer to Notes 2 and 11 to the consolidated financial statements

Critical Audit Matter Description

The Company's income tax expense, deferred tax assets and liabilities (net of valuation allowance, if any), and reserves for unrecognized tax benefits are based on enacted tax laws and reflects management's best assessment of estimated future taxes to be paid. The Company is subject to income taxes in both the U.S. and various foreign jurisdictions. The Company has deferred tax assets resulting from the tax basis step-up received in connection with the Company's public equity offerings. Determining income tax expense requires significant management judgments and estimates.

We identified management's calculation of income tax expense, deferred tax assets and liabilities (net of valuation allowance, if any), and reserves for unrecognized tax benefits as a critical audit matter because of the significant judgments and estimates management makes to determine these amounts. Performing audit procedures to evaluate the reasonableness of management's interpretation of tax law in various foreign jurisdictions, and its estimate of the associated provisions, tax charges, and uncertain tax positions required a high degree of auditor judgment and increased effort, including the need to involve our income tax specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to income taxes included, among others, the following:

- We tested the operating effectiveness of controls over income tax balances and disclosures, including the provision for income taxes, deferred tax assets and liabilities (including valuation allowance) and unrecognized tax benefits.
- With the assistance of our income tax specialists, we assessed the Company's income tax expense by:
  - Evaluating the Company's income tax provision calculation, including testing the appropriateness of income tax rates applied and of income allocations among the taxing jurisdictions, and the mathematical accuracy of the calculation.
  - Evaluating the Company's analyses supporting its conclusions as to the recognition and measurement of deferred tax assets and liabilities, including the calculation of the deferred tax asset related to the tax basis step-up received in connection with the Company's public equity offering.
  - Evaluating management's assessment of the Company's ability to utilize the net deferred tax assets in future years.
  - Evaluating the appropriateness of the Company having no significant unrecognized tax benefits.
  - Evaluating the Company's disclosures related to the provision for income taxes, deferred tax assets and liabilities (including valuation allowance) and unrecognized tax benefits.

/s/ Deloitte & Touche LLP
New York, New York
February 24, 2023

We have served as the Company's auditor since 1990.

Interactive Brokers Group, Inc. and Subsidiaries
Consolidated Statements of Financial Condition

(in millions, except share amounts)	December 31, 2022	December 31, 2021
Assets		
Cash and cash equivalents	$ 3,436	$ 2,395
Cash - segregated for regulatory purposes	25,167	22,888
Securities - segregated for regulatory purposes	31,781	15,121
Securities borrowed	4,749	3,912
Securities purchased under agreements to resell	6,029	4,380
Financial instruments owned, at fair value		
Financial instruments owned	396	559
Financial instruments owned and pledged as collateral	89	114
Total financial instruments owned, at fair value	485	673
Receivables		
Customers, less allowance for credit losses of $10 and $8 as of December 31, 2022 and 2021	38,760	54,935
Brokers, dealers and clearing organizations	3,469	3,771
Interest	341	127
Total receivables	42,570	58,833
Other assets	926	911
Total assets	$115,143	$109,113
Liabilities and equity		
Short-term borrowings	$ 18	$ 27
Securities loaned	8,940	11,769
Financial instruments sold, but not yet purchased, at fair value	146	182
Payables		
Customers	93,195	85,634
Brokers, dealers and clearing organizations	291	557
Affiliate	214	222
Accounts payable, accrued expenses and other liabilities	531	492
Interest	193	8
Total payables	94,424	86,913
Total liabilities	103,528	98,891
Commitments, contingencies and guarantees (see Note 14)		
Equity		
Stockholders' equity		
Common stock, $0.01 par value per share		
Class A – Authorized - 1,000,000,000, Issued - 103,057,148 and 98,359,572 shares, Outstanding – 102,887,728 and 98,204,658 shares as of December 31, 2022 and 2021	1	1
Class B – Authorized, Issued and Outstanding – 100 shares as of December 31, 2022 and 2021	—	—
Additional paid-in capital	1,581	1,442
Retained earnings	1,294	953
Accumulated other comprehensive income, net of income taxes of $0 and $0 as of December 31, 2022 and 2021	(22)	4
Treasury stock, at cost, 169,420 and 154,914 shares as of December 31, 2022 and 2021	(6)	(5)
Total stockholders' equity	2,848	2,395
Noncontrolling interests	8,767	7,827
Total equity	11,615	10,222
Total liabilities and equity	$115,143	$109,113

See accompanying notes to the consolidated financial statements.

Interactive Brokers Group, Inc. and Subsidiaries
Consolidated Statements of Comprehensive Income

(in millions, except share or per share amounts)	Year-Ended December 31, 2022	2021	2020
Revenues			
Commissions	$ 1,322	$ 1,350	$ 1,112
Other fees and services	184	218	175
Other income (loss)	(107)	(2)	59
Total non-interest income	1,399	1,566	1,346
Interest income	2,686	1,372	1,133
Interest expense	(1,018)	(224)	(261)
Total net interest income	1,668	1,148	872
Total net revenues	3,067	2,714	2,218
Non-interest expenses			
Execution, clearing and distribution fees	324	236	293
Employee compensation and benefits	454	399	325
Occupancy, depreciation and amortization	90	80	69
Communications	33	33	26
General and administrative	165	176	236
Customer bad debt	3	3	13
Total non-interest expenses	1,069	927	962
Income before income taxes	1,998	1,787	1,256
Income tax expense	156	151	77
Net income	1,842	1,636	1,179
Less net income attributable to noncontrolling interests	1,462	1,328	984
Net income available for common stockholders	$ 380	$ 308	$ 195
Earnings per share			
Basic	$ 3.78	$ 3.27	$ 2.44
Diluted	$ 3.75	$ 3.24	$ 2.42
Weighted average common shares outstanding			
Basic	100,460,016	94,167,572	79,939,289
Diluted	101,299,609	95,009,880	80,638,908
Comprehensive income			
Net income available for common stockholders	$ 380	$ 308	$ 195
Other comprehensive income			
Cumulative translation adjustment, before income taxes	(26)	(22)	26
Income taxes related to items of other comprehensive income	—	—	—
Other comprehensive income (loss), net of tax	(26)	(22)	26
Comprehensive income available for common stockholders	$ 354	$ 286	$ 221
Comprehensive income attributable to noncontrolling interests			
Net income attributable to noncontrolling interests	$ 1,462	$ 1,328	$ 984
Other comprehensive income - cumulative translation adjustment	(85)	(75)	98
Comprehensive income attributable to noncontrolling interests	$ 1,377	$ 1,253	$ 1,082

See accompanying notes to the consolidated financial statements.

Interactive Brokers Group, Inc. and Subsidiaries
Consolidated Statements of Cash Flows

(in millions)	Year-Ended December 31, 2022	2021	2020
Cash flows from operating activities			
Net income	$ 1,842	$ 1,636	$ 1,179
Adjustments to reconcile net income to net cash from operating activities			
Deferred income taxes	20	23	9
Depreciation and amortization	58	50	42
Amortization of right-of-use assets	26	24	20
Employee stock plan compensation	92	80	65
Unrealized (gain) loss on other investments, net	8	9	(50)
(Gain) loss on remeasurement of Tax Receivable Agreement liability	(6)	(1)	3
Bad debt expense	3	3	13
Impairment loss	1	—	14
Shares distributed to customers under IBKR Promotions	9	9	—
Change in operating assets and liabilities			
Securities - segregated for regulatory purposes	(16,660)	12,700	(9,997)
Securities borrowed	(837)	1,044	(1,040)
Securities purchased under agreements to resell	(1,649)	(3,588)	2,319
Financial instruments owned, at fair value	189	(32)	1,286
Receivables from customers	16,172	(15,605)	(8,041)
Other receivables	88	(2,540)	(515)
Other assets	35	(198)	(11)
Securities loaned	(2,829)	1,931	5,428
Securities sold under agreement to repurchase	—	—	(1,909)
Financial instruments sold, but not yet purchased, at fair value	(36)	29	(304)
Payable to customers	7,561	9,754	19,634
Other payables	(119)	568	(77)
Net cash provided by operating activities	3,968	5,896	8,068
Cash flows from investing activities			
Purchases of other investments	(5)	(116)	(5)
Distributions received and proceeds from sales of other investments	7	5	5
Purchase of property, equipment and intangible assets	(69)	(77)	(50)
Net cash used in investing activities	(67)	(188)	(50)
Cash flows from financing activities			
Short-term borrowings, net	(9)	4	6
Dividends paid to stockholders	(40)	(38)	(32)
Distributions from IBG LLC to noncontrolling interests	(404)	(374)	(283)
Repurchases of common stock for employee tax withholdings under stock incentive plans	(20)	(27)	(17)
Proceeds from the sale of treasury stock	23	26	18
Issuances of senior notes	—	1,428	116
Redemptions of senior notes	—	(1,524)	(20)
Payments made under the Tax Receivable Agreement	(20)	(18)	(17)
Net cash used in financing activities	(470)	(523)	(229)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(111)	(97)	124
Net increase in cash, cash equivalents and restricted cash	3,320	5,088	7,913
Cash, cash equivalents and restricted cash at beginning of period	25,283	20,195	12,282
Cash, cash equivalents and restricted cash at end of period	$ 28,603	$ 25,283	$20,195
Cash, cash equivalents and restricted cash			
Cash and cash equivalents	3,436	2,395	4,292
Cash segregated for regulatory purposes	25,167	22,888	15,903
Cash, cash equivalents and restricted cash at end of period	$ 28,603	$ 25,283	$20,195
Supplemental disclosures of cash flow information			
Cash paid for interest	$ 833	$ 222	$ 284
Cash paid for taxes, net	$ 148	$ 114	$ 64
Cash paid for amounts included in lease liabilities	$ 32	$ 24	$ 21
Non-cash financing activities			
Issuance of common stock in exchange of member interests in IBG LLC	$ 192	$ 376	$ 609
Redemption of member interests from IBG Holdings LLC	$ (192)	$ (376)	$ (609)
Adjustments to additional paid-in capital for changes in proportionate ownership in IBG LLC	$ 27	$ 25	$ 21
Adjustments to noncontrolling interests for changes in proportionate ownership in IBG LLC	$ (27)	$ (25)	$ (21)
Non-cash distributions to noncontrolling interests	$ (1)	$ (3)	$ (5)

See accompanying notes to the consolidated financial statements.

Interactive Brokers Group, Inc. and Subsidiaries
Consolidated Statements of Changes in Equity
Three Years Ended December 31, 2022, 2021, and 2020

(in millions, except share amounts)	Class A Common Stock Issued Shares	Class A Common Stock Par Value	Additional Paid-In Capital	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Income	Total Stockholders' Equity	Non-controlling Interests	Total Equity
Balance, December 31, 2019	76,889,040	$1	$ 934	$ (3)	$ 520	$ —	$1,452	$6,488	$ 7,940
Issuance of common stock in follow-on offering	12,710,608		264				264	(264)	—
Common stock distributed pursuant to stock incentive plans	1,300,241						—		—
Issuance of common stock - IBKR Promotion	10,000			(1)			(1)	1	—
Net distribution of common stock - IBKR Promotion				1			1		1
Compensation for stock grants vesting in the future			12				12	53	65
Deferred tax benefit retained - follow-on offering			13				13		13
Repurchases of common stock for employee tax withholdings under stock incentive plans				(17)			(17)		(17)
Sales of treasury stock				17			17	1	18
Dividends paid to stockholders - $0.10 per share					(32)		(32)		(32)
Distributions from IBG LLC to noncontrolling interests							—	(288)	(288)
Adjustments for changes in proportionate ownership in IBG LLC			21				21	(21)	—
Comprehensive income					195	26	221	1,082	1,303
Balance, December 31, 2020	90,909,889	$1	$1,244	$ (3)	$ 683	$ 26	$1,951	$7,052	$ 9,003
Issuance of common stock in follow-on offering	6,079,542		145				145	(145)	—
Common stock distributed pursuant to stock incentive plans	1,220,141						—		—
Issuance of common stock - IBKR Promotion	150,000		3	(11)			(8)	8	—
Net distribution of common stock - IBKR Promotion				9			9		9
Compensation for stock grants vesting in the future			18				18	62	80
Deferred tax benefit retained - follow-on offering			7				7		7
Repurchases of common stock for employee tax withholdings under stock incentive plans				(27)			(27)		(27)
Sales of treasury stock				27			27	(1)	26
Dividends paid to stockholders - $0.10 per share					(38)		(38)		(38)
Distributions from IBG LLC to noncontrolling interests							—	(377)	(377)
Adjustments for changes in proportionate ownership in IBG LLC			25				25	(25)	—
Comprehensive income					308	(22)	286	1,253	1,539
Balance, December 31, 2021	98,359,572	$1	$1,442	$ (5)	$ 953	$ 4	$2,395	$7,827	$10,222
Issuance of common stock in follow-on offering	3,271,390		84				84	(84)	—
Common stock distributed pursuant to stock incentive plans	1,276,186						—		—
Issuance of common stock - IBKR Promotion	150,000		2	(10)			(8)	8	—
Net distribution of common stock - IBKR Promotion				9			9		9
Compensation for stock grants vesting in the future			23				23	69	92
Deferred tax benefit retained - follow-on offering			3				3		3
Repurchases of common stock for employee tax withholdings under stock incentive plans				(20)			(20)		(20)
Sales of treasury stock				20	1		21	2	23
Dividends paid to stockholders - $0.10 per share					(40)		(40)		(40)
Distributions from IBG LLC to noncontrolling interests							—	(405)	(405)
Adjustments for changes in proportionate ownership in IBG LLC			27				27	(27)	—
Comprehensive income					380	(26)	354	1,377	1,731
Balance, December 31, 2022	103,057,148	$1	$1,581	$ (6)	$1,294	$(22)	$2,848	$8,767	$11,615

See accompanying notes to the consolidated financial statements.

1. Organization of Business

Interactive Brokers Group, Inc. (''IBG, Inc.'') is a Delaware holding company whose primary asset is its ownership of approximately 24.5% of the membership interests of IBG LLC, which, in turn, owns operating subsidiaries (collectively, ''IBG LLC''). IBG, Inc. together with IBG LLC and its consolidated subsidiaries (collectively, ''the Company''), is an automated global electronic broker specializing in executing and clearing trades in stocks, options, futures, foreign exchange instruments, bonds, mutual funds, exchange-traded funds (''ETFs'') and precious metals on more than 150 electronic exchanges and market centers around the world and offering custody, prime brokerage, securities and margin lending services to customers. In addition, our customers can use our trading platform to trade certain cryptocurrencies through a third-party cryptocurrency service provider that executes, clears and custodies the cryptocurrencies. In the United States of America (''U.S.''), the Company conducts its business primarily from its headquarters in Greenwich, Connecticut and from Chicago, Illinois. Abroad, the Company conducts its business through offices located in Canada, the United Kingdom, Ireland, Switzerland, Hungary, India, China (Hong Kong and Shanghai), Japan, Singapore, and Australia. As of December 31, 2022, the Company had 2,820 employees worldwide.

IBG LLC is a Connecticut limited liability company that conducts its business through its significant operating subsidiaries: Interactive Brokers LLC (''IB LLC''); IBKR Securities Services LLC (''IBKRSS''); Interactive Brokers Canada Inc. (''IBC''); Interactive Brokers (U.K.) Limited (''IBUK''); Interactive Brokers Ireland Limited (''IBIE''); IBKR Financial Services AG (''IBKRFS''); Interactive Brokers Central Europe Zrt. (''IBCE''); Interactive Brokers (India) Private Limited (''IBI''); Interactive Brokers Hong Kong Limited (''IBHK''); Interactive Brokers Securities Japan, Inc. (''IBSJ''); Interactive Brokers Singapore Private Limited (''IBSG''); and Interactive Brokers Australia Pty Limited (''IBA'').

Certain operating subsidiaries are members of various securities and commodities exchanges in North America, Europe and the Asia/Pacific region and are subject to regulatory capital and other requirements (see Note 16). IB LLC, IBKRSS, IBC, IBUK, IBIE, IBCE, IBI, IBHK, IBSJ, IBSG and IBA carry securities accounts for customers or perform custodial functions relating to customer securities.

2. Significant Accounting Policies

Basis of Presentation

These consolidated financial statements are presented in U.S. dollars and have been prepared in accordance with accounting principles generally accepted in the U.S. (''U.S. GAAP'') and pursuant to the rules and regulations of the U.S. Securities and Exchange Commission (''SEC'') regarding financial reporting with respect to Form 10-K.

These consolidated financial statements include the accounts of the Company and its consolidated subsidiaries and reflect all adjustments of a normal and recurring nature that are, in the opinion of management, necessary for the fair presentation of the results for the periods presented.

Principles of Consolidation, including Noncontrolling Interests

These consolidated financial statements include the accounts of IBG, Inc. and its majority and wholly-owned subsidiaries. As sole managing member of IBG LLC, IBG, Inc. exerts control over IBG LLC's operations. In accordance with Financial Accounting Standards Board (''FASB'') Accounting Standards Codification (''ASC'') Topic 810, ''Consolidation,'' the Company consolidates IBG LLC's financial statements and records the interests in IBG LLC that it does not own as noncontrolling interests.

