

About This Agreement

Things to Know Before Using Your Account

The information in this box is only a summary. Please read the complete Agreement for more complete information.

Using your brokerage retirement account involves risks, for which you assume full responsibility.

As the account owner, you are fully responsible for monitoring your account and for all investment decisions and instructions concerning your account. Unless we have contractually agreed otherwise, we have no responsibility for monitoring your account or your investment decisions, even if your decisions were based on our recommendations. Additionally, unless we have contractually agreed otherwise, your account is a brokerage account and not an investment advisory account subject to the Investment Advisers Act of 1940.

Placing orders during times when markets are volatile can be risky.

Before you start using your account or any account feature, it's essential that you understand the terms, conditions, and policies that apply. You should also understand your relationship with Fidelity, as described herein and in the FBS Form CRS, as well as the conflicts of interest that exist as described in the Products, Services, and Conflicts of Interest disclosure document, available online at Fidelity.com/Reg-BI-Disclosure.

A joint owner or any one of multiple trustees can place any order in a joint account or trust account (including removing all of the assets) without the approval of the other owner(s) or trustee(s) and without any obligation on Fidelity's part to question the action.

There are certain situations in which it is essential that you get in touch with us.

You need to tell us immediately if any of the following occur:

- You notice anything incorrect or suspicious concerning your orders, account activity, or statements.
- Your financial circumstances or goals change.
- You become subject to laws or regulations concerning corporate insiders, the reporting of certain investments, or employment in the securities industry.

The terms of this Agreement apply only to certain Fidelity retirement accounts.

This account Agreement applies to Fidelity IRAs (including traditional, rollover, and SEP IRAs), Fidelity Roth IRAs, Fidelity SIMPLE-IRAs, and Fidelity Retirement Plan accounts [Profit Sharing, Money Purchase, and Self-Employed 401(k) plans].

Disputes between you and Fidelity are settled by arbitration.

As with most brokerage accounts, the parties agree to waive their rights to sue in court, and agree to abide by the findings of an arbitration panel established in accordance with an industry self-regulatory organization.

How to Contact Us

For matters concerning your account, including questions, changes, and notifications of errors, contact us:

By Phone

800-544-6666

Online

Fidelity.com

In Writing

Fidelity Investments
Client Services
PO Box 770001
Cincinnati, OH 45277-0045

Who's Who in This Agreement

In this document, "Fidelity," "us," and "we" include Fidelity Brokerage Services LLC ("FBS") and National Financial Services LLC ("NFS") and their employees, agents, and representatives as the context may require. "You" and "account owner" refer to the owner indicated on the account application.

Fidelity's Commitments to You

Under this Agreement, Fidelity has certain rights and responsibilities. When we accept your account application, we are agreeing to serve as your broker and to maintain an account for you. We agree, subject to our acceptance of an authorized order, to buy, sell, or otherwise dispose of, or acquire, securities for you according to your instructions. We also agree to provide various services and features, as described on the following pages.

Your Commitments to Fidelity

Many of these commitments are spelled out more completely on the following pages, but, in general, when you sign the account application, you agree:

- to accept full responsibility for the content and accuracy of all authorized instructions placed on your account, and for all results and consequences of these instructions, including all investment decisions, trading orders, tax consequences, and all instructions placed by you or any other person you authorize
- to pay all fees, charges, and expenses incurred on your account, in accordance with the provisions of this Agreement and the fee schedule in effect at the time (a current schedule is attached hereto and incorporated herein); for services we perform at your request that are not covered in our current fee schedule, you agree to pay the applicable fee
- to maintain enough assets in your account to satisfy all obligations as they become due, and to understand that we may take whatever steps we consider necessary to resolve unpaid debts or other obligations
- to use the account and its features according to this Agreement and for your own personal purposes only
- if you use any of our electronic services, or provide us with your email address, to have your personal financial information transmitted electronically, and to receive your initial notice of our privacy policy electronically. Since electronic (including wired and wireless) communications may not be encrypted, you acknowledge that there is a risk that data, including email, electronic and wireless communications, and personal data, may be accessed by unauthorized third parties when communicated between you and Fidelity or between you and other parties
- to keep secure your account number, username, and password, and any devices, such as mobile phones or pagers, you use in connection with your account
- to let us monitor and/or record any phone conversations with you
- to let us create a digital representation of your voice, a "voiceprint," that may be used for verifying your identity when you contact Fidelity
- to let us verify the information you provide and obtain credit reports and other credit-related information about you at any time, such as payment and employment information, and to permit any third-party financial services provider to do likewise
- to resolve disputes concerning your relationship with us (other than class actions) through arbitration rather than in a court of law
- if applying for, or using, any optional features or services (including online or other electronic services), to understand and accept the terms associated with them
- to protect Fidelity against losses arising from your use of market data and other information provided by third parties
- to understand that, whenever you invest in, or exchange into, any mutual fund (including any fund serving as your core position), you are responsible for reading that fund's prospectus, including its description of the fund, the fund's fees and charges, and the operation of the fund
- to notify us in writing anytime there is a material change in your financial circumstances or investment objectives
- to be bound by the current and future terms of this Agreement, from the time you first use your account or sign your application, whichever happens first

- that if you have authorized someone to act on your behalf in your account, any and all disclosures may be provided solely to you or the individual acting on your behalf as part of the scope of his or her authority
- that we are authorized by you to use information related to you or any of your accounts, including information that Fidelity or its affiliates obtain in connection with services to or through your employer or a workplace plan or other benefit

Account Features

Certain features and services are standard with your Fidelity retirement account. Others are optional, and may be added either when you open your account or later. Note that some features and fees vary depending on the nature of your relationship with Fidelity.

Industry regulations require that Fidelity Brokerage Services LLC (FBS) and its clearing firm, National Financial Services LLC (NFS), allocate between them certain functions regarding the administration of your account. The following is a summary of the allocation of those functions performed by FBS and NFS.

FBS is responsible for:

- Obtaining and verifying account information and documentation.
- Opening, approving and monitoring trading and other activity in your account.
- Acceptance of orders and other instructions from you regarding your account, and for promptly and accurately transmitting those orders and instructions to NFS.
- Determining the suitability of investment recommendations and advice, and that those persons placing instructions for your account are authorized to do so.
- Operating and supervising your account and its own activities in compliance with applicable laws and regulations, including compliance with federal, industry and NFS margin rules pertaining to your margin account and for advising you of margin requirements.
- Maintaining the required books and records for the services it performs.
- Investigating and responding to any questions or complaints you have about your account(s), confirmations, your periodic statement or any other matter related to your account(s). FBS will notify NFS with respect to matters involving services performed by NFS.

NFS is responsible, at the direction of FBS, for:

- The clearance and settlement of securities transactions.
- The execution of securities transactions, in the event NFS accepts orders from FBS.
- Preparing and sending transaction confirmations and periodic statements of your account (unless FBS has undertaken to do so).
- Acting as custodian for funds and securities received by NFS on your behalf.
- Following the instructions of FBS with respect to transactions and the receipt and delivery of funds and securities for your account.
- Extending margin credit for purchasing or carrying securities on margin.
- Maintaining the required books and records for the services it performs.
- NFS will not give you advice about your investments and will not evaluate the suitability or best interest (if applicable) of investments made by you, your investment representative, or any other party.

Standard Features

Securities Trading

This account is a brokerage account that allows the trading and holding of many securities that are publicly traded in the United States, such as most securities in these categories:

- stocks, including common and preferred
- bonds, including corporate, municipal, and government
- convertible securities

- mutual funds, including Fidelity funds, non-Fidelity funds, and closed-end funds such as exchange-traded funds (ETFs)
- options, although retirement accounts are only eligible for writing covered calls, buying calls/puts, and buying long straddles/strangles/combinations with respect to index and equity options in all cases
- options spreads may be permitted in IRA accounts provided certain conditions are met; please contact your Fidelity Representative for more information
- certificates of deposit (CDs)
- unit investment trusts (UITs)

The account can be used to trade certain foreign securities (either directly or as depositary receipts) and certain precious metals.

Participation in shareholder voting and/or dividend payments in non-U.S. securities is subject to the rules and regulations of the non-U.S. market in which the security was issued and may require the disclosure of your personal information, including, but not limited to, name, address, and country of citizenship and/or residence.

Aggregate non-personal historical and real-time trading data may be made publicly available on our websites, online services, and/or mobile applications. We may also share aggregate non-personal data (including, but not limited to, real-time and historical trading data and customer service data) with clients and affiliates for analysis purposes.

Some investments that **cannot** be traded through your Fidelity retirement account are futures and commodities.

When you place a trade, you may have a choice of order types, including market orders, limit orders, stop orders, and stop-limit orders. To find out how these different types of orders work, and for other helpful information, go to [Fidelity.com/brokerage](https://www.fidelity.com/brokerage). Fidelity may refuse to accept or execute any order or instruction related to your account, for any reason and at any time, in its sole discretion.

Trading Foreign Securities

Fidelity offers you different ways to trade foreign stocks: "International Trading," "Dollarized International Trading," or "Foreign Ordinary Share Trading." International Trading allows you to trade most common stocks and exchange-traded funds (ETFs) directly in the local market with an option to settle your trade in U.S. dollars or in the local currency. Foreign Ordinary Share Trading allows you to trade shares in foreign corporations in the over-the-counter (OTC) market through a U.S. market maker. All customers trading foreign securities should be aware of certain risks described below:

Trading in foreign securities, including direct investments in foreign markets, involves various investment risks, including foreign exchange risk (the possibility that foreign currency will fluctuate in value against the U.S. dollar); increased volatility as compared to the U.S. markets; political, economic, and social events that may influence foreign markets or affect the prices of foreign securities; lack of liquidity (foreign markets may have lower trading volumes and fewer listed companies, shorter trading hours, and restrictions on the types of securities that foreign investors may buy and sell); and less access to information about foreign companies. Trading in foreign securities also may be subject to various credit, settlement, operational, financial, and legal risks. Emerging markets, in particular, can be subject to greater social, economic, regulatory, and political uncertainties, and can be extremely volatile.

These risks may include but are not limited to:

Physical Markets. Certain countries may have less regulated or less liquid securities markets. Some countries still rely on physical markets that require delivery of properly endorsed share certificates to complete trades. As a result, the settlement process can be lengthy (and erratic in some markets) and carries an increased risk of failure, including, but not limited to, the failure of the counterparty to deliver securities in exchange for payment.

Misidentification of Securities. Foreign companies may have multiple classes of securities, including "foreign" and "local" shares. Inadequate understanding of a foreign company's capital structure or imprecision in placing orders can result in purchasing the wrong securities.

Non-DVP Transactions. Local trading and settlement customs frequently require non-DVP ("delivery versus payment") transactions. Unlike DVP transactions, which involve a simultaneous exchange of securities and payment, non-DVP transactions can increase counterparty risk because the purchaser pays before securities are delivered or the seller delivers securities before payment is made.

Trading Days and Hours. Differences in trading days and hours can also create operational issues, trading delays, and complicate clearance and settlement. Unless indicated otherwise, all online trading hours are reflected in U.S. Eastern time. Foreign securities orders will not be sent to the local market except during market hours in the specified country. Orders entered during such nonmarket hours will be released to the local market before it opens. Foreign exchange orders for a given trade date may be entered up until 5 p.m. Eastern time. Any orders submitted after this time will be submitted for execution on the following trade date. Generally, the settlement date for orders placed together for foreign securities and foreign exchange corresponds to the settlement date for the underlying security, absent differences in bank and local market days of operation.

Cross-Border Settlement. Cross-border settlement involves the interaction of different settlement systems and differing (and potentially inconsistent) laws in each of the affected countries.

Dividend and Reorganization Payments. Dividend and reorganization payments are paid when funds are received from local market custodians, which may or may not coincide with the actual announced payment date. Participation in shareholder voting and/or dividend payments in non-U.S. securities is subject to the rules and regulations of the non-U.S. market in which the security was issued and may require the disclosure of your personal information, including but not limited to name, address, and country of citizenship and/or residence.

Trading Restrictions and Market Operations. Foreign markets often operate differently from U.S. markets. For example, there may be different periods for clearance and settlement of securities transactions, and investments in foreign securities may be subject to local market trading restrictions and fees. Certain markets may impose restrictions regarding repatriation of monies or limit certain investment activities. Fidelity is not responsible for notifying customers of each country's specific requirements. Customers agree to conduct appropriate due diligence to understand specific limitations in each country.

Margin Privileges. Extension of margin credit in foreign securities may result in greater risk than U.S. securities. Foreign securities may be eligible for margin privileges when a brokerage account has been opened and the customer has applied and been approved for margin trading.

Limited Recourse Under Local Law. A U.S. investor may not be able to sue a foreign issuer or a Foreign Executing Broker, or to enforce a judgment in U.S. courts. The only available remedy may be the legal remedies that are available under foreign law, and those remedies may be limited.

Tax Treatment. There may be negative tax consequences when trading in certain countries. You should consult a tax advisor for further information.

Foreign securities positions that are not in the custody or control of NFS are not covered by SIPC or any additional insurance secured by NFS.

Fidelity may limit, restrict, or terminate your ability to trade in certain foreign securities at any time and in Fidelity's sole discretion.

Please refer to Additional Information for more on Fidelity's brokerage fee schedules, fees for various features and services, and margin borrowing charges. Note that foreign jurisdictions may impose additional fees, taxes, or other charges from time to time, which may not be reflected in the fee schedule in effect at that time. By placing a trade in a foreign security, you agree to pay any such applicable fees, taxes, or other charges, regardless of notice.

Foreign Currency Exchange Risk Disclosure Statement

While this brief statement cannot disclose all risks associated with trading in foreign currency, when considering whether to trade or authorize someone else to trade foreign currency for you, you should be aware of the following:

The Risk of Loss in Trading Foreign Currency Can Be Substantial. You should, therefore, carefully consider whether trading foreign currency is suitable for you in light of your financial condition, risk tolerance, and understanding of foreign markets.

Cash Held in Foreign Currency. To the extent that you hold all or a portion of your cash assets in a currency other than your local currency, you may suffer currency losses from unfavorable exchange rate movements

that reduce the value of your cash assets compared to your local currency. These potential losses could leave you without sufficient cash to pay planned expenses or other liabilities.

Impossible to Liquidate. Under certain market conditions, you may find it difficult or impossible to liquidate an investment. This can occur, for example, when a currency is deregulated or fixed trading bands are widened. Certain currencies may not be available to invest in, sell through, or hold at Fidelity. Exchange practices, including currency controls, may change from time to time without notice. As a result, it is important that you understand the practices in the foreign markets in which you trade.

