

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 different fee schedules generally apply for Stock Plan Services.

STOCKS/ETFs

Online **\$7.95 per trade**
 FAST[®] **\$12.95 per trade**
 Rep-Assisted **\$32.95 per trade**

These commissions and fees apply to securities including, but not limited to, domestic (US) 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). For details on foreign stock trading, see the Foreign Stocks section below.

There is an assessment of \$0.0192 per \$1,000 of principal in addition to your commission that is added to sell orders. This assessment is imposed on the financial services industry by the Securities and Exchange Commission to cover the government's costs of regulating the security markets and security professionals.

Fidelity Brokerage Services LLC (“FBS”) and/or NFS receives remuneration, compensation, or consideration for directing orders in equity securities to particular broker/dealers or market centers for execution. The source and nature of any compensation received in connection with your particular transaction will be disclosed upon written request to FBS. Please refer to Fidelity's customer agreement for additional information about order flow practices and 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 receives compensation from the fund's advisor or its affiliates in connection with a marketing program that includes promotion of this security and other iShares funds, as well as the waiver of commissions for online trades in certain iShares funds (“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 and the continuance of commission waivers. 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 receives compensation for participating in the offering as a selling group member or underwriter. The compensation Fidelity receives 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 **\$7.95 per trade** + 75¢ per contract
 FAST[®] **\$12.95 per trade** + 75¢ per contract
 Rep-Assisted **\$32.95 per trade** + 75¢ per contract

Buy-to-close trades: regular online stock rates apply when the contract price is 65¢ or less; or regular options rates (as above) apply when the contract price exceeds 65¢. Exercises and assignments: regular online stock rates apply. Maximum charge: 5% of principal (subject to a minimum charge of \$7.95 for Online trades, \$12.95 for FAST trades, and \$32.95 for Rep-Assisted trades).

Multi-Leg Option orders are charged only on base commission, plus a per contract charge for the total number of contracts executed in the trade.

The Options Regulatory Fee applies to both option buy and sell transactions. This fee is in addition to your commission, and is included on your trade confirmation in the Activity Assessment Fee. The current cumulative fee charged by participating options exchanges is \$0.0245 per contract and is subject to change at any time. In addition, other options exchanges may decide to impose similar fees. If so, these fees will also be included in the Activity Assessment Fee. All fees collected by Fidelity are passed on to the appropriate regulatory body to meet this requirement.

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 receives compensation for participating in the offering as a selling group member or underwriter. The compensation Fidelity receives 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 bonds 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	• 0.004% to 2.5% of the investment amount	• 0.0055% to 3.0% of the investment amount
Corporate Bond	• 0.010% to 0.075% of the investment amount	• 0.050% to 0.115% 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)	• 0.5% to 5% 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)	• 0.5% 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

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

U.S. Treasury, including TIPS

Online **No charge**

Rep-Assisted **No charge**

All Other Bonds

Online **\$1.00 per bond***

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

*Online \$8.00 minimum

**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.® Orders for high-yield, mortgage-backed, and other debt securities must be placed through a representative.

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.

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 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 4,900 mutual funds. At the time you purchase shares of a no-load fund, those shares will be assigned either a transaction fee (TF) or no transaction fee (NTF) 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 brokerage affiliate, may receive remuneration for providing certain recordkeeping or shareholder services to these fund families.

FBS has contracted to receive other compensation in connection with the purchase and/or the ongoing maintenance of positions in certain mutual fund shares in your brokerage account. This additional compensation may be paid by the mutual fund, its investment advisor, or one of its affiliates. All or a portion of this compensation may be funded with 12b-1 fees as described in the fund's prospectus.

FundsNetwork No Transaction Fee (NTF) Funds

All Methods **No transaction fee* and no load**

Short-term Trading Fees

Fidelity will charge a short-term trading fee each time you sell or exchange shares of FundsNetwork NTF funds held less than 60 days (short-term trade). Fidelity funds, money market funds, funds redeemed through the Personal Withdrawal Service, and shares purchased through dividend reinvestment are not subject to this short-term trading fee. 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 **\$75.00 flat fee**

Fidelity Automated Service Telephone (FAST®): **0.5625% of principal** (25% off representative-assisted rates), maximum \$187.50, minimum \$75
 Representative-Assisted: **0.75% of principal**, maximum \$250, minimum \$100

Please be aware that certain FundsNetwork funds may be subject to separate and additional redemption fees imposed by the particular fund. Please refer to a fund's current prospectus for details.