The Company's policy is to consolidate all other entities in which it owns more than 50% unless it does not have control. All inter-company balances and transactions have been eliminated.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts and disclosures in these consolidated financial statements and accompanying notes. These estimates and assumptions are based on judgment and the best available information at the time. Therefore, actual results could differ materially from those estimates. Such estimates include the allowance for credit losses, valuation of certain investments, compensation accruals, current and deferred income taxes, and contingency reserves.

2. Significant Accounting Policies (Continued)

Fair Value

Substantially all of the Company's assets and liabilities, including financial instruments, are carried at fair value based on published market prices and are marked to market, or are assets and liabilities which are short-term in nature and are carried at amounts that approximate fair value.

The Company applies the fair value hierarchy in accordance with FASB ASC Topic 820, ''Fair Value Measurement'' (''ASC Topic 820''), to prioritize the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets and liabilities and the lowest priority to unobservable inputs. The three levels of the fair value hierarchy are:

Level 1	Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.
Level 2	Quoted prices for similar assets in an active market, quoted prices in markets that are not considered to be active or financial instruments for which all significant inputs are observable, either directly or indirectly.
Level 3	Prices or valuations that require inputs that are both significant to fair value measurement and unobservable.

Financial instruments owned, at fair value, and financial instruments sold, but not yet purchased, at fair value are generally classified as Level 1 of the fair value hierarchy. The Company's Level 1 financial instruments, which are valued using quoted market prices as published by exchanges and clearing houses or otherwise broadly distributed in active markets, include active listed stocks, options, warrants and U.S. and foreign government securities. The Company does not adjust quoted prices for financial instruments classified as Level 1 of the fair value hierarchy, even if the Company may hold a large position whereby a purchase or sale could reasonably be expected to impact quoted prices.

Currency forward contracts are valued using broadly distributed bank and broker prices and are classified as Level 2 of the fair value hierarchy since inputs to their valuation can generally be corroborated by market data. Precious metals are valued using an internal model, which incorporates the exchange-traded futures price of the underlying instruments, benchmark interest rates and estimated storage costs, and are classified as Level 2 of the fair value hierarchy since the significant inputs to their valuation are observable. Other securities that are not traded in active markets are also classified as Level 2 of the fair value hierarchy. Level 3 financial instruments are comprised of securities that have been delisted or otherwise are no longer tradable in active markets and have been valued by the Company based on internal estimates.

Earnings per Share

Earnings per share (''EPS'') is computed in accordance with FASB ASC Topic 260, ''Earnings per Share.'' Basic EPS is computed by dividing the net income available for common stockholders by the weighted average number of shares outstanding for that period. Diluted EPS is calculated by dividing the net income available for common stockholders by the diluted weighted average shares outstanding for that period. Diluted EPS includes the determinants of basic EPS and, in addition, reflects the dilutive effect of shares of common stock estimated to be distributed in the future under the Company's stock-based compensation plans, with no adjustments to net income available for common stockholders for potentially dilutive common shares.

Current Expected Credit Losses

The Company follows FASB ASC Topic 326 – ''Financial Instruments – Credit Losses'' (''ASC Topic 326'') which applies to financial assets measured at amortized cost, held-to-maturity debt securities and off-balance sheet credit exposures. For on-balance sheet assets, an allowance must be recognized at the origination or purchase of in-scope assets and represents the expected credit losses over the contractual life of those assets.

2. Significant Accounting Policies (Continued)

Expected credit losses on off-balance sheet credit exposures must be estimated over the contractual period the Company is exposed to credit risk as a result of a present obligation to extend credit. The impact to the current period is not material since the Company's in-scope assets are primarily subject to collateral maintenance provisions for which the Company elected to apply the practical expedient of reporting the difference between the fair value of the collateral and the amortized cost for the in-scope assets as the allowance for current expected credit losses.

Cash and Cash Equivalents

Cash and cash equivalents consist of deposits with banks and all highly liquid investments, with maturities of three months or less, that are not segregated and deposited for regulatory purposes or to meet margin requirements at clearing houses and clearing banks.

Cash and Securities - Segregated for Regulatory Purposes

As a result of customer activities, certain operating subsidiaries are obligated by rules mandated by their primary regulators to segregate or set aside cash or qualified securities to satisfy such regulations, which have been promulgated to protect customer assets. Restricted cash represents cash and cash equivalents that are subject to withdrawal or usage restrictions. Cash segregated for regulatory purposes meets the definition of restricted cash and is included in ''cash, cash equivalents and restricted cash'' in the consolidated statements of cash flows.

The table below presents the composition of the Company's securities segregated for regulatory purposes for the periods indicated.

	December 31,	
	2022	2021
	(in millions)	
U.S. and foreign government securities	$ 4,641	$ 4,729
Municipal securities	82	—
Securities purchased under agreements to resell[1]	27,058	10,392
	$31,781	$15,121

(1) These balances are collateralized by U.S. government securities.

Securities Borrowed and Securities Loaned

Securities borrowed and securities loaned are recorded at the amount of the cash collateral advanced or received. Securities borrowed transactions require the Company to provide counterparties with collateral, which may be in the form of cash, letters of credit or other securities. With respect to securities loaned, the Company receives collateral, which may be in the form of cash or other securities in an amount generally in excess of the fair value of the securities loaned. The Company monitors the market value of securities borrowed and loaned daily, with additional collateral obtained or refunded as permitted contractually. The Company's policy is to net, in the consolidated statements of financial condition, securities borrowed and securities loaned contracts entered into with the same counterparty that meet the offsetting requirements prescribed in FASB ASC Topic 210-20, ''Balance Sheet – Offsetting'' (''ASC Topic 210-20'').

Securities lending fees received and paid by the Company are included in interest income and interest expense, respectively, in the consolidated statements of comprehensive income.

2. Significant Accounting Policies (Continued)

Securities Purchased Under Agreements to Resell and Securities Sold Under Agreements to Repurchase

Securities purchased under agreements to resell and securities sold under agreements to repurchase, which are reported as collateralized financing transactions, are recorded at contract value, which approximates fair value. To ensure that the fair value of the underlying collateral remains sufficient, the collateral is valued daily with additional collateral obtained or excess collateral returned, as permitted under contractual provisions. The Company's policy is to net, in the consolidated statements of financial condition, securities purchased under agreements to resell transactions and securities sold under agreements to repurchase transactions entered into with the same counterparty that meet the offsetting requirements prescribed in ASC Topic 210-20.

Financial Instruments Owned and Financial Instruments Sold, But Not Yet Purchased, at Fair Value

Financial instrument transactions are accounted for on a trade date basis. Financial instruments owned and financial instruments sold, but not yet purchased are stated at fair value based upon quoted market prices, or if not available, are valued by the Company based on internal estimates (see Fair Value above). The Company's financial instruments pledged to counterparties where the counterparty has the right, by contract or custom, to sell or repledge the financial instruments are reported as financial instruments owned and pledged as collateral in the consolidated statements of financial condition.

Customer Receivables and Payables

Receivables from and payables to customers include amounts due on cash and margin transactions, including futures contracts transacted on behalf of customers. Securities owned by customers, including those that collateralize margin loans or other similar transactions, are not reported in the consolidated statements of financial condition. Amounts receivable from customers that are determined by management to be uncollectible are recorded as customer bad debt expense in the consolidated statements of comprehensive income.

Receivables from and Payables to Brokers, Dealers and Clearing Organizations

Receivables from and payables to brokers, dealers and clearing organizations include net receivables and payables from unsettled trades, including amounts related to futures and options on futures contracts executed on behalf of customers, amounts receivable for securities not delivered by the Company to the purchaser by the settlement date (''fails to deliver'') and cash deposits. Payables to brokers, dealers and clearing organizations also include amounts payable for securities not received by the Company from a seller by the settlement date (''fails to receive'').

Investments

The Company makes certain strategic investments related to its business which are included in other assets in the consolidated statements of financial condition. The Company accounts for these investments as follows:

- Under the equity method of accounting as required under FASB ASC Topic 323, ''Investments - Equity Method and Joint Ventures.'' These investments, including where the investee is a limited partnership or limited liability company, are recorded at the fair value amount of the Company's initial investment and are adjusted each period for the Company's share of the investee's income or loss. Contributions paid to and distributions received from equity method investees are recorded as additions or reductions, respectively, to the respective investment balance.
- At fair value, if the investment in equity securities has a readily determinable fair value.
- At adjusted cost, if the investment does not have a readily determinable fair value. Adjusted cost represents the historical cost, less impairment if any. If the Company identifies observable price changes in orderly transactions for the identical or a similar investment of the same issuer, the Company measures the equity security at fair value as of the date that the observable transaction occurred in accordance with FASB ASC Topic 321, ''Investments in Equity Securities.''

2. Significant Accounting Policies (Continued)

A judgmental aspect of accounting for investments is evaluating whether a decline in the value of an investment has occurred. The evaluation of impairment is dependent on specific quantitative and qualitative factors and circumstances surrounding an investment, including recurring operating losses, credit defaults and subsequent rounds of financing. Most of the Company's equity investments do not have readily determinable market values. All investments are reviewed for changes in circumstances or occurrence of events that suggest the Company's investment may not be recoverable. An impairment loss, if any, is recognized in the period the determination is made.

The table below presents the composition of the Company's investments for the periods indicated.

	December 31,	
	2022	2021
	(in millions)	
Equity method investments[1]	$121	$123
Investments in equity securities at adjusted cost[2]	16	17
Investments in equity securities at fair value[2]	34	49
Investments in exchange memberships and equity securities of certain exchanges[2]	2	3
	$173	$192

(1) The Company's share of income or losses is included in other income in the consolidated statements of comprehensive income.

(2) These investments do not qualify for the equity method of accounting. Dividends received are included in other income in the consolidated statements of comprehensive income.

Property, Equipment and Intangible Assets

Property, equipment and intangible assets, which are included in other assets in the consolidated statements of financial condition, consist of leasehold improvements, computer equipment, software developed for the Company's internal use, office furniture and equipment.

Property and equipment are recorded at historical cost, less accumulated depreciation and amortization. Additions and improvements that extend the lives of assets are capitalized, while expenditures for repairs and maintenance are expensed as incurred. Depreciation and amortization are computed using the straight-line method. Equipment is depreciated over the estimated useful lives of the assets, while leasehold improvements are amortized over the lesser of the estimated economic useful life of the asset or the term of the lease. Computer equipment is depreciated over three to five years and office furniture and equipment are depreciated over five to seven years. Intangible assets with a finite life are amortized on a straight-line basis over their estimated useful lives of three to five years, and tested for recoverability whenever events indicate that the carrying amounts may not be recoverable. Qualifying costs for internally developed software are capitalized and amortized over the expected useful life of the developed software, not to exceed three years. Upon retirement or disposition of property and equipment, the cost and related accumulated depreciation are removed from the consolidated statements of financial condition and any resulting gain or loss is recorded in other income in the consolidated statements of comprehensive income. Fully depreciated (or amortized) assets are retired periodically throughout the year.

Leases

The Company reviews all relevant contracts to determine if the contract contains a lease at its inception date. A contract contains a lease if the contract conveys to the company the right to control the use of an underlying asset for a period of time in exchange for consideration. If the Company determines that a contract contains a lease, it recognizes, in the consolidated statements of financial condition, a lease liability and a corresponding right-of-use asset on the commencement date of the lease. The lease liability is initially measured at the present value of the future lease payments over the lease term using the rate implicit in the lease or, if not readily determinable, the Company's secured incremental borrowing rate. An operating lease right-of-use asset is initially measured at the value of the lease liability minus any lease incentives and initial direct costs incurred plus any prepaid rent.

2. Significant Accounting Policies (Continued)

The Company's leases are classified as operating leases and consist of real estate leases for office space, data centers and other facilities. Each lease liability is measured using the Company's secured incremental borrowing rate, which is based on an internally developed yield curve using interest rates of third parties' corporate debt issued with a similar risk profile as the Company and a duration similar to the lease term. The Company's leases have remaining terms of less than one year to fourteen years, some of which include options to extend the lease term, and some of which include options to terminate the lease upon notice. The Company considers these options when determining the lease term used to calculate the right-of-use asset and the lease liability when the Company is reasonably certain it will exercise such option.

The Company's operating leases contain both lease components and non-lease components. Non-lease components are distinct elements of a contract that are not related to securing the use of the underlying assets, such as common area maintenance and other management costs. The Company elected to measure the lease liability by combining the lease and non-lease components as a single lease component. As such, the Company includes the fixed payments and any payments that depend on a rate or index that relate to the lease and non-lease components in the measurement of the lease liability. Some of the non-lease components are variable and not based on an index or rate, and as a result, are not included in the measurement of the right-of-use asset or lease liability.

Operating lease expense is recognized on a straight-line basis over the lease term and is included in occupancy, depreciation and amortization expense in the Company's consolidated statements of comprehensive income.

Crypto-assets safeguarding liability and corresponding safeguarding asset

In March 2022, the SEC published Staff Accounting Bulletin No. 121 (''SAB 121''), which provides interpretive accounting and disclosure guidance to entities that have obligations to safeguard crypto-assets held for their platform users, whether directly or through an agent or another third party acting on its behalf. SAB 121 requires an entity to recognize a liability to reflect its obligation to safeguard the crypto-assets held for its platform users and a corresponding safeguarding asset on its balance sheet, even when the Company does not control the crypto-assets. Both the crypto-asset safeguarding liability and the corresponding safeguarding asset shall be measured at the fair value of the crypto-assets held for the platform users with the measurement of the safeguarding asset taking into account any potential loss events. SAB 121 is effective for interim or annual periods ending after June 15, 2022, with retrospective application as of the beginning of the fiscal year. The Company adopted SAB 121 as of June 30, 2022, with retrospective application as of January 1, 2022.

The Company operates a trading platform that allows its customers to access a digital asset exchange and custody services provided by a third-party Cryptocurrency Service Provider (''CSP'') to buy, sell and hold crypto-assets in an account in the customer's name at the CSP. The Company does not provide execution, custody or safeguarding services for the customers' crypto-assets and does not maintain (or have access to) the cryptographic key information and wallets necessary to access the crypto-assets, nor does the Company have any legal title or claim to those crypto-assets. The CSP is responsible for securing the customers' crypto-assets and protecting them from loss or theft. The agreement the customer signs with IB LLC before the customer is permitted to access the CSP's services through IB LLC's platform provides that:

> [Customer] acknowledges and agrees that [IB LLC] is not responsible for any trading or other losses (including, without limitation, losses due to theft, fraud, cybersecurity breach, loss of control of private keys, or any other loss arising from trading or holding digital assets with [the CSP]) resulting directly or indirectly from or in connection with [Customer's] relationship with [the CSP] and/or [Customer's] trading or holding of digital assets, including activity or holdings in the [CSP] Account.

Even though the Company is not responsible for the custody or safeguarding of crypto-assets, the Company is deemed to be in scope of SAB 121.

2. Significant Accounting Policies (Continued)

As of December 31, 2022, the fair value of the crypto-assets held in the customers' names at the CSP that the Company recognized on its balance sheet for both the crypto-asset safeguarding liability and the corresponding safeguarding asset, which are included in ''accounts payable, accrued expenses and other liabilities'' and ''other assets,'' respectively, in the consolidated statements of financial condition, was $80 million ($134 million as of January 1, 2022), which consisted of $44 million of Bitcoin, $34 million of Ethereum and $2 million of other crypto-assets. Changes in the fair value of crypto-assets, held by our customers at the CSP, do not impact our consolidated statements of comprehensive income unless a loss event is identified. As of December 31, 2022, the CSP did not identify any loss events.

Comprehensive Income and Foreign Currency Translation

The Company's operating results are reported in the consolidated statements of comprehensive income pursuant to FASB ASC Topic 220, ''Comprehensive Income.''

Comprehensive income consists of two components: net income and other comprehensive income (''OCI''). The Company's OCI is comprised of gains and losses resulting from translating foreign currency financial statements of non-U.S. subsidiaries, net of related income taxes, where applicable. In general, the practice and intention of the Company is to reinvest the earnings of its non-U.S. subsidiaries in those operations; therefore, tax is usually not accrued on OCI.

The Company's non-U.S. domiciled subsidiaries have a functional currency that is other than the U.S. dollar. Such subsidiaries' assets and liabilities are translated into U.S. dollars at period-end exchange rates, and revenues and expenses are translated at average exchange rates prevailing during the period. Adjustments that result from translating amounts from a subsidiary's functional currency to the U.S. dollar (as described above) are reported net of tax, where applicable, in accumulated OCI in the consolidated statements of financial condition. In December of 2020, the Company liquidated its Canadian subsidiary, Timber Hill Canada Company, and accordingly reclassified the accumulated OCI loss of $34 million to other income in the consolidated statements of comprehensive income.

