EDI

IPL
An IPL company

❮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.

British Assessment Bureau
UKAS MANAGEMENT SYSTEMS
S289
ISO 9001
QUALITY MANAGEMENT

British Assessment Bureau
UKAS MANAGEMENT SYSTEMS
8289
ISO 27001
INFORMATION SECURITY MANAGEMENT

Contents

Worldwide End of Day Prices (EODP)

The closing price is considered the most up-to-date, standardized valuation of a security until trading commences again on the next trading day. This data is used for portfolio valuation, index calculation, technical analysis, and benchmarking throughout the financial industry.

With EDI's Worldwide End of Day Pricing service, banks, brokers, and trading houses can obtain bond closing pricing data from 106 exchanges worldwide all through a single source. Data fields include local code or ticker symbol, ISIN, currency, price date, open, high, low, close, bid, ask and traded volume, and for the London Stock Exchange, the Mid Price.

The closing price feed comprises a set of daily exchange price files for EMEA (Europe, Middle East, and Africa), Asia/Pacific and the Americas. Since large volumes of closing price data are produced around the clock, EDI processes and provides each market's closing price file as soon as it becomes available. In addition, data from a rolling 10-day period is available to users at any given time through a browser web page.

With the Worldwide End of Day Pricing service, financial firms have quick access to accurate closing pricing data, enabling them to mark-to-market their positions and settle transactions on a timely basis. In addition, they have the flexibility to cost-effectively feed this information into their web sites and third-party solutions.

EODP File Spec

EDI's End of Day Pricing feed is delivered by FTP connections. Clients have a choice between receiving price files stored in folders named using the ISO country code, culled after 20 days, and receiving one folder with all price files, culled after six days.

Series P04 Extended Closing Price Data

Element Name	DataType	Format	Max Width	Lookup TYPEGROUP	Field Description
MIC	Char	Char String	6	MICCODE	Swift's ISO Standard 10383 Market Identification Code
pricefilesymbol	Char	Char String	60		Ticker/local code
Isin	Char	Char String	12		ISIN ISO Standard 6166
Currency	Char	Char String	3	CUREN	ISO Standard 4217 Code for Base Currency
PriceDate	Date	yyyy/mm/dd	10		Real date of price - note that this is does not necessarily match the close date implied in the file name
Open	Double	64 bit	20		the first price of the trading day or session (can be derived, not necessarily the first trade/transaction)
High	Double	64 bit	20		day's high price
Low	Double	64 bit	20		day's low price
Close	Double	64 bit	20		the official close of the trading day or session (can be derived, not necessarily the last trade/transaction)
Mid	Double	64 bit	20		the average of the bid and ask prices rounded up to the price format allowed for that tradable instrument/currency (London SE only)
Ask	Double	64 bit	20		the selling price (ask/offer) for securities in the market
Last	Double	64 bit	20		the most recent (last) trade/transaction price of the trading day or session
Bid	Double	64 bit	20		the buying price for securities in the market
Bidsize	Double	64 bit	20		
Asksize	Double	64 bit	20		
TradedVolume	Double	64 bit	20		The number of shares or contracts traded during the trading day or session
SecID	Integer	32 bit	10		Security ID from EDI's Worldwide Corporate Action Database to link into Corporate Actions
MktCloseDate	Date	yyyy/mm/dd	10		Market Close Date
VolFlag	Char	Char String	1		Relates to trading Volume, A= Absolute, T= Stated in thousands trading day or session
Issuername	Varchar	Char String	70		EDI's Masterfile Issuer name if link established
SecTyCD	Char	Char String	3	SECTYPE	EDI's Masterfile Security Type Code if link established. EQS (Equity), PRF (Preference), DR (Depositary Receipt)
SecurityDesc	Varchar	Char String	70		EDI's Masterfile Security Description if link established
Uscode	Char	Char String	9		Extracted from US an Canadian Isins
PrimaryExchgCD	Char	Char String	6	EXCHANGE	EDI proprietary Exchange Code of primary Listing if known
ExchgCD	Char	Char String	6	EXCHANGE	EDI proprietary Exchange Code
TradedValue	Double	64 bit	20		The total value of shares or contracts traded during the trading day or session
TotalTrades	Integer	32 bit	11		Total numbers of trades in this stock
Comment	Varchar	Char String	50		Freetext comment for market specific information if any