Currency Trading Is Speculative and Volatile. Currency prices are highly volatile. Price movements for currencies are influenced by, among other things, changing supply-demand relationships; trade, fiscal, monetary, exchange control programs and policies of governments; U.S. and foreign political and economic events and policies; changes in national and international interest rates and inflation; currency devaluation; and sentiment of the marketplace. None of these factors can be controlled by you or any individual advisor, and no assurance can be given that you will not incur losses from such events.

Currency Trading Presents Unique Risks. Fidelity, through its affiliate Fidelity FOREX, LLC ("Fidelity FOREX"), may refuse to quote prices for certain currencies or quote wide spreads for currencies that are experiencing high levels of volatility.

Broker Compensation. Fidelity serves as agent rather than principal to the foreign currency transaction. Fidelity sends the transaction to Fidelity FOREX for the foreign exchange transaction.

Fidelity FOREX Is an Affiliate of Fidelity. Fidelity FOREX acts as a principal on the currency exchange. Fidelity FOREX imposes a commission, or markup, to the price they receive from the interbank market, which may result in a higher price to you. Fidelity FOREX may in turn share a portion of any foreign exchange commission or markup with Fidelity. More favorable exchange rates may be available through third parties not affiliated with NFS. Larger transactions for foreign currency may receive more favorable rates than smaller transactions.

Foreign Currency Balances. Customers acknowledge that credit balances in foreign currency may or may not earn interest.

Extended-Hours Trading Risk Disclosure Statement

Trading in the extended hours (outside of the standard market hours, generally 9:30 a.m. to 4 p.m. Eastern time) may pose greater risks than the risks you take when you trade during standard market hours. You should review and understand these risks prior to engaging in extended-hours trading.

Liquidity, Volatility, and Price Spreads. Prices are based on the supply and demand created by other sellers and buyers. Because there are generally fewer participants trading during the extended-hours sessions, there may be wider price spreads, reduced liquidity, and higher volatility. These conditions may prevent your orders from being executed, in whole or in part, or you may receive a less favorable price than you might receive during standard market hours. Additionally, the prices of investments traded in extended-hours trading may not reflect the prices at the end of regular trading hours, or at opening the next morning.

Communication Delays. If there is a high volume of orders, increased number of communications being sent, or other computer system problems, you may experience delays or failures in communication that cause delays in or prevent access to current information about the investments you're considering, or in executing your order.

Time and Price Priority of Orders. Orders in the extended-hours sessions are generally handled in a price/time priority manner. Orders are first prioritized according to price, with the orders at the same price ranked based on the time the order was submitted. There is no trade through protection during the extended-hours sessions, so price/time priority is set by each market center, not across market centers. This may prevent your order from being executed, in whole or in part, or prevent you from receiving as favorable a price as you might receive during standard market hours. If you change your order, your change is treated as a cancellation and replacement, which may cause it to lose its time priority.

Access to Other Markets and Market Information. Not all market centers are connected in extended-hours trading sessions, and not all market centers offer extended-hours trading during the same time periods. This means there may be greater liquidity or a more favorable price for a particular security in another market center. Access to quotes and trading information in other market centers may be limited during extended-hours sessions. Normally, issuers make news announcements that may affect the price of their securities after regular trading hours. Similarly, important financial information is frequently announced outside of regular trading hours. Keep in mind that news stories and related announcements, coupled with lower liquidity and higher volatility, may cause an exaggerated and unsustainable effect on the price of a security.

Trading Options Securities. There is a risk of lack of calculation or dissemination of the underlying index value or Intraday Indicative Value (“IIV”) and lack of regular trading in securities underlying indexes. For certain products, an updated underlying index, portfolio value, or IIV will not be calculated or publicly disseminated during Extended Trading Hours. Because the underlying index or portfolio value and IIV are not calculated or widely circulated during extended trading hours, an investor who is unable to calculate implied values for certain products during extended trading hours may be at a disadvantage to market professionals. Securities underlying the indexes or portfolios will not be regularly trading as they are during regular trading hours, or may not be trading at all. This may cause prices during extended trading hours to not reflect the prices of those securities when they open for trading.

Penny Stock Trading Risk Disclosure Statement

Low-priced securities, or penny stocks, generally trade for less than \$5 per share and have a relatively small market capitalization. Before engaging in penny stock trading, you should carefully review and consider the following risks, which can be exacerbated in periods of market volatility:

Lack of Public Information. Reliable, publicly available information about the penny stock you’re considering may not be available or as accessible as information about securities that trade on major exchanges. This can include information about the management, operations, financials, and other aspects of a company may not be available. As a result, it is less likely that quote prices will be based on full and accurate information about the company.

No Minimum Listing Standards. Companies that trade on major exchanges like the New York Stock Exchange or Nasdaq must meet minimum standards for the amount of net assets they have and the numbers of shareholders invested in their companies. In contrast, companies that trade as penny stocks in the OTC market may be subject to reduced or no minimum listing standards.

Liquidity Risk. Demand may not be constant for penny stocks, which means you may not be able to sell when you want to. You should carefully consider that you may have difficulty selling the stock, and that this could impact the sale price.

High Volatility. Penny stocks are susceptible to and can experience large price swings in a short amount of time. These swings may be exacerbated during periods of overall market volatility.

Fraud. Since reliable, publicly available information on penny stock is often limited and there is generally less liquidity and trading volume, these stocks can be a target for price or volume manipulation and other fraudulent activity.

For more information on penny stocks and their risks, see the three-part Investor Bulletin: Microcap Stock Basics from the SEC.

Core Account

Your Fidelity retirement account includes a core account that holds assets awaiting investment or withdrawal. Any amount in your core account will be held in the core position specified (including by default) or selected by you on your Fidelity retirement account application.

As detailed below, the options for your core position may include a money market mutual fund, a bank sweep (sometimes referred to herein as the “FDIC-Insured Deposit Sweep” or “Bank Sweep”) or a free credit balance. Fidelity reserves the right to make changes to the available options and/or the options available to you for your core position.

For purposes of this Core Account section of this Agreement, the free credit balance will be referred to as the “Interest Bearing Option.” This is different from the Intra-day Free Credit Balance described in the Credits to Your Account section of this Agreement. Like any free credit balance,

the Interest Bearing Option represents an amount payable to you on demand by Fidelity. Subject to applicable law, Fidelity may use this free credit balance in connection with its business. Fidelity may, but is not required to, pay you interest on this free credit balance, provided that the accrued interest for a given day is at least half a cent. Interest, if paid, will be based upon a schedule set by Fidelity, which may change from time to time at Fidelity’s sole discretion.

More details about the money market mutual fund can be found in the money market mutual fund’s prospectus, which will be made available to you when applicable.

More details about the Bank Sweep can be found on the FDIC-Insured Sweep Program Disclosure, which is attached hereto, incorporated herein, and forms a part of this Agreement.

Newly established Fidelity IRAs (including traditional, rollover, and SEP IRAs), and newly established Fidelity Roth IRAs and Fidelity SIMPLE-IRAs, will have the option to use the core position(s) indicated on the account application. Note that inherited IRAs and any IRAs, Roth IRAs, or SIMPLE-IRAs that utilize Fidelity’s Portfolio Advisory Services will not have the option to use the Bank Sweep.

Once the Fidelity IRA, Fidelity Roth IRA, or Fidelity SIMPLE-IRA is established, you may be able to switch the core position to another available option. Information about the rates of return on these different options can be found at www.Fidelity.com/ira.

After your Fidelity retirement account has been opened, there may be situations where your core position must be changed from the option you currently use to another available option. Upon receiving advance written notice of such change, unless you contact Fidelity and inform us otherwise within the time frame specified in the notice, you will be deemed to (i) consent to such change and (ii) direct Fidelity to withdraw your funds from the core position you currently use and place those funds in the new core position.

If You Reside Outside the United States

If we determine that you reside outside the United States in any country other than Canada (as described in the Residing Outside the United States section of this Agreement), either at the time you open your Fidelity retirement account or at any point in time after you open your Fidelity retirement account (e.g., as a result of a subsequent move), your core account will not operate as described elsewhere in this Agreement. Instead, during such time as we believe you reside outside the United States, the following will apply:

1. New Fidelity Accounts.

The core position specified (including by default) or selected by you on your Fidelity retirement account application will not be changed, but the process of sweeping the Intra-day and After-hours Free Credit Balances to your core account (as described in the Credits to Your Account section of this Agreement) will be suspended. As a result, all uninvested cash in your Fidelity retirement account will be held as Intra-day and After-hours Free Credit Balances. You will also be unable to make any change to the option you selected or were defaulted into for your core position during the account opening process, including making any changes to the Program Bank List assigned to your Fidelity retirement account, in the event the Bank Sweep is your core position.

2. Existing Fidelity Accounts.

The process of sweeping the Intra-day and After-hours Free Credit Balances to your core account will be suspended. This will not affect any existing holdings of a Fidelity money market fund, or your Program Deposits. You will be able to liquidate that position should you elect to do so, but you will generally be unable to add to it for so long as we believe you reside outside the United States, except for the deposit of accrued interest in the case of the Bank Sweep or the reinvestment of dividends on money market mutual fund positions. As a result, all new deposits to your Fidelity retirement account or settlement proceeds from transactions in your account will be held as Intra-day and After-hours Free Credit Balances. You will also be unable to make any change to your core position election, including making any changes to the Program Bank List assigned to your Fidelity retirement account, in the event the Bank Sweep is your core position.

Should we determine that you no longer reside outside the United States, if your Fidelity retirement account was subject to a suspension, this suspension will be lifted, the Intra-day and After-hours Free Credit Balances will be swept to your core account and, going forward, your Fidelity retirement account will operate as otherwise described herein.

For Fidelity Retirement Plan accounts (including Profit Sharing, Money Purchase, and Self-Employed 401(k) plan accounts), the core position is generally Fidelity® Government Cash Reserves or any other core position that Fidelity might make available for this purpose.

If you establish or maintain a Fidelity IRA (including traditional, rollover, and SEP IRAs), a Fidelity Roth IRA, or a Fidelity SIMPLE-IRA and you wish to transfer to or otherwise utilize Fidelity's Portfolio Advisory Services, as a condition of enrolling in Fidelity's Portfolio Advisory Services, your core position in the Portfolio Advisory Services account will be a then available Fidelity money market mutual fund (generally Fidelity Government Cash Reserves or any other core position Fidelity might make available for this purpose). As a result, any balance in the Bank Sweep or other core position will be liquidated prior to such a transfer or utilization.

If you maintain a Fidelity IRA (including traditional, rollover, and SEP IRA), a Fidelity Roth IRA, or a Fidelity SIMPLE-IRA and you wish to establish a relationship with an independent third-party investment adviser that utilizes Fidelity or its affiliates for clearing and custody services and technology support, your core position will be a then available money market mutual fund or other core position Fidelity might make available for this purpose. As a result, any balance in the Bank Sweep or other core position must be liquidated in connection with the establishment of such relationship.

The Bank Sweep is not available in inherited IRAs (including inherited Roth IRAs). Therefore, in connection with the establishment of an inherited IRA, prior to transferring the assets to the inherited IRA, any balance maintained by the deceased IRA depositor in the Bank Sweep will be liquidated.

If your Fidelity IRA, Fidelity Roth IRA, or Fidelity SIMPLE-IRA was established by your employer in accordance with the terms of your workplace savings plan and your employer elected as the core position a then available Fidelity money market mutual fund (generally Fidelity Government Cash Reserves or any other core position Fidelity might make available for this purpose), at the time that you activate your employer-established IRA, you will not be able to select the Bank Sweep. Your only available core position at that time will be a then available Fidelity money market mutual fund (generally Fidelity Government Cash Reserves or any other core position Fidelity might make available for this purpose). However, after you activate your IRA, you may switch the core position between the Bank Sweep and any then available Fidelity money market mutual fund option without restriction.

Statements

We will send an account statement to the address of record:

- every calendar quarter, at a minimum
- for any month when you have trading or cash management activity

Your account statements will show all activity in your account for the stated period, including securities transactions, cash balances, credits and debits, and all fees paid directly from your account.

We will also send a confirmation for every securities transaction in your account. The only exceptions are automatic investments, automatic withdrawals, dividend reinvestments, and transactions that involve only your core position or the Intra-day Free Credit Balance; for these activities, your regular account statement serves in place of a confirmation.

To receive your account statements and confirmations faster, you can arrange to have them delivered electronically instead of through the mail. This option is free, and you can switch to or from it at any time upon request.

If you live with immediate family members who also have eligible Fidelity accounts, Fidelity may "household" those accounts to potentially qualify for enhanced services and features and to provide statements and disclosures combined in a single envelope. You may also elect to have your statements combined or householded by completing the information requested at [Fidelity.com/customer-service/how-to-combine-statements](https://www.fidelity.com/customer-service/how-to-combine-statements). By participating in householding, you agree that Fidelity may provide the employers of any householded account holders with account statements, trade confirmations, or other documents as required by applicable regulations.

In addition, by signing the account application, you consent to have only one copy of Fidelity mutual fund shareholder documents, such as prospectuses and shareholder reports ("Documents"), delivered to you and any other investors sharing your address. Your Documents will be householded indefinitely; however, you may revoke this consent at any time by contacting Fidelity. Additional details regarding your consent are provided in the account application.

Account Protection

The securities in your account are protected in accordance with the Securities Investor Protection Corporation (SIPC) for up to \$500,000 (including up to \$250,000 for uninvested cash). We also provide additional coverage above these limits. Neither coverage protects against a decline in the value of your securities, nor does either coverage extend to certain securities that are considered ineligible for coverage.

For more details on the SIPC, or to request an SIPC brochure, visit www.sipc.org or call 202-371-8300.

Please note that if you utilize the Bank Sweep, except as otherwise described in the Core Account section of this Agreement, any balance you maintain in your account is swept to an FDIC-insured position at a bank with which Fidelity has established a relationship (a "Program Bank"). Until funds are swept to the Program Bank, they are covered by SIPC. Once funds are swept to a Program Bank, they are no longer covered by SIPC, but they are eligible for FDIC insurance subject to FDIC insurance coverage limits. For more information about the Bank Sweep, please refer to the FDIC-Insured Deposit Sweep Program Disclosures document, which is attached hereto, incorporated herein, and forms a part of this Agreement.

Optional Features

You can set up these services using your account application. To add them to an existing account, contact Fidelity. Some of these features are covered by their own customer agreements, which are incorporated into this Agreement by reference (are legally considered part of this Agreement) and will be provided to you as applicable. Note that some services are not available for certain types of accounts.