Revenue Recognition

Commissions

Commissions earned for executing and/or clearing transactions are accrued on a trade date basis and are reported as commissions in the consolidated statements of comprehensive income. Commissions also include payments for order flow income received from IBKR Lite^{SM} liquidity providers. The Company's IBKR Lite^{SM} offering provides commission-free trades on U.S. exchange-listed stocks and ETFs and generates no commission revenues from customers on these trades. See Note 8 for further information on revenue from contracts with customers.

Other Fees and Services

The Company earns fee income on services provided to customers, which includes market data fees, risk exposure fees, payments for order flow from exchange-mandated programs, minimum activity fees, and other fees and services charged to customers. Fee income is recognized either daily or monthly. See Note 8 for further information on revenue from contracts with customers.

Interest Income and Expense

The Company earns interest income and incurs interest expense primarily in connection with its electronic brokerage customer business and its securities lending activities, which are recorded on an accrual basis and are included in interest income and interest expense, respectively, in the consolidated statements of comprehensive income.

2. Significant Accounting Policies (Continued)

Principal Transactions

Principal transactions include gains and losses as a result of changes in the fair value of financial instruments owned, at fair value, financial instruments sold, but not yet purchased, at fair value, and other investments measured at fair value (i.e., unrealized gains and losses) and realized gains and losses related to the Company's principal transactions. Included are net gains and losses on stocks, options, U.S. and foreign government securities, municipal securities, futures, foreign exchange, precious metals and other derivative instruments, which are reported on a net basis in other income in the consolidated statements of comprehensive income. Dividends are integral to the valuation of stocks. Accordingly, dividend income and expense attributable to financial instruments owned, at fair value and financial instruments sold, but not yet purchased, at fair value, are reported on a net basis in other income in the consolidated statements of comprehensive income.

Foreign Currency Gains and Losses

Foreign currency balances are assets and liabilities in currencies other than the Company's functional currency. At every reporting date, the Company revalues its foreign currency balances to its functional currency at the spot exchange rate and records the associated foreign currency gains and losses. These foreign currency gains and losses are reported in the consolidated statements of comprehensive income, as follows: (a) foreign currency gains and losses related to the Company's currency diversification strategy are reported in other income; (b) foreign currency gains and losses arising from currency swap transactions are reported in interest income or interest expense; and (c) all other foreign currency gains and losses are reported in other income.

Rebates

Rebates consist of volume discounts, credits, or payments received from exchanges or other market centers related to the placement and/or removal of liquidity from the marketplace and are recorded on an accrual basis. Rebates are recorded net within execution, clearing and distribution fees in the consolidated statements of comprehensive income. Rebates received for trades executed on behalf of customers that elect tiered pricing are passed, in whole or part, to these customers, and such pass-through amounts are recorded net within commissions in the consolidated statements of comprehensive income.

Stock-Based Compensation

The Company follows FASB ASC Topic 718, ''Compensation - Stock Compensation'' (''ASC Topic 718''), to account for its stock-based compensation plans. ASC Topic 718 requires all share-based payments to employees to be recognized in the consolidated financial statements using a fair value-based method. Grants, which are denominated in U.S. dollars, are communicated to employees in the year of the grant, thereby establishing the fair value of each grant. The fair value of awards granted to employees are generally expensed as follows: 50% in the year of grant in recognition of the plans' post-employment provisions (as described below) and the remaining 50% over the related vesting period utilizing the ''graded vesting'' method permitted under ASC Topic 718. In the case of ''retirement eligible'' employees (those employees older than 59), 100% of awards are expensed when granted.

Awards granted under stock-based compensation plans are subject to the plans' post-employment provisions in the event an employee ceases employment with the Company. The plans provide that employees who discontinue employment with the Company without cause and continue to meet the terms of the plans' post-employment provisions will be eligible to earn 50% of previously granted but not yet earned awards, unless the employee is over the age of 59, in which case the employee would be eligible to receive 100% of previously granted but not yet earned awards.

2. Significant Accounting Policies (Continued)

Income Taxes

The Company accounts for income taxes in accordance with FASB ASC Topic 740, ''Income Taxes'' (''ASC Topic 740''). The Company's income tax expense, deferred tax assets and liabilities, and reserves for unrecognized tax benefits are based on enacted tax laws (see Note 11) and reflect management's best assessment of estimated future taxes to be paid. The Company is subject to income taxes in the U.S. and numerous foreign jurisdictions. Determining income tax expense requires significant judgment and estimates. Deferred income tax assets and liabilities arise from temporary differences between the tax and financial statement recognition of underlying assets and liabilities. In evaluating the ability to recover deferred tax assets within the jurisdictions from which they arise, the Company considers all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax-planning strategies and results of recent operations. In projecting future taxable income, historical results are adjusted for changes in accounting policies and incorporate assumptions including the amount of future state, federal and foreign pre-tax operating income, the reversal of temporary differences, and the implementation of feasible and prudent tax-planning strategies. These assumptions require significant judgment about the forecasts of future taxable income and are consistent with the plans and estimates the Company is using to manage the underlying businesses. In evaluating the objective evidence that historical results provide, three years of cumulative operating income (loss) are considered. Deferred income taxes have not been provided for U.S. tax liabilities or for additional foreign taxes on the unremitted earnings of foreign subsidiaries that have been indefinitely reinvested.

The calculation of the Company's tax liabilities involves dealing with uncertainties in the application of complex tax laws and regulations in a multitude of jurisdictions across the Company's global operations. Changes in tax laws and rates could also affect recorded deferred tax assets and liabilities in the future.

The Company records tax liabilities in accordance with ASC Topic 740 and adjusts these liabilities when management's judgment changes as a result of the evaluation of new information not previously available. Because of the complexity of some of these uncertainties, the ultimate resolution may result in payments that are different from the current estimates of these tax liabilities. These differences will be reflected as increases or decreases to income tax expense in the period in which new information becomes available.

The Company recognizes a tax benefit from an uncertain tax position only when it is more likely than not that the position will be sustained upon examination, including resolutions of any related appeals or litigation processes, on the basis of the technical merits. A tax position that meets this standard is measured at the largest amount of benefit that will more likely than not be realized on settlement.

The Company recognizes interest related to income tax matters as interest income or interest expense and penalties related to income tax matters as income tax expense in the consolidated statements of comprehensive income.

2. Significant Accounting Policies (Continued)

Standards Adopted During 2022

Standard	Summary of guidance	Effect on financial statements
Accounting for the Obligations to Safeguard Crypto-assets (SAB 121) *Issued March 2022*	• Requires companies that have obligations to safeguard crypto-assets held for their platform users to recognize a liability to reflect such obligation and a corresponding asset in the balance sheet, both measured at the fair value of the crypto-assets.	• Effective date: Effective for interim or annual periods ending after June 15, 2022, with retrospective application as of the beginning of the fiscal year. • The Company adopted SAB 121 as of June 30, 2022, which resulted in the recognition a crypto-asset safeguarding liability and the corresponding safeguarding asset on its consolidated statements of financial condition.

FASB Standards issued but not adopted as of December 31, 2022

Standard	Summary of guidance	Effect on financial statements
Business Combinations (Topic 805) *Issued October 2021*	• Requires companies to recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with Topic 606, ''Revenue from Contracts with Customers''. At the acquisition date, the acquirer should account for the related revenue contracts as if it had originated the contracts.	• Effective date: January 1, 2023. • The changes are not expected to have a material impact on the Company's consolidated financial statements.

3. Trading Activities and Related Risks

Trading activities expose the Company to market and credit risks. These risks are managed in accordance with established risk management policies and procedures. To accomplish this, management has established a risk management process that includes:

- a regular review of the risk management process by executive management as part of its oversight role;
- defined risk management policies and procedures supported by a rigorous analytic framework; and
- articulated risk tolerance levels as defined by executive management that are regularly reviewed to ensure that the Company's risk-taking is consistent with its business strategy, its capital structure, and current and anticipated market conditions.

3. Trading Activities and Related Risks (Continued)

Market Risk

The Company is exposed to various market risks. Exposures to market risks arise from equity price risk, foreign currency exchange rate fluctuations and changes in interest rates. The Company seeks to mitigate market risk associated with trading inventories by employing hedging strategies that correlate rate, price and spread movements of trading inventories and related financing and hedging activities. The Company uses a combination of cash instruments and exchange-traded derivatives to hedge its market exposures. The Company does not apply hedge accounting. The following discussion describes the types of market risk faced:

Equity Price Risk

Equity price risk arises from the possibility that equity security prices will fluctuate, affecting the value of equity securities and other instruments that derive their value from a particular stock, a defined basket of stocks, or a stock index. The Company is subject to equity price risk primarily in financial instruments owned, at fair value and financial instruments sold, but not yet purchased, at fair value. The Company attempts to limit such risks by continuously reevaluating prices and by diversifying its portfolio across many different options, futures and underlying securities and avoiding concentrations of positions based on the same underlying security.

Interest Rate Risk

Interest rate risk arises from the possibility that changes in interest rates will affect the value of financial instruments. The Company is exposed to interest rate risk on cash and margin balances, positions carried in equity and fixed income securities, options, futures and on its borrowings. These risks are managed through investment policies and by entering into interest rate futures contracts.

Currency Risk

Currency risk arises from the possibility that fluctuations in foreign exchange rates will impact the value of financial instruments. The Company manages this risk using spot (i.e., cash) currency transactions, currency futures contracts and currency forward contracts. The Company actively manages its currency exposure using a currency diversification strategy that is based on a defined basket of ten currencies internally referred to as the ''GLOBAL.'' These strategies minimize the fluctuation of the Company's equity as expressed in GLOBALs, thereby diversifying its risk in alignment with these global currencies, weighted by the Company's view of their importance. As the Company's financial results are reported in U.S. dollars, the change in the value of the GLOBAL as expressed in U.S. dollars affects the Company's earnings. The impact of this currency diversification strategy in the Company's earnings is included in other income in the consolidated statements of comprehensive income.

Credit Risk

The Company is exposed to the risk of loss if a customer, counterparty or issuer fails to perform its obligations under contractual terms (''default risk''). Both cash instruments and derivatives expose the Company to default risk. The Company has established policies and procedures for mitigating credit risk on principal transactions, including reviewing and establishing limits for credit exposure, maintaining collateral and continually assessing the creditworthiness of counterparties.

The Company's credit risk is limited as contracts entered into are settled directly at securities and commodities clearing houses or are settled through member firms and banks with substantial financial and operational resources. Over-the-counter transactions, such as securities lending and contracts for differences (''CFDs''), are marked to market daily and are conducted with counterparties that have undergone a thorough credit review. The Company seeks to control the risks associated with its customer margin activities by requiring customers to maintain collateral in compliance with regulatory and internal guidelines.

3. Trading Activities and Related Risks (Continued)

In the normal course of business, the Company executes, settles and finances various customer securities transactions. Execution of these transactions includes the purchase and sale of securities which exposes the Company to default risk arising from the potential that customers or counterparties may fail to satisfy their obligations. In these situations, the Company may be required to purchase or sell financial instruments at unfavorable market prices to satisfy obligations to customers or counterparties. Liabilities to other brokers and dealers related to unsettled transactions (i.e., securities fails to receive) are recorded at the amount for which the securities were purchased, and are paid upon receipt of the securities from other brokers or dealers. In the case of aged securities fails to receive, the Company may purchase the underlying security in the market and seek reimbursement for any losses from the counterparty.

For cash management purposes, the Company enters into short-term securities purchased under agreements to resell and securities sold under agreements to repurchase transactions (''repos'') in addition to securities borrowing and lending arrangements, all of which may result in credit exposure in the event the counterparty to a transaction is unable to fulfill its contractual obligations. Repos are collateralized by securities with a market value in excess of the obligation under the contract. Similarly, securities lending agreements are collateralized by deposits of cash or securities. The Company attempts to minimize credit risk associated with these activities by monitoring collateral values daily and requiring additional collateral to be deposited with or returned to the Company as permitted under contractual provisions.

Concentrations of Credit Risk

The Company's exposure to credit risk associated with its trading and other activities is measured on an individual counterparty basis, as well as by groups of counterparties that share similar attributes. Concentrations of credit risk can be affected by changes in political, industry, or economic factors. To reduce the potential for risk concentration, credit limits are established and exposure is monitored in light of changing counterparty and market conditions. As of December 31, 2022, the Company did not have any material concentrations of credit risk outside the ordinary course of business.

Off-Balance Sheet Risks

The Company may be exposed to a risk of loss not reflected in the consolidated financial statements to settle futures and certain over-the-counter contracts at contracted prices, which may require repurchase or sale of the underlying products in the market at prevailing prices. Accordingly, these transactions result in off-balance sheet risk as the Company's cost to liquidate such contracts may exceed the amounts reported in the Company's consolidated statements of financial condition.

4. Equity and Earnings per Share

In connection with IBG, Inc.'s initial public offering of Class A common stock (''IPO'') in May 2007, it purchased 10.0% of the membership interests in IBG LLC from IBG Holdings LLC (''Holdings''), became the sole managing member of IBG LLC and began to consolidate IBG LLC's financial results into its financial statements. Holdings owns all of IBG, Inc.'s Class B common stock, which has voting rights in proportion to its ownership interests in IBG LLC. The table below presents the amount of IBG LLC membership interests held by IBG, Inc. and Holdings as of December 31, 2022.

	IBG, Inc.	Holdings	Total
Ownership %	24.5%	75.5%	100.0%
Membership interests	102,927,703	316,609,102	419,536,805

These consolidated financial statements reflect the results of operations and financial position of IBG, Inc., including consolidation of its investment in IBG LLC and its subsidiaries. The noncontrolling interests in IBG LLC attributable to Holdings are reported as a component of total equity in the consolidated statements of financial condition.

4. Equity and Earnings per Share (Continued)

Recapitalization and Post-IPO Capital Structure

Immediately before and immediately following the consummation of the IPO, IBG, Inc., Holdings, IBG LLC and the members of IBG LLC consummated a series of transactions collectively referred to herein as the ''Recapitalization.'' In connection with the Recapitalization, IBG, Inc., Holdings and the historical members of IBG LLC entered into an exchange agreement, dated as of May 3, 2007 (the ''Exchange Agreement''), under which the historical members of IBG LLC received membership interests in Holdings in exchange for their membership interests in IBG LLC. Additionally, IBG, Inc. became the sole managing member of IBG LLC.

In connection with the consummation of the IPO, Holdings used the net proceeds to redeem 10.0% of members' interests in Holdings in proportion to their interests. Immediately following the Recapitalization and IPO, Holdings owned approximately 90% of IBG LLC and 100% of IBG, Inc.'s Class B common stock.

Since the consummation of the IPO and Recapitalization, IBG, Inc.'s equity capital structure has been comprised of Class A and Class B common stock. All shares of common stock have a par value of $0.01 per share and have identical rights to earnings and dividends and in liquidation. As of December 31, 2022 and 2021, 1,000,000,000 shares of Class A common stock were authorized, of which 103,057,148 and 98,359,572 shares have been issued; and 102,887,728 and 98,204,658 shares were outstanding, respectively. Class B common stock is comprised of 100 authorized shares, of which 100 shares were issued and outstanding as of December 31, 2022 and 2021. In addition, 10,000 shares of preferred stock have been authorized, of which no shares are issued or outstanding as of December 31, 2022 and 2021.

As a result of a federal income tax election made by IBG LLC applicable to the acquisition of IBG LLC member interests by IBG, Inc., the income tax basis of the assets of IBG LLC acquired by IBG, Inc. have been adjusted based on the amount paid for such interests. Deferred tax assets were recorded as of the IPO date and in connection with subsequent redemptions of Holdings member interests in exchange for common stock. These deferred tax assets are included in other assets in the Company's consolidated statements of financial condition and are being amortized as additional deferred income tax expense over 15 years from the IPO date and from the additional redemption dates, respectively, as allowable under current tax law. As of December 31, 2022 and 2021, the unamortized balance of these deferred tax assets was $193 million and $209 million, respectively.

IBG, Inc. also entered into an agreement (the ''Tax Receivable Agreement'') with Holdings to pay Holdings (for the benefit of the former members of IBG LLC) 85% of the tax savings that IBG, Inc. actually realizes as the result of tax basis increases. These payables to Holdings are reported as payable to affiliate in the Company's consolidated statements of financial condition. The remaining 15% is accounted for as a permanent increase to additional paid-in capital in the Company's consolidated statements of financial condition.

The cumulative amounts of deferred tax assets, payables to Holdings and additional paid-in capital arising from stock offerings from the date of the IPO through December 31, 2022 were $654 million, $556 million and $98 million, respectively. Amounts payable under the Tax Receivable Agreement are payable to Holdings annually following the filing of IBG, Inc.'s federal income tax return. The Company has paid Holdings a cumulative total of $243 million through December 31, 2022 under the terms of the Tax Receivable Agreement.

The Exchange Agreement, as amended, provides for future redemptions of member interests and for the purchase of member interests in IBG LLC by IBG, Inc. from Holdings, which could result in IBG, Inc. acquiring the remaining member interests in IBG LLC that it does not own. On an annual basis, members of Holdings can request redemption of their interests.

