



Doing data differently



Helping the global financial community make informed decisions through the provision of comprehensive, accurate, timely and affordable securities and economic data services

With more than 30 years' experience, we offer comprehensive and accurate securities reference, corporate actions and pricing data for derivatives, equities, fixed income, and investment funds around the globe. We also cover economic data extensively.

We understand how crucial financial and economic data is and take a different approach as to how we proceed:

- We do not rent data, we sell it
- We do not have onerous redistribution rules
- We customize our services to meet your needs
- We cover all countries – no matter how large or small
- Finally, we offer competitive prices

As a result of our on-going commitment to providing cost-effective and innovative data solutions, while ensuring the highest standards, EDI has achieved the internationally recognized quality and security certifications ISO 9001 and ISO 27001.

Headquartered in the United Kingdom, we have operations in Australia, Canada, Germany, India, Morocco, South Africa, and in the United States.

Our Support Team is available on +44 (0) 207 324 0020, 24 hours a day, Monday to Friday and are closed on Christmas and New Year's Day.



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Introduction to Options Analytics Service

The Options Analytics Service uses daily updates and historical data to provide end-of-day analytics and reference data for U.S and international exchange-listed options on equities, exchanged traded funds (ETFs), equity indexes, and futures. The service can be used to run back tests simulation of trading strategies, generate risk and regulatory reports on portfolios of options and underlying securities, perform in depth analysis of options positions. Accounting firms can also use the service to calculate the amount of dividend equivalent payment and delta test for the IRS Section 871(m).

Coverage and End-of-Day Pricing

- Coverage: Over 10 million options and futures contracts and 10,000 issuers
- Options: Pricing for U.S and international exchange-listed equity, ETFs, index, and futures options.
- End-of-day composite pricing includes open, high, low, close, volume and open interest. NBBO bid/ask quotes are snapped at the close of the market.
- Underlying: Pricing for equities, ETFs, indexes, and futures with exchange- listed options. End-of-day composite pricing includes open, high, low, close, and volume. Composite bid/ask quotes are snapped at the close of the market.

Options Analytics

End-of-Day Options Sensitivities

- End-of-Day composite pricing includes open, high, low, close, volume and open interest. NBBO bid/ask quotes are snapped at the close of the market.
- Pricing for equities, ETFs, indexes, and futures with exchange-listed options. End-of-Day composite pricing includes open, high, low, close and volume. Composite bid/ask quotes are snapped at the close of the market.

Standard Greeks: End-of-day Options Sensitivities

The standard Greeks include the more well-known option sensitivities listed below: Details can include bid and ask calculations.

- Delta: Sensitivity of options price with respect to underlying price.
- Gamma: Sensitivity of options Delta with respect to underlying price.
- Vega: Sensitivity of options price with respect to implied volatility.
- Theta: Sensitivity of options price with respect to time (per day).
- Rho: Sensitivity of options price with respect to interest rate.

Additional calculations available upon request and specification.

Spot rate to expiration

Implied Volatilities

The implied volatilities are also available, which can be used to build an implied volatility surface.

- Closing implied volatilities
- Price-Relative (moneyness) Surfaces: Strike relative to underlying price (100 = at the money)
- Delta-Relative Surfaces: Call-equivalent delta (50 = at the money)

Interpolated Volatility Surfaces

The implied volatilities in the previous section are used to build interpolated volatility surfaces.

- Interpolate volatilities uses closing implied volatilities
- Price-Relative (moneyness) Surfaces: Strike relative to underlying price (100 = at the money)

Historical Volatilities

- Time series periods from 10 days up to 180 days
- Close to Close historical volatilities time series
- Open-High-Low-Close historical volatilities time series, which take into account the underlying opening price jumps and drift.

Options Pricing Model

- Industry Standard Partial Differential Equations (PDE) Model for European and American Options.
- Term structure of interest rates calculated from US Treasury bond prices.