Checkwriting

Checkwriting is available on certain retirement accounts. Note that cancelled checks are not returned to you, although check imaging may be available.

Electronic Funds Transfer

You may transfer cash in and out of your account using electronic funds transfer (EFT), which works like an electronic check. You can also arrange for your brokerage account to receive periodic payments from other accounts, or transfers from other sources, such as Automatic Investments.

Dividend Reinvestment

In addition to reinvestment of mutual fund dividends, reinvestment of dividends from eligible equities and closed-end funds is an option for most retirement accounts. You can choose to have the service apply to all eligible securities in your account, or only to certain ones. You can request this feature by phone, online, or in writing (for all securities or for individual ones) once you have established your account.

Fidelity MyVoice®

Fidelity MyVoice is a free security service. When you call Fidelity, you'll no longer have to enter PINs or passwords because Fidelity MyVoice helps you interact with us securely and more conveniently. Through natural conversation, MyVoice will detect and verify your voiceprint in the first few moments of the call. A voiceprint is a combination of your physical and behavioral voice patterns. Like a fingerprint, it's unique to you.

Mobile Phone Number Security Check

In order to protect your account, we may review any changes made to your mobile phone number to ensure that a newly entered number is not associated with any known fraudulent activity. You authorize your mobile provider to disclose information about your mobile phone account, such as subscriber status, payment method (whether your account is prepaid or is subject to monthly billing), and device details, if available, to support identity verification and fraud avoidance, and for other security purposes for the duration of your business relationship with us. This information

may also be shared with certain third-party companies whose services we utilize for security to support your transactions with us, and for identity verification and fraud avoidance purposes.

If you provide us with a mobile phone number, you agree and consent that we may contact you at that mobile number with telephone calls that may utilize an autodialer or via text messages for the purposes of servicing of your account(s) or investigating and preventing fraud. We will not use autodialed calls or texts to contact you for marketing purposes unless we receive your prior express written consent. You do not have to agree to receive autodialed calls or texts to your mobile phone number in order to use the products and services offered by Fidelity. You can decline to receive autodialed calls and texts to your mobile phone by contacting us at 800-343-3548 or through Fidelity.com. Standard telephone minute and text charges may apply.

Accessing Your Account

There are a variety of ways you can place orders, access your account, get market and investment information, or contact Fidelity. Online choices include Fidelity.com, Fidelity Active Trader Pro®, alerts and wireless trading services, the Fidelity Investments mobile app, and other interactive services for computers or hand-held devices. Some of these services are offered by Fidelity directly; others are offered by outside providers.

Telephone choices include Fidelity Automated Service Telephone (FAST®) as well as Fidelity's telephone representatives. Both services are generally available 24 hours a day, seven days a week. You can also speak with a Fidelity Representative in person, during business hours, at any of our Fidelity Investor Centers around the country. Please note that our telephone lines may be recorded, and, by signing the account application, you are consenting to such recording. If you do not wish to be recorded, you should contact Fidelity via another means.

Account Policies

Account Registration

Custodial Accounts

For accounts opened by a parent, guardian, or custodian for the benefit of a minor: By opening this type of account, you agree that all account assets will be used only for the minor's benefit. Note that the IRA Custodian or Plan Trustee may restrict the use of this type of account.

Authorization and Direction to Obtain and Use Information Related to You

You authorize us to obtain and use information related to all of your accounts, workplace plans or other benefits, or other information related to you that may be maintained by any of our affiliates, including without limitation information related to your accounts, participation, or benefits that any Fidelity affiliate may obtain in connection with providing services to or through your employer or a workplace plan or other benefit. This information may be used by us for any purpose not prohibited by law, such as the provision of enhanced or integrated services or more personalized communications, but shall not be required to be used for any specific purpose.

Account Usage

First Use of a Core Account

If a money market mutual fund is your core position, making your first investment into that fund is your acknowledgment that you have received and read a prospectus or profile prospectus for that fund.

Retirement Account Funding for Canadian Residents

If you have provided Fidelity with an address and/or tax information that indicates that you are a resident of Canada, you warrant and represent to Fidelity that any cash or assets used to fund this account constitute proceeds from an existing IRA or retirement plan account previously established in the United States for your benefit.

Prohibited Uses and Actions

You are strictly prohibited from using your account in conjunction with any business as a broker-dealer, trader, agent, or adviser in any type of security, commodity, future, or contract, or in any business or organization connected with individuals performing these functions. You are also prohibited from publicizing or sharing with anyone any information you obtain through your account (such as securities quotes). In addition, be aware that we may freeze your account or suspend certain privileges, features, or services at any time without notice.

Limits on Mutual Fund Trades

Because excessive trading in mutual fund shares can be detrimental to a fund and its shareholders, we may block account owners or accounts that engage in excessive trading from making further transactions in fund shares. A block on trading fund shares may be temporary or permanent, and may apply only to certain mutual funds or all mutual funds, including Fidelity funds.

The decision to impose a block may originate with a mutual fund company or may be made by Fidelity at the brokerage account level, if Fidelity believes such a block is warranted. To see what a given fund company's definition of "excessive trading" is, check the fund's prospectus.

In addition, we may restrict or limit any transaction in any mutual fund or other investment company that we or an affiliate manages or advises if we believe the transaction could adversely affect the investment company or its shareholders.

How Transactions Are Settled

Credits to Your Account

During normal business hours ("Intra-day"), activity in your account such as deposits and the receipt of settlement proceeds are credited to your account and may be held as a free credit balance (the "Intra-day Free Credit Balance").

Activity in your account such as deposits and the receipt of settlement proceeds may also occur after the cut-offs described above, or on days the market is not open and the Fedwire Funds Service is not operating (collectively "After-hours"). Those amounts are credited to your account and may be held as a free credit balance (the "After-hours Free Credit Balance").

Like any free credit balance, the Intra-day and After-hours Free Credit Balances represent amounts payable to you on demand by Fidelity. Subject to applicable law, Fidelity may use these free credit balances in connection with its business. Fidelity may, but is not required to, pay you interest on free credit balances held in your account overnight, provided that the accrued interest for a given day is at least half a cent. Interest, if paid, will be based upon a schedule set by Fidelity, which may change from time to time at Fidelity's sole discretion.

Interest paid on free credit balances will be labeled "Credit Interest" in the Investment Activity section of your account statement. Interest is calculated on a periodic basis and credited to your account on the next business day after the end of the period. This period typically runs from approximately the 20th day of one month to the 20th day of the next month, provided, however, that the beginning and ending periods each year run, respectively, from the 1st of the year to approximately the 20th of January and approximately the 20th of December to the end of the year. Interest is calculated by multiplying your average overnight free credit balance during the period by the applicable interest rate, provided, however, that if more than one interest rate is applicable during the period, this calculation will be modified to account for the number of days each period during which each interest rate is applicable.

If You Utilize a Fidelity Money Market Fund as Your Core Position

If you utilize a Fidelity money market fund as your core position, the Intra-day Free Credit Balance, if any, generated by activity occurring prior to the market close each business day (or 4 p.m. Eastern time on business days when the market is closed and the Fedwire Funds Service is operating) is automatically swept into your core account and invested in your core position at the market close.

There will be an additional automatic sweep into your core account early in the morning prior to the start of business on each business day that will also be invested in your core position at that time. This will include your After-hours Free Credit Balance along with credit amounts attributed to certain actual or anticipated transactions that would otherwise generate an Intra-day Free Credit Balance on such business day.

If You Utilize the Bank Sweep as Your Core Position

If you utilize the Bank Sweep as your core position, the Intra-day Free Credit Balance, if any, as well as any After-hours Free Credit Balance generated by activity occurring prior to Fidelity's nightly processing cycle are automatically swept into your core account as part of that nightly cycle (the "Evening Bank Sweep") and reflected in your Account as Program Deposits (as defined infra.) in anticipation of the deposit process described below occurring on the next business day.

There will be an additional automatic sweep into your core account early in the morning prior to the start of business on each business day that will also be invested in your core position at that time (the "Morning Bank Sweep"). This will include credit amounts attributed to certain actual or anticipated transactions that would otherwise generate an Intra-day Free Credit Balance on such business day.

The total amount of the Evening Bank Sweep and the Morning Bank Sweep is referred to as your Cash Balance. In the morning of the business day of the Morning Bank Sweep, your Cash Balance will be deposited in an FDIC-insured interest-bearing account (a "Program Deposit Account") at one or more participating banks (each, a "Program Bank"). The amounts on deposit are collectively referred to as your Program Deposits, and Program Deposits are eligible for FDIC insurance. Your Program Deposit will earn interest, provided that the accrued interest for a given day is at least half a cent.

If You Utilize the Interest Bearing Option as Your Core Position

If you utilize the Interest Bearing option as your core position, the Intra-day Free Credit Balance, if any, as well as any After-hours Free Credit Balance generated by activity occurring prior to Fidelity's nightly processing cycle is automatically swept into your core account as part of that nightly cycle and held in the Interest Bearing option.

Check and ACH Deposits

Each check or Automated Clearing House (ACH) deposit is promptly credited to your account. However, the money may not be available to use until up to six business days later, and we may decline to honor any debit that is applied against the money before the deposited check or ACH has cleared. If a deposited check or ACH does not clear, the deposit will be removed from your account, and you are responsible for returning any interest you received on it. Note that we can only accept checks denominated in U.S. dollars and drawn on a U.S. bank account (including a U.S. branch of a foreign bank). We cannot accept third-party checks. In addition, if we have reason to believe that assets were incorrectly credited to your account, we may restrict such assets and/or return such assets to the account from which they were transferred.

Debits to Your Account

Deferred debit card charges are debited monthly. All other debit items (including checks, debit card transactions, bill payments, securities purchases, electronic transfers of money, levies, court orders or other legal process payments) are paid daily to the extent that sufficient funds are available. Note that debits to resolve securities transactions (including margin calls) will be given priority over other debits, such as checks or debit card transactions.

As an account owner, you are responsible for satisfying all debits on your account, including any debit balance outstanding after all assets have been removed from an account, any margin interest (at prevailing margin rates) that has accrued on that debit and any costs (such as legal fees) that we incur in collecting the debit. You are also responsible for ensuring that checks issued to you representing distributions from your account are promptly presented for payment. If a check issued to you from your account remains uncashed and outstanding for at least six months, you authorize and instruct Fidelity, in its sole discretion, to cancel the check and return the underlying proceeds to you by depositing the proceeds into your account.

To help ensure the proper discharge of debits, it is our policy (unless we agree to do otherwise) to do the following when settling debits against your account.

If You Utilize a Fidelity Money Market Fund as Your Core Position

If you utilize a Fidelity money market fund as your core position and there are debits in your account generated by account activity occurring prior to the market close each business day (or 4 p.m. Eastern time on business days when the market is closed and the Fedwire Funds Service is operating), these debits will be settled at the market close using the following sources, in this order:

- any Intra-day Free Credit Balances
- redemption proceeds from the sale of your core position at the market close
- redemption proceeds from the sale of any shares of a Fidelity money market mutual fund held in the account that maintains a stable (i.e., \$1.00/share) net asset value and is not subject to a liquidity fee or assessment
- if you have a margin account, any margin surplus available, which will increase your margin balance

There will be an additional sweep early in the morning prior to the start of business on each business day, and certain unsettled debits in your account along with debits associated with certain actual or anticipated transactions that would otherwise generate a debit in your account during the business day will be settled using redemption proceeds from the sale of your core position early in the morning prior to the start of business.

If You Utilize the Bank Sweep as Your Core Position

If you utilize the Bank Sweep as your core position and there are debits in your account generated by account activity occurring prior to Fidelity's nightly processing cycle, these debits will be settled using the following sources, in this order:

- any Intra-day or After-hours Free Credit Balances
- proceeds from the withdrawal of Program Deposits occurring on the next business day (not including bank holidays or days on which the New York Stock Exchange is closed, such as Good Friday)
- redemption proceeds from the sale of any shares of a Fidelity money market mutual fund held in the account that maintains a stable (i.e., \$1.00/share) net asset value and is not subject to a liquidity fee or similar fee or assessment
- if you have a margin account, any margin surplus available, which will increase your margin balance

In addition, early in the morning prior to the start of business on each business day, certain unsettled debits in your account along with debits associated with certain actual or anticipated transactions that would otherwise generate a debit in your account during the business day will be settled using proceeds from the withdrawal of Program Deposits occurring that business day (not including bank holidays or days on which the New York Stock Exchange is closed, such as Good Friday).

If You Utilize the Interest Bearing Option as Your Core Position

If you utilize the Interest Bearing option as your core position and there are debits in your account generated by account activity occurring prior to Fidelity's nightly processing cycle, these debits will be settled using the following sources, in this order:

- any Intra-day or After-hours Free Credit Balances
- funds held in the Interest Bearing option
- redemption proceeds from the sale of any shares of a Fidelity money market mutual fund held in the account that maintains a stable (i.e., \$1.00/share) net asset value and is not subject to a liquidity fee or similar fee or assessment
- if you have a margin account, any margin surplus available, which will increase your margin balance

In addition to the foregoing, we may turn to the following sources:

- redemption proceeds from the sale of any shares of a Fidelity money market fund held in another non-retirement account with the same registration (which you authorize us to sell for this purpose when you sign the application)
- any securities in any other account at Fidelity in which you have an interest

If you want to opt out of the foregoing, please contact Fidelity for more information.

In the event that your account does not contain sufficient cash, Fidelity may liquidate securities to satisfy a court order, levy, or any other legal process payment.

Resolving Unpaid Obligations or Other Obligations

If certain of the sources listed above in "Debits to Your Account" (which are defined as your "available balance" for purposes of this Agreement) are not enough to satisfy a given debit, we reserve the right to take action as we see fit, including declining to honor the debit, which may result in fees (such as a returned check fee) or other consequences for you.

Note that at any time, we may reduce your available balance to cover obligations that have occurred but not yet been debited including but not limited to withholding taxes that should have been deducted from your account.

It is important to understand that we do have additional choices for resolving unsatisfied obligations. Like many other securities brokers, we reserve the right to sell or otherwise use assets in an account to discharge any obligations the account owner(s) may have to us (including unmatured and contingent obligations), and to do so without further notice or demand. For example, if you have bought securities but not paid for them, we may sell them ourselves and use the proceeds to settle the purchase.

Although Fidelity may use other methods, Fidelity reserves the right to use the provisions described in this section at any time, except when they would conflict with the Employee Retirement Income Security Act of 1974 (ERISA) or the Internal Revenue Code of 1986, both as amended.