4. Equity and Earnings per Share (Continued)

At the time of IBG, Inc.'s IPO in 2007, three hundred sixty (360) million shares of authorized common stock were reserved for future sales and redemptions. From 2008 through 2010, Holdings redeemed 5,013,259 IBG LLC interests with a total value of $114 million, which redemptions were funded using cash on hand at IBG LLC. Upon cash redemption, these IBG LLC interests were retired. From 2011 through 2021, IBG, Inc. issued 34,207,307 shares of common stock (with a fair value of $1.5 billion) directly to Holdings in exchange for an equivalent number of member interests in IBG LLC. On August 1, 2022, the Company filed a Prospectus Supplement on Form 424B5 (File Number 333-240121) with the SEC to issue 3,271,390 shares of common stock (with a fair value of $192 million) in exchange for an equivalent number of shares of member interests in IBG LLC.

On July 27, 2020, the Company filed a Prospectus Supplement on Form 424B (File Number 333-240121) with the SEC to re-register up to 990,000 shares of common stock, offering the opportunity for eligible persons to receive awards in the form of an offer to receive such shares by participating in one or more promotions that are designed to attract new customers to the Company's brokerage platform, increase assets held with the Company's brokerage business and enhance customer loyalty. From 2019 through 2022, the Company issued 320,000 shares to IBG LLC for distribution to eligible customers of certain of its subsidiaries.

As a consequence of these redemption transactions and distribution of shares to employees (see Note 10), IBG, Inc.'s interest in IBG LLC has increased to approximately 24.5%, with Holdings owning the remaining 75.5% as of December 31, 2022. The redemptions also increased the Holdings interest held by Mr. Thomas Peterffy and his affiliates from approximately 84.6% at the IPO to approximately 90.5% as of December 31, 2022.

Earnings per Share

Basic earnings per share is calculated utilizing net income available for common stockholders divided by the weighted average number of shares of Class A and Class B common stock outstanding for that period.

	Year-Ended December 31,		
	2022	2021	2020
	(in millions, except share or per share amounts)		
Basic earnings per share			
Net income available for common stockholders	$ 380	$ 308	$ 195
Weighted average shares of common stock outstanding			
Class A	100,459,916	94,167,472	79,939,189
Class B	100	100	100
	100,460,016	94,167,572	79,939,289
Basic earnings per share	$ 3.78	$ 3.27	$ 2.44

Diluted earnings per share are calculated utilizing the Company's basic net income available for common stockholders divided by diluted weighted average shares outstanding with no adjustments to net income available to common stockholders for potentially dilutive common shares.

	Year-Ended December 31,		
	2022	2021	2020
	(in millions, except share or per share amounts)		
Diluted earnings per share			
Net income available for common stockholders	$ 380	$ 308	$ 195
Weighted average shares of common stock outstanding			
Class A			
Issued and outstanding	100,459,916	94,167,472	79,939,189
Potentially dilutive common shares			
Issuable pursuant to employee stock incentive plans	839,593	842,308	699,619
Class B	100	100	100
	101,299,609	95,009,880	80,638,908
Diluted earnings per share	$ 3.75	$ 3.24	$ 2.42

4. Equity and Earnings per Share (Continued)

Member Distributions and Stockholder Dividends

During the three years ended December 31, 2022, 2021, and 2020, IBG LLC made distributions totaling $533 million, $489 million and $356 million to its members, of which IBG, Inc.'s proportionate share was $128 million, $112 million and $68 million, respectively. The Company paid quarterly cash dividends of $0.10 per share of common stock, totaling $40 million, $38 million and $32 million during 2022, 2021, and 2020, respectively.

On January 17, 2023, the Company declared a cash dividend of $0.10 per common share, payable on March 14, 2023 to stockholders of record as of March 1, 2023.

5. Comprehensive Income

The table below presents comprehensive income and earnings per share on comprehensive income for the periods indicated.

	Year-Ended December 31,		
	2022	2021	2020
	(in millions, except share or per share amounts)		
Comprehensive income available for common stockholders	$ 354	$ 286	$ 221
Earnings per share on comprehensive income			
Basic	$ 3.53	$ 3.04	$ 2.77
Diluted	$ 3.50	$ 3.01	$ 2.74
Weighted average common shares outstanding			
Basic	100,460,016	94,167,572	79,939,289
Diluted	101,299,609	95,009,880	80,638,908

6. Financial Assets and Financial Liabilities

Financial Assets and Liabilities Measured at Fair Value on a Recurring Basis

The tables below present, by level within the fair value hierarchy (see Note 2), financial assets and liabilities, measured at fair value on a recurring basis for the periods indicated. As required by ASC Topic 820, financial assets and financial liabilities are classified in their entirety based on the lowest level of input that is significant to the respective fair value measurement.

	Financial Assets at Fair Value as of December 31, 2022			
	Level 1	Level 2	Level 3	Total
	(in millions)			
Securities segregated for regulatory purposes				
U.S. and foreign government securities	$4,641	—	—	4,641
Municipal securities	—	82	—	82
Total securities segregated for regulatory purposes	4,641	82	—	4,723
Financial instruments owned, at fair value				
Stocks	380	—	—	380
Options	31	—	—	31
U.S. and foreign government securities	35	—	—	35
Precious metals	—	9	—	9
Currency forward contracts	—	30	—	30
Total financial instruments owned, at fair value	446	39	—	485

6. Financial Assets and Financial Liabilities (Continued)

	Financial Assets at Fair Value as of December 31, 2022			
	Level 1	Level 2	Level 3	Total
	(in millions)			
Other assets				
Customer-held fractional shares	91	—	—	91
Crypto-asset safeguarding asset	—	80	—	80
Other investments in equity securities	34	—	—	34
Total other assets	125	80	—	205
Total financial assets at fair value	$5,212	$201	$—	$5,413

	Financial Liabilities at Fair Value as of December 31, 2022			
	Level 1	Level 2	Level 3	Total
	(in millions)			
Financial instruments sold, but not yet purchased, at fair value				
Stocks	$121	$—	$—	$121
Options	16	—	—	16
Precious metals	—	7	—	7
Currency forward contracts	—	2	—	2
Total financial instruments sold, but not yet purchased, at fair value	137	9	—	146
Accounts payable, accrued expenses and other liabilities				
Fractional shares repurchase obligation	91	—	—	91
Crypto-asset safeguarding liability	—	80	—	80
Total accounts payable, accrued expenses and other liabilities	91	80	—	171
Total financial liabilities at fair value	$228	$89	$—	$317

	Financial Assets at Fair Value as of December 31, 2021			
	Level 1	Level 2	Level 3	Total
	(in millions)			
Securities segregated for regulatory purposes				
U.S. government securities	$4,729	$—	$—	$4,729
Total securities segregated for regulatory purposes	4,729	—	—	4,729
Financial instruments owned, at fair value				
Stocks	548	—	—	548
Options	22	—	—	22
U.S. and foreign government securities	54	—	—	54
Precious metals	—	10	—	10
Currency forward contracts	—	39	—	39
Total financial instruments owned, at fair value	624	49	—	673
Other assets				
Customer-held fractional shares	166	—	—	166
Other investments in equity securities	49	49		
Total other assets	215	—	—	215
Total financial assets at fair value	$5,568	$49	$—	$5,617

6. Financial Assets and Financial Liabilities (Continued)

	Financial Liabilities at Fair Value as of December 31, 2021			
	Level 1	Level 2	Level 3	Total
	(in millions)			
Financial instruments sold, but not yet purchased, at fair value				
Stocks	$144	$—	$—	$144
Options	22	—	—	22
Precious metals	—	6	—	6
Currency forward contracts	—	10	—	10
Total financial instruments sold, but not yet purchased, at fair value	166	16	—	182
Accounts payable, accrued expenses and other liabilities				
Fractional shares repurchase obligation	166	—	—	166
Total accounts payable, accrued expenses and other liabilities	166	—	—	166
Total financial liabilities at fair value	$332	$16	$—	$348

Level 3 Financial Assets and Financial Liabilities

There were no transfers in or out of level 3 for the year ended December 31, 2022.

Financial Assets and Liabilities Not Measured at Fair Value

The tables below represent the carrying value, fair value and fair value hierarchy category of certain financial assets and liabilities that are not recorded at fair value in the Company's consolidated statements of financial condition for the periods indicated. The tables below exclude certain financial instruments such as equity method investments and all non-financial assets and liabilities.

	December 31, 2022				
	Carrying Value	Fair Value	Level 1	Level 2	Level 3
			(in millions)		
Financial assets, not measured at fair value					
Cash and cash equivalents	$ 3,436	$ 3,436	$ 3,436	$ —	$—
Cash - segregated for regulatory purposes	25,167	25,167	25,167	—	—
Securities - segregated for regulatory purposes	27,058	27,058	—	27,058	—
Securities borrowed	4,749	4,749	—	4,749	—
Securities purchased under agreements to resell	6,029	6,029	—	6,029	—
Receivables from customers	38,760	38,760	—	38,760	—
Receivables from brokers, dealers and clearing organizations	3,469	3,469	—	3,469	—
Interest receivable	341	341	—	341	—
Other assets	17	18	—	2	16
Total financial assets, not measured at fair value	$109,026	$109,027	$28,603	$ 80,408	$16
Financial liabilities, not measured at fair value					
Short-term borrowings	$ 18	$ 18	$ —	$ 18	$—
Securities loaned	8,940	8,940	—	8,940	—
Payables to customers	93,195	93,195	—	93,195	—
Payables to brokers, dealers and clearing organizations	291	291	—	291	—
Interest payable	193	193	—	193	—
Total financial liabilities, not measured at fair value	$102,637	$102,637	$ —	$102,637	$—

6. Financial Assets and Financial Liabilities (Continued)

	December 31, 2021				
	Carrying Value	Fair Value	Level 1	Level 2	Level 3
			(in millions)		
Financial assets, not measured at fair value					
Cash and cash equivalents	$ 2,395	$ 2,395	$ 2,395	$ —	$—
Cash - segregated for regulatory purposes	22,888	22,888	22,888	—	—
Securities - segregated for regulatory purposes	10,392	10,392	—	10,392	—
Securities borrowed	3,912	3,912	—	3,912	—
Securities purchased under agreements to resell	4,380	4,380	—	4,380	—
Receivables from customers	54,935	54,935	—	54,935	—
Receivables from brokers, dealers and clearing organizations	3,771	3,771	—	3,771	—
Interest receivable	127	127	—	127	—
Other assets	20	20	—	2	18
Total financial assets, not measured at fair value	$102,820	$102,820	$25,283	$77,519	$18
Financial liabilities, not measured at fair value					
Short-term borrowings	$ 27	$ 27	$ —	$ 27	$—
Securities loaned	11,769	11,769	—	11,769	—
Payables to customers	85,634	85,634	—	85,634	—
Payables to brokers, dealers and clearing organizations	557	557	—	557	—
Interest payable	8	8	—	8	—
Total financial liabilities, not measured at fair value	$ 97,995	$ 97,995	$ —	$97,995	$—

Netting of Financial Assets and Financial Liabilities

The Company's policy is to net securities borrowed and securities loaned, and securities purchased under agreements to resell and securities sold under agreements to repurchase that meet the offsetting requirements prescribed in ASC Topic 210-20. In the tables below, the amounts of financial instruments that are not offset in the consolidated statements of financial condition, but could be netted against cash or financial instruments with specific counterparties under master netting agreements, according to the terms of the agreements, including clearing houses (exchange-traded options, warrants and discount certificates) or over the counter currency forward contract counterparties, are presented to provide financial statement readers with the Company's net payable or receivable with counterparties for these financial instruments.

6. Financial Assets and Financial Liabilities (Continued)

The tables below present the netting of financial assets and financial liabilities for the periods indicated.

	December 31, 2022				
	Gross Amounts of Financial Assets and Liabilities Recognized	Amounts Offset in the Consolidated Statement of Financial Condition[2]	Net Amounts Presented in the Consolidated Statement of Financial Condition	Amounts Not Offset in the Consolidated of Financial Condition	
				Cash or Financial Instruments	Net Amount
			(in millions)		
Offsetting of financial assets					
Securities segregated for regulatory purposes - purchased under agreements to resell	$27,058[1]	$—	$27,058	$(27,058)	$ —
Securities borrowed	4,749	—	4,749	(4,597)	152
Securities purchased under agreements to resell	6,029	—	6,029	(6,029)	—
Financial instruments owned, at fair value					
Options	31	—	31	(16)	15
Currency forward contracts	30	—	30	—	30
Total	$37,897	$—	$37,897	$(37,700)	$197
Offsetting of financial liabilities					
Securities loaned	$ 8,940	$—	$ 8,940	$ (8,260)	$680
Financial instruments sold, but not yet purchased, at fair value					
Options	16	—	16	(16)	—
Currency forward contracts	2	—	2	—	2
Total	$ 8,958	$—	$ 8,958	$ (8,276)	$682

6. Financial Assets and Financial Liabilities (Continued)

	December 31, 2021				
	Gross Amounts of Financial Assets and Liabilities Recognized	Amounts Offset in the Consolidated Statement of Financial Condition[2]	Net Amounts Presented in the Consolidated Statement of Financial Condition	Amounts Not Offset in the Consolidated Statement of Financial Condition	
				Cash or Financial Instruments	Net Amount
			(in millions)		
Offsetting of financial assets					
Securities segregated for regulatory purposes - purchased under agreements to resell	$10,392[1]	$—	$10,392	$(10,392)	$ —
Securities borrowed	3,912	—	3,912	(3,642)	270
Securities purchased under agreements to resell	4,380	—	4,380	(4,380)	—
Financial instruments owned, at fair value					—
Options	22	—	22	(19)	3
Currency forward contracts	39	—	39	—	39
Total	$18,745	$—	$18,745	$(18,433)	$312
Offsetting of financial liabilities					
Securities loaned	$11,769	$—	$11,769	$(10,992)	$777
Financial instruments sold, but not yet purchased, at fair value					
Options	22	—	22	(19)	3
Currency forward contracts	10	—	10	—	10
Total	$11,801	$—	$11,801	$(11,011)	$790

(1) As of December 31, 2022 and 2021, the Company had $27.1 billion and $10.4 billion, respectively, of securities purchased under agreements to resell that were segregated to satisfy regulatory requirements. These securities are included in ‘‘Securities - segregated for regulatory purposes’’ in the consolidated statements of financial condition.

(2) The Company did not have any balances eligible for netting in accordance with ASC Topic 210-20 at December 31, 2022 and 2021.

6. Financial Assets and Financial Liabilities (Continued)

Secured Financing Transactions – Maturities and Collateral Pledged

The tables below present gross obligations for securities loaned transactions by remaining contractual maturity and class of collateral pledged for the periods indicated.

	December 31, 2022				
	Remaining Contractual Maturity				
	Overnight and Open	Less than 30 days	30 – 90 days	Over 90 days	Total
	(in millions)				
Securities loaned					
Stocks	$8,837	$—	$—	$—	$8,837
Corporate bonds	101	—	—	—	101
Foreign government securities	2	—	—	—	2
Total securities loaned	$8,940	$—	$—	$—	$8,940

	December 31, 2021				
	Remaining Contractual Maturity				
	Overnight and Open	Less than 30 days	30 – 90 days	Over 90 days	Total
	(in millions)				
Securities loaned					
Stocks	$11,715	$—	$—	$—	$11,715
Corporate bonds	51	—	—	—	51
Foreign government securities	3	—	—	—	3
Total securities loaned	$11,769	$—	$—	$—	$11,769

7. Collateralized Transactions

The Company enters into securities borrowing and lending transactions and agreements to repurchase and resell securities to finance trading inventory, to obtain securities for settlement and to earn residual interest rate spreads. In addition, the Company's customers pledge their securities owned to collateralize margin loans. Under these transactions, the Company either receives or provides collateral, including equity, corporate debt and U.S. government securities. Under typical agreements, the Company is permitted to sell or repledge securities received as collateral and use these securities to secure securities purchased under agreements to resell, enter into securities lending transactions or deliver these securities to counterparties to cover short positions.

The Company also engages in securities financing transactions with and for customers through margin lending. Customer receivables generated from margin lending activity are collateralized by customer-owned securities held by the Company. Customers' required margin levels and established credit limits are monitored continuously by risk management staff using automated systems. Pursuant to the Company's policy and as enforced by such systems, customers are required to deposit additional collateral or reduce positions, when necessary, to avoid automatic liquidation of their positions.

7. Collateralized Transactions (Continued)

Margin loans are extended to customers on a demand basis and are not committed facilities. Factors considered in the acceptance or rejection of margin loans are the amount of the loan, the degree of leverage being employed in the customer account and an overall evaluation of the customer's portfolio to ensure proper diversification or, in the case of concentrated positions, appropriate liquidity of the underlying collateral. Additionally, transactions relating to concentrated or restricted positions are limited or prohibited by raising the level of required margin collateral (to 100% in the extreme case). The underlying collateral for margin loans is evaluated with respect to the liquidity of the collateral positions, valuation of securities, volatility analysis and an evaluation of industry concentrations. Adherence to the Company's collateral policies significantly limits the Company's credit exposure to margin loans in the event of a customer's default. Under margin lending agreements, the Company may request additional margin collateral from customers and may sell securities that have not been paid for or purchase securities sold but not delivered from customers, if necessary. As of December 31, 2022 and 2021, approximately $38.8 billion and $54.9 billion, respectively, of customer margin loans were outstanding.