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

FundsNetwork Transaction-Fee Funds (no load)

Purchases:

Online: **\$75 per investment**

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

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

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

All Methods **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 you two different ways to trade foreign stocks. You can utilize either Fidelity's "International Trading" functionality or its "Foreign Ordinary Share Trading" service.

International Trading allows customers to trade stocks from 12 countries and exchange between eight currencies. These trades are placed using a root symbol, followed by a colon (:) and then the two-letter country code for the market the customer wants to trade in. *Foreign Ordinary Share Trading* allows customers to trade shares in foreign corporations in the over-the-counter (OTC) market using a five-character symbol ending in "F." Depending on the service, different commissions and fees apply, as more fully described below.

International Trading

Canada

Online **\$19 CAD per trade**;

Rep-Assisted **\$70 CAD per trade**

France, Germany, Belgium, Italy, Netherlands, Portugal

Online **€19 EUR per trade**

Rep-Assisted **€50 EUR per trade**

Hong Kong

Online **HK\$250 HKD per trade**;

Rep-Assisted **HK\$600 HKD per trade**

Note: Additional fees charged in Hong Kong include:

Transaction Levy **0.004% of principal** on buys and sells

Trading Fee **0.005% of principal** on buys and sells

Stamp Duty **0.10% of principal** on buys and sells

Japan

Online **¥3,000 JPY per trade**;

Rep-Assisted **¥8,000 JPY per trade**

United Kingdom

Online **£9 GBP per trade**;

Rep-Assisted **£30 GBP per trade**

Note: Additional fees charged for trades in the United Kingdom include:

PTM Levy **£1 GBP** on buys and sells where principal amount is >£10,000 GBP

Stamp Duty **0.50% of principal** on buys only

Australia

Online **\$32 AUD per trade**;

Rep-Assisted **\$70 AUD per trade**

Norway

Online **kr160 NOK per trade**;

Rep-Assisted **kr400 NOK per trade**

New Zealand

Online **\$35 NZD per trade**;
Rep-Assisted **\$90 NZD per trade**

Mexico

Online **\$360 MXN per trade**;
Rep-Assisted **\$960 MXN per trade**

Singapore

Online **\$35 SGD per trade**;
Rep-Assisted **\$90 SGD per trade**

Sweden

Online **kr180 SEK per trade**;
Rep-Assisted **kr480 SEK per trade**

Switzerland

Online **CHF25 CHF per trade**;
Rep-Assisted **CHF65 CHF per trade**

When stocks are listed in a currency other than the local market currency, commissions are charged in the currency that the stock is listed in.

Note: There may be additional fees charged for trading in certain countries, and the list of countries and fees is subject to change without notice. These additional fees, if any, will display in the Other Fees section on the Trade Verification page.

Foreign Currency Exchange

A currency exchange fee (in the form of a markup or markdown on the rate of exchange) will be charged based on the size of the currency conversion. See fee schedule below.¹

<\$100K	1.0% of principal
\$100K–\$249K	0.75% of principal
\$250K–\$499K	0.50% of principal
\$500K–\$999K	0.30% of principal
\$1M+	0–0.20% of principal

Foreign Ordinary Share Trading

For every country other than Canada, these shares will be traded in the over-the-counter (OTC) market through a U.S. market maker, unless otherwise directed. When trading in Canadian stocks, orders are generally routed to brokers in Canada. However, dually listed Canadian stocks may be routed to a Canadian broker or U.S. market center for execution. In all cases, the domestic stock commission schedule applies.

For every country other than Canada, additional foreign exchange fees of up to 0.30% of principal are embedded in the execution price of non-Canadian foreign ordinary shares that are executed directly on the foreign exchange (available only through a representative).