Transaction Settlement Deadlines

Generally, you need to pay for all transactions or deliver all securities by 2 p.m. Eastern time on the settlement date. We reserve the right to cancel or liquidate, at your risk, any transaction not settled in a timely way.

Nontransferable Securities

In the event that any securities in your account become nontransferable, NFS may remove them from your account without prior notice. Non-transferable securities are those where transfer agent services have not been available for six or more years. A lack of transfer agent services may be due to a number of reasons, including that the issuer of such securities may no longer be in business and may even be insolvent. NFS may remove nontransferable securities from your account pursuant to a Securities and Exchange Commission-approved program that permits our custodian for these securities to no longer maintain the physical certificates representing the positions in these securities. Please note the following:

- There are no known markets for these securities
- We are unable to deliver certificates to you representing these positions

- These transactions will not appear on Form 1099 or any other tax-reporting form
- If the position is held in a retirement account, we will not report the removal of the position as a taxable distribution and any reinstatement of the position will not be reported as a contribution
- If transfer agent services become available sometime in the future, NFS will use its best efforts to have the position reinstated in your account
- Positions removed from your account will appear on your next available account statement following such removal as an "Expired" transaction

By opening and maintaining an account with us, you consent to our actions as we have described them above, and you waive any claims against us arising out of such actions. You also understand that we do not provide tax advice concerning your account or any securities that may be the subject of removal from or reinstatement into your account, and you agree to consult with your own tax advisor concerning any tax implications that may arise as a result of any of these circumstances. Fidelity has no responsibility for determining if the sale of either a limited partnership or master limited partnership would generate unrelated business taxable income in your IRA or whether a specific securities transaction you have made would be deemed a prohibited transaction under ERISA and §4975 of the Internal Revenue Code.

Policies on Optional Features

EFT Transactions

EFT transactions are normally completed within three to seven business days of your request. An EFT transfer may be from \$10 to \$99,999. The two accounts involved in an EFT transaction must have at least one owner's name in common (and that name must match exactly). To send and receive EFT transactions, your bank must be a member of the Automated Clearing House (ACH) system.

For EFT transactions, you hereby grant us limited power of attorney for purposes of redeeming any shares in your accounts (with the right to make any necessary substitutions), and direct us to accept any orders to make payments to an authorized bank account and to fulfill these orders through the redemption of shares in your account. You agree that the above appointments and authorizations will continue until we receive written notice of any change at the address listed following "Things to Know Before Using Your Account," although we may cease to act as agents to the above appointments on 30 days' written notice to your account's address of record. You further understand that Fidelity may notify you electronically or by phone when the EFT feature is set up or EFT transactions are initiated on your account.

If you have arranged to have direct deposits made to your account, at least once every 60 days from the same person or company, you can call Fidelity at 800-343-3548 to find out whether or not the deposit has been made.

Dividend Reinvestment Program

With this feature, all dividends paid by eligible securities that you designate for reinvestment are automatically reinvested in additional shares of the same security. (For purposes of the Dividend Reinvestment Program, "dividends" means cash dividends and capital gain distributions, late ex-dividend payments, and special dividend payments, but not cash-in-lieu payments.) In designating any eligible security for reinvestment, you authorize us to purchase shares of that security for your account.

To be eligible for this feature, a security must satisfy all of the following:

- be a closed-end fund, common stock, or foreign security (generally American depository receipts [ADRs])
- be margin-eligible (as defined by NFS)
- be held in street name by NFS (or at a securities depository on its behalf)
- not be held as a short position

Dividends are reinvested on shares that satisfy all of the following:

- the security is eligible

- you own the shares on the dividend record date
- you own the shares on the dividend payable date (even if you sell them that day)
- your position in the security has been settled on or before the dividend record date
- the shares are designated for reinvestment as of 9 p.m. Eastern time on the dividend record date

Shares purchased through the Dividend Reinvestment Program will generally be placed in your account as of the dividend payable date. Note, however, that the stock price at which your reinvestment occurs is not necessarily the same as the price that is in effect on the dividend payable date. This is because we generally buy the shares of domestic companies two business days before the dividend payable date, at the market price(s) in effect at the time, in order to help ensure that we have shares on hand to place in your account on the dividend payable date. Other factors may require the purchase of the shares on a different business day, which may be before, on, or after the dividend payable date, e.g., dividends of foreign companies. Also, shares of securities that have an irregular ex-dividend date are purchased on the ex-dividend date and placed in your account on the second business day following the ex-dividend date. Therefore, you may end up receiving more or fewer shares than if your dividend had been reinvested on the dividend payable date itself, particularly if there are significant changes in the market price of a security just before its dividend payable date. If several purchase transactions are necessary to reinvest your and other customers' dividends in a particular security, the price per share will be the weighted average price per share for all shares purchased. If sufficient shares are unavailable in the market to satisfy all customers' requirements for dividend reinvestment for a security, the dividend will not be reinvested. The reinvestment of dividends may be delayed in certain circumstances. NFS reserves the right to suspend or completely remove securities from participation in dividend reinvestment and credit such dividends in cash at any time without notice.

Automatic reinvestments often involve purchase of fractional shares, calculated to three decimal places. Partial shares pay prorated dividends and can be sold if you sell your entire share position, and will be liquidated automatically in transfers and certain other situations, but otherwise typically cannot be sold.

Although for dividend reinvestments your regular account statement takes the place of a trade confirmation, you can generally obtain status information the day after the reinvestment date by contacting Fidelity. If you transfer or reregister your account within Fidelity (for example, by changing from a traditional IRA to a Roth IRA), you need to redesignate any securities whose dividends you want reinvested.

DTC's Dividend Reinvestment Program

For certain securities, dividend reinvestment may occur through DTC's (Depository Trust Company) dividend reinvestment program (DRP). This plan may be utilized if an issuer offers reinvestment at a discount. Eligibility for a security to be enrolled in the DRP or the Fidelity dividend reinvestment program is determined by Fidelity and may change without notice. A DRP transaction will post to your account when the shares are made available to Fidelity by DTC. Such transactions are generally posted within 15 days after pay date.

Note that dividend reinvestment does not ensure a profit on your investments and does not protect against loss in declining markets. If you sell your dividend-generating shares before the posting date, the dividend will not be reinvested.

Optional Dividends

At times, certain issuers that pay dividends may offer shareholders an opportunity to elect to receive stock or cash, or a combination of both. This is known as an "Optional Dividend." The issuer will assign a default if no instruction is received. For example, the default option could be cash, stock, or a combination of both. You have the opportunity up until the applicable deadline to make an election to receive the payment of your choice. Please be advised, if you do not make an election prior to the deadline, your account will be assigned a default election based on the dividend reinvestment program instructions you established with respect to your account. **This default election will be utilized in lieu of the issuer's default option being applied to your account.**

Fractional Share Trading

Fidelity's fractional share trading functionality allows you to buy and sell fractional share quantities and dollar amounts of certain securities ("Fractional Trading"). Fractional Trading presents unique risks and has certain limitations that you should understand before placing your first trade.

Trading

Orders to buy or sell may be entered using either a fractional share quantity (e.g., 2.525 shares) or a dollar value (e.g., \$250.00). Share quantities can be specified to three decimal places (.001). Dollar-value orders will be converted into share quantities for execution, again, to three decimal places. In all cases, when converting dollar-value orders into share quantities, the share quantities will be rounded down.

For a variety of reasons, including but not limited to this conversion convention, the actual amount of an executed dollar-value trade may be different from the requested amount. The actual amount of an executed order to buy or sell a dollar value of a security may also be lower than the amount requested due to the deduction of certain fees (e.g., the Additional Assessment) or taxes.

Orders received in good form by FBS will be accepted and transmitted to NFS for execution. You may attempt to cancel an order, but there is no ability to request that an order be "cancelled and replaced" (i.e., you cannot modify an order once it has been submitted). Instead, you will need to cancel your order and then submit a new one.

Fractional Trading supports market and limit orders only for fractional share quantities of a security that are good for that day's trading session, or in the case of an order entered outside of market hours, that are good until the close of the next trading session. Because of this, your ability to buy or sell a security using Fractional Trading may be more restricted than if you were to buy or sell traditional whole share quantities of the same security.

In the event of a trading halt of a security, Fractional Trading of that security will also be halted, and your order will be held until trading resumes. However, your order is good only for that day's trading session, or in the case of an order entered outside of market hours, good until the close of the next trading session. If trading does not resume or your order is not executed by the close of that day's Fractional Trading window, it will be cancelled.

You can generally trade exchange-listed National Market System ("NMS") stocks using the Fractional Trading functionality. However, certain NMS stocks may not be made available for Fractional Trading, and Fidelity reserves the right to modify the list of eligible NMS stocks available for Fractional Trading will not affect any fractional share interests previously acquired by you. In certain limited circumstances, you may also be able to sell a fractional share interest in a security that is no longer an NMS stock, provided that it was an NMS stock at the time you purchased it and your fractional interest was acquired using the Fractional Trading functionality. Additionally, you may not be able to place trades through some of Fidelity's order entry platforms (e.g., Fractional Trading may be available via mobile device but not through the live representative channel).

Trade Execution

FBS will act as your agent and NFS will act in either a principal or a mixed capacity (i.e., both as agent and principal) when executing your order. The whole share component of any order will be executed by NFS as agent at the price NFS receives in the market. The fractional share component of any order will be executed by NFS as principal against its principal account. When a fractional share interest is allocated to your account, NFS will maintain custody of the whole share in which you have the fractional interest. Any fractional share interest in the whole share not allocated to your account may be allocated to other customers or to NFS as principal.

All orders with a fractional share component will be marked "Not Held," which gives Fidelity the time and price discretion to execute the order without being held to the security's current quote. In connection therewith, each time you submit an order to buy or sell a fractional share quantity or dollar amount of a particular security, you authorize NFS to "work the order." If you do not wish your order to be handled on a Not Held basis, you should not engage in Fractional Trading.

In the case of a sale of the fractional component of any order, that sale will be executed at the then current National Best Bid or Offer ("NBBO"). Please note that this price may be higher or lower than the price at the time you place your order. In the case of a purchase of the fractional component of any order, if NFS has sufficient principal inventory, that purchase will also be executed at the then current NBBO. However, if NFS does not have sufficient principal inventory, that purchase will be executed at the price received in the market. For orders placed prior to market open, Fidelity may wait for the primary exchange to open before commencing trading in a particular security. When trading as principal for its own account, NFS may make a profit or incur a loss on each trade.

Additionally, NFS may be required to correct or adjust trades that (for a variety of reasons) have been executed in amounts that either exceed or fall short of the amounts requested. These trade corrections and adjustments could arise in connection with either or both of the agency and principal components of the executed orders. Regardless, these trade corrections and adjustments will be executed by NFS in a principal capacity, and when trading as principal for its own account, NFS may make a profit or incur a loss.

Shareholder Rights

Fractional share interests in an NMS security generally have different rights from full share interests of the same NMS security. Please read the following information carefully to understand your rights regarding your fractional share interests.

Fractional share positions cannot be transferred or certificated. The Automated Customer Account Transfer System does not support fractional share positions. If you want to transfer your account or specific share positions to another broker, you must sell your fractional positions and transfer the cash proceeds.

You hereby direct NFS, and NFS hereby agrees, not to vote or take any discretionary or voluntary action with respect to any fractional share position. Furthermore, you acknowledge that you cannot vote or take any discretionary or voluntary action with respect to any fractional share position. Accordingly, while NFS may notify you of issuer meetings, NFS will not solicit proxies in connection with fractional share positions, and you cannot vote proxies for fractional share positions. Fractional shareholders will not be able to provide instruction in connection with voluntary corporate actions (e.g., tenders), except for optional dividends; and NFS will not vote proxies for any fractional shares it holds as principal and will not affirmatively participate in any voluntary corporate actions.

In the case of a dividend paid on, or a redemption of, an NMS security, the dividend or redemption proceeds will be passed along to you in proportion to your ownership interest, inclusive of fractional share interests. NFS will only support payments that are equal to or greater than \$.01 per share. Amounts smaller than that, or nondivisible amounts (based on the .001 rounding convention described above), will be handled in accordance with the process described in the section titled "Undistributable Interests" below.

Holders of fractional share positions may participate in dividend reinvestment programs ("DRIPS") to the same extent as if they owned a full share (adjusted for their fractional share interest in the dividend). In the event that the amount is too small to be reinvested (based on the .001 rounding convention described above), but large enough to be distributed as cash (i.e., at least \$0.01), it will be paid to you. Smaller amounts will be handled in accordance with the process described in the section titled "Undistributable Interests" below.

For mandatory reorganizations, such as mergers and acquisitions, or other involuntary corporate actions, such as stock splits or stock dividends, typically NFS will distribute interests in proportion to your ownership interest, inclusive of fractional share interests. NFS will distribute interests in fractional amounts to three decimal places. Amounts smaller than that, or nondivisible amounts, will be handled in accordance with the process described in the section titled "Undistributable Interests" below. The foregoing notwithstanding, these situations are in all cases subject to the

terms contained in the materials prepared by the issuer describing the corporate action, as well as NFS's applicable policies and procedures, which may result in a different outcome from what is described herein.

Because of the unpredictable nature of corporate actions, there may be situations that arise that are not described previously. Generally, these situations will be handled in accordance with the concepts applicable to dividends and reorganizations. Interests will be divided and distributed where possible in proportion to your ownership interest, and anything that cannot be divided will be handled in accordance with the process described in the section titled "Undistributable Interests" below. The foregoing notwithstanding, these situations are in all cases subject to the terms contained in the materials prepared by the issuer describing the corporate action, as well as NFS's applicable policies and procedures, which may result in a different outcome from what is described above.

Undistributable Interests

NFS will only support payments that are equal to or greater than \$.01 per share. Amounts smaller than that, or nondivisible amounts (based on the .001 rounding convention described above), will not be distributed. Instead, it is generally but not always the case that when the aggregate value to be distributed is less than or equal to \$1.00, it will be retained by NFS, and when it exceeds \$1.00, it will be escheated.

Tax Treatment

NFS and you agree to treat you as the owner of all fractional share interests allocated to your account, to file all tax returns in accordance with such treatment, and to take no action inconsistent with such treatment.

Additional Considerations

Fractional share positions may be illiquid. NFS does not guarantee that there will be a market for fractional share positions and makes no representations or warranties about its ability or willingness to continue to trade as principal in fractional share quantities.

If your account is closed, your fractional shares may be liquidated and the proceeds distributed to you as cash.

