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Helping the global financial community make informed decisions through the provision of fast, accurate, timely and affordable reference data services

With more than 20 years of experience, we offer comprehensive and complete securities reference and pricing data for equities, fixed income and derivative instruments around the globe.

Our customers can rely on our successful track record to efficiently deliver high quality data sets including:

- Worldwide Corporate Actions
- Worldwide Fixed Income
- Security Reference File
- Worldwide End-of-Day Prices

Exchange Data International has recently expanded its data coverage to include economic data. Currently it has three products:

- African Economic Data <u>www.africadata.com</u>
- Economic Indicator Service (EIS)
- Global Economic Data

Our professional sales, support and data/research teams deliver the lowest cost of ownership whilst at the same time being the most responsive to client requests.

As a result of our on-going commitment to providing cost effective and innovative data solutions, whilst at the same time ensuring the highest standards, we have been awarded the internationally recognized symbol of quality ISO 9001.

Headquartered in United Kingdom, we have staff in Canada, India, Morocco, South Africa and United States.





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Swap Curve Data

The Swap Curve Data Service provides clients with a daily source of independent zero-coupon, swap-implied yield curves for valuations, portfolio analytics and risk management calculations.

Data Description

The Swap Curve Data Service supplies daily yield curves for a wide range of global currency. Results are expressed as both a zero-coupon yield and the associated discount factor.

Delivery Frequency

Yield curve data is available on an intraday or end-of-day basis. End-of-day data is delivered at the close of major global markets or as a consolidated file at 4pm ET. Up to 5 years of history is also available.

Methodology

EDI implies yield curves from readily-observable market prices. We select the most liquid instruments available in the market for each maturity regime. OIS is the assumed approach if a liquid market exists for the referenced currency. The zero-coupon yields and discount factors are implied using an industry-standard bootstrapping model.

Results File Field Names

The Swap Curve Data Service results file contains column headers defined as follows:

Header	Example	Definition
CFID	GBP_YCZ_1 Y	The unique identifier for the yield curve tenor point. See "CFID Construction" below.
SPOTDDATE	5/31/2017	The date on which the data were spotted in the market. Yield curves are spotted as of the close of the local currency bond market or 3pm ET depending upon client requirements.
YLD	2.61	The zero-coupon yield for the referenced CFID as of the spot date, expressed as a percentage.
DF	0.9915682	The discount factor for the referenced CFID as of the spot date, expressed as a decimal.



CFID Construction

The "CFID" column contains proprietary identifiers that uniquely represent each piece of data. For zero-coupon, swap-implied yield curves, the CFID is constructed as follows:

Characteristic	Example	Definition
Currency	GBP	The ISO currency code referenced by the yield curve.
YCZ	YCZ	An abbreviation for "yield curve – zero coupon".
Tenor	1Y	The tenor of the yield and discount factor point on the reference curve.

Each Characteristic is separated by an underscore. Using the example data above, we would construct the CFID for the 1Y point along the GBP zero-coupon, swap-implied yield curve as:

Coverage

The Swap Curve Data Service covers the following currencies:

Currency	Coverage				
AUD	DKK	IDR	KRW	PLN	TWD
BGN	EUR	ILS	MXN	RUB	USD
BRL	GBP	INR	MYR	SAR	ZAR
CAD	HUF	ISK	NOK	SEK	
CHF	HKD	JPY	NZD	SGD	
CZK	HRK	KES	PHP	TRY	



Credit Default Swap Data

The CDS Data Service provides clients with a daily source of independent CDS spread curves for valuations, portfolio analytics and risk management calculations.

Data Description

The CDS Data Service supplies 5 & 10-year spreads for over 2000 reference entities, together with a wide range of currency, restructuring clause and tier of debt combinations. Spreads are expressed as the basis point cost of buying protecting on the corresponding CDS. Full term structure curves (with spreads covering 6 months through 30 years) are available at a premium service level.

Delivery Frequency

CDS data are available on a daily basis, with delivery at approximately 4pm ET. 10 years of history is also available.

Methodology

EDI parses CDS quotes from market communication, typically in the form of indicative quotes emailed from the sell side to the buy side. These data are cleaned for spurious points, such as outliers or stale spreads. Curves displaying inversion are investigated manually to ensure accuracy. Cleaned data are then averaged into a composite.