Reference Data

- Options contract reference data including contract identifier, options type (put or call), expiration date, strike price, exercise style (American or European), and contract size.
- Underlying security reference data including security identifier, ticker, issuer name, security type (equity, ETF, Index, Futures)
- Historical discrete dividends including ex dates and dividend amounts
- Corporate actions for options and underlying equities
- Options contract history (including underlying security, deliverable units, strike multipliers) are retained when a corporate action results in an options contract adjustment
- A unique identifier is assigned to each security and remains unchanged through contract adjustments and corporate actions such as stock splits and ticker/name changes.

The Options Analytics Service's Implied Dividend Yield and Implied Borrow Rate

In addition to implied volatilities and Greeks, the Options Analytics Service also provides implied dividend yields and implied borrow rates derived from US and International exchange-listed options on stocks, ETFs, and equity indexes.

Key Features

For each options expiry, the implied dividend yields and implied borrow rates are derived so as to satisfy put-call parity for European-Style options or maintain consistent implied volatility surfaces for American-Style options. Time-series of constant maturity implied dividend and borrow curves are available for maturities spanning 30, 90, 180, 360 days or longer into the future. Term structure of implied forward prices calculated using the implied dividend yields and borrow rates are available.

Key Benefits

Based on extensive coverage of US and International markets of exchange-listed options on stocks, ETFs, and equity indexes. End-of-day and historical time-series available. Security master that includes discrete dividend data and updates for corporate actions are used to support the calculations.

Applications

Custodian banks and asset managers can use the implied borrow curves to manage risk, make informed decisions on how to manage their equity financing costs. Long term traders and securities financing desks can use the implied borrow curves to determine what financing rates look like 30, 90, 180, 360 days or longer into the future. Hedge funds can use the implied dividend and borrow curves create and back-test alpha generating trading strategies.

Full Options Analytics File Specification

| Field | Data Type | Description |
|--------------------|-------------|---|
| Market Close Date | DATE | Market Close Date (YYYYMMDD) |
| Contract Name | VARCHAR[32] | OCC Options Contract Symbol |
| Contract Code | VARCHAR[32] | Internal Contract Symbol |
| Root Symbol | VARCHAR[16] | Options Root Symbol |
| Ticker Symbol | VARCHAR[16] | Underlying Ticker Symbol |
| Issuer Name | TEXT | Underlying Issuer Name |
| Underlying ISIN | TEXT | Underlying ISIN |
| Security Type | VARCHAR[32] | Underlying Security Type (e.g. Equity, Index, ETF, Futures) |
| Currency | VARCHAR[3] | Currency |
| Country | VARCHAR | Country |
| Exchange Name | TEXT | Name of the Exchange where options trade |
| Exchange Code | VARCHAR[16] | Code of the Exchange where options trade |
| Expiration Date | DATE | Options Expiration Date (YYYYMMDD) |
| Days to Expiration | INTEGER | Number of days from market close date to option expiration |
| Contract Size | INTEGER | Contract size |
| Put Call Indicator | VARCHAR[1] | "C" for call and "P" for put |
| Exercise Style | VARCHAR[1] | "A" for American and "E" for European |
| Strike | FLOAT | Options Strike Price |
| Underlying Price | FLOAT | Underlying Price |
| Moneyness | FLOAT | Moneyness of the option (Strike/Underlying Price) |
| Delta | FLOAT | Delta of the option |
| Implied Vol | FLOAT | Implied volatility |

Delta File Specification

| Field | Description |
|--------------------------|--|
| Underlying ISIN | ISIN of underlying security |
| Underlying Security Type | Equity, Index, ETF, Futures |
| Underlying Ticker Symbol | e.g. AAPL (stock), SPX (index), ZG(futures), SPY (ETF) |
| Issuer Name | Underlying issuer name |
| EDI Series Code | e.g. XCBOA1OC2017012027.5 |
| Exchange Contract Code | e.g. A17AKC027500 |
| Exchange Name | ICE Futures U.S. |
| Currency | Listed currency (e.g. USD) |
| Call Put Indicator | "C" for call and "P" for put |
| Expiration Date | contract expiration date |
| Strike | contract exercise price |
| Exercise Style | "A" for American and "E" for European |
| Contract Size | Contract size |
| Date | Pricing date |
| Option Price | Options mark price |