The fractional share component of certain orders may not be eligible for "Price Improvement." Also, Price Improvement will operate differently, and in some situations less advantageously, in connection with Fractional Trading from the way it would if you were trading in whole share quantities. Additionally, because in certain situations Price Improvement on the fractional share component of an order will affect the execution price rather than the share quantity of an order, the effect of the improvement on a dollar-value order in those situations will be to increase or decrease the value of the order outside of what was requested.

If your account has been approved for margin, notwithstanding the terms of the Customer Agreement, Fidelity will not lend (hypothecate) your fractional share positions.

If you hold fractional share positions in your account (these positions come about for a variety of reasons, such as DRIPs or corporate actions), it has been Fidelity's practice to automatically sell these holdings when you place an order to sell your entire whole share position ("Auto-liquidate"). The first time you place an order to buy or sell a security using the Fractional Trading functionality, we will turn off the Auto-liquidate feature in your account so that going forward, those positions will be handled like any other fractional share position acquired using Fractional Trading (i.e., you will need to affirmatively sell those fractional share positions if you wish to sell your entire position in that security).

Trading in Volatile Markets— Understand the Risks

Volatile markets can present higher trading risks. Ways to manage some of these risks include:

- **Consider placing limit orders instead of market orders** In certain market conditions or with certain types of volatile securities, price changes may be significant and rapid during regular or after-hours trading. In these cases, placing a market order could result in a transaction that exceeds your available funds, meaning that Fidelity would have the right to sell other assets in your account. This is especially a risk in accounts that you cannot easily add money to, such as retirement accounts.
- **Be aware that quotes, order executions, and execution reports could be delayed** During periods of heavy trading or volatility, quotes that are provided as “real time” may be stale—even if they appear not to be—and you may not receive every quote update. Security prices can change dramatically during such delays, and order execution may be delayed or unavailable.
- **If you attempt to cancel an order, understand that there is no guarantee that an open order can be canceled, in whole or in part** If you wish to replace an order you have attempted to cancel, be sure your original order is actually canceled. Don't rely on a receipt for your cancellation order; that order may have arrived too late for us to act on.
- **Use other ways to access Fidelity during peak volume times** Phone or computer capacity limitations could mean delays in getting information or placing orders. If you are having problems with one method, try another.

The chances of encountering these risks are higher for individuals using day-trading strategies. In part for this reason, Fidelity does not promote day-trading strategies.

For more information on trading risks and how to manage them, visit Fidelity.com or contact Fidelity.

Precious Metals

In general, precious metals and other collectibles within the meaning of Section 408(m) of the Internal Revenue Code may not generally be purchased in an IRA or other retirement account except as otherwise permitted under ERISA and the Internal Revenue Code, as applicable, and to the extent permitted by Fidelity. To the extent that collectibles, including precious metals, are held in an underlying trust or other investment vehicle such as an exchange-traded fund, it is your responsibility to determine whether or not such an investment is appropriate for an IRA or retirement plan account and whether the acquisition of such investment may result in a taxable distribution from such account under Section 408(m).

Precious metals are not covered by SIPC account protection, but are insured by the depository at market value if stored through us. When trading precious metals, note that because they can experience sudden and rapid price changes, they are risky as investments, and we cannot guarantee you an advantageous price when you trade them.

If you store precious metals through us, storage fees will apply.

Closing Your Account

We can close your account, or terminate any optional feature, at any time, for any reason, and without prior notice. You can close your account, or terminate any optional feature, by notifying us in writing or calling us on a recorded line. We may automatically close accounts with zero balances.

Regardless of how or when your account is closed, you will remain responsible for all charges, debit items, or other transactions you initiated or authorized, whether arising before or after termination. Note that a final disbursement of assets may be delayed until any remaining issues have been resolved.

Monitoring Your Account and Notifying Us of Errors

As an account owner, you are responsible for monitoring your account. This includes making sure that you are receiving transaction confirmations, account statements, and any other expected communications. It also includes reviewing these documents to see that information about your account is accurate and contains nothing suspicious. Please note that, unless we have otherwise contractually agreed to do so, we do not have an ongoing responsibility to monitor an investment strategy, account type, or securities bought, sold, or held in your account, even in cases where we have made a recommendation.

Note that so long as we send communications to you at the physical or electronic address of record given on the application, or to any other address given to us by an authorized person, the communications are legally presumed to have been delivered, whether you actually received them or not. In addition, confirmations and statements are legally presumed to be accurate unless you specifically tell us otherwise.

If you have not received a communication you expected, or if you have a question or believe you have found an error in any communication from us, telephone us immediately, then follow up with written confirmation (see contact information following “Things to Know Before Using Your Account”).

You agree to notify us immediately if:

- you placed an order electronically but did not receive a reference number for it (an electronic order is not considered received until we have issued an acknowledgment)
- you received confirmation of an order you did not place, or any similar conflicting report
- there is any other type of discrepancy or suspicious or unexplained occurrence relating to your account
- your password or access device is lost or stolen, or you believe someone has been using it without authorization

If any of these conditions occurs and you fail to notify us immediately, neither we nor any other Fidelity affiliate will be liable for any consequences. If you do immediately notify us, our liability is limited as described in this Agreement.

With any feature or service that is governed by a separate agreement (such as an options trading agreement), note that different policies concerning error resolution and liability may apply, as described in the separate agreement.

If, through any error, you have received property that is not rightfully yours, you agree to notify us and to immediately return the property and any earnings it may have yielded.

If we identify an error in connection with property you have received from or through us or a Fidelity affiliate and determine it is not rightfully yours, you agree that we may take action to correct the error, which may include returning such property to the rightful owner.

Complying with Applicable Laws and Regulations

In keeping with federal and state laws, and with securities industry regulations, you agree to notify us in writing if any of the following occur (with all terms in quotes defined as being within the meaning of the Securities Act of 1933):

- if you are, or later become, an employee or other “associated person” of a stock exchange, a member firm of an exchange or the Financial Industry Regulatory Authority (FINRA), a municipal securities dealer, or Fidelity or any Fidelity “affiliate”
- if you are, or later become, an “affiliate” or “control person” with respect to any security held in your account
- if any transactions in your account regarding securities whose resale, transfer, delivery, or negotiation must be reported under state or federal laws

You also agree:

- if you are, or later become, an “associated person” of a member firm of an exchange or FINRA, that you have obtained consent of the “employer member,” and you authorize Fidelity upon request by an employer member to transmit copies of confirmations and statements, or the transactional data contained therein, with respect to all of your accounts, including all accounts subject to FINRA rules and unit investment trusts, municipal fund securities, and qualified programs pursuant to Section 529 of the Internal Revenue Code.
- to ensure that your account transactions comply with all applicable laws and regulations, understanding that any transaction subject to special conditions may be delayed until those conditions are met
- to comply with all policies and procedures concerning “restricted” and “control” securities that we may require
- to comply with any insider trading policies that may apply to you as an employee or “affiliate” of the issuer of a security

If you or another individual associated with your account resides outside the U.S., Fidelity may at any time in its sole discretion terminate that relationship or modify your rights to access any or all account features, products, or services. By opening or maintaining an account with Fidelity, you acknowledge that Fidelity does not solicit offers to buy or sell securities, or any other product or service, to any person in any jurisdiction where such offer, solicitation, purchase, or sale would be unlawful under the laws of such jurisdiction.

Limits to Our Responsibility

Although we strive to ensure the quality and reliability of our services, including electronic services (such as online, wireless, and automated telephone services), neither we nor any third party whose services we arrange for are responsible for the availability, accuracy, timeliness, completeness, or security of any service related to your account.

You therefore agree that we are not responsible for any losses you incur (meaning claims, damages, actions, demands, investment losses, or other losses, as well as any costs, charges, attorneys’ fees, or other fees and expenses) as a result of any of the following:

- cancellation of an accepted trade in which Fidelity reasonably determines, in its sole discretion, that there was a data, clerical or other similar error in the handling or processing of the trade, including but not limited to a situation where a third party caused such error
- the acceptance and processing of any order placed on your account, whether received electronically or through other means, as long as the order reasonably appears to be authentic; or the refusal to accept or execute any order, instruction, or transfer as Fidelity may elect to do at any time
- cancellation of an accepted/executed trade when dealers and/or contra-parties notify Fidelity that they are unable to deliver the bonds because the order was filled in error
- investment decisions or instructions placed on your account, or other such actions attributable to you or any authorized person
- occurrences related to governments or markets, such as restrictions, suspensions of trading, or high market volatility or trading volumes

- uncontrollable circumstances in the world at large, such as wars, natural disasters, power outages, unusual weather conditions, or government restrictions
- occurrences related to computers and communications, such as a network or systems failure, a message interception, or an instance of unauthorized access or breach of security
- with respect to electronically provided market data or other information provided by third parties, any flaw in the timing, transmission, receipt, or substance (such as any inaccuracy, error, delay, omission, or sequence error, any nonperformance, or any interruption of information), regardless of who or what has caused it to occur
- the storage and use of information about you and your account(s) by our systems and transmission of this information between you and us; these activities occur entirely at your risk
- the usage of information received by you or us through any electronic services
- telephone requests for redemptions, so long as we transmit the proceeds to you or the bank account number identified
- difficulties receiving information or accessing your account that are due to the equipment you use, including difficulties resulting from technical incompatibilities, malfunctions, inherent limitations, or interruptions in service
- any checks or other debits to your account that are not honored because the account has insufficient funds

If any service failure is determined to be our responsibility, we will be liable only for whatever direct benefit you would have realized up to the time by which you should have notified us, as specified earlier in “Monitoring Your Account and Notifying Us of Errors.” Fidelity reserves the right to restrict your account from withdrawals and/or trades if there is a reasonable suspicion of fraud, diminished capacity, or inappropriate activity. Fidelity also reserves the right to restrict your account from withdrawals and/or trades if Fidelity is put on reasonable notice that the ownership of some or all of the assets in the account is in dispute.

Indemnification

You agree to indemnify us from, and hold us harmless for, any losses (as defined in “Limits to Our Responsibility”) resulting from your actions or failures to act, whether intentional or not, including losses resulting from actions taken by third parties.

If you use any third-party services or devices in connection with your account (such as Internet service or wireless devices), all service agreements and payments for these are your responsibility. Rates and terms are set by the service providers and are not Fidelity’s responsibility.

Note that beyond taking reasonable steps to verify the authenticity of instructions, we have no obligation to inquire into the purpose, wisdom, or propriety of any instruction we receive.

Terms Concerning This Agreement

Applicability

This Agreement is the only agreement between you and us concerning its subject matter, and covers all accounts that you, at whatever time, open, reopen, or have opened with us. In addition, if you have already entered into any agreements concerning services or features that relate to this account (such as the usage agreement for Fidelity.com), or if you do so in the future, this Agreement incorporates by reference the terms, conditions, and policies of those agreements. In the case of any conflict between this Agreement and an agreement for a particular service or feature, the service or feature agreement will prevail.

Governing Laws and Policies

This Agreement and its enforcement are governed by the laws of the Commonwealth of Massachusetts, except with respect to its conflicts-of-law provisions.

All transactions through Fidelity are subject to the rules and customs of the marketplace where they are executed, as well as to applicable state and federal laws. In addition, the services below are subject to the following laws and policies:

- Securities trades: any Fidelity trading policies and limitations that are in effect at the time
- Online services: the license or usage terms posted online
- Checkwriting: the applicable provisions of the Uniform Commercial Code and the terms governing the service

Modification and Enforcement

We may amend or terminate this Agreement at any time. This may include changing, dropping, or adding fees and policies; changing features and services or the entities that provide them (such as the bank that provides checkwriting); and limiting the usage or availability of any feature or service, within the limits of applicable laws and regulations. Although it is our policy to send notice to account owners of any material changes, we are not obligated to do so in most cases. Apart from changes originating in these ways, no provision of this Agreement can be amended or waived except in writing by an authorized representative of Fidelity.

Fidelity may transfer its interests in this account or Agreement to any of its successors and assigns, whether by merger, consolidation, or otherwise. You may not transfer your interests in your account or Agreement (including de facto transferal by giving a nonowner access to the account using a password) except with the prior written approval of Fidelity, or through inheritance, divorce, or similar circumstance, as allowed by law, in which case any rights and obligations in existence at the time will accrue to, and be binding on, your heirs, executors, administrators, successors, or assigns.

We may enforce this Agreement against any and all account owners. In addition, any securities exchanges or associations that provide information to you through your account may enforce the terms of this Agreement directly against you. Although we may not always enforce certain provisions of this Agreement, we retain our full right to do so at any time.

If any provision of this Agreement is found to be in conflict with applicable laws, rules, or regulations, either present or future, that provision will be enforced to the maximum extent allowable, or made to conform, as the case may be. However, the remainder of this Agreement will remain fully in effect.

Fidelity may use the electronically stored copy of your (or your agent's) signature, any written instructions or authorization, the account application and this Agreement as the true, complete, valid, authentic, and enforceable record, admissible in judicial, administrative, or arbitration proceedings to the same extent as if the documents and records were originally generated and maintained in printed form. You agree to not contest the admissibility or enforceability of the electronically stored copies of such documents in any proceeding between you and Fidelity.

Disclosures

Consumer Reporting Agencies

We may report information about your account to credit bureaus. Late payments, missed payments, or other defaults on your account may be reflected in your credit report.

We may also provide information about you and your account as well as the activity in your account to one or more consumer reporting agencies. If you believe that information Fidelity has provided about you or your account or the activity in your account is not accurate, you may notify us at:

Fidelity Investments
Attn: Customer Data Disputes
PO Box 770001
Cincinnati, OH 45277-0045

In order for us to investigate any dispute that you may submit to us with respect to information that we have provided, please provide us with the following information:

- (1) Your name, address, and account number;
- (2) An identification of the specific information that you believe is not accurate; and
- (3) An explanation of the basis for your dispute.

Service Providers

Retirement brokerage services are provided by NFS, an affiliate of FBS. Bonds may be traded through NFS (which may choose to act as principal or agent) or through external dealers. Services available through this account are the property of Fidelity or the third parties from which Fidelity has obtained rights. Market data provided by national securities exchanges or associations remain the property of those entities.

Routing of Orders

FBS routes most customer orders to its affiliated broker-dealer, NFS, which in turn sends orders to various exchanges or market centers for execution. In deciding where to send an order, NFS looks at a number of factors, such as size of order, trading characteristics of the security, favorable execution prices (including the opportunity for price improvement), access to reliable market data, availability of efficient automated transaction processing, and execution cost. Some market centers may execute orders at prices superior to publicly quoted market prices. Although you can instruct us to send an order to a particular marketplace, our order-routing policies are designed to result in transaction processing that is favorable for you. NFS reserves the right to wait for the primary exchange to open before commencing trading in a particular security.