The table below presents a summary of the amounts related to collateralized transactions for the periods indicated.

	December 31, 2022		December 31, 2021	
	Permitted to Repledge	Sold or Repledged	Permitted to Repledge	Sold or Repledged
	(in millions)			
Securities lending transactions	$ 62,689	$ 7,055	$ 69,582	$ 6,192
Securities purchased under agreements to resell transactions[1]	33,208	31,108	14,715	13,956
Customer margin assets	42,222	17,008	65,899	15,936
	$138,119	$55,171	$150,196	$36,084

(1) As of December 31, 2022, $27.1 billion or 87% (as of December 31, 2021, $10.4 billion or 74%) of securities acquired through agreements to resell that are shown as repledged have been deposited in a separate bank account for the exclusive benefit of customers in accordance with SEC Rule 15c3-3.

In the normal course of business, the Company pledges qualified securities with clearing organizations to satisfy daily margin and clearing fund requirements. As of December 31, 2022 and 2021, the majority of the Company's U.S. and foreign government securities owned were pledged to clearing organizations.

The table below presents financial instruments owned and pledged as collateral, including amounts pledged to affiliates, where the counterparty has the right to repledge, for the periods indicated.

	December 31,	
	2022	2021
	(in millions)	
Stocks	$54	$ 60
U.S. and foreign government securities	35	54
	$89	$114

8. Revenues from Contracts with Customers

Revenue from contracts with customers is recognized when, or as, the Company satisfies its performance obligations by transferring the promised services to the customers. A service is transferred to a customer when, or as, the customer obtains control of that service. A performance obligation may be satisfied at a point in time or over time. Revenue from a performance obligation satisfied at a point in time is recognized at the point in time that the Company determines the customer obtains control over the promised service. Revenue from a performance obligation satisfied over time is recognized by measuring the Company's progress in satisfying the performance obligation in a manner that depicts the transfer of the services to the customer. The amount of revenue recognized reflects the consideration the Company expects to receive in exchange for those promised services (i.e., the "transaction price"). In determining the transaction price, the Company considers multiple factors, including the effects of variable consideration, if any.

8. Revenues from Contracts with Customers (Continued)

The Company's revenues from contracts with customers are recognized when the performance obligations are satisfied at an amount that reflects the consideration expected to be received in exchange for such services. The majority of the Company's performance obligations are satisfied at a point in time and are typically collected from customers by debiting their brokerage account with the Company.

Nature of Services

The Company's main sources of revenues from contracts with customers are as follows:

- *Commissions* are charged to customers for order execution services and trade clearing and settlement services. These services represent a single performance obligation as the services are not separately identifiable in the context of the contract. The Company recognizes revenue at a point in time at the execution of the order (i.e., trade date). Commissions are generally collected from cleared customers on trade date and from non-cleared customers monthly. Commissions also include payments for order flow received from IBKR Lite[SM] liquidity providers.
- *Market data fees* are charged to customers for market data services to which they subscribe that the Company delivers. The Company recognizes revenue monthly as the performance obligation is satisfied over time by continually providing market data for the period. Market data fees are collected monthly, generally in advance.
- *Risk exposure fees* are charged to customers who carry positions with a market risk that exceeds defined thresholds. The Company recognizes revenue daily as the performance obligation is satisfied at a point in time by the Company taking on the additional risk of account liquidation and potential losses due to insufficient margin. Risk exposure fees are collected daily.
- *Payments for order flow* are earned from various options exchanges based upon options trading volume originated by the Company that meets certain criteria. The Company recognizes revenue daily as the performance obligation is satisfied at a point in time on customer orders that qualify for payments subject to exchange-mandated programs. Payments for order flow are collected monthly, in arrears.
- *Minimum activity fees* are charged to customers that do not generate the required minimum monthly commission. The Company recognizes revenue monthly as the performance obligation is satisfied at a point in time by servicing customer accounts that do not generate the required minimum monthly commissions. Minimum activity fees are collected monthly, in arrears. Effective July 1, 2021, the Company eliminated minimum activity fees for most account types.

The Company also earns revenues from other services, including order cancelation or modification fees, position transfer fees, telecommunications fees, withdrawal fees and bank sweep program fees, among others.

Disaggregation of Revenue

The tables below present revenue from contracts with customers by geographic location and major types of services for the periods indicated.

	Year-Ended December 31		
	2022	2021	2020
		(in millions)	
Geographic location[1]			
United States	$ 931	$ 951	$ 806
International	575	617	481
	$1,506	$1,568	$1,287

8. Revenues from Contracts with Customers (Continued)

	Year-Ended December 31		
	2022	2021	2020
	(in millions)		
Major types of services			
Commissions	$1,322	$1,350	$1,112
Market data fees[2]	76	78	61
Risk exposure fees[2]	33	38	12
Payments for order flow[2]	37	40	27
Minimum activity fees[2]	3	18	28
Other[2]	35	44	47
	$1,506	$1,568	$1,287

(1) Based on the location of the subsidiaries in which the revenues are recorded.

(2) Included in other fees and services in the consolidated statements of comprehensive income.

Receivables and Contract Balances

Receivables arise when the Company has an unconditional right to receive payment under a contract with a customer and are derecognized when the cash is received. Receivables of $17 million and $19 million, as of December 31, 2022 and 2021, respectively, are reported in other assets in the consolidated statements of financial condition.

Contract assets arise when the revenue associated with the contract is recognized before the Company's unconditional right to receive payment under a contract with a customer (i.e., unbilled receivable) and are derecognized when either it becomes a receivable or the cash is received. Contract assets are reported in other assets in the consolidated statements of financial condition. As of December 31, 2022 and 2021, contract asset balances were not material.

Contract liabilities arise when customers remit contractual cash payments in advance of the Company satisfying its performance obligations under the contract and are derecognized when the revenue associated with the contract is recognized either when a milestone is met triggering the contractual right to bill the customer or when the performance obligation is satisfied. Contract liabilities are reported in accounts payable, accrued expenses and other liabilities in the consolidated statements of financial condition. As of December 31, 2022 and 2021, contract liability balances were not material.

9. Other Income (Loss)

The table below presents the components of other income (loss) for the periods indicated.

	Year-Ended December 31,		
	2022	2021	2020
	(in millions)		
Principal transactions	$ (16)	$ 22	$ 86
Gains (losses) from currency diversification strategy, net	(100)	(37)	(19)
Other, net	9	13	(8)
	$(107)	$ (2)	$ 59

Principal transactions include (1) trading gains and losses from the Company's remaining market making activities; (2) realized and unrealized gains and losses on financial instruments that (a) are held for purposes other than the Company's market making activities, or (b) are subject to restrictions; and (3) dividends on investments accounted at cost less impairment.

10. Employee Incentive Plans

Defined Contribution Plan

The Company offers substantially all employees of U.S.-based operating subsidiaries who have met minimum service requirements the opportunity to participate in defined contribution retirement plans qualifying under the provisions of Section 401(k) of the Internal Revenue Code. The general purpose of this plan is to provide employees with an incentive to make regular savings in order to provide additional financial security during retirement. This plan provides for the Company to match 50% of the employees' pre-tax contribution, up to a maximum of 10% of eligible earnings. The employee is vested in the matching contribution incrementally over six years of service. Included in employee compensation and benefits expenses in the consolidated statements of comprehensive income were $6 million, $5 million and $5 million of plan contributions for the years ended December 31, 2022, 2021, and 2020, respectively.

2007 Stock Incentive Plan

Under the Company's Stock Incentive Plan, up to 30 million shares of the Company's Class A common stock may be issued to satisfy vested restricted stock units granted to directors, officers, employees, contractors and consultants of the Company. The purpose of the Stock Incentive Plan is to promote the Company's long-term financial success by attracting, retaining and rewarding eligible participants.

As a result of the Company's organizational structure, there is no material dilutive effect upon ownership of common stockholders of issuing shares under the Stock Incentive Plan. The issuances do not dilute the book value of the ownership of common stockholders since the restricted stock units are granted at market value, and upon their vesting and the related issuance of shares of common stock, the ownership of IBG, Inc. in IBG LLC, increases proportionately to the shares issued. As a result of such proportionate increase in share ownership, the dilution upon issuance of common stock is borne by IBG LLC's majority member (i.e., noncontrolling interest), Holdings, and not by IBG, Inc. or its common stockholders. Additionally, dilution of earnings that may take place after issuance of common stock is reflected in EPS reported in the Company's financial statements. The EPS dilution can be neither estimated nor projected, but historically it has not been material.

The Stock Incentive Plan is administered by the Compensation Committee of the Company's Board of Directors. The Compensation Committee has discretionary authority to determine the eligibility to participate in the Stock Incentive Plan and establishes the terms and conditions of the awards, including the number of awards granted to each participant and all other terms and conditions applicable to such awards in individual grant agreements. Awards are expected to be made primarily through grants of restricted stock units. Stock Incentive Plan awards are subject to issuance over time. All previously granted but not yet earned awards may be canceled by the Company upon the participant's termination of employment or violation of certain applicable covenants before issuance, unless determined otherwise by the Compensation Committee.

The Stock Incentive Plan provides that, upon a change in control, the Compensation Committee may, at its discretion, fully vest any granted but not yet earned awards under the Stock Incentive Plan, or provide that any such granted but not yet earned awards will be honored or assumed, or new rights substituted by the new employer on a substantially similar basis and terms and conditions substantially comparable to those of the Stock Incentive Plan.

The Company expects to continue to grant awards on or about December 31 of each year to eligible participants as part of an overall plan of equity compensation. In 2021, the Company's Compensation Committee approved a change to the vesting schedule for the Stock Incentive Plan. For awards granted on December 31, 2021 onwards, restricted stock units vest and become distributable to participants 20% on each vesting date, which is on or about May 9 of each year, assuming continued employment with the Company and compliance with non-competition and other applicable covenants. The vesting and distribution of grants prior to December 31, 2021 remain in accordance with the following schedule: (a) 10% on the first vesting date, which is on or about May 9 of each year; and (b) an additional 15% on each of the following six anniversaries of the first vesting.

10. Employee Incentive Plans (Continued)

Awards granted to directors vest and are distributed as follows: (a) one-time award granted to external directors on December 31 of the year of appointment vests over a five-year period (20% per year) commencing one year after the date of grant, and (b) annual awards granted to all directors on December 31 of each year are fully vested and distributed immediately on grant date. A total of 36,609 restricted stock units have been granted to the directors cumulatively since the plan's inception.

The table below presents Stock Incentive Plan awards granted and the related fair values since the plan's inception.

	Units	Fair Value at Date of Grant ($ millions)
Prior periods (since inception)	27,018,110	$687
December 31, 2020	1,229,177	71
December 31, 2021	1,084,773[1]	84
April 25, 2022	180,889[2]	12
December 31, 2022	1,244,383	91
	30,757,332	$945

(1) Stock Incentive Plan number of granted restricted stock units related to 2021 was adjusted by 7,725 additional restricted stock units during the year ended December 31, 2022.

(2) On April 25, 2022, the Company awarded a special grant of restricted stock units to employees.

Estimated future grants under the Stock Incentive Plan are accrued for ratably during each year (see Note 2). In accordance with the vesting schedule, outstanding awards vest and are distributed to participants yearly on or about May 9 of each year. At the end of each year, no vested awards remain undistributed.

Compensation expense related to the Stock Incentive Plan recognized in the consolidated statements of comprehensive income was $92 million, $80 million and $65 million for the years ended December 31, 2022, 2021, and 2020, respectively. Estimated future compensation costs for unvested awards, net of credits for canceled awards, as of December 31, 2022 are $43 million.

The table below summarizes the Stock Incentive Plan activity for the periods indicated.

	Stock Incentive Plan Units	Intrinsic Value of SIP Shares which Vested and were Distributed ($ millions)[1]
Balance, December 31, 2019	5,127,915	
Granted	1,229,177	
Canceled	(82,496)	
Distributed	(1,300,241)	$53
Balance, December 31, 2020	4,974,355	
Granted	1,084,773[2]	
Canceled	(55,177)	
Distributed	(1,220,141)	$85
Balance, December 31, 2021	4,783,810	
Granted	1,425,272	
Canceled	(179,856)	
Distributed	(1,276,186)	$67
Balance, December 31, 2022	4,753,040	

(1) Intrinsic value of SIP units distributed represents the compensation value reported to the participants.

(2) Stock Incentive Plan number of granted restricted stock units related to 2021 was adjusted by 7,725 additional restricted stock units during the year ended December 31, 2022.

10. Employee Incentive Plans (Continued)

Awards previously granted but not yet earned under the stock plans are subject to the plans' post-employment provisions in the event a participant ceases employment with the Company. Through December 31, 2022, a total of 1,225,895 restricted stock units have been distributed under these post-employment provisions. These distributions are included in the table above.

11. Income Taxes

Income tax expense for the three years ended December 31, 2022, 2021, and 2020 differs from the U.S. federal statutory rate primarily due to the taxation treatment of income attributable to noncontrolling interests in IBG LLC. These noncontrolling interests are held directly through a U.S. partnership. Accordingly, the income attributable to these noncontrolling interests is reported in the consolidated statements of comprehensive income, but the related U.S. income tax expense attributable to these noncontrolling interests is not reported by the Company as it is generally the obligation of the noncontrolling interests. Income tax expense is also affected by the differing effective tax rates in foreign, state and local jurisdictions where certain of the Company's subsidiaries are subject to corporate taxation.

Deferred income taxes arise primarily due to the amortization of the deferred tax assets recognized in connection with the common stock offerings (see Note 4), differences in the valuation of financial assets and liabilities, and for other temporary differences arising from the deductibility of compensation and depreciation expenses in different periods for accounting and income tax return purposes.

Under U.S. GAAP, the Company is allowed to make an accounting policy election of either (1) treating taxes due on future U.S. inclusions in taxable income related to global intangible low tax income as a current-period expense when incurred (the ''period cost method'') or (2) factoring such amounts into the Company's measurement of its deferred taxes (the ''deferred method''). The Company has elected the period cost method.

The table below presents the components of the provision for income taxes for the periods indicated.

	Year-Ended December 31,		
	2022	2021	2020
	(in millions)		
Current			
Federal	$ 59	$ 62	$21
State and local	8	8	4
Foreign	69	58	43
Total current	136	128	68
Deferred			
Federal	21	15	21
State and local	4	4	(7)
Foreign	(5)	4	(5)
Total deferred	20	23	9
	$156	$151	$77

11. Income Taxes (Continued)

The table below presents a reconciliation of the statutory U.S. Federal income tax rate of 21% to the Company's effective tax rate for the periods indicated.

	Year-Ended December 31,		
	2022	2021	2020
U.S. Statutory Tax Rate	21.0%	21.0%	21.0%
State, local and foreign taxes, net of federal benefit	2.1%	3.0%	1.5%
Subtotal	23.1%	24.0%	22.5%
Less: rate attributable to noncontrolling interests	(15.3%)	(15.6%)	(16.4%)
Total	7.8%	8.4%	6.1%

The table below presents significant components of the Company's deferred tax assets and liabilities, which are reported in other assets and in accounts payable, accrued expenses and other liabilities, respectively, in the consolidated statements of financial condition for the periods indicated.

	December 31,		
	2022	2021	2020
		(in millions)	
Deferred tax assets			
Arising from the acquisition of interests in IBG LLC	$193	$209	$190
Deferred compensation	14	11	9
Other	34	22	16
Total deferred tax assets	241	242	215
Deferred tax liabilities			
Foreign	2	1	2
Other	7	11	8
Total deferred tax liabilities	9	12	10
Net deferred tax assets	$232	$230	$205

As of and for the years ended December 31, 2022 and 2021, the Company had no material valuation allowances on deferred tax assets.

The Company is subject to taxation in the U.S. and various states and foreign jurisdictions. As of December 31, 2022, the Company is no longer subject to U.S. Federal and State income tax examinations for tax years before 2016, and to non-U.S. income tax examinations for tax years prior to 2012.

As of December 31, 2022, accumulated earnings held by non-U.S. subsidiaries totaled $1.9 billion (as of December 31, 2021 $1.6 billion), of which $1.8 billion of such earnings are indefinitely reinvested abroad due to regulatory and other capital requirements in foreign jurisdictions. As a result, the Company has not provided for its proportionate share of additional foreign taxes or deferred U.S. tax on Internal Revenue Code ("IRC") Section 986 gains/losses on previously taxed earnings and any local foreign withholding taxes associated with the repatriation of such earnings. If the Company were to record a deferred tax liability due to a hypothetical repatriation of such earnings, the estimated amount of such taxes would be up to $11 million of foreign withholding taxes as of December 31, 2022.