Results File Field Names

The CDS Data Service results file contains column headers defined as follows:

Header	Example	Definition
CFID	BARC_SF_MM_EUR_5 Y	The unique identifier of the CDS spread point. See "CFID Construction" below.
SPOTDDATE	5/31/2017	In historical data files only. The date on which the SPREAD was spotted in the market.
SPREAD	79.61	The CDS spread, expressed in basis points.



CFID Construction

The "CFID" column contains proprietary identifiers that uniquely represent each piece of data. For CDS, the CFID is constructed as follows:

Ticker + Seniority + DocClause + Currency + Tenor

Characteristic	Example	Definition
Ticker	BARC	The ticker for the reference entity of the CDS. This is usually (but not always) the ticker for the entity's stock on its primary exchange.
Seniority	SF	The tier of debt referenced by the CDS.
		SF = senior corporate or foreign
		sovereign SU = subordinated
		SD = secured corporate or domestic sovereign
		JS = junior subordinated
DocClause	MM	The doc clause (or restructuring clause) referenced by the CDS. By default, all EDI doc clauses refer to the 2014 protocol; however, curves referencing the 2003 protocol are available for some entities.
		CR = full restructuring
		MR = modified restructuring
		MM = modified-modified
		restructuring XR = no
		restructuring
Currency	EUR	The ISO currency code for the CDS (currently USD, EUR or JPY).
Tenor	5Y	The tenor of the CDS (5Y or 10Y).

Each Characteristic is separated by an underscore. Using the example data above, we would construct the CFID for a Barclays Bank PLC, senior debt, mod-mod restructuring, EUR-denominated, 5Y CDS spread point as:

BARC_SF_MM_EUR_5Y

Reference Data File Field Names

In addition to a daily results file containing CDS spreads, clients of the EDI CDS Data Service receive access to a reference data file that maps the CFID in the results file to the corresponding CDS characteristics, including the reference entity, currency, restructuring clause and tier of debt. For ease of mapping, the reference entity's primary stock ticker is also included, where available.



This file is updated as reference data changes, and contains the following information:

Header	Definition
LEGAL_NAME	The legal name of the reference entity.
TICKER	The ticker for the reference entity of the CDS. This is usually (but not always) the ticker for the entity's stock on its primary exchange.
CCY	The currency of the CDS cash flows. This does not necessarily correspond to the domicile currency of the reference entity.
TIER	The tier of debt referenced by the CDS.
DOC	The doc clause (or restructuring clause) referenced by the CDS. By default, the 2014 Protocol is assumed.
CFID_5Y	The CFIS proprietary ID for the CDS curve's 5-year maturity point.
CFID_10Y	The CFIS proprietary ID for the CDS curve's 10-year maturity point.
EQUITY_TICKER	The ticker of the reference entity's stock on its primary exchange.
EQUITY_EXCHANGE	The name of the primary exchange on which the reference entity's stock trades.
ISO	For sovereign reference entities: the ISO country code of the sovereignty.



Fixed Income Prices

The Fixed Income Pricing Service provides clients with a daily source of independent prices for valuations, portfolio analytics, best execution reporting, and risk management calculations.

Data Description

The Fixed Income Pricing Service provides prices on a wide range of fixed income securities, including:

- Corporate Bonds
- Municipal Bonds
- Syndicated Bank Loans
- Agency MBS

- Non-Agency CMO
- CMBS
- ABS
- CLO

Delivery Frequency

Valuations are calculated daily at the close of major markets. For more liquid bonds, intraday valuations may be available. Valuations can be delivered on a same-day or next-day basis.

Methodology

In this section, we provide a high-level summary of the methodology used to calculate security prices.

Corporate Bonds & Municipal Bonds

EDI provides comprehensive coverage on global corporate bonds and U.S. municipal securities.

Pricing Methodology

EDI acquires observable pricing data from trade reporting utilities and parses indicative prices from emails sent from the sell side to the buy side. Prices are organized based on issuer, and an issuer-level yield curve is implied from the prices. This yield curve is used to price on and off-the-run securities from the same issuer. For those issuers that lack sufficient liquidity to imply an issuer-level yield curve, securities are priced using a proxy curve chosen based on factors such as rating, sector, region and/or industry.