Conflicts of Interest and Compensation

Fidelity and its affiliates receive fees for providing certain products and services. Below is a partial list of affiliates, and the services they are paid for:

- Fidelity Management & Research Company—fee for serving as an investment adviser to the Fidelity funds.
- FBS, NFS, or their affiliates may receive compensation in connection with the purchase and/or ongoing maintenance of positions in certain mutual funds in your account. FBS, NFS, or their affiliates may also receive compensation for such things as systems development necessary to establish a fund on their systems, a fund's attendance at events for FBS' clients, and/or representatives and opportunities for the fund to promote its products and services. This compensation may take the form of sales loads and 12b-1 fees described in the prospectus; marketing, engagement, and analytics program participation fees; maintenance fees; start-up fees; and infrastructure support paid by the fund, its investment advisor, or an affiliate.
- FBS and/or NFS receives remuneration, compensation, or other consideration (such as financial credits or reciprocal business) for directing orders in certain securities to particular broker/dealers or market centers for execution. Information about the source(s) and amount(s) of compensation as well as other remuneration received by FBS and/or NFS and other affiliates is also more fully described in the FBS Form CRS and the Products, Services, and Conflicts of Interest disclosure document, available online at [Fidelity.com](https://www.fidelity.com) /Reg-BI-Master-Disclosure and information about the foregoing is also available upon written request.

Warranty Disclaimer

Neither we nor any third party makes any representations or warranties express or implied, including, without limitation, any implied warranties of merchantability or fitness for a particular purpose in respect of any services provided in connection with this account, or any information programs or products obtained from, through, or in connection with these services. In no event will we or any third party be liable for direct, indirect, incidental, or consequential damages resulting from any defect in or use of these services.

Money Market Fund Investments

You could lose money by investing in a money market fund. Although the fund seeks to preserve the value of your investment at \$1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Fidelity Investments and its affiliates, the fund's sponsor, have no legal obligation to provide financial support to money market funds, and you should not expect that the sponsor will provide financial support to the fund at any time.

Fidelity's government and U.S. Treasury money market funds will not impose a fee upon the sale of your shares, nor temporarily suspend your ability to sell shares if the fund's weekly liquid assets fall below 30% of its total assets because of market conditions or other factors.

Texas House Bill 1454 "Designated Representative"

For Texas residents (or those using a Texas address as a legal address), under Texas House Bill 1454 Act No. 350, you, as an account owner of shares of a mutual fund, may designate a representative for the purpose of receiving a due diligence notice; however, you are not required to designate a representative. If you add a designated representative, you acknowledge that:

- Fidelity is required to mail written notice to the representative, in addition to mailing the notice to the owner, upon presumption of abandonment of the account.
- The designated representative does not have any rights to the mutual fund shares and may not access the shares.

The process by which you select a designated representative is done through a written form, which may be accessed online or requested by phone.

Wisconsin Marital Property Act

Married Wisconsin residents should be aware that no provision of any marital property agreement, unilateral agreement, or court decree under Wisconsin's Marital Property Act will adversely affect a creditor's interest unless, prior to the time credit is granted, the creditor is furnished a copy of, or given complete information about, that agreement or decree.

Residing Outside the United States

If we determine that you reside outside the United States, you will be subject to certain limitations. While we generally make this determination by looking at the address information on our books and records (including the addresses maintained by the account owner and certain individuals with control over the account), we reserve the right to consider other information when making this determination and/or subjecting you to these limitations.

Generally speaking, regardless of where you reside, you will be subject to certain limitations. These include, but are not limited to, the following: (i) we will provide you with only ministerial or administrative services, which means that, among other things, our representatives will not engage in discussions with you about such topics as asset allocation, income planning, or portfolio composition; and (ii) you will not be permitted to purchase additional shares of any U.S. mutual fund (except pursuant to a dividend reinvestment program or in other limited circumstances), which among other things will affect the operation of your core account (please refer to the Core Account section of this Agreement for further details).

In addition to the foregoing, depending on where you reside, you may be subject to additional restrictions (for example, margin lending or options trading may not be permitted) up to and including restrictions that will prevent you from making additional deposits or purchasing additional securities positions (i.e., you will be prohibited from doing anything in your account other than selling your existing holdings and withdrawing the proceeds).

Notwithstanding the above, special rules govern your relationship with us if you live in Canada. Because of this, and because every situation is unique, you should contact Fidelity if you have questions about how you may be affected.

If you notify us that you do not reside outside the U.S., these limitations may be lifted.

Unclaimed Property

Your account balance and certain uncashed checks issued from your account may be transferred to a state unclaimed property administrator if no activity occurs in the account or the check remains outstanding within the time period specified by the applicable state law.

Redemption Features/Callable Securities Lottery

Certain debt securities may have redemption features in addition to those disclosed on the trade confirmation including, for example, special mandatory redemption features such as sinking funds provisions. It is the customer's obligation to review all disclosure documents the customer may receive, and to understand the risks of calls or early redemptions, which may affect yield. Issuers may, from time to time, publish notices of offers to redeem callable securities within limited time, price, and tender parameters. NFS is not obligated to notify customers of such published calls. Information about whether a municipal security is callable can be accessed via the Municipal Securities Rulemaking Board's Electronic Municipal Market Access ("EMMA") website (www.emma.msrb.org).

When street name or bearer securities held for you are subject to a partial call or partial redemption by the issuer, NFS may or may not receive an allocation of called/redeemed securities by the issuer, transfer agent, and/or depository. If NFS is allocated a portion of the called/redeemed securities, NFS utilizes an impartial lottery allocation system, in accordance with applicable rules, that randomly selects the securities within customer accounts that will be called/redeemed. NFS's allocations are not made on a pro rata basis and it is possible for you to receive a full or partial allocation, or no allocation. You have the right to withdraw uncalled fully paid securities at any time prior to the cutoff date and time established by the issuer, transfer agent, and/or depository with respect to the partial call, and also to withdraw excess margin securities, provided your account is not subject to restriction under the Federal Reserve's Regulation T or such withdrawal will not cause an undermargined condition. If you have bought or sold a security, and prior to the settlement of your trade, the issuer initiates a call of the security, NFS reserves the right to cancel your trade. Customers are responsible for covering any outstanding short positions, as well as any other resulting costs in their account, that result from the lottery. For more information and an example of the impartial lottery process, please go to: http://personal.fidelity.com/products/fixedincome/FI_Common_Risk.shtml.

FINRA BrokerCheck

As part of the Financial Industry Regulatory Authority (FINRA) BrokerCheck program, you have access to the FINRA BrokerCheck hotline at 800-289-9999 and the FINRA website at finra.org. You can call or email your inquiries and request a brochure that includes information detailing the BrokerCheck program.

MSRB Investor Brochure

Fidelity Brokerage Services LLC is registered with the U.S. Securities and Exchange Commission (SEC) and the Municipal Securities Rulemaking Board (MSRB). An investor brochure may be obtained at msrb.org that describes the protections that may be provided by the MSRB and how to file a complaint with an appropriate regulatory authority.

Resolving Disputes — Arbitration

This Agreement contains a predispute arbitration clause. Under this clause, which you agree to when you sign your account application, you and Fidelity agree as follows:

- A. All parties to this Agreement are giving up the right to sue each other in court, including the right to a trial by jury, except as provided by the rules of the arbitration forum in which a claim is filed.
- B. Arbitration awards are generally final and binding; a party's ability to have a court reverse or modify an arbitration award is very limited.
- C. The ability of the parties to obtain documents, witness statements, and other discovery is generally more limited in arbitration than in court proceedings.
- D. The arbitrators do not have to explain the reason(s) for their award unless, in an eligible case, a joint request for an explained decision has been submitted by all parties to the panel at least 20 days prior to the first scheduled hearing date.
- E. The panel of arbitrators may include a minority of arbitrators who were or are affiliated with the securities industry.
- F. The rules of some arbitration forums may impose time limits for bringing a claim in

arbitration. In some cases, a claim that is ineligible for arbitration may be brought in court.

- G. The rules of the arbitration forum in which the claim is filed, and any amendments thereto, shall be incorporated into this Agreement.

All controversies that may arise between you and us concerning any subject matter, issue, or circumstance whatsoever (including, but not limited to, controversies concerning any account, order, distribution, rollover, advice interaction, or transaction, or the continuation, performance, interpretation, or breach of this or any other agreement between you and us, whether entered into or arising before, on, or after the date this account is opened) shall be determined by arbitration through the Financial Industry Regulatory Authority (FINRA) or any United States securities self-regulatory organization or United States securities exchange of which the person, entity, or entities against whom the claim is made is a member, as you may designate. If you commence arbitration through a United States self-regulatory organization or United States securities exchange and the rules of that organization or exchange fail to be applied for any reason, then you shall commence arbitration with any

other United States securities self-regulatory organization or United States securities exchange of which the person, entity, or entities against whom the claim is made is a member. If you do not notify us in writing of your designation within five (5) days after such failure or after you receive from us a written demand for arbitration, then you authorize us to make such designation on your behalf. The commencement of arbitration through a particular self-regulatory organization or securities exchange is not integral to the underlying agreement to arbitrate. You understand that judgment upon any arbitration award may be entered in any court of competent jurisdiction.

No person shall bring a putative or certified class action to arbitration, nor seek to enforce any predispute arbitration agreement against any person who has initiated in court a putative class action; or who is a member of a putative class action who has not opted out of the class with respect to any claims encompassed by the putative class action until: (i) the class certification is denied; (ii) the class is decertified; or (iii) the customer is excluded from the class by the court. Such forbearance to enforce an agreement to arbitrate shall not constitute a waiver of any rights under this Agreement except to the extent stated herein.



Brokerage Commission and Fee Schedule

FEES AND COMPENSATION

Fidelity brokerage accounts are highly flexible, and our cost structure is flexible as well. Our use of “à la carte” pricing for many features helps to ensure that you only pay for the features you use.

About Our Commissions and Fees

The most economical way to place trades is online, meaning either through Fidelity.com, Fidelity Active Trader Pro,[®] or Fidelity Mobile.[®] The next most economical way is Fidelity Automated Service Telephone (FAST[®]). This automated service is available around the clock and can be accessed from a touch-tone phone.

The fees described in this document apply to the Fidelity Account,[®] Non-Prototype Retirement Accounts, Health Savings Accounts (HSAs), and Fidelity Retirement Accounts (including Traditional, Roth, Rollover, SEP-IRA, SIMPLE IRAs, and Fidelity Retirement Plans (Keogh and SE 401(k)), and inherited IRAs and inherited Keogh accounts). Note that for Stock Plan Services Accounts, a different fee schedule located on NetBenefits.com may apply for Exercise-and-Sell Fees for Stock Option Plans and Sale of Company Stock. This Fidelity Brokerage Commission and Fee Schedule applies to all other transactions. The fees described in this document may change from time to time without notice. Before placing a trade, consider Fidelity's most recent Brokerage Commission and Fee Schedule, available at Fidelity.com or through a Fidelity representative.

STOCKS/ETFs

Online **\$0.00 per trade**
FAST[®] **\$12.95 per trade**
Rep-Assisted **\$32.95 per trade**

The remuneration that Fidelity receives and keeps as described in this section applies to transactions and activities involving securities including, but not limited to, domestic (U.S.) equities traded on national exchanges, short sales, exchange-traded funds (ETFs), and U.S.-traded foreign securities (ADRs, or American Depository Receipts, and ORDs, or Ordinaries).¹ For details on foreign stock trading, see the Foreign Stocks section. Large block orders requiring special handling, restricted stock orders, and certain directed orders may carry additional fees, which will be disclosed at the time of the transaction.

In addition to the per trade charges identified above, Fidelity's remuneration also includes a fee that is charged on all sell orders (“Additional Assessment”). The Additional Assessment, which typically ranges from \$0.01 to \$0.03 per \$1,000 of principal, is charged by Fidelity. Fidelity uses the Additional Assessment to pay certain charges imposed on Fidelity by national securities associations, clearing agencies, national securities exchanges, and other self-regulatory organizations (collectively, “SROs”). The SROs in turn pay the SEC using the money they collect from Fidelity and other broker-dealers. The Additional Assessment that Fidelity charges you is designed to offset the charges imposed on Fidelity by the SROs, which in turn are intended to cover the costs incurred by the government, including the SEC, for supervising and regulating the securities markets and securities professionals. You acknowledge, understand, and agree that Fidelity determines the amount of the Additional Assessment in its sole and exclusive discretion, and that the Additional Assessment may differ from or exceed the charges imposed on Fidelity by the SROs. These differences are caused by various factors, including, among other things, the rounding methodology used by Fidelity, the use of allocation accounts, transactions or settlement movements for which a fee by the SROs may not be assessed, and differences between the dates of changes to rates charged by the SROs. You understand, acknowledge, and agree that Fidelity has made no representation that the Additional Assessment charged to you will equal the fees assessed against Fidelity by the SROs in connection with your transactions. The Additional Assessment is in addition to the commissions we charge (i.e., the per trade charges identified above), and is included on your trade confirmation as a part of the Activity Assessment Fee. For the exact amount of the Additional Assessment charged on a particular transaction, please contact a Fidelity representative.

Fidelity Brokerage Services LLC (“FBS”) and/or NFS receives remuneration, compensation, or other consideration (such as financial credits or reciprocal business) for directing orders in certain securities to particular broker-dealers or market centers for execution. The payer, source, and nature of any compensation received in connection with your particular transaction will vary

based on the venue that a trade has been routed to for execution and will be disclosed upon written request to FBS. Please refer to Fidelity's customer agreement for additional information about order flow practices and to Fidelity's commitment to execution quality (http://personal.fidelity.com/products/trading/Fidelity_Services/Service_Commitment.shtml) for additional information about order routing. Also review FBS's annual disclosure on payment for order flow policies and order routing policies.

FBS has entered into a long-term, exclusive and significant arrangement with the advisor to the iShares Funds that includes but is not limited to FBS's promotion of iShares funds, as well as in some cases purchase of certain iShares funds at a reduced commission rate (“Marketing Program”). FBS receives compensation from the fund's advisor or its affiliates in connection with the Marketing Program. FBS is entitled to receive additional payments during or after termination of the Marketing Program based upon a number of criteria, including the overall success of the Marketing Program. The Marketing Program creates significant incentives for FBS to encourage customers to buy iShares funds. Additional information about the sources, amounts, and terms of compensation is described in the ETF's prospectus and related documents.