Under U.S. GAAP, a tax benefit from an uncertain tax position may be recognized when it is more likely than not that the position will be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. Based upon the Company's review of its federal, state, local and foreign income tax returns and tax filing positions, the Company has recorded a $2 million tax liability for an uncertain tax position for an IRS audit primarily related to the IRC Section 199 Domestic Production Activities Deduction.

12. Leases

All of the Company's leases are classified as operating leases and primarily consist of real estate leases for corporate offices, data centers and other facilities. As of December 31, 2022, the weighted-average remaining lease term on these leases is approximately 7 years and the weighted-average discount rate used to measure the lease liabilities is approximately 3.70%. For the year ended December 31, 2022, right-of-use assets obtained under new operating leases were $45 million. The Company's lease agreements do not contain any residual value guarantees, restrictions, or covenants.

The table below presents balances reported in the consolidated statements of financial condition related to the Company's leases for the periods indicated.

	December 31,	
	2022	2021
	(in millions)	
Right-of-use assets[1]	$119	$101
Lease liabilities[1]	$140	$123

(1) Right-of-use assets are included in other assets and lease liabilities are included in accounts payable, accrued expenses and other liabilities in the Company's consolidated statements of financial condition.

The table below presents balances reported in the consolidated statements of comprehensive income related to the Company's leases for the periods indicated.

	Year-Ended December 31,		
	2022	2021	2020
	(in millions)		
Operating lease cost	$32	$28	$26
Variable lease cost	4	5	4
Total lease cost	$36	$33	$30

The table below reconciles the undiscounted cash flows of the Company's leases to the present value of its operating lease payments for the period indicated.

	December 31, 2022
	(in millions)
2023	$ 30
2024	26
2025	21
2026	19
2027	15
Thereafter	48
Total undiscounted operating lease payments	159
Less: imputed interest	(19)
Present value of operating lease liabilities	$140

13. Property, Equipment and Intangible Assets

Property, equipment and intangible assets, which are included in other assets in the consolidated statements of financial condition, consist of leasehold improvements, computer equipment, software developed for the Company's internal use, office furniture and equipment. The table below presents balances related to property, equipment and intangible assets for the periods indicated.

	December 31,	
	2022	2021
	(in millions)	
Leasehold improvements	$ 51	$ 43
Computer equipment	84	67
Office furniture and equipment	16	15
	151	125
Less - accumulated depreciation and amortization	(58)	(40)
Property and equipment, net	93	85
Internally developed software	87	77
Other intangible assets	4	4
Less - accumulated amortization	(43)	(35)
Intangible assets, net	48	46
Total property, equipment, and intangible assets, net	$141	$131

Depreciation and amortization of $58 million, $50 million and $42 million, for the three years ended December 31, 2022, 2021, and 2020, respectively, is included in occupancy, depreciation and amortization expenses in the consolidated statements of comprehensive income. Amortization expense related to the Company's intangible assets as of December 31, 2022 is expected to be approximately $26 million, $16 million, and $6 million, for years ended December 31, 2023, 2024, and 2025, respectively.

14. Commitments, Contingencies and Guarantees

Legal, Regulatory and Governmental Matters

The Company is subject to certain pending and threatened legal, regulatory and governmental actions and proceedings that arise out of the normal course of business. Given the inherent difficulty of predicting the outcome of such matters, particularly in proceedings where claimants seek substantial or indeterminate damages, or which are in their early stages, the Company is generally not able to quantify the actual loss or range of loss related to such legal proceedings, the manner in which they will be resolved, the timing of their final resolution or the ultimate settlement. Management believes that the resolution of these matters will not have a material effect, if any, on the Company's business or financial condition, but may have a material impact on the results of operations for a given period.

The Company accounts for potential losses related to litigation in accordance with FASB ASC Topic 450, ''Contingencies.'' As of December 31, 2022 and 2021, accruals for potential losses related to legal, regulatory and governmental actions and proceedings matters were not material.

Trading Technologies Matter

On February 3, 2010, Trading Technologies International, Inc. (''Trading Technologies'') filed a complaint in the U.S. District Court for the Northern District of Illinois, Eastern Division (the ''District Court''), against IBG LLC and IB LLC (the ''Defendants''). The complaint, as amended, alleged that the Defendants infringed twelve U.S. patents held by Trading Technologies. Trading Technologies sought damages and injunctive relief. The Defendants asserted numerous defenses to Trading Technologies' claims.

14. Commitments, Contingencies and Guarantees (Continued)

The asserted patents were the subject of petitions before the United States Patent and Trademark Office (''USPTO'') seeking Covered Business Method Review (''CBM Review''). The USPTO Patent Trial Appeal Board (''PTAB'') found all claims of ten of the twelve asserted patents to be invalid. Of the remaining two patents, 53 of the 56 claims of one patent were held invalid and the other patent survived CBM Review proceedings. Appeals were filed by either the Defendants or Trading Technologies on all PTAB determinations.

The United States Court of Appeals for the Federal Circuit affirmed the PTAB's CBM Review determinations that eight patents were invalid and vacated the CBM Review determinations of invalidity for four patents, concluding that these patents were not eligible for CBM Review. The District Court proceedings on the four patents where the CBM Review determinations had been vacated thereafter resumed in March 2019. All four patents have since expired.

In June 2021, the District Court granted summary judgment in favor of the Defendants, finding that two of the remaining four patents were invalid. The District Court trial with respect to the two remaining patents began on August 6, 2021. At trial, Trading Technologies sought damages of $962.4 million and a finding of willful infringement to support a later request for an award of enhanced damages. The Defendants believed and continue to believe that Trading Technologies' damages request was unrealistic and without merit, and was inconsistent with license agreements involving the same patents and with prior settlement agreements with unrelated third parties.

On September 7, 2021, the jury rendered its verdict finding that the Defendants infringed the two patents, but did not willfully infringe either patent, finding that the two patents were not invalid and awarding $6.6 million in damages to Trading Technologies.

On October 5, 2021, Trading Technologies filed motions for a new trial on damages and willfulness, and to amend the judgment to include pre-judgment and post-judgment interest. On October 7, 2021, Trading Technologies filed a Bill of Costs seeking to recover certain litigation costs. The Defendants opposed each of these motions. On December 21, 2021, Trading Technologies filed a motion seeking to substitute Harris Brumfield (through a trust controlled by Brumfield) as the plaintiff. The Defendants did not oppose the substitution. On January 11, 2022, the District Court granted in part and denied in part Trading Technologies' motion seeking pre-judgment and post-judgment interest, denying the amount Trading Technologies was seeking, but awarding Trading Technologies pre-judgment interest in the amount of $2.1 million and post-judgment interest in an amount to be calculated pursuant to the Court's orders. On February 22, 2022, the District Court denied in its entirety Trading Technologies' motion seeking a new trial on damages and willfulness. On March 24, 2022, Harris Brumfield filed a notice of appeal with the Court of Appeals for the Federal Circuit of the District Court's judgment, certain other orders of the Court, and generally any and all other orders, rulings, findings, and/or conclusions adverse to Trading Technologies. On March 31, 2022, the District Court granted Trading Technologies' bill of costs in the amount of $490,232, which was less than the amount Trading Technologies sought. On April 7, 2022, the Defendants filed a notice of cross-appeal. Brumfield's Opening Brief was filed on August 26, 2022, and the Defendants' filed an Opposition Brief on November 18, 2022. On December 24, 2022, Brumfield filed a Reply Brief. The appeal is still pending. The Defendants continue to believe in the invalidity of the two patents that were the subject of the jury verdict, and which have expired.

While it is difficult to predict the ultimate outcome of the matter and litigation is inherently uncertain, the Company believes in the merits of its positions and will defend them vigorously.

Class Action Matter

On December 18, 2015, a former individual customer filed a purported class action complaint against IB LLC, IBG, Inc., and Thomas Frank, Ph.D., the Company's Executive Vice President and Chief Information Officer, in the U.S. District Court for the District of Connecticut. The complaint alleges that a purported class of IB LLC's customers were harmed by alleged ''flaws'' in the computerized system used to close out (i.e., liquidate) positions in customer brokerage accounts that have margin deficiencies. The complaint seeks, among other things, undefined compensatory damages and declaratory and injunctive relief.

14. Commitments, Contingencies and Guarantees (Continued)

On September 28, 2016, the District Court issued an order granting the Company's motion to dismiss the complaint in its entirety, and without providing plaintiff leave to amend. On September 28, 2017, the plaintiff appealed to the United States Court of Appeals for the Second Circuit. On September 26, 2018, the Court of Appeals affirmed the dismissal of plaintiff's claims of breach of contract and commercially unreasonable liquidation but vacated and remanded back to the District Court plaintiff's claims for negligence. On November 30, 2018, the plaintiff filed a second amended complaint. The Company filed a motion to dismiss the new complaint on January 11, 2019, which was denied on September 30, 2019. On December 9, 2019, the Company filed a motion requesting that the District Court certify to the Connecticut Supreme Court two questions of Connecticut law directly relevant to the motion to dismiss. The Court denied the Company's motion to certify on May 15, 2020. The plaintiff served a motion for class certification on March 18, 2022. The motion is now fully briefed. The Court has not yet set a date for oral argument. On March 25, 2022, the plaintiff also filed a motion for leave to amend his complaint, which was granted on July 5, 2022. The plaintiff filed his third amended complaint on July 14, 2022. The Company's answer was filed on July 26, 2022. The Company does not believe that a purported class action is appropriate given the great differences in portfolios, markets and many other circumstances surrounding the liquidation of any particular customer's margin-deficient account. IB LLC and the related defendants intend to continue to defend themselves vigorously against the case and, consistent with past practice in connection with this type of unwarranted action, any potential claims for counsel fees and expenses incurred in defending the case may be fully pursued against the plaintiff.

Regulatory Matters

The Company is subject to regulatory oversight and examination by numerous governmental and self-regulatory authorities. As announced on August 10, 2020, the Company agreed to settle certain matters related to its historical anti-money laundering and Bank Secrecy Act practices and procedures with FINRA, the SEC and the CFTC. As part of the settlements, the Company agreed to pay penalties of $15 million to FINRA, $11.5 million to the SEC and $11.5 million to the CFTC, plus approximately $700,000 in disgorgement. In addition, the Company agreed to continue the retention of an independent consultant to review the implementation of its enhanced compliance practices and procedures. The Company is also cooperating with a United States Department of Justice inquiry concerning these matters, and while its outcome cannot be predicted, the Company does not believe that the resolution of this inquiry is likely to have a materially adverse effect on its financial results.

In November 2022, the SEC sent IB LLC and Interactive Brokers Corp. (''IB Corp.'') a request for information related to the Company's compliance with records preservation requirements relating to business communications sent over electronic messaging channels that have not been approved by the Company. As has been publicly reported, the SEC is conducting similar investigations of other financial services firms. The Company is cooperating with the SEC's inquiry.

Guarantees

Certain of the operating subsidiaries provide guarantees to securities and commodities clearing houses and exchanges which meet the accounting definition of a guarantee under FASB ASC Topic 460, ''Guarantees.'' Under standard membership agreements, clearing house and exchange members are required to guarantee collectively the performance of other members. Under the agreements, if a member becomes unable to satisfy its obligations, other members would be required to meet shortfalls. In the opinion of management, the operating subsidiaries' liability under these arrangements is not quantifiable and could exceed the cash and securities they have posted as collateral. However, the potential for these operating subsidiaries to be required to make payments under these arrangements is remote. Accordingly, no contingent liability is carried in the consolidated statements of financial condition for these arrangements.

14. Commitments, Contingencies and Guarantees (Continued)

In connection with its retail brokerage business, IB LLC or other electronic brokerage operating subsidiaries perform securities and commodities execution, clearance and settlement on behalf of their customers for whom they commit to settle trades submitted by such customers with the respective clearing houses. If a customer fails to fulfill its settlement obligations, the respective operating subsidiary must fulfill those settlement obligations. No contingent liability is carried on the consolidated statements of financial condition for such customer obligations.

Other Commitments

Certain clearing houses, clearing banks and firms used by certain operating subsidiaries are given a security interest in certain assets of those operating subsidiaries held by those clearing organizations. These assets may be applied to satisfy the obligations of those operating subsidiaries to the respective clearing organizations.

15. Geographic Information

The Company operates its automated global business in the U.S. and international markets on more than 150 electronic exchanges and market centers. A significant portion of the Company's net revenues is generated by subsidiaries operating outside the U.S. International operations are conducted in 32 countries in Europe, Asia/Pacific and the Americas (outside the U.S.). The following table presents total net revenues and income before income taxes by geographic area for the periods indicated.

Significant transactions and balances between the operating subsidiaries occur, primarily as a result of certain operating subsidiaries holding exchange or clearing organization memberships, which are utilized to provide execution and clearing services to subsidiaries. Intra-region income and expenses and related balances have been eliminated in this geographic information to reflect the external business conducted in each geographic region. The geographic analysis presented below is based on the location of the subsidiaries in which the transactions are recorded. This geographic information does not reflect the way the Company's business is managed.

	Year-Ended December 31,		
	2022	2021	2020
		(in millions)	
Net revenues			
United States	$2,115	$1,881	$1,584
International	952	833	634
Total net revenues	$3,067	$2,714	$2,218
Income before income taxes			
United States	$1,546	$1,474	$1,032
International	452	313	224
Total income before income taxes	$1,998	$1,787	$1,256

16. Regulatory Requirements

As of December 31, 2022, aggregate excess regulatory capital for all operating subsidiaries was $8.7 billion.

IB LLC, IBKRSS and IB Corp. are subject to the Uniform Net Capital Rule (Rule 15c3-1) under the Exchange Act. IB LLC is also subject to the CFTC's minimum financial requirements (Regulation 1.17). IBC is subject to the Investment Industry Regulatory Organization of Canada risk-adjusted capital requirement. IBKRFS is subject to the Swiss Financial Market Supervisory Authority eligible equity requirement, IBUK is subject to the United Kingdom Financial Conduct Authority Capital Requirements Directive, IBIE is subject to the Central Bank of Ireland financial resources requirement, IBCE is subject to the Hungarian National Bank financial resource requirement, IBI is subject to the National Stock Exchange of India net capital requirements, IBHK is subject to the Hong Kong Securities Futures Commission liquid capital requirement, IBSJ is subject to the Japanese Financial Supervisory Agency capital requirements, IBSG is subject to the Monetary Authority of Singapore capital requirements, and IBA is subject to the Australian Securities Exchange liquid capital requirement.

The table below summarizes capital, capital requirements and excess regulatory capital as of December 31, 2022.

	Net Capital/ Eligible Equity	Requirement	Excess
		(in millions)	
IB LLC	$6,425	$ 661	$5,764
IBKRFS	558	12	546
IBHK	945	200	745
Other regulated operating subsidiaries	1,851	255	1,596
	$9,779	$1,128	$8,651

Regulatory capital requirements could restrict the operating subsidiaries from expanding their business and declaring dividends if their net capital does not meet regulatory requirements. Also, certain operating subsidiaries are subject to other regulatory restrictions and requirements.

As of December 31, 2022, all regulated operating subsidiaries were in compliance with their respective regulatory capital requirements.

17. Related Party Transactions

Receivable from affiliate, reported in other assets in the consolidated statements of financial condition, represents amounts advanced to Holdings and payable to affiliate represents amounts payable to Holdings under the Tax Receivable Agreement (see Note 4).

Included in receivables from and payables to customers in the consolidated statements of financial condition as of December 31, 2022 and 2021 were accounts receivable from directors, officers and their affiliates of $17 million and $28 million, respectively, and payables of $1,208 million and $1,197 million, respectively. The Company may extend credit to these related parties in connection with margin and securities loans. Such loans are (i) made in the ordinary course of business, (ii) are made on substantially the same terms, including interest rates and collateral, as those prevailing at the time for comparable loans with persons not related to the company, and (iii) do not involve more than the normal risk of collectability or present other unfavorable features.

18. Senior Notes Payable

IBG LLC from time to time may offer senior notes in private placements to certain qualified customers of IB LLC at an issue price of $1 thousand per note. The senior notes will mature no later than the thirtieth day following the issuance date. IBG LLC, at its option, may redeem the senior notes at any time, at a redemption price equal to 100% of the principal amount of the senior notes to be redeemed, plus accrued interest. The senior notes will pay a fixed rate of interest during their tenure. The interest rate is calculated by adding the benchmark rate to a rate (spread) that IBG LLC will announce from time to time. The benchmark rate is the effective federal funds rate as reported by the Federal Reserve Bank of New York on the morning of the date of the offering. IBG LLC intends to use the proceeds for general financing purposes when interest spread opportunities arise.

The carrying value of the senior notes approximates fair value since the notes are short-term in nature. During the year ended December 31, 2022, the Company did not issue any senior notes. As of December 31, 2022 and 2021, there were no senior notes outstanding. Interest expense on the senior notes for the year ended December 31, 2022, 2021, and 2020 was $0, and $1 and $0 million, respectively.