If your order is routed to a Canadian broker, certain additional fees may apply, including:

- Limit orders—a local broker fee is incorporated into the limit price by the Canadian broker
- Market orders—a local broker fee is incorporated into the execution price
- Foreign exchange fees of up to 0.06% of principal are embedded in the execution price.¹

Any foreign ordinary stock that is not Depository Trust Company eligible is subject to another \$50 fee.

Foreign Fixed-Income Trading

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

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

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

Mutual Fund Low Balance Fee \$12 per year for each noncore Fidelity fund under \$2,000; other policies described below

Bank Wire \$15 per transaction; waived for households that meet certain asset and trade minimums at Fidelity²

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

Voluntary Reorganizations \$38 per transaction; applies to voluntary transactions such as exercising rights or warrants, participating in tender offers, bonds or preferred stock; waived for households that meet certain asset and trade minimums at Fidelity²

Nonretirement Accounts

Checkwriting \$15 per returned check or stop-payment; nominal fees may apply for services such as check reorders, copies of checks, and specialty check orders

Debit Card No card fee for Fidelity VISA® Gold Check Card + \$1.00 per ATM transaction above five transactions per month; households with \$500,000 in assets or 120 trades per year pay no Fidelity ATM fee and Fidelity reimburses domestic ATM fees charged by other institutions up to \$75 per year. ATM not available for Fidelity HSA debit card.

Credit Card No annual fee for Fidelity Investment Rewards Visa Signature® Card + any interest charges and fees you incur (see your card member agreement)

Late Settlement \$15 per transaction; charged when a securities purchase settles one or more days late due to insufficient funds being available in your account

Transfer Limited Partnership Positions \$75 per partnership; applies only when moving a holding in an unregistered partnership to your account

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

¹ Currency exchanges are completed on behalf of Fidelity Brokerage Services LLC and National Financial Services LLC (together, "Fidelity") by Fidelity FOREX, Inc., an affiliate of Fidelity. Fidelity sends the transaction to Fidelity FOREX, Inc., for the foreign exchange transaction. Fidelity serves as agent and Fidelity FOREX, Inc., as principal to the foreign exchange transaction. Fidelity FOREX, Inc., may impose a commission or markup to the price they receive from the interbank market, which may result in a higher price to you. Fidelity FOREX, Inc., 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 Fidelity.

² Households 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 on the next page.

Cashier's Check \$20 (Not applicable to Fidelity Retirement Accounts)

Available only at select Investor Centers, cashier's checks, which are purchased with funds from a Fidelity nonretirement account, are subject to a \$20 fee; waived for households that meet certain asset and trade minimums at Fidelity²

Retirement Accounts and HSAs

Annual Fees \$25 per year for SIMPLE IRAs; deducted from account (usually in November) unless employer has already paid separately. Fidelity may deduct an administrative fee of \$12 per quarter (\$48 annually) from your Fidelity HSA; waived for households that meet certain asset minimums at Fidelity.³ The administrative fee will not be deducted if it's paid by your employer.

Close Account \$50 per account for Fidelity IRAs (excluding SIMPLE IRAs), Fidelity Retirement Plan (Keogh) Accounts

Check Ordering HSAs will be subject to a fee of \$10 per order of 25 checks.

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 Private Portfolio Service[®] 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 or call us at 800-544-6666.

Mutual Fund Low-Balance Fee

Fund positions are normally valued each year on the second Friday in November. Positions opened after September 30, or after January 1 if using regular, periodic investment plans, are not subject to the fee for that calendar year. See your Fidelity fund's prospectus for additional information. This fee does not apply to Portfolio Advisory Services, SIMPLE IRA, CIT, or Fidelity BrokerageLink[®] accounts.

ATM Fees

For ATM transactions, assets are calculated each business day and free ATM use is extended to the account the following day. Accounts which do not maintain the stated balances may be charged the fee without notice. ATM withdrawals may be subject to other fees and limits.

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–\$9,999.99	+2.00%
\$10,000–\$24,999.99	+1.50%
\$25,000–\$49,999.99	+1.00%
\$50,000–\$99,999.99	+0.50%
\$100,000–\$499,999.99	0.00%
\$500,000	–2.825%

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.

³ Households with \$250k or more in assets. For details, see Fee Waiver Eligibility section.

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.