Underlying Price

Underlying close price

Delta

Option delta

Delta File Specification

The Interpolated file includes all the fields for the standard Implied Volatilities, and the field listed below.

| Field | Data Type | Description |
|------------------|-----------|-------------------------|
| Interpolated Vol | FLOAT | Interpolated volatility |

List of Exchanges

| Country | Country Code | Exchange Code | Country | Country Code | Exchange Code |
|--------------------|--------------|---------------|--------------------------|--------------|---------------|
| Australia | AU | XASX | United States of America | US | AMXO |
| Belgium | BE | XBRU | United States of America | US | ARCX |
| Brazil | BR | BVMF | United States of America | US | BATS |
| Canada | CA | XMOD | United States of America | US | C2OX |
| Switzerland | CH | EUCH | United States of America | US | EDGX |
| Germany | DE | XEUR | United States of America | US | GMNI |
| Denmark | DK | XCSE | United States of America | US | MCRY |
| Spain | ES | XMRV | United States of America | US | MPRL |
| Finland | FI | XHEL | United States of America | US | OPRA |
| France | FR | XPAR | United States of America | US | XASE |
| United Kingdom | GB | IFEU | United States of America | US | XBOX |
| Greece | GR | XADE | United States of America | US | XBXO |
| Hungary | HU | XBUD | United States of America | US | XCBO |
| India | IN | XBOM | United States of America | US | XISE |
| India | IN | XNSE | United States of America | US | XMIO |
| Italy | IT | XMIL | United States of America | US | XNAS |
| Japan | JP | XOSE | United States of America | US | XNDQ |
| Korea, Republic of | KR | XKRX | United States of America | US | XNYS |
| Mexico | MX | XEMD | United States of America | US | XPHL |
| The Netherlands | NL | XEUE | | | |
| Norway | NO | XOSL | | | |
| Russia | RU | MISX | | | |
| Sweden | SE | XSTO | | | |
| Singapore | SG | XSES | | | |
| Thailand | TH | TFEX | | | |
| Ukraine | UA | UKEX | | | |



Customization

EDI is proud to offer the most effective and efficient solutions tailored to meet each individual customer's needs. We offer a range of customization options including:

- Delivery-based solutions to complement existing client infrastructure.
- Content provided at the geographical or portfolio holding level.
- Feeds containing particular formats, field content and integrated client level data items.

EDI uses its extensive data research expertise to source, scrub and integrate new client specified data items with existing products and services. For instance, a request from a multinational investment bank to source the DR universe and map it against its underlying share portfolio ultimately led to the development of EDI's successful Depository Receipt Database.

In addition, EDI was the first vendor to successfully launch an ISO 15022 Corporate Action Messaging feed. This enables customers to reduce costs and increase efficiency by removing the need for multiple feed handlers.

Support

Customer Support

Monday - Friday
Open 24 hours

Saturday
Support Coverage ends 8am
(GMT)

Sunday
Support Coverage resumes at
11pm (GMT)

**Support Coverage is not
available**
Saturday 8am to Sunday 11pm

Call +44 207 324 0020

Email: support@exchange-data.com

Customer support is closed Christmas and New Year's Day.

We aim to acknowledge all queries within an hour of receipt and answer queries within 24 hours where possible.

We will send a progress report if a query is not resolved within that time-frame. We resolve around 95% of customer queries within 24 hours.

All queries sent to our Support department are filtered and dispatched to the relevant department. An IT staff member is engaged in the communication process to resolve complicated technical issues.

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