19. Subsequent Events

The Company has evaluated subsequent events for adjustment to or disclosure in its consolidated financial statements through the date the consolidated financial statements were issued.

Except as disclosed in Note 4 and Note 14, no other recordable or disclosable events occurred.

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ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures that are designed to provide reasonable assurance that information required to be disclosed in the reports it files or submits under the Securities Exchange Act of 1934 (the ''Exchange Act'') is recorded, processed, summarized and reported accurately and within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to management, including the Chief Executive Officer (''CEO'') and Chief Financial Officer (''CFO''), as appropriate, to allow timely decisions regarding required disclosure.

Under the supervision and with the participation of our management, including our CEO and our CFO, we conducted an evaluation of our disclosure controls and procedures; as such term is defined under Exchange Act Rule 13a-15(e). Based on this evaluation, our CEO and our CFO concluded that our disclosure controls and procedures were effective as of the end of the period covered by this annual report.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. IBG, Inc.'s internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

Our internal control over financial reporting includes those policies and procedures that pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of IBG, Inc.; provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of IBG, Inc.'s management and directors; and provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Our Accounting Policy Committee (the ''APC'') provides a robust framework for the design and implementation of all relevant controls. The APC is comprised of six (6) experienced subject matter experts from within the Company's accounting and regulatory disciplines, and includes the CFO and the Chief Accounting Officer. The APC is responsible for assessing the effects of complex transactions and related accounting guidance on the Company's financial statements and to report the results of its assessments to management and to the Audit Committee. The APC's mandate includes review and approval of the adoption and implementation of accounting guidance (new or newly applicable) by the Company.

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

Management, including our CEO and our CFO, assessed the effectiveness of IBG, Inc.'s internal control over financial reporting as of December 31, 2022. In making this assessment, management used the criteria set forth in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (''COSO''). Based on management's assessment and those criteria, management concluded that IBG, Inc. maintained effective internal control over financial reporting as of December 31, 2022.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2022, has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which appears herein.

Changes to Internal Control over Financial Reporting

No changes to our internal control over financial reporting for the year ended December 31, 2022 have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of
Interactive Brokers Group, Inc.
Greenwich, CT

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Interactive Brokers Group, Inc. and subsidiaries (the ''Company'') as of December 31, 2022, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated statements as of and for the year ended December 31, 2022, of the Company and our report dated February 24, 2023, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/ Deloitte & Touche LLP
New York, New York
February 24, 2023

ITEM 9B. OTHER INFORMATION

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information related to the Company's directors and nominees under the following captions in the Company's Proxy Statement is incorporated by reference herein:

- ''Item 1 - Election of Directors''
- ''Item 1 - Election of Directors - Board Meetings and Committees''

Code of Ethics

IBG, Inc.'s Code of Ethics and Business Conduct applies to all directors, officers and employees, including its Chief Executive Officer, its Chief Financial Officer and its Chief Accounting Officer. Information relating to our Code of Business Conduct and Ethics is included in Part I, Item 1 of this Annual Report on Form 10-K. We will post any amendments to the Code of Ethics and Business Conduct, and any waivers that are required to be disclosed by the rules of either the SEC or Nasdaq on the investor relations section of our website located at www.interactivebrokers.com/ir.

ITEM 11. EXECUTIVE COMPENSATION

Information relating to director and executive officer compensation under the following captions in the Company's Proxy Statement is incorporated by reference herein:

- ''Compensation of Directors''
- ''Executive Compensation''

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Other information relating to security ownership of certain beneficial owners and management is set forth under the caption ''Beneficial Ownership of Directors, Executive Officers and Owners of More than Five Percent'' in the Company's Proxy Statement and such information is incorporated by reference herein.

ITEM 13. TRANSACTIONS WITH RELATED PERSONS, PROMOTERS AND CERTAIN CONTROL PERSONS

Information regarding certain relationships and related transactions under the following caption in the Company's Proxy Statement and such information is incorporated by reference herein:

- ''Certain Relationships and Related Transactions''

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information regarding principal accounting fees and under the following caption in the Company's Proxy Statement is incorporated by reference herein:

- ''Item 2 - Ratification of Appointment of Independent Registered Public Accounting Firm''

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

Documents filed as part of this report

1. Consolidated Financial Statements

The consolidated financial statements required to be filed in the Annual Report on Form 10-K are listed on page F-63 hereof and in Part II, Item 8 hereof.

2. Financial Statement Schedule

The financial statement schedule required in the Annual Report on Form 10-K is listed on page F-110 hereof. The required schedule appears on pages F-110 through F-5 hereof.

3. Exhibits

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation of Interactive Brokers Group, Inc. (filed as Exhibit 3.1 to Amendment No. 2 to the Registration Statement on Form S-1 filed by the Company on April 4, 2007).**
3.2	Amended bylaws of Interactive Brokers Group, Inc. (filed as Exhibit 3.1 to the Form 8-K filed by the Company on February 24, 2016).**
4.1	Description of the Registrant's Securities.
10.1	Amended and Restated Operating Agreement of IBG LLC (filed as Exhibit 10.1 to the Quarterly Report on Form 10-Q for the Quarterly Period Ended March 31, 2007 filed by the Company on June 15, 2007).**
10.2	Form of Limited Liability Company Operating Agreement of IBG Holdings LLC (filed as Exhibit 10.5 to Amendment No. 1 to the Registration Statement on Form S-1 filed by the Company on February 12, 2007).**
10.3	Exchange Agreement by and among Interactive Brokers Group, Inc., IBG Holdings LLC, IBG LLC and the Members of IBG LLC (filed as Exhibit 10.3 to the Quarterly Report on Form 10-Q for the Quarterly Period Ended September 30, 2009 filed by the Company on November 11, 2009).**
10.4	Tax Receivable Agreement by and between Interactive Brokers Group, Inc. and IBG Holdings LLC (filed as Exhibit 10.3 to the Quarterly Report on Form 10-Q for the Quarterly Period Ended March 31, 2007 filed by the Company on June 15, 2007).**
10.5	Amended Interactive Brokers Group, Inc. 2007 Stock Incentive Plan (filed as Exhibit 10.9 to Form 10-Q for the Quarterly Period Ended June 30, 2018 filed by the Company on August 8, 2018)**+
10.6	Interactive Brokers Group, Inc. 2007 ROI Unit Stock Plan. (filed as Exhibit 10.9 to Amendment No. 2 to the Registration Statement on Form S-1 filed by the Company on April 4, 2007).**+
10.7	Interactive Brokers Group, Inc. Amendment to the Exchange Agreement (filed as Exhibit 10.1 to the Form 8-K filed by the Company on June 6, 2012).**+
10.8	Second Amendment to Exchange Agreement by and among Interactive Brokers Group, Inc., IBG Holdings LLC, IBG (filed as Exhibit 10.1 to the Quarterly Report on Form 10-Q for the Quarterly Period Ended September 31, 2015 filed by the Company on November 9, 2015).**
10.9	First Amendment to Limited Liability Company Agreement of IBG Holdings LLC (filed as Exhibit 10.2 to the Quarterly Report on Form 10-Q for the Quarterly Period Ended September 31, 2015 filed by the Company on November 9, 2015).**
21.1	Subsidiaries of the registrant.
23.1	Consent of Independent Registered Public Accounting Firm.
31.1	Certification of Chief Executive Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document*
101.SCH	XBRL Extension Schema*
101.CAL	XBRL Extension Calculation Linkbase*
101.DEF	XBRL Extension Definition Linkbase*
101.LAB	XBRL Extension Label Linkbase*
101.PRE	XBRL Extension Presentation Linkbase*
104	Cover Page Interactive Data File - the cover page XBRL tags are embedded within the Inline XBRL document.

** Previously filed; incorporated herein by reference.

† These exhibits relate to management contracts or compensatory plans or arrangements.

* Attached as Exhibit 101 to this Annual Report on Form 10-K for the annual period ended December 31, 2022, are the following materials formatted in iXBRL (Inline eXtensible Business Reporting Language) (i) the Consolidated Statements of Financial Condition, (ii) the Consolidated Statements of Comprehensive Income, (iii) the Consolidated Statements of Cash Flows, (iv) the Consolidated Statements of Changes in Stockholders' Equity and (v) Notes to the Consolidated Financial Statements tagged in detail levels 1-4.

ITEMS. 15 (a)(1) and 15 (a)(2) INDEX TO FINANCIAL STATEMENTS AND FINANCIAL STATEMENT SCHEDULE

Financial Statement Schedule

Schedule I—Condensed Financial Information of Registrant (Parent Company Only)

Report of Independent Registered Public Accounting Firm (PCAOB ID No. 34)	F-1
Condensed Statements of Financial Condition as of December 31, 2022 and 2021	F-2
Condensed Statements of Comprehensive Income for the Years ended December 31, 2022, 2021, and 2020	F-3
Condensed Statements of Cash Flow for the Years ended December 31, 2022, 2021, and 2020	F-4
Notes to Condensed Financial Statements	F-5

ITEM 16. 10-K SUMMARY

None.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of
Interactive Brokers Group, Inc.
Greenwich, CT

Opinion on the Financial Statement Schedules

We have audited the consolidated financial statements of Interactive Brokers Group, Inc. and subsidiaries (the ‘‘Company’’) as of December 31, 2022 and 2021, and for each of the three years in the period ended December 31, 2022, and the Company’s internal control over financial reporting as of December 31, 2022, and have issued our reports thereon dated February 24, 2023; such consolidated financial statements and reports are included elsewhere in this Form 10-K. Our audits also included the financial statement schedules of the Company listed in the Index at Item 15. These condensed financial statement schedules are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statement schedules based on our audits. In our opinion, such condensed financial statement schedules, when considered in relation to the consolidated financial statements taken as a whole, present fairly, in all material respects, the information set forth therein.

/s/ Deloitte & Touche LLP
New York, New York
February 24, 2023

We have served as the Company’s auditor since 1990

INTERACTIVE BROKERS GROUP, INC.
(Parent Company Only)
CONDENSED STATEMENTS OF FINANCIAL CONDITION

(in millions, except share amounts)	December 31, 2022	December 31, 2021
Assets		
Cash and cash equivalents	$ 1	$ —
Investments in subsidiaries, equity basis	2,845	2,400
Other assets	231	236
Total assets	$3,077	$2,636
Liabilities and Equity		
Liabilities:		
Payable to affiliates	$ 214	$ 222
Accrued expenses and other liabilities	15	19
	229	241
Stockholders' equity:		
Common stock, $0.01 par value per share:		
Class A – Authorized - 1,000,000,000, Issued - 103,057,148 and 98,359,572 shares, Outstanding – 102,887,728 and 98,204,658 shares as of December 31, 2022 and 2021	1	1
Class B – Authorized, Issued and Outstanding – 100 shares as of December 31, 2022 and 2021	—	—
Additional paid-in capital	1,581	1,442
Retained earnings	1,294	953
Accumulated other comprehensive income, net of income taxes of $0 and $0 as of December 31, 2022 and 2021	(22)	4
Treasury stock, at cost, 169,420 and 154,914 shares as of December 31, 2022 and 2021	(6)	(5)
Total equity	2,848	2,395
Total liabilities and equity	$3,077	$2,636

See accompanying notes to the condensed financial statements.

INTERACTIVE BROKERS GROUP, INC.
(Parent Company Only)
CONDENSED STATEMENTS OF COMPREHENSIVE INCOME

(in millions)	Year-Ended December 31, 2022	2021	2020
Income (loss) before income from subsidiaries	$ 4	$ —	$ (3)
Undistributed gains of subsidiaries, net	463	383	237
Income tax expense	87	75	39
Net income	$380	$308	$195
Net income available for common stockholders	$380	$308	$195
Cumulative translation adjustment, net of tax	(26)	(22)	26
Comprehensive income available for common stockholders	$354	$286	$221

See accompanying notes to the condensed financial statements.

INTERACTIVE BROKERS GROUP, INC.
(Parent Company Only)
CONDENSED STATEMENTS OF CASH FLOWS

(in millions)	Year-Ended December 31, 2022	2021	2020
Cash flows from operating activities			
Net income	$ 380	$ 308	$ 195
Adjustments to reconcile net income to net cash used in operating activities			
Undistributed gains of subsidiaries, net	(463)	(383)	(237)
Deferred income taxes	28	18	15
(Gain) loss on remeasurement of Tax Receivable Agreement liability	(6)	(1)	3
Changes in operating assets and liabilities	20	21	(17)
Net cash used in operating activities	(41)	(37)	(41)
Cash flows provided by investing activities	127	111	67
Cash flows used in financing activities	(59)	(56)	(49)
Effect of exchange rate changes on cash and cash equivalents	(26)	(22)	26
Net increase in cash and cash equivalents	1	(4)	3
Cash and cash equivalents at beginning of period	—	4	1
Cash and cash equivalents at end of period	$ 1	$ —	$ 4
Supplemental disclosures of cash flow information			
Cash paid for interest	$ 1	$ 1	$ —
Cash paid for taxes, net	$ 67	$ 57	$ 16
Non-cash investing activities:			
Non-cash distributions from subsidiaries	$ 1	$ 1	$ 1

See accompanying notes to the condensed financial statements.

INTERACTIVE BROKERS GROUP, INC.
(Parent Company Only)
NOTES TO CONDENSED FINANCIAL STATEMENTS

1. Basis of Presentation

The accompanying condensed financial statements (the ''Parent Company Financial Statements'') of Interactive Brokers Group, Inc. (''IBG, Inc.''), a Delaware holding company, including the notes thereto, should be read in conjunction with the consolidated financial statements of IBG, Inc. and its subsidiaries (the ''Company'') and the notes thereto. IBG, Inc.'s primary asset is its ownership interest in IBG LLC, an automated global electronic broker specializing in executing and clearing trades in stocks, options, futures, foreign exchange instruments, bonds, mutual funds, exchange-traded funds (''ETFs'') and precious metals on more than 150 electronic exchanges and market centers around the world and offering custody, prime brokerage, securities and margin lending services to customers.

The preparation of the Parent Company Financial Statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts and disclosures in the condensed financial statements and accompanying notes.

Income Taxes

Refer to Note 2 to the consolidated financial statements.

2. Related Party Transactions

As of December 31, 2022, receivables from affiliates was immaterial and as of December 31, 2021, there were no receivables from affiliates. Dividends received from IBG LLC for the three years ended December 31, 2022, 2021, and 2020, were $128 million, $112 million and $68 million, respectively.

As of December 31, 2022 and 2021, respectively, payable to affiliates of $214 million and $222 million consisted primarily of amounts payable to Holdings under the Tax Receivable Agreement.

3. Stockholders' Equity

Refer to Note 4 to the consolidated financial statements.

4. Employee Incentive Plans

Refer to Note 10 to the consolidated financial statements.

5. Commitments, Contingencies and Guarantees

Refer to Note 14 to the consolidated financial statements.

6. Subsequent Events

As required by FASB ASC Topic, ''Subsequent Events,'' IBG, Inc. has evaluated subsequent events for adjustment to or disclosure in its condensed financial statements through the date the condensed financial statements were issued.

Except as disclosed in Note 4 and Note 14 to the consolidated financial statements, no other recordable or disclosable events occurred.

****

SIGNATURES

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

INTERACTIVE BROKERS GROUP, INC.

/s/ Paul J. Brody

Name: Paul J. Brody
Title: *Chief Financial Officer, Treasurer and Secretary*
(Signing both in his capacity as a duly authorized officer and as principal financial officer of the registrant)

Date: February 24, 2023

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/s/ Thomas Peterffy Thomas Peterffy	Chairman of the Board of Directors	February 24, 2023
/s/ Milan Galik Milan Galik	Chief Executive Officer and President (Principal Executive Officer)	February 24, 2023
/s/ Denis Mendonca Denis Mendonca	Chief Accounting Officer (Principal Accounting Officer)	February 24, 2023
/s/ Lawrence E. Harris Lawrence E. Harris	Director	February 24, 2023
/s/ Gary Katz Gary Katz	Director	February 24, 2023
/s/ Philip Uhde Philip Uhde	Director	February 24, 2023

Exhibit 4.1

DESCRIPTION OF CAPITAL STOCK

The following is a summary of Interactive Brokers Group, Inc.'s capital stock and provisions of our certificate of incorporation and bylaws, as each is currently in effect. This summary does not purport to be complete and is qualified in its entirety by the provisions of our certificate of incorporation and bylaws, copies of which are incorporated by reference as exhibits to this Annual Report on Form 10-K. When we use the terms ''we,'' ''us,'' and ''our,'' we mean solely Interactive Brokers Group, Inc. and not our subsidiaries.

Our authorized capital stock consists of 1,000,000,000 shares of Class A common stock, par value $0.01 per share, 100 shares of Class B common stock, par value $0.01 per share and 10,000 shares of preferred stock. In this section, when we refer to ''common stock,'' we are referring to Class A common stock and Class B common stock, taken as a whole.

Common Stock

Except as otherwise provided in our organizational documents and applicable law, all shares of common stock are identical and entitle the holder to the same rights and privileges and subjects them to the same limitations and restrictions. The principle difference between the Class A and Class B common stock concerns relative voting rights.

