



exchange data international

Fixed Income Offering

V.7.2



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 data for equities and fixed income 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 www.africadata.com
- 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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Background

Originally in the equity space, Exchange Data International (EDI) moved to the Fixed Income arena following an increased demand from clients to add debt instruments to its coverage. As the firm was approached by a major credit rating agency to build a customised fixed income service, it developed its own Fixed Income service providing global coverage of the debt market.

New countries and sources are continually researched and added to enhance geographic coverage and increase the volume of securities in the database. The service provides historical data back from 2007.

Worldwide Fixed Income (WFI)

An Invaluable Reference Source

Access static data outlining key terms and conditions for all securities. Data is sourced globally from stock exchanges, central banks, ministries of finance, lead managers, paying, calculation and transfer agents.

Additional Information at Your Fingertips for Complex Fixed Income Instruments

Take advantage of full securities terms and conditions documentation. EDI can provide you with pricing supplements, offering circulars, term sheets and prospectuses for as many securities as possible subject to availability. Its coverage currently covers approximately 30% of the Fixed Income database.

Keep Pace with The On-Going Changes in The Fixed Income Marketplace.

All latest instrument developments can be smoothly integrated into the framework. A comprehensive specification caters for all markets. This level of coverage and data quality combined provides investment firms with the necessary tools to reduce risk and maximise potential from the Fixed Income arena.

Efficiently Manage Corporate Actions

Track corporate action events from 150 countries and 15 supranational. In addition to covering developed markets, EDI specialises in emerging markets and frontier countries that include Africa, Asia, the Middle & Far East and Latin America.

As well as giving details of interest payments for both fixed and floating rate issues, worldwide fixed income provides a comprehensive coverage of corporate actions events and thus a complete overview of changes.

The event coverage includes: Bankruptcy, Liquidation, Default Securities, Conversion, Consent, Redemptions whether they be Repurchases, Tender Offers, Dutch Auctions...

Flexible Delivery Mechanisms

Have **Worldwide Fixed Income** delivered either via web interface or as a data feed (via FTP).

The feed is comprised of a number of table elements which can either be taken separately or combined to fulfil specific needs

Reference/Terms and Conditions Data

The Terms and Conditions tables provide fundamental static data enabling the identification of any debt security, details from the indenture such as redemption and conversion terms.

The feed is available in our proprietary format and can be fully customised to meet clients' specific needs. Subscribers get an initial file with all the data they require and thereafter daily updates with all the changes made to the Terms & Conditions tables.

Corporate Actions Data

Users have the choice of receiving Corporate Actions data with or without the Terms and Conditions.

The feed is available in our proprietary format and in ISO 15022 MT564 & 568 standards. The ISO file is fully compatible with our equity corporate actions feed.

Historical data back to 2007 is available in our proprietary format.

Coverage

Region

Number of Fixed Income instruments per Region as per November 2017.

Region	Number of Securities
Africa	7,151
Asia and Far East	108,601
Europe	175,236
Latin America & the Caribbean	37,719
Middle East	3,220
North America	159,124
Oceania	10,656
Unlisted Euro Bond	123,972

Asset Classes

Fully covered

- Canadian strip packages without underlying
- Cash management bills
- Certificate of deposit (tenure more than 28 days)
- Commercial papers (tenure more than 28 days)
- Corporate bonds
- Government bonds
- Municipal securities (excluding US)
- Reverse-convertibles
- Short-term corporate Bonds
- Short-term government Bonds
- Strips (parent needed)
- Treasury bills

Covered if in portfolio

- Asset-backed securities (ABS) (securities entered with critical fields and just covered for live client's portfolio and Canada; offering documents processed for live clients; corporate actions not maintained)
- Certificates (just covered