NEW ISSUE

Fidelity makes certain new issue products available without a separate transaction fee. Fidelity may receive compensation for participating in the offering as a selling group member or underwriter. The compensation Fidelity receives from issuers when acting as both underwriter and selling group member is reflected in the “Range of Fees from Underwriting” column. When Fidelity acts as underwriter but securities are sold through other selling group members, Fidelity receives the underwriting fees less the selling group fees.

Securities	Range of Fees from Participation in Selling Group	Range of Fees from Underwriting
IPOs	• 3% to 4.2% of the investment amount	• 5% to 7% of the investment amount
Follow-Ons	• 1.8% to 2.4% of the investment amount	• 3% to 4% of the investment amount

Please refer to the applicable pricing supplement or other offering document for the exact percentage sales concession or underwriting discount.

OPTIONS

Online **\$0.00 per trade** + 65¢ per contract
FAST[®] **\$12.95 per trade** + 65¢ per contract
Rep-Assisted **\$32.95 per trade** + 65¢ per contract

Buy-to-close orders placed online for options priced 0¢ to 65¢ are commission-free and are not subject to per contract option fees. For trades placed on other channels, you will not be charged a per contract fee when the contract price is 65¢ or less. Regular option rates (as shown above) apply when the contract price exceeds 65¢.

Maximum charge: 5% of principal (subject to a minimum charge of \$12.95 for FAST trades and \$32.95 for Rep-Assisted trades).

Exercises and assignments are commission-free and are not charged a per contract fee.

In addition to the per trade/contract fees described above, Fidelity's remuneration also includes fees it charges you (“Options Fee”) that are designed to offset the Options Regulatory Fee (“ORF”) that the Options Clearing Corporation (“OCC”) charges Fidelity through various options exchanges. The ORF applies to any transaction to buy or sell options contracts and represents the cumulative charges imposed by all the participating options exchanges. The ORF has ranged from \$0.03 to \$0.05 per contract but is subject to change at any time. You acknowledge, understand, and agree that Fidelity determines the amount of the Options Fee charged to you and its other customers in its sole and exclusive discretion, and that the Options Fee amount collected from you by Fidelity may differ from or exceed the ORF that Fidelity pays to OCC. These differences are caused by various factors, including, among other things, the rounding methodology used by Fidelity, the use of allocation accounts, transactions for which a fee may not be assessed, and differences between the dates of changes to the ORF rate. You understand, acknowledge, and agree that Fidelity has made no representation that the fees assessed to you will equal the fees assessed against Fidelity by the OCC in connection with your transactions. This Options Fee is in addition to your commission and is included on your trade confirmation as a part of the Activity Assessment Fee. For the exact amount of the Options Fee charged to you on a particular transaction, please contact a Fidelity representative.

Multi-Leg Option orders placed online are charged a per contract Options Fee for the total number of contracts executed in the trade. Multi-Leg Option orders placed through other channels are charged a commission and the 65¢ per contract fee.

¹A Financial Transaction Tax of 0.30% of principal per trade on purchases of French securities, 0.10% of principal per trade on purchases of Italian securities, and 0.20% of principal per trade on Spanish securities may be assessed.

An "Additional Assessment" is also charged on any order to sell options contracts. Please refer to the discussion of the "Additional Assessment" in the Stocks/ETFs section of this document for additional information.

BONDS AND CDs

New Issues, Primary Purchases (all other fixed-income securities except U.S. Treasury)

Fidelity makes certain new issue products available without a separate transaction fee. Fidelity may receive compensation from issuers for participating in the offering as a selling group member and/or underwriter. The compensation Fidelity receives from issuers when acting as both underwriter and selling group member is reflected in the "Range of Fees from Underwriting" column. When Fidelity acts as underwriter but securities are sold through other selling group members, Fidelity receives the underwriting fees less the selling group fees.

BONDS

Securities	Range of Fees from Participation in Selling Group	Range of Fees from Underwriting
Agency/GSE	N/A	• 0.05% to 1.00% of the investment amount
Corporate Notes	• 0.01% to 2.5% of the investment amount	• 0.01% to 3.0% of the investment amount
Corporate Bond	• 0.01% to 2.5% of the investment amount	• 0.05% to 3.0% of the investment amount
Municipal Bonds and Taxable Municipal Bonds	• 0.1% to 2% of the investment amount	• 0.1% to 2.5% of the investment amount
Structured Products (Registered Notes)	• 0.05% to 5.0% of the investment amount	N/A
Fixed-Rate Capital	• 2% of the investment amount	• 3% of the investment amount

Please refer to the applicable pricing supplement or other offering document for the exact percentage sales concession or underwriting discount.

CDs

Securities	Range of Fees from Participation in Selling Group	Range of Fees from Underwriting
CDs—CDIPs (Inflation Protected)	• 0.1% to 2% of the investment amount	• 0.1% to 2.5% of the investment amount
Structured Products (Market-linked CDs)	• 0.05% to 5% of the investment amount	N/A

U.S. Treasury, including TIPS—Auction Purchases

Online **No charge**

Rep-Assisted **\$19.95 per trade**

SECONDARY MARKET TRANSACTIONS

Mark-ups for all secondary bond (fixed-income) trades are listed below.

U.S. Treasury, including TIPS

Online **No charge**

*Rep-Assisted **\$19.95**

All Other Bonds

Online **\$1.00 per bond**

Rep-Assisted **\$1.00 per bond***

*Rep-Assisted \$19.95 minimum

Please note that a \$250 maximum applies to all trades and is reduced to a \$50 maximum for bonds maturing in one year or less.

Bond orders cannot be placed through FAST.®

The offering broker, which may be our affiliate National Financial Services ("NFS"), may separately mark up or mark down the price of the security and may realize a trading profit or loss on the transaction. If NFS is not the offering broker, Fidelity compensation is limited to the prices above.

Foreign Fixed-Income Trading

When purchasing a foreign currency-denominated fixed-income security for settlement in USD, the following additional charges will apply:

<\$1M	0.30% of principal
\$1M–\$5M	0.20% of principal
>\$5M	negotiated rate

MUTUAL FUNDS

This section only describes fees associated with your account. Fees charged by a fund itself (for example, expense ratios, redemption fees [if any], exchange fees [if any], sales charges [for certain load funds]) are in the fund's prospectus. Read it carefully before you invest.

Fidelity Funds

All Methods **No transaction fee**

FundsNetwork Funds

Through FundsNetwork.® your account provides access to over 10,000 mutual funds. At the time you purchase shares of funds, those shares will be assigned either a transaction fee (TF), a no transaction fee (NTF) or a load status. When you subsequently sell those shares, any applicable fees will be assessed based on the status assigned to the shares at the time of purchase.

Fidelity Brokerage Services LLC, or its affiliates, may receive compensation in connection with the purchase and/or the ongoing maintenance of positions in certain mutual funds in your account. FBS may also receive compensation for such things as systems development necessary to establish a fund on its systems, a fund's attendance at events for FBS's clients and/or representatives, and opportunities for the fund to promote its products and services. This compensation may take the form of sales loads and 12b-1 fees described in the prospectus, as well as program participation and maintenance fees, start-up fees, and infrastructure support paid by the fund, its investment advisor, or an affiliate.

FundsNetwork No Transaction Fee Funds.

All Methods **No transaction fee*** Most NTF Funds will have no load.

Certain NTF Funds will be available load waived.

Short-term Trading Fees

Fidelity charges a short-term trading fee each time you sell or exchange shares of a FundsNetwork NTF fund held less than 60 days. This fee does not apply to Fidelity funds, money market funds, FundsNetwork Transaction Fee funds, FundsNetwork load funds, funds redeemed through the Personal Withdrawal Service, or shares purchased through dividend reinvestment. In addition, Fidelity reserves the right to exempt other funds from this fee, such as funds designed to achieve their stated objective on a short-term basis. The fee will be based on the following fee schedule:

Online **\$49.95 flat fee**

Fidelity Automated Service Telephone (FAST.®): **0.5625% of principal** (25% off representative-assisted rates), maximum \$187.50, minimum \$75

Rep-Assisted: **0.75% of principal**, maximum \$250, minimum \$100

Keep in mind that the short-term trading fee charged by Fidelity on FundsNetwork NTF funds is different and separate from a short-term redemption fee assessed by the fund itself. Not all funds have short-term redemption fees, so please review the fund's prospectus to learn more about a potential short-term redemption fee charged by a particular fund.

*Fidelity reserves the right to change the funds available without transaction fees and reinstate the fees on any funds.

FundsNetwork Transaction-Fee Funds

Purchases:

Online: **\$49.95 or \$75 per purchase**. To identify any applicable transaction fees associated with the purchase of a given fund, please refer to the "Fees and Distributions" tab on the individual fund page on Fidelity.com.

FAST.®: **0.5625% of principal per purchase**; minimum \$75, maximum \$187.50

Rep-Assisted: **0.75% of principal per purchase**; minimum \$100, maximum \$250

These fees may be waived for certain types of periodic investment accounts.

Redemptions:

Fidelity does not charge a transaction fee on any redemption of shares of a transaction-fee fund that were purchased with no load. A fund's own redemption fees may apply.

You can buy shares in a transaction-fee fund from its principal underwriter or distributor without a Fidelity transaction fee.

FundsNetwork Load Funds

A fund's sales charges may apply. Fidelity does not charge a transaction fee on a load fund. A fund's own redemption fees may apply.

FOREIGN STOCKS

Fidelity offers three different opportunities to trade foreign stocks. You can utilize "International Trading," "Dollarized International Trading," or Fidelity's "Foreign Ordinary Share Trading" services. Depending on the service, different commissions, taxes, and fees may apply as more fully described below. You may also call a Fidelity representative for further detail. The International Trading team at Fidelity is available Monday through Friday, from 5 a.m.–7 p.m. ET.

International Trading

International Trading allows customers to trade stocks from 25 countries and exchange between 16 currencies. These trades are placed using a root symbol, followed by a colon (:) and the two-letter country code for the market the customer wants to trade in. The commission charged by Fidelity is dependent on the market in which the order is placed and whether the trade is placed online or with the assistance of a representative as noted in the table below.

Country	Online*	Rep Assisted*
Australia	\$32 AUD	\$70 AUD
Austria	19 EUR(€)	50 EUR(€)
Belgium	19 EUR(€)	50 EUR(€)
Canada	\$19 CAD	\$70 CAD
Denmark	160 DKK	420 DKK
Finland	19 EUR(€)	50 EUR(€)
France	19 EUR(€)	50 EUR(€)
Hong Kong	\$250 HKD	\$600 HKD
Germany	19 EUR(€)	50 EUR(€)
Greece	19 EUR(€)	50 EUR(€)
Ireland	19 EUR(€)	50 EUR(€)
Italy	19 EUR(€)	50 EUR(€)
Japan	3,000 JPY(¥)	8,000 JPY(¥)
Mexico	360 MXN	960 MXN
Netherlands	19 EUR(€)	50 EUR(€)
New Zealand	\$35 NZD	\$90 NZD
Norway	160 NOK	400 NOK
Poland	90 PLN	235 PLN
Portugal	19 EUR(€)	50 EUR(€)
Singapore	\$35 SGD	\$90 SGD
South Africa	225 ZAR	600 ZAR
Spain	19 EUR(€)	50 EUR(€)
Sweden	180 SEK	480 SEK
Switzerland	25 CHF	65 CHF
United Kingdom	9 GBP(£)	30 GBP(£)

*Per trade

Note that retirement account registrations are ineligible for this service. Please also note that if a security trading on an exchange in one of the markets noted above is only listed for trading in a currency other than that country's local market's currency, then the commission that will be charged will be based on the currency the security is trading in instead of the identity of the local market.

Dollarized International Trading

Dollarized International Trading allows customers to execute stocks on foreign exchanges in retirement and non-internationally enabled accounts using a five-character symbol ending in "F" for settlement in U.S. Dollars. Trade Amounts are calculated and posted in U.S. Dollars by incorporating a foreign currency exchange. This service is only available through the International Trading team at Fidelity and orders will execute during the respective countries' regular market hours. At a minimum, all the same countries listed above for the International Trading offering are available, but please inquire with your Fidelity representative if you have a question about the availability of any additional countries.

Country	Rep Assisted Only*
Canada	Rep Assisted Commission
All Others	Rep Assisted Commission + \$50 non-DTC (Depository Trust Company) Fee

*Per trade

Country-Specific Taxes and Fees

Additional country-specific taxes and fees may be charged as detailed in the table below for International Trading and Dollarized International Trading. The list of countries, currencies, taxes, and fees provided below is subject to change without notice. There may also be further fees, taxes, or other charges assessed by intermediaries when conducting transactions in foreign securities beyond those described here, which could change at any time based on the country or exchange directive. Details regarding these charges are available from a Fidelity representative.

Country	Tax (Per Trade)
France*	Financial Transaction Tax (FTT) .30% of principal on purchases
Italy*	Financial Transaction Tax (FTT) .10% of principal on purchases
Spain*	Financial Transaction Tax (FTT) .20% of principal on purchases
Ireland	Stamp Tax 1.00% of principal on purchases
Hong Kong	Transaction Levy 0.0027% of principal Trading fee 0.005% of principal Stamp Duty 0.10% of principal
South Africa	Securities Transfer Tax .25% of principal on purchases
Singapore	Clearing fee of 0.04% of principal
United Kingdom	PTM Levy 1 GBP where principal amount is > £10,000 Stamp Duty 0.50% of principal on purchases

*Certain securities based on market capitalization

Please also note that if a security trading on an exchange in one of the markets noted above is only listed for trading in a currency other than that country's local market's currency, then the fees that will be charged will be based on the currency the security is trading in instead of the identity of the local market.

Foreign Currency Exchange

In addition to the commissions, taxes, fees, and other charges for International Trading and Dollarized International Trading, a currency exchange fee (in the form of a markup or markdown on the exchange rate) will be charged based on the size of the currency conversion, pursuant to the following schedule:

Total Foreign Exchange Amount	Cost
<\$100K	1.0% of principal
\$100K–<\$250K	0.75% of principal
\$250K–<\$500K	0.50% of principal
\$500K–<\$1M	0.30% of principal
\$1M+	0–0.20% of principal

Note: The Foreign Currency Exchange Fees above are applied to orders filled in the local country markets listed above. Rates may vary for additional currencies in available countries not listed in this schedule. Details are available from a Fidelity representative.