Class A common stock

Voting rights

The holders of Class A common stock are entitled to one vote per share. Holders of shares of Class A common stock are not entitled to cumulate their votes in the election of directors. Generally, all matters to be voted on by stockholders must be approved by a majority (or, in the case of election of directors, by a plurality) of the votes entitled to be cast by all shares of Class A common stock and Class B common stock present in person or represented by proxy, voting together as a single class. Except as otherwise provided by law, amendments to our amended and restated certificate of incorporation must be approved by a majority of the combined voting power of all shares of Class A common stock and Class B common stock, voting together as a single class. However, amendments to the amended and restated certificate of incorporation that would alter or change the powers, preferences or special rights of the Class A common stock so as to affect them adversely also must be approved by a majority of the votes entitled to be cast by the holders of the shares affected by the amendment, voting as a separate class. Notwithstanding the foregoing, any amendment to our amended and restated certificate of incorporation to increase or decrease the authorized shares of any class of common stock (but not below the number of shares thereof then outstanding) shall be approved upon the affirmative vote of the holders of a majority of the shares of Class A common stock and Class B common stock, voting together as a single class.

Dividend rights

Subject to the rights of any Preferred Stock, holders of Class A common stock share ratably (based on the number of shares of common stock held) in any dividend declared by our board of directors. Dividends consisting of shares of Class A common stock may be paid only as follows: (i) shares of Class A common stock may be paid only to holders of shares of Class A common stock; and (ii) shares are paid proportionally with respect to each outstanding share of Class A common stock. We may not subdivide or combine shares of either class of common stock without at the same time proportionally subdividing or combining shares of the other class. Dividends payable to holders of Class B common stock can only be paid if dividends in the same amount per share are simultaneously paid to holders of Class A common stock.

Liquidation rights

On our liquidation, dissolution or winding up and subject to the rights of any Preferred Stock, all holders of Class A common stock are entitled to share ratably in any assets available for distribution to holders of shares of common stock.

Other matters

In accordance with the amended and restated limited liability company agreement pursuant to which IBG LLC is governed, we intend to keep the number of outstanding IBG LLC membership interests owned by us equal to the number of outstanding shares of our common stock at all times. This means that as we issue additional shares of our common stock we would expect to use the proceeds to acquire a corresponding number of shares in IBG LLC. To the extent this occurs, existing common stockholders experience no material dilution with regard to their equity interest in IBG LLC as a result of the issuance of additional shares of our common stock.

In the event of our merger or consolidation with or into another company in connection with which shares of either class of common stock are converted into or exchangeable for shares of stock, other securities or property (including cash), all holders of common stock, regardless of class, are entitled to receive the same kind and amount of shares of stock and other securities and property (including cash), provided that if shares of either class of common stock are exchanged for shares of capital stock, such shares exchanged for or changed into may differ to the extent that the Class A common stock and the Class B common stock differ.

No shares of either class of common stock are subject to redemption or have preemptive rights to purchase additional shares of either class of common stock. All outstanding shares of Class A common stock have been legally issued, fully paid and nonassessable.

Class B common stock

Voting rights

The holders of Class B common stock, in the aggregate, are entitled to the number of votes equal to the number of IBG LLC membership interests held by such holders. IBG Holdings LLC, as the sole holder of the Class B common stock, is entitled to approximately 317 million votes, as of December 31, 2022.

Holders of shares of Class B common stock are not entitled to cumulate their votes in the election of directors. Generally, all matters to be voted on by stockholders must be approved by a majority (or, in the case of election of directors, by a plurality) of the votes entitled to be cast by all shares of Class B common stock and Class A common stock present in person or represented by proxy, voting together as a single class. Except as otherwise provided by law, amendments to the amended and restated certificate of incorporation must be approved by a majority of the combined voting power of all shares of Class B common stock and Class A common stock, voting together as a single class. However, amendments to the certificate of incorporation that would alter or change the powers, preferences or special rights of the Class B common stock so as to affect them adversely also must be approved by a majority of the votes entitled to be cast by the holders of the shares affected by the amendment, voting as a separate class. Notwithstanding the foregoing, any amendment to our amended and restated certificate of incorporation to increase or decrease the authorized shares of any class of common stock (but not below the number of shares thereof then outstanding) shall be approved upon the affirmative vote of the holders of a majority of the shares of Class B common stock and Class A common stock, voting together as a single class.

Dividend rights

Subject to the rights of any Preferred Stock, holders of Class B common stock share ratably (based on the number of shares of common stock held) in any dividend declared by the board of directors. Dividends consisting of shares of Class B common stock may be paid only as follows: (i) shares of Class B common stock may be paid only to holders of shares of Class B common stock; and (ii) shares are paid proportionally with respect to each outstanding share of Class B common stock. We may not subdivide or combine shares of either class of common stock without at the same time proportionally subdividing or combining shares of the other class. Dividends payable to holders of Class B common stock can only be paid if dividends in the same amount per share are simultaneously paid to holders of Class A common stock.

Liquidation rights

On our liquidation, dissolution or winding up and subject to the rights of any Preferred Stock, all holders of Class B common stock are entitled to share ratably in any assets available for distribution to holders of shares of common stock.

Other matters

In the event of our merger or consolidation with or into another company in connection with which shares of either class of common stock are converted into or exchangeable for shares of stock, other securities or property (including cash), all holders of common stock, regardless of class, are entitled to receive the same kind and amount of shares of stock and other securities and property (including cash), provided that, if shares of either class of common stock are exchanged for shares of capital stock, such shares exchanged for or changed into may differ to the extent that the Class A common stock and the Class B common stock differ.

No shares of either class of common stock are subject to redemption or will have preemptive rights to purchase additional shares of either class of common stock. All outstanding shares of Class B common stock have been legally issued and are fully paid and nonassessable.

Preferred Stock

Our board of directors has the authority, without further action by our stockholders, to issue our preferred stock in one or more series and to fix the rights, preferences, privileges, and restrictions thereof. These rights, preferences, and privileges include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms, and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of our common stock. The issuance of our preferred stock could adversely affect the voting power of our holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of our preferred stock could have the effect of delaying, deferring, or preventing a change in our control.

Anti-takeover Effects of the Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Certain provisions of our amended and restated certificate of incorporation and our bylaws could have anti-takeover effects. These provisions are intended to enhance the likelihood of continuity and stability in the composition of our corporate policies formulated by our board of directors. In addition, these provisions also are intended to ensure that our board of directors will have sufficient time to fulfill its fiduciary duties to us and our stockholders. These provisions also are designed to reduce our vulnerability to an unsolicited proposal for our takeover that does not contemplate the acquisition of all of our outstanding shares or an unsolicited proposal for the restructuring or sale of all or part of us. The provisions are also intended to discourage certain tactics that may be used in proxy fights. However, these provisions could delay or frustrate the removal of incumbent directors or the assumption of control of us by the holder of a large block of common stock, and could also discourage or make more difficult a merger, tender offer, or proxy contest, even if such event would be favorable to the interest of our stockholders.

Special meetings of stockholders. Our bylaws preclude our stockholders from calling special meetings of stockholders or requiring the board of directors or any officer to call such a meeting or from proposing business at such a meeting. Our bylaws provide that only a majority of our board of directors, the chairman of the board or the chief executive officer can call a special meeting of stockholders. Because our stockholders do not have the right to call a special meeting, a stockholder cannot force stockholder consideration of a proposal over the opposition of the board of directors by calling a special meeting of stockholders prior to the time a majority of the board of directors, the chairman of the board or the chief executive officer believes the matter should be considered or until the next annual meeting provided that the requestor met the notice requirements. The restriction on the ability of stockholders to call a special meeting means that a proposal to replace board members also can be delayed until the next annual meeting.

Other limitations on stockholder actions. Advance notice is required for stockholders to nominate directors or to submit proposals for consideration at meetings of stockholders. This provision may have the effect of precluding the conduct of certain business at a meeting if the proper notice is not provided and may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company. In addition, the ability of our stockholders to remove directors without cause is precluded.

Section 203 of the General Corporation Law of the State of Delaware

We are subject to Section 203 of the General Corporation Law of the State of Delaware, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that such stockholder became an interested stockholder, with the following exceptions:

- prior to such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested holder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned by persons who are directors and also officers and by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; and
- on or subsequent to such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least $66^2/3\%$ of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 defines business combination to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loss, advances, guarantees, pledges, or other financial benefits by or through the corporation.

In general, Section 203 defines an interested stockholder as an entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation or any entity or person affiliated with or controlling or controlled by such entity or person.

Transfer Agent and Registrar

The transfer agent and registrar for shares of our common stock is Computershare Shareholder Services, Inc.

Listing

Our common stock is listed on The Nasdaq Stock Market LLC's Global Select Market under the symbol "IBKR."

EXHIBIT 21.1

SUBSIDIARIES OF THE COMPANY

Name	Jurisdiction of Organization
IBG LLC	Connecticut, U.S.A.

The following is a list of subsidiaries of IBG LLC:

Name	Jurisdiction of Organization
Interactive Brokers LLC[1]	Connecticut, U.S.A.
IBKR Security Services LLC[2]	Connecticut, U.S.A.
IA GP LLC	Connecticut, U.S.A.
IB Exchange Corp.	Delaware, U.S.A.
IB Global Investments LLC[3]	Delaware, U.S.A.
ForecastEx LLC[3]	Illinois, U.S.A.
Interactive Brokers Ireland Limited	Ireland
Interactive Brokers Central Europe Zrt.	Hungary
Interactive Brokers (India) Private Limited[3]	India
Interactive Brokers Software Services (India) Private Limited	India
Interactive Brokers Singapore Pte. Ltd.	Singapore

(1) IBG LLC owns 99.9% and Mr. Thomas Peterffy owns 0.1%.
(2) IBG LLC owns 99.99% and Mr. Thomas Peterffy owns 0.01%.
(3) IBG LLC Owns 99.99% and IB Exchange Corp. owns 0.01%

The following is a list of subsidiaries of IB Exchange Corp:

Name	Jurisdiction of Organization
Interactive Brokers Canada Inc.	Canada
Interactive Brokers (U.K.) Limited.	United Kingdom
Interactive Brokers Hong Kong Limited	Hong Kong
Interactive Brokers Australia Pty Limited	Australia
Interactive Brokers Securities Japan, Inc.	Japan
IB Business Services (Shanghai) Company Limited	China
IBKR Financial Services AG	Switzerland
Interactive Brokers Hungary Informatikai KFT.	Hungary
Interactive Brokers Software Services Estonia OU	Estonia
Interactive Brokers Software Services Rus	Russia
Interactive Brokers Corp.	Delaware, U.S.A.
Covestor, Inc.	Massachusetts, U.S.A.

The following is a list of subsidiaries of IBKR Financial Services AG:

Name	Jurisdiction of Organization
Global Financial Information Services GmbH	Switzerland

The following is a list of subsidiaries of Interactive Brokers (U.K.) Limited:

Name	Jurisdiction of Organization
Interactive Brokers (U.K.) Nominee Limited.	United Kingdom

The following is a list of subsidiaries of Interactive Brokers Australia Pty Limited:

Name	Jurisdiction of Organization
Interactive Brokers Australia Nominees Pty Limited	Australia

The following is a list of subsidiaries of Covestor, Inc.:

Name	Jurisdiction of Organization
Covestor Limited	United Kingdom

The following is a list of subsidiaries of Interactive Brokers Ireland Limited

Name	Jurisdiction of Organization
Interactive Brokers Ireland (Nominee) Limited	Ireland

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-142686, 333-174913 and 333-203358 on Form S-8 and Registration No. 333-240121 on Form S-3 of our reports dated February 24, 2023 relating to the consolidated financial statements and financial statement schedules of Interactive Brokers Group, Inc. and subsidiaries, and the effectiveness of Interactive Brokers Group, Inc. and subsidiaries internal control over financial reporting, appearing in this Annual Report on Form 10-K of Interactive Brokers Group, Inc. and subsidiaries for the year ended December 31, 2022.

/s/ Deloitte & Touche LLP
New York, New York
February 24, 2023

EXHIBIT 31.1

CERTIFICATION

I, Milan Galik, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2022 of Interactive Brokers Group, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the Audit Committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ Milan Galik

Name: Milan Galik

Title: *Chief Executive Officer and President*

Date: February 24, 2023

EXHIBIT 31.2

CERTIFICATION

I, Paul J. Brody, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2022 of Interactive Brokers Group, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the Audit Committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ Paul J. Brody

Name: Paul J. Brody
Title: *Chief Financial Officer, Treasurer and Secretary*

Date: February 24, 2023

EXHIBIT 32.1

CERTIFICATION

Pursuant to 18 U.S.C. § 1350, the undersigned officer of Interactive Brokers Group, Inc. (the ''Company'') hereby certifies that the Company's Annual Report on Form 10 K for the year ended December 31, 2022 (the ''Report'') fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ MILAN GALIK

Name: Milan Galik
Title: *Chief Executive Officer and President*

Date: February 24, 2023

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and is not being filed as part of the Report or as a separate disclosure document.

EXHIBIT 32.2

CERTIFICATION

Pursuant to 18 U.S.C. § 1350, the undersigned officer of Interactive Brokers Group, Inc. (the ''Company'') hereby certifies that the Company's Annual Report on Form 10-K for the year ended December 31, 2022 (the ''Report'') fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ PAUL J. BRODY

Name: Paul J. Brody
Title: *Chief Financial Officer, Treasurer and Secretary*

Date: February 24, 2023

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and is not being filed as part of the Report or as a separate disclosure document.

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Corporate Information

Officers and Directors

Thomas Peterffy
Chairman of the Board of Directors

Earl H. Nemser
Vice Chairman and Director

Milan Galik
President, Chief Executive Officer and Director

Thomas A. Frank
Executive Vice President and Chief Information Officer

Paul J. Brody
Chief Financial Officer, Treasurer, Secretary and Director

Lawrence E. Harris
Lead Independent Director

Gary Katz
Director

Philip Uhde
Director

William Peterffy
Director

Nicole Yuen
Director

Jill Bright
Director

Corporate Headquarters
One Pickwick Plaza, Greenwich, CT 06830
877-442-2757

Independent Registered Public Accounting Firm
Deloitte & Touche LLP

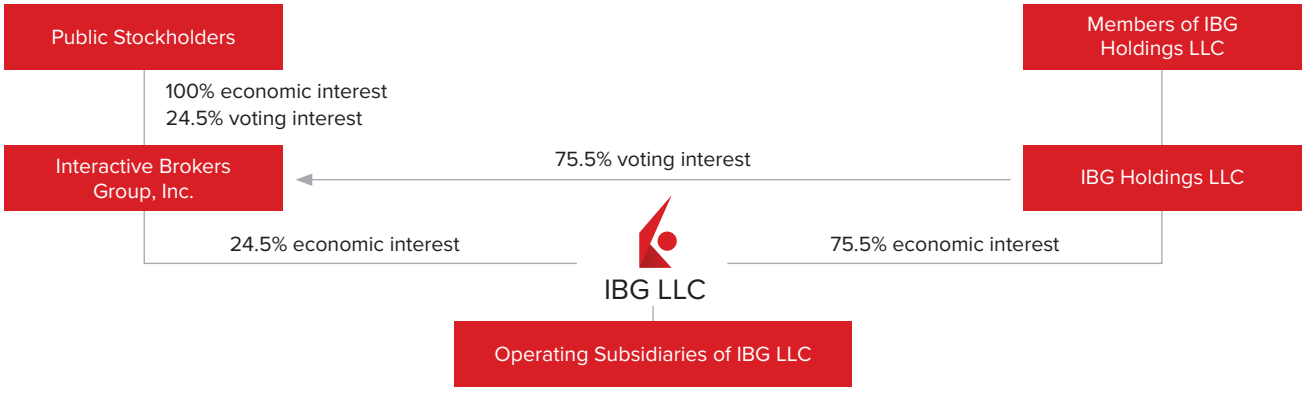
Common Stock
Our stock is listed on the Nasdaq Global Select Market under the symbol “IBKR”

Corporate Website
www.ibkr.com

Media
media@ibkr.com
203-913-1369

Investor Relations
investor-relations@ibkr.com
203-618-4070

Organizational Structure



Interactive Brokers Group Sales Office Locations

Greenwich, CT
Chicago, IL
San Francisco, CA
West Palm Beach, FL
855-861-6414

Montreal, Canada
514-847-3415

Toronto, Canada
647-621-8211

Dublin, Ireland
353-1-431-0870

London, United Kingdom
44-207-710-5680

Zug, Switzerland
41-41-726-50-78

Budapest, Hungary
36-1-701-0351

Mumbai, India
91-22-61289-835

Hong Kong
852-3410-7500

Tokyo, Japan
81-3-4588-9707

Singapore
65-6694-7410

Sydney, Australia
61-2-8093-7301

InteractiveBrokers
www.ibkr.com

Member: NYSE, FINRA, SIPC.