Syndicated Bank Loans

EDI provides prices on approximately 3000 global syndicated bank loans.

Pricing Methodology

EDI parses indicative prices from emails sent from the sell side to the buy side. Prices are organized based on issuer and tranche and then cleaned to remove outliers or stale prices. An average is then formed. If observable pricing information from the lead syndicate bank is available, these prices may be weighted more heavily when calculating the average.

Agency MBS & Non-Agency CMO

EDI provides prices on a comprehensive set of agency MBS and non-agency CMO.

Pricing Methodology

Securities are grouped into categories based on collateral, seniority and type of tranche. A range of yields is determined for each category.

For Re-REMIC, prepay and default vectors are calculated using models that reflect current market conditions (including views on housing and unemployment). These models also reflect the latest available remittance reports, which are used to generate loan-level performance expectations. Using the model-supplied prepayment and default vectors, cashflows are generated for each of the tranches that comprise the Re-REMIC. Those cashflows are then aggregated and applied to the tranches that comprise the Re-REMIC structure.

Each individual tranche is reviewed to assign an adjustment factor to the baseline discount margin (DM)/yield. The adjustment factor is based on specific shelf and servicer names, bond Insurance (if applicable), structural/ waterfall features, and underlying collateral quality.

Cashflows are discounted at the DM/yield according to the baseline yields and adjustments from above.

Quality Assurance

Prices are then checked against parsed prices for each bond, bonds from the same deal, bonds from the same shelf, and bonds that have similar structure and collateral. Appropriate adjustments are made based on these observable prices.



CMBS

EDI provides month-end prices on approximately 15,000 commercial mortgage-backed securities (CMBS).

Pricing Methodologu

Securities are grouped into categories based on deal type, seniority and vintage. A range of yields is determined for each category.

Each individual tranche is reviewed to assign an adjustment factor to the baseline DM/yield. The adjustment factor is based on specific shelf and servicer names, structural/waterfall features, and the underlying collateral quality, type and geographic concentrations.

For bonds subject to credit risk (e.g. CMBS Subs and CRE CDO), the following variables are also considered:

- NCF Stress using stresses derived from broad-based economic assumptions including unemployment and GDP
- Cap rates based on geographic and property type metrics
- Recovery lag based on CMBS market observations
- Months-cured after term defaults based on market observations
- DSCR triggers for term defaults
- LTV thresholds for extensions and balloon extensions, based on market observations

Default assumptions are generated using property-level cashflow and capitalization rates and predict defaults and severities based upon broad-based economic assumptions. For loans underlying CRE CDO that are not modeled, we review the loan's performance and current fundamental factors and financials to determine if and when we believe cashflows will occur.

Attachment and detachment points for the tranche are reviewed against expected collateral losses in order to determine whether the tranche is likely to take a writedown, and if so, by how much. The resulting cashflows are discounted at the DM/yield according to the matrix and adjustments described above. For CMBS Subs and CRE CDO, WAL and principal coverage (expected principal repayment) are considered in formulating and refining the yields.

Subordinate bonds and CRE CDO may perform strongly in some scenarios but are quick to default in others. This volatility may need to be reflected in the pricing.

Quality Assurance

Prices are then checked against parsed prices on each bond, bonds from the same deal, and bonds from the same shelf. Appropriate adjustments are made based on these observable prices. To the extent applicable, relevant indices are also considered.



ABS

EDI provides month-end prices on approximately 20,000 asset-backed securities (ABS).

Pricing Methodology

Securities are grouped into categories based on collateral type, fixed or floating bond type, tranche type, average life, and collateral coupon. For some securities, assets are further classified into issuer and collateral quality tiers. A benchmark range of yield, DM or spread is determined for each category. Due to the large volume of new ABS deals, new issue pricing is also used as an input to determine benchmark level.

Each individual tranche is reviewed to assign an adjustment factor to the baseline yield or spread. The adjustment factor is based on tranche type, collateral coupon, loan size/age, structural/waterfall features, and recent collateral performance

Prepay and default assumptions are generated, and then cashflows are discounted at the appropriate yield or spread according to the matrix and adjustments described above.

Model adjustments may be made to prepay and default in accordance with performance and prevailing market conditions.

Quality Assurance

Prices are then checked against available recent trading and indicative colour on each bond, bonds from the similar collateral, and bonds with similar structural characteristics. Appropriate adjustments are made based on these observable prices.

CLO

EDI provides month-end prices on approximately 1500 U.S. and European collateralized loan obligations (CLO).

Pricing Methodology

First, EDI assigns a rating to each CLO manager. These manager ratings are used to construct a cube of rating and bond seniority in the capital structure, which is then used to determine the baseline DM/yield of each CLO bond.

Each individual CLO tranche is reviewed to assign an adjustment factor to the baseline DM/yield. The adjustment factor is based on structural/waterfall features, underlying collateral quality and specific manager names.



EDI implies default, prepayment and recovery assumptions from parsed market data; these assumptions are then applied to the underlying loans and any other collateral.

Next, cashflows are generated based on the collateral assumptions described above and are then discounted at the DM/yield according to the matrix and adjustments described above.

The net-asset value (NAV) of the CLO portfolio of loans is determined by gathering pricing data on all of the underlying collateral. The NAV is used to determine the material value overcollateralization available for each tranche. The price of the tranche may be adjusted to reflect the relative amount of NAV coverage.

Quality Assurance

Prices are checked against parsed prices for each bond, bonds from the same deal, and bonds from the same manager. Appropriate adjustments are made based on these observable prices.



FX Option Volatility Data

The FX Option Volatility Data Service provides clients with a daily source of independent FX volatility data for valuations, portfolio analytics and risk management calculations.

Data Description

The FX Option Volatility Data Service supplies daily volatility surfaces for FX options, including skew, across 30 global currencies and precious metals. Results are expressed as follows:

- For at-the-money (ATM) strikes: as percentage implied volatility
- For 10 and 25 Delta Risk Reversals & Butterflies: as offsets to the corresponding ATM volatility

Delivery Frequency

FX option volatility data is available on an intraday or end-of-day basis. End-of-day data is delivered at the close of major global markets or as a consolidated file at 4pm ET. Up to 5 years of history is also available.

Methodology

EDI receives market-observable quotes for precious metal and FX options directly from dealer desks. These data are cleaned for spurious points, such as outliers or stale contributions. Cleaned data are then averaged into a composite.

Results File Field Names

The FX Option Volatility Data Service results file contains column headers defined as follows:

Header	Example	Definition
CFID	GBP_10_BF_1Y	The unique identifier for the FX option volatility node on the surface. See "CFID Construction" below.
SPOTDDATE	5/31/2017	In historical data files only. The date on which the BID or ASK was spotted in the market. Volatilities are spotted as of the close of the local currency bond market.
BID	23.61	The bid FX option implied volatility (for ATM options) expressed as a percentage, or the offset to the ATM volatility (for 10 and 25 Delta Risk Reversals and Butterflies).
ASK	24.11	The ask FX option implied volatility (for ATM options) expressed as a percentage, or the offset to the ATM volatility (for 10 and 25 Delta Risk Reversals and Butterflies).



CFID Construction

The "CFID" column contains proprietary identifiers that uniquely represent each piece of data. For FX options, the CFID is constructed as follows:

Currency + Delta + QuoteType + OptionTenor

Characteristic	Example	Definition
Currency	GBP	The ISO currency code or precious metal referenced by the option, relative to USD.
Delta	10	The delta of the quote, either 10 or 25. For at-the-money options, this field contains a zero.
QuoteType	BF	Denotes either a Butterfly (BF), Risk Reversal (RR) or at-themoney (AM) quote.
OptionTenor	1Y	The tenor of the option, expressed as overnight (ON), spot week (SW), and standard expiries in months (M) or years (Y).

Each Characteristic is separated by an underscore. Using the example data above, we would construct the CFID for a GBP 10-Delta Butterfly with 1Y expiry as:

Coverage

The FX Option Volatility Data Service covers Gold, Silver and the following currencies, relative to USD:

Currency Coverage

ARS	EUR	PEN
AUD	GBP	PHP
BRL	HKD	PLN
CAD	HUF	RUB
CHF	IDR	SEK
CNH	INR	SGD
CNY	JPY	THB
COP	KRW	TRY
CZK	MXN	TWD
DKK	NZD	ZAR



Swaption Volatility Data

The Swaption Volatility Data Service provides clients with a daily source of independent interest rate volatility data for valuations, portfolio analytics and risk management calculations.

Data Description

The Swaption Volatility Data Service supplies daily normalized volatility cubes for interest rate swaptions, including skew, across many popular global currencies. Volatilities are expressed in basis points and correspond to standardized cube nodes, including:

- At-the-Money (ATM) strikes, and out-of-the-money strikes specified as positive and negative offsets of the ATM forward rate in 25, 50, 100, 150 and 200 basis point increments
- Standard option tenors, typically from 1 month to 30 years
- Standard swap tenors, typically from 1 year to 30 years

Delivery Frequency

Swaption volatility data is available on an intraday or end-of-day basis, with snaptimes at the close of the local currency bond market and delivery at approximately 4pm ET. Up to 5 years of history is also available.

Methodology

EDI receives market-observable quotes for swaptions directly from dealer desks. These volatilities are quoted using OIS discounting, where applicable, or as forward premiums. We use these quotes to calibrate the SABR model, the output of which is a normalized volatility cube.

- The service provides normalized volatilities in order to ensure consistent coverage, even in negative interest rate environments.
- While normalized volatilities will calibrate for negative ATM rates, some negative offset strikes, particularly for short tenors, that produce negative forward rates, will not calibrate given limitations of the SABR model.



Results File Field Names

The Swaption Volatility Data Service results file contains column headers defined as follows:

Header	Example	Definition
CFID	USD_2Y_10Y_N10 0	The unique identifier of the swaption volatility node within the cube. See "CFID Construction" below.
SPOTDDATE	5/31/2017	In historical data files only. The date on which the NVOL was spotted in the market. Volatilities are spotted as of the close of the local currency bond market.
NVOL	53.94	The Normalized Volatility, expressed in basis points.

CFID Construction

The "CFID" column contains proprietary identifiers that uniquely represent each piece of data. For swaptions, the CFID is constructed as follows:

Characteristic	Example	Definition
Currency	USD	The ISO currency code of the underlying interest rate swap.
OptionTenor	2Y	The tenor of the option in months (M) or years (Y).
SwapTenor	10Y	The tenor of the swap in months (M) or years (Y).
Strike	N100	The strike of the option as positive (P) or negative (N) offsets of 25, 50, 100, 150 or 200 basis points. An at-the-money strike is denoted "AM".

Each Characteristic is separated by an underscore. Using the example data above, we would construct the CFID for a USD 2Y option, 10Y swap with a -100 offset to the ATM strike as:



Coverage

The Swaption Data Service comes in two separate packages: G5 and Premium. The G5 Package covers USD, EUR, GBP, JPY and AUD swaptions with the following tenors:

	Option Tenor		Swap Tenor	
Currency	Min	Max	Min	Max
AUD	1M	20Y	1Y	20Y
EUR	1M	30Y	1Y	30Y
GBP	1M	30Y	1Y	20Y
JPY	1M	10Y	1Y	20Y
USD	1M	30Y	1Y	30Y

EDI also offers a Premium Package containing less-liquid swaption currencies with the following tenors:

	Option Tenor		Swap Tenor	
Currency	Min	Max	Min	Max
AED	1M	5Y	1Y	10Y
CHF	1M	10Y	1Y	10Y
CNY	1M	10Y	1Y	10Y
DKK	1M	5Y	1Y	10Y
HKD	1M	10Y	1Y	10Y
KRW	1M	10Y	1Y	10Y
MYR	1M	10Y	1Y	10Y
NOK	1M	5Y	1Y	10Y
PLN	1M	5Y	1Y	10Y
RUB	1M	5Y	1Y	10Y
SAR	1M	5Y	1Y	10Y
SEK	1M	10Y	1Y	10Y
SGD	1M	10Y	1Y	10Y
THB	1M	10Y	1Y	10Y
TWD	1M	10Y	1Y	10Y



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

12AM - 8AM (GMT)

Sunday

11PM-12AM(GMT)

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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