4

Series 902 - LOOKUP - Combined Lookup Table

Element Name	DataType	Format	Max Width	Lookup TYPEGROUP	Field Description
Actflag	Char	Char String	1	ACTION	Record Level Action Status
Acttime	Date	yyyy/mm/dd	10		Last Changed date of record at EDI
*TypeGroup	Char	Char String	10	TYPEGROUP	Link between coded data and Combined Lookup Table
*Code	Char	Char String	10		Code data value
Lookup	VarChar	Char String	70		Lookup value for Code (previous field)

Notes on the Lookups

Use ALyymmdd.902 to lookup any the meaning of coded data with an entry in Lookup TYPEGROUP column.

Combined lookup table where codes of a particular type are grouped by TypeGroup.

Join using the Typegroup of the coded field data and the coded data field content to get the lookup.

Only field containing coded date has the Typegroup column populated.

This table also gives all the POSSIBLE VALUES.

Because it is combining multiple coded types, the format of the field must accommodate the largest possible code in the whole system hence the slight apparent. Also, if a BLANK value is possible, it is indicated as the coded value of 'BLANK' as this is part of a primary key in this table and therefore cannot be physically would contain '' and a lookup on this is pointless and therefore unnecessary.

Exchange Coverage

Below is the list of exchanges covered by the services as per January 2022.

Unconfirmed Prices Available

* Redistribution license required

Africa

Country	Exchange Name	MIC	EODP History
Algeria	Algiers Stock Exchange	XALG	03/01/2007
Botswana	Botswana Stock Exchange	XBOT	01/04/2013
Cameroon	Douala Stock Exchange	XDSX	20/11/2012
Cape Verde	Cape Verde Stock Exchange	XBVC	06/04/2010
Egypt	Egyptian Exchange	XCAI	05/02/2012
Ghana	Ghana Stock Exchange	XGHA	17/01/2007
Ivory Coast	Regional Stock Exchange of West Africa	XBRV	01/03/2010
Kenya	Nairobi Securities Exchange	XNAI	06/04/2010
Malawi	Malawi Stock Exchange	XMSW	01/03/2010
Mauritius	Stock Exchange of Mauritius	XMAU	03/01/2007
Morocco	Casablanca Stock Exchange	XCAS	01/03/2010
Mozambique	Mozambique Stock Exchange	XMAP	01/04/2014
Namibia	Namibian Stock Exchange	XNAM	16/04/2009
Nigeria	Nigerian Stock Exchange	XNSA	03/12/2007
Rwanda	Rwanda Stock Exchange	RSEX	15/04/2010
Seychelles	Seychelles Securities Exchange	TRPX	19/01/2012
South Africa	Cape Town Exchange	4AXE	02/09/2019
South Africa *	Johannesburg Stock Exchange *	XJSE	01/01/2014
South Africa	A2X Stock Exchange	XJSE	01/03/2010
South Africa	ZAR X Stock Exchange	ZARX	16/06/2019
Sudan	Khartoum Stock Exchange	XKHA	01/03/2010
Tanzania	Dar es Salaam Stock Exchange	XDAR	23/11/2012
Tunisia	Tunis Stock Exchange	XTUN	24/06/2020
Uganda	Uganda Securities Exchange	XUGA	01/03/2010
Zambia	Lusaka Stock Exchange	XLUS	01/03/2010
Zimbabwe	Zimbabwe Stock Exchange	XZIM	01/03/2010

Asia

Country	Exchange Name	MIC	EODP History
Bangladesh	Chittagong Stock Exchange	XCHG	04/12/2018
Bangladesh	Dhaka Stock Exchange	XDHA	01/03/2010
China	Shanghai Stock Exchange	XSHG	11/04/2010
China	Shenzhen Stock Exchange	XSHE	03/12/2009
Hong Kong	Hong Kong Stock Exchange	XHKG	02/12/2009
India	BSE Ltd.	XBOM	22/01/2014
India	National Stock Exchange of India	XNSE	22/01/2014
Japan	Nagoya Stock Exchange	XNGO	01/03/2007
Japan	Osaka Securities Exchange	XOSE	01/03/2010
Japan*	Tokyo Stock Exchange*	XJPX	30/01/2014
Kazakhstan *	Kazakhstan Stock Exchange *	XKAZ	08/06/2009
Korea (South)	Korea Stock Exchange	XKRX	11/04/2010
Kyrgyz Republic	Kyrgyz Stock Exchange	XKSE	01/03/2010

6

www.exchange-data.com

Malaysia	Malaysian Exchange	XKLS	02/12/2009
Mongolia	Mongolian Stock Exchange	XULA	18/01/2020
Myanmar	Yangon Stock Exchange	MYSX	17/01/2020
Nepal	Nepal Stock Exchange	XNEP	01/03/2010
Pakistan	Pakistan Stock Exchange	XKAR	16/12/2019
Philippines	Philippine Stock Exchange	XPHS	19/09/2014
Singapore*	Singapore Exchange*	XSES	02/12/2009
Sri Lanka	Colombo Stock Exchange	XCOL	10/02/2020
Taiwan	Taipei Exchange	ROCO	03/05/2010
Taiwan	Taiwan Stock Exchange	XTAI	01/03/2010
Thailand	Stock Exchange of Thailand	XBKK	11/04/2010
Vietnam	Hanoi Stock Exchange	HSTC	01/03/2010
Vietnam	Hochiminh Stock Exchange	XSTC	01/03/2010

Europe

Country	Exchange Name	MIC	EODP History
Armenia	Nasdaq OMX Armenia Stock Exchange	XARM	14/09/2015
Austria*	Vienna Stock Exchange*	XWBO	02/01/2007
Belgium	Euronext Brussels	XBRU	01/03/2010
Belarus	Belarus Currency and Stock Exchange	BCSE	26/11/2016
Bosnia and Herzegovina*	Sarajevo Stock Exchange*	XSSE	31/05/2017
Bosnia and Herzegovina	Banja Luka Stock Exchange	XBLB	22/04/2010
Bulgaria	Bulgarian Stock Exchange - Sofia	XBUL	01/03/2010
Channel Islands	Channel Islands Securities Exchange	XCIE	23/03/2017
Croatia	Zagreb Stock Exchange	XZAG	01/03/2010
Cyprus	Cyprus Stock Exchange	XCYS	01/03/2010
Czech Republic	Prague Stock Exchange	XPRA	01/03/2010
Denmark	Nasdaq Nordic Copenhagen	XCSE	17/11/2008
Estonia	Nasdaq Baltic Tallinn	XTAL	29/01/2008
Finland	Nasdaq Nordic Helsinki	XHEL	17/11/2008
France	Euronext Paris	XPAR	02/06/2008
Germany	Berlin Stock Exchange	XBER	02/01/2007
Germany	Duesseldorf Stock Exchange	XDUS	02/01/2007
Germany	Frankfurt Stock Exchange	XFRA	02/01/2007
Germany	Hamburg Stock Exchange	XHAM	02/01/2007
Germany	Hanover Stock Exchange	XHAN	01/03/2010
Germany	Munich Stock Exchange	XMUN	01/03/2010
Germany	Tradegate	TGAT	19/05/2017
Germany	Stuttgart Stock Exchange	XSTU	02/01/2007
Germany	XETRA Frankfurt	XETR	01/03/2010
Greece	Athens Exchange	ASEX	18/01/2020
Hungary	Budapest Stock Exchange	XBUD	01/03/2010
Iceland	Nasdaq Nordic Iceland	XICE	07/11/2008
Ireland	Irish Stock Exchange	XDUB	02/11/2016
Italy	Electronic Bond Market	MOTX	24/08/2010
Latvia	Nasdaq Baltic Riga	XRIS	29/01/2008
Lithuania	Nasdaq Baltic Vilnius	XLIT	29/01/2008
Luxembourg	Luxembourg Stock Exchange	XLUX	04/03/2010
Macedonia	Macedonian Stock Exchange	XMAE	01/03/2010
Malta	Malta Stock Exchange	XMAL	03/01/2010
Moldova	Moldova Stock Exchange	XMOL	23/05/2013
Montenegro	Montenegro Stock Exchange	XMNX	11/09/2013

www.exchange-data.com

Netherlands	Euronext Amsterdam	XAMS	04/01/2008
Norway	Oslo Axess	XOAS	01/03/2010
Norway	Oslo Bors	XOSL	01/03/2010
Norway	Oslo Bors Alternative Bond Market	XOAM	02/03/2010
Poland	Poland Over the Counter Stock Exchange	CETO	26/04/2010
Poland	Warsaw Stock Exchange	XWAR	01/03/2010
Portugal	Euronext Lisbon	XLIS	01/03/2010
Romania*	Bucharest Stock Exchange*	XBSE	02/12/2009
Russia	Moscow Exchange MICEX-RTS	MISX	09/05/2012
Serbia	Belgrade Stock Exchange	XBEL	20/08/2008
Slovak Republic	Bratislava Stock Exchange	XBRA	02/03/2010
Slovenia	Ljubljana Stock Exchange	XLJU	01/03/2010
Spain	AIAF - Fixed Income Market	XDRF	12/04/2010
Spain	Sistema Espanol De Negociacion…	XNAF	02/11/2018
Sweden	Nasdaq Nordic Stockholm	XSTO	17/11/2008
Sweden	Nordic Growth Market	XNGM	22/07/2016
Switzerland	Bern Exchange	XBRN	09/06/2010
Switzerland	SIX Structured Products Exchange	XQMH	28/02/2010
Switzerland	SIX Swiss Exchange	XSWX	01/03/2010
Turkey	Istanbul Stock Exchange	XIST	30/08/2012
Ukraine	PFTS Stock Exchange	PFTS	09/01/2007
Ukraine	Ukrainian Exchange	UAUX	06/06/2013
United Kingdom	GEMMA (Gilt Edged Market Maker Association)	GEMX	17/11/2010
United Kingdom	London Stock Exchange	XLON	01/03/2010
United Kingdom	London Stock Exchange Electronic Quotation	SEAQ	01/03/2010

Latin America & the Caribbean

Country	Exchange Name	MIC	EODP History
Argentina	Buenos Aires Stock Exchange	XBUE	08/02/2011
Bahamas	Bahamas International Securities Exchange	XBAA	01/03/2010
Barbados	Barbados Stock Exchange	XBAB	19/05/2020
Bermuda	Bermuda Stock Exchange	XBDA	28/02/2010
Bolivia	Bolivian Stock Exchange	XBOL	02/01/2007
Brazil	B3 S.A. - Securities, Commodities and Futures Exchange	BVMF	02/09/2015
Cayman Islands	Cayman Islands Stock Exchange	XCAY	01/03/2010
Chile	Chilean Electronic Exchange	XBCL	01/03/2010
Colombia	Colombian Stock Exchange	XBOG	28/04/2020
Costa Rica	National Stock Exchange (Costa Rica)	XBNV	01/03/2010
Dominican Republic	Dominican Republic Stock Exchange	XBVR	02/06/2010
Ecuador	Guayaquil Stock Exchange	XGUA	25/08/2010
Ecuador	Quito Stock Exchange	XQUI	25/08/2010
El Salvador	El Salvador Stock Exchange	XSVA	01/03/2011
Guatemala	National Stock Exchange (Guatemala)	XGTG	17/11/2019
Guyana	Guyana Stock Exchange	GSCI	21/01/2019
Jamaica	Jamaica Stock Exchange	XJAM	08/04/2010
Mexico	Mexican Stock Exchange	XMEX	17/01/2020
Panama	Panama Stock Exchange	XPTY	01/08/2008
Paraguay	Asuncion Stock Exchange	XVPA	02/03/2010
Peru	Lima Stock Exchange	XLIM	26/04/2010
St. Kitts & Nevis	Eastern Caribbean Securities Exchange	XECS	05/08/2014
Trinidad and Tobago	Trinidad & Tobago Stock Exchange	XTRN	21/07/2010

8

| Uruguay | Montevideo Stock Exchange | XMNT | 07/04/2010 |
| Venezuela | Caracas Stock Exchange | XCAR | 21/01/2020 |

Middle East

Country	Exchange Name	MIC	EODP History
Bahrain	Bahrain Bourse	XBAH	01/03/2010
Iran	Tehran Stock Exchange	XTEH	01/03/2010
Iraq	Iraq Stock Exchange	XIQS	07/11/2010
Israel	Tel-Aviv Stock Exchange	XTAE	18/04/2010
Jordan	Amman Stock Exchange	XAMM	01/03/2010
Kuwait	Kuwait Stock Exchange	XKUW	01/03/2010
Lebanon	Beirut Stock Exchange	XBEY	01/03/2010
Oman	Muscat Securities Market	XMUS	08/04/2010
Palestine	Palestine Exchange	XPAE	01/03/2010
Qatar	Qatar Exchange	DSMD	01/03/2010
Saudi Arabia	Saudi Stock Exchange	XSAU	01/03/2010
Syria	Damascus Securities Exchange	XDSE	08/10/2010
United Arab Emirates	Abu Dhabi Securities Exchange	XADS	11/02/2009
United Arab Emirates	Dubai Financial Market	XDFM	08/03/2007
United Arab Emirates	Nasdaq Dubai	DIFX	01/03/2010

North America

Country	Exchange Name	MIC	EODP History
Canada	Canadian Securities Exchange	XCNQ	03/11/2017
Canada	Toronto Stock Exchange	XTSE	05/04/2007
Canada	TSX Venture Exchange	XTSX	03/01/2017
United States of America	BZTS BYX Exchange	BATY	07/09/2018
United States of America	Chicago Stock Exchange	XCHI	10/04/2010
United States of America	FINRA TRACE	TRCE	13/07/2009
United States of America	NASDAQ Stock Market	XNAS	12/04/2010
United States of America	National Stock Exchange (USA)	XCIS	10/04/2010
United States of America	New York Stock Exchange	XNYS	10/04/2010
United States of America	Non Nasdaq OTC BB	OTCB	10/04/2010
United States of America	NYSE Arca	ARCX	10/04/2010
United States of America	NYSE MKT	XASE	10/04/2010
United States of America	OTC Markets Group	XOTC	10/04/2010
United States of America	US Treasury Bonds	GOVX	30/05/2008
United States of America	US Composite (NYSE, NASDAQ)	USCOMP	10/04/2010
United States of America	CBOE BZX US Equities Exchange	BATS	02/07/2018
United States of America	CBOE BZX Options Exchange	BATO	02/07/2018

Oceania

Country	Exchange Name	MIC	EODP History
Australia*	Australian Securities Exchange*	XASX	01/03/2010
Australia	National Stock Exchange of Australia	XNEC	22/01/2014
Fiji	South Pacific Stock Exchange	XSPS	21/11/2011
New Zealand*	NZX*	XNZE	02/12/2009

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 Depositary 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.

EDI

Contact Information

United Kingdom - Headquarters
5 Highgate Road,
London, NW5 1JY
Telephone: +44 207 324 0020

United States
Exchange Data International Inc
1250 Front Street, no. 260 Binghamton,
NY 13901, USA
Telephone: +1 607 238 4438

South Africa
PO Box 2176
Cape Town 8000

Morocco
ILot l.12
Founty Imm Founty Plaza, 1er étage,
Agadir 80650
Telephone: +212 528 290 255

Other Locations
(Incl. Austria, Bulgaria, Croatia, Czech
Republic, Estonia, Germany, Hungary,
Latvia, Lithuania, Moldiva, Poland)

Jonathan Bloch
Chief Executive Officer
Cell: +44 7785 550 043
Email: j.bloch@exchange-data.com

Andrew Sabourin
Head of Sales - UK, Europe and Asia
Work: +44 207 324 0048 **Cell:** +44 7931 906 569
Email: a.sabourin@exchange-data.com

Robin Newton
Business Development Manager
Cell: +44 7545 428 552
Email: r.newton@exchange-data.com

Ian Sissons
Business Development Manager
Cell: +44 (0)7900 003832
Email: i.sissons@exchange-data.com

Nora Cervara
Head of Sales - North America
Cell: +1 732 670 – 1935
Email: n.cervara@exchange-data.com

William Cowen
Business Development Manager
Cell: +1 267-670-2443
Email: w.cowen@exchange-data.com

John Kirk
Business Development Manager
Cell: +1 908-768-7815
Email: j.kirk@exchange-data.com

Ilze Gouws
Head of Economic Data & Sales
Cell: +27 (0) 82 782 3750
Email: i.gouws@exchange-data.com

Samy Rajendran
Director, International Business Strategy
Cell: +44 7517 857 896
Email: p.rajendran@exchange-data.com

Michael Abraham
Business Development Manager
Cell: +49 160 7188 340
Email: m.abraham@exchange-data.com