Foreign Ordinary Share Trading

Foreign Ordinary Share Trading allows customers to trade shares in foreign corporations on the over-the-counter (OTC) market using a five-character symbol ending in "F." Trades in foreign ordinary shares can be placed online through the domestic equity order ticket or through a Fidelity representative. In either case, the domestic commission schedule for stocks/ETFs will apply. A \$50 fee will also be charged on each transaction in any foreign ordinary stock that is not Depository Trust Company eligible. Retirement and non-retirement accounts are eligible for this service.

Country-Specific Taxes and Fees

Additional country-specific taxes and fees may be charged as detailed in the table below for Foreign Ordinary Share Trading. The list of countries, taxes, and fees provided below is subject to change without notice. There may also be further fees, taxes, or other charges assessed by intermediaries when conducting transactions in foreign securities beyond those described here, which could change at any time based on the country. Details regarding these charges are available from a Fidelity representative.

Country	Tax (Per Trade)
France*	Financial Transaction Tax (FTT) .30% of principal on purchases
Italy*	Financial Transaction Tax (FTT) .10% of principal on purchases
Spain*	Financial Transaction Tax (FTT) .20% of principal on purchases

*Certain securities based on market capitalization

Note: The taxes and fees, if any, will be disclosed individually on the trade confirmation.

OTHER INVESTMENTS

Commercial Paper \$50 per transaction

Unit Investment Trusts (UITs) \$35 minimum per redemption; no fee to purchase. Fidelity makes certain new issue products available without a separate transaction fee. Fidelity receives compensation for participating in the offering as a selling group member. Fees from participating in the selling group range from 1% to 4% of the public offering price. Fidelity may also receive compensation for reaching certain sales levels, which range from 0.001%–0.0025% of the monthly volume sold.

Precious Metals

Buy	Gross Amount	% Charged on Gross Amount	Sell	Gross Amount	% Charged on Gross Amount
\$0–\$9,999		2.90%	\$0–\$49,999		2.00%
\$10,000–\$49,999		2.50%	\$50,000–\$249,999		1.00%
\$50,000–\$99,999		1.98%	\$250,000+*		0.75%
\$100,000+*		0.99%			

*delivery charges and applicable taxes if you take delivery

Fidelity charges a quarterly storage fee of 0.125% of the total value or \$3.75, whichever is greater. Storage fees are pre-billed based on the value of the precious metals in the marketplace at the time of billing.

For more information on these other investments and the cost of a specific transaction, contact Fidelity at 800-544-6666. Minimum fee per precious metals transaction: \$44. Minimum precious metals purchase: \$2,500 (\$1,000 for IRAs). Precious metals may not be purchased in a Fidelity Retirement Plan (Keogh), and are restricted to certain types of investments in a Fidelity IRA.

OTHER FEES AND COMPENSATION

All Accounts

Foreign Currency Wires up to 3% of principal; charged when converting USD to wire funds in a foreign currency

Foreign Dividends/Reorganizations 1% of principal; charged when a dividend is paid or a reorganization event occurs on a foreign asset held in an account in USD

Nonretirement Accounts

Debit Card and ATM Fees There is no annual fee for the Fidelity® Debit Card or the Fidelity HSA® debit card. You may be charged separate fees by other institutions, such as the owner of the ATM. Note: You cannot use the Fidelity HSA® debit card at an ATM.

For Fidelity Account® owners coded Premium, Private Client Group, Wealth Management, or with household annual trading activity of 120 or more stock, bond, or options trades, your account will automatically be reimbursed for all ATM fees charged by other institutions while using the Fidelity® Debit Card at any ATM displaying the Visa®, Plus® or Star® logos. The reimbursement will be credited to the account the same day the ATM fee is debited. In rare instances, ATM owners may not itemize fees, which may cause disruption of individual automatic rebates. Should this occur, please contact Fidelity. Please note there may be a foreign transaction fee of 1% included in the amount charged to your account.

Fidelity debit cards are issued by PNC Bank, N.A., and the debit card programs are administered by BNY Mellon Investment Servicing Trust Company. These entities are not affiliated with each other or with Fidelity. Visa is a registered trademark of Visa International Service Association, and is used by PNC Bank pursuant to a license from Visa U.S.A. Inc.

Transfer and Ship Certificates \$100 per certificate; applies only to customers who have certificate shares reregistered and shipped; waived for households that meet certain asset and trade minimums at Fidelity²

HSA

Annual fees For Fidelity HSAs that are opened through, or serviced by, an intermediary, or in connection with your workplace benefits, Fidelity may deduct:

- an administrative fee of up to \$12 per quarter (\$48 annually) from your Fidelity HSA, unless it is paid by your employer (may be waived for households that were established before a certain date and meet certain asset minimums at Fidelity).

Fee and Trading Policies

Commissions will be charged per order. For commission purposes, orders executed over multiple days will be treated as separate orders. Unless noted otherwise, all fees and commissions are debited from your core account.

Fee Waiver Eligibility

To determine your eligibility for fee waivers, we group the assets and trading activity of all of the eligible accounts shown on your periodic account statement.

Eligible accounts generally include those maintained with Fidelity Service Company, Inc., or FBS [such as 401(k), 403(b), or 457 plan assets] or held in Fidelity Investments Life Insurance Company accounts, Fidelity Portfolio Advisory Service® or Fidelity® Personalized Portfolios accounts. Assets maintained by Fidelity Personal Trust Company, FSB, are generally not included. We may include other assets at our discretion.

We will review your account periodically to confirm that your household is receiving the best fee waivers it qualifies for, and may change your fee waiver eligibility at any time based on these reviews. We update fee waiver eligibility across household accounts promptly after a daily review of trading activity, and monthly after a review of household assets. All trading activity is measured on a rolling 12-month basis.

If you believe there are eligible accounts within your household that are not being counted in our fee waiver eligibility process—for example, accounts held by immediate family members who reside with you—you may authorize Fidelity to consolidate these accounts into an aggregated relationship household and review them for eligibility. Any resulting fee waivers would extend both to you and to all immediate family members residing with you. Most customers receive only a single customer reporting statement from Fidelity and do not need to take any action. However, for more information, go to [Fidelity.com/goto/commissions](https://www.fidelity.com/goto/commissions) or call us at 800-544-6666.

²Households with \$1 million or more in assets or \$25,000 or more in assets + 120 trades a year. For details, see Fee Waiver Eligibility section above.

Limits on Feature Eligibility

Retirement accounts and Fidelity BrokerageLink® accounts cannot trade foreign securities or sell short, are not eligible for margin loans, and may be subject to other rules and policies. Please see the literature for these accounts for details.

Prospectuses and Fact Sheets

Free prospectuses are available for UITs, Fidelity funds, and Fidelity FundsNetwork® funds. Fact sheets are available for certificates of deposit. To obtain any of these documents, and for other information on any fund offered through Fidelity, including charges and expenses, call 800-544-6666 or visit Fidelity.com.

Margin Fees

Understanding how margin charges are calculated is essential for any investor considering or using margin. The information below, provided in conformity with federal securities regulations, is designed to help you understand the terms, conditions, and methods associated with our margin interest charges.

For all margin borrowing—regardless of what you use it for—we charge interest at an annual rate that is based on two factors: our base rate, and your average debit balance. We set our base rate with reference to commercially recognized interest rates, industry conditions regarding margin credit, and general credit conditions. The table below shows the premiums and discounts we apply to our base rate depending on the average debit balance:

Interest Charged

Average Debit Balance	Interest Charged Above/Below Base Rate
\$0–\$24,999.99	+1.250%
\$25,000–\$49,999.99	+0.750%
\$50,000–\$99,999.99	–0.200%
\$100,000–\$249,999.99	–0.250%
\$250,000–\$499,999.99	–0.500%
\$500,000–\$999,999.99	–2.825%
\$1,000,000+	–3.075%

In determining your debit balance and interest rate, we combine the margin balances in all your accounts except short accounts and income accounts. We then compute interest for each account based on the rate resulting from averaging the daily debit balances during the interest period. Interest is charged from the date we extend you credit.

Your rate of interest will change without notice based on changes in the base rate and in your average debit balance. When your interest rate is increased for any other reason, we will give you at least 30 days' written notice. If the base rate is stated as a range, we may apply the high end of the range.

For any month where your monthly margin charges are \$1 or more, your monthly statement will show both the dollar amount and the rate of your interest charges. If your interest rate changed during the month, separate charges will be shown for each rate. Each interest cycle begins the first business day following the 20th of each month.

Other Charges

You may be assessed separate interest charges, at the base rate plus two percentage points, in connection with any of the following:

- Payments of the proceeds of a security sale in advance of the regular settlement date (such prepayments must be approved in advance)
- When the market price of a "when-issued" security falls below your contract price by more than the amount of your cash deposit
- When payments for securities purchased are received after the settlement date

How Interest Is Computed

Interest on debit balances is computed by multiplying the average daily debit balance of the account by the applicable interest rate in effect and dividing by 360, times the number of days a daily debit balance was maintained during the interest period.

Marking to Market

The credit balance in the short account will be decreased or increased in accordance with the corresponding market values of all short positions. Corresponding debits or credits will be posted to the margin account. These entries in the margin account will, of course, affect the balance on which interest is computed. Credits in your short account, other than marking to market, will not be used to offset your margin account balance for interest computation.

Addendum to Brokerage Commission and Fee Schedule

FundsNetwork®

FBS and/or NFS has contracted with certain mutual funds, their investment advisors, or their affiliates and certain ETF investment advisors to receive other compensation in connection with the purchase and/or the ongoing maintenance of positions in certain mutual fund shares and ETFs in your brokerage account. This additional annual compensation may be paid with respect to the mutual fund by the mutual fund, its investment advisor, or one of its affiliates and with respect to the ETF by its investment advisor or its affiliates.

- FundsNetwork No Transaction Fee (NTF) Funds and ETFs
 - For funds participating in the NTF program and certain ETFs, Fidelity receives compensation that can typically range from 0 to 50 basis points based on the average daily balance. As of 12/31/2020, 70% of the mutual funds currently in the NTF program are in the 35–40 basis point range. For NTF funds with a 12b-1 fee, the fund family may use the 12b-1 fee as part of its NTF payment.
- FundsNetwork Transaction Fee (TF) Funds
 - For funds participating in the TF program, Fidelity receives compensation based on: (1) per-position fees that typically range from \$3 to \$25 per brokerage account or (2) asset-based fees that typically range from 0 to 20 basis points based on average daily assets. As of 12/31/2020, 64% of the mutual funds participating in the TF program are in the \$12–\$19 per-position-fee range or 8 to 12 basis point range. TF compensation is in addition to any 12b-1 fees as described in the fund's prospectus.
- Fidelity receives fees from certain unaffiliated product providers to compensate Fidelity for maintaining the infrastructure required to accommodate unaffiliated product providers' investments products in one or more of Fidelity's distribution channels, including retail, workplace and intermediary channels. These fees vary by providers, but in each case the fee is a fixed amount that is less than .07% of the product provider's assets in the Fidelity distribution channel(s) for which it applies. In addition, certain unaffiliated product providers may pay Fidelity initial start-up fees, product add, maintenance, access to certain distribution channels, and provider minimum monthly fees as well as a flat, uniform, annual fee related to an exclusive marketing, engagement, and analytic program. In Fidelity's view, collectively, these fees are not in connection with Fidelity's services to plans and should not be considered indirect compensation under the 408(b)(2) regulation.
- Fidelity may receive a payment from American Fund Distributors (AFD) for among other things, to compensate Fidelity for providing them access to financial intermediaries and investors in certain Fidelity channels, a platform to support the provision of investment guidance and service to such financial intermediaries and investors, when applicable, and to promote operational efficiencies. As described in American Fund prospectuses, AFD has discretion as to the amount of the payment, if any; the criteria to determine any payment includes sales, assets, and cash flows as well as qualitative factors. It is anticipated that the payment would not exceed .08% annually of American Fund assets in all retail, workplace and intermediary channels maintained by Fidelity, subject to certain exclusions.
- Fidelity may receive an annual product fee of up to \$2,000 if aggregate assets held in that product across all retail, workplace and intermediary channels maintained by Fidelity are less than \$1.5 million.
- If you would like more information on any of the mutual funds in the FundsNetwork program, please call Fidelity at 800-544-5373.

Use of funds held overnight

FBS is the introducing broker-dealer for Fidelity brokerage accounts ("Accounts"). Its affiliate, NFS, provides clearing and other related services on Accounts. As compensation for services provided with respect to Accounts, NFS receives use of: amounts from the sale of securities prior to settlement; amounts that are deposited in the Accounts before investment; and disbursement amounts made by check prior to the check being cleared by the bank on which it was drawn. Any of the above amounts will first be netted against outstanding Account obligations. The use of such amounts may generate earnings (or "float") for NFS or instead may be used by NFS to offset its other operational obligations. Information concerning the time frames during which NFS may have use of such amounts and rates at which float earnings are expected to accrue is provided as follows:

- (1) Receipts. The deposit of amounts that settle from the sale of securities or that are deposited into an Account (by wire, check, ACH [Automated Clearing House] or other means) will generally be purchased into the Account's core sweep vehicle by close of business on the business day that NFS receives such funds. NFS gets the use of such amounts from the time it receives funds until the core sweep vehicle purchase settles on the next business day. Note that amounts disbursed from an Account (other than as referenced in Section 2 below) or purchases made in an Account will result in a corresponding "cost" to NFS. This occurs because NFS provides funding for these disbursements or purchases one day prior to the receipt of funds from the Account's core sweep vehicle. These "costs" may reduce or eliminate any benefit that NFS derived from the receipts described previously.
- (2) Disbursements. NFS gets the use of amounts disbursed by check from Accounts from the date the check is issued by NFS until the check is presented and paid.
- (3) Float Earnings. To the extent that such amounts generate float earnings, such earnings will generally be realized by NFS at rates approximating the Effective Federal Funds Rate.

Fidelity Defined Contribution Retirement Plan Accounts (including Profit Sharing, Money Purchase, and Self-Employed 401(k) plans) for Customers who Reside Outside the United States

If you reside outside the United States in any country other than Canada (as described in the Residing Outside of the United States section of the Fidelity Brokerage Retirement Customer Account Agreement ["Agreement"]), deposits to your Fidelity retirement account will be held in the Intraday Free Credit Balance as more fully described in the Agreement. Any interest paid as a result of the Intraday Free Credit Balance will be labeled "Credit Interest" in the Activity section of your account statement. To the extent such amounts generate earnings, such earnings will be realized by NFS at rates approximating the Effective Federal Funds Rate. NFS's compensation is the amount of earnings reduced by any interest paid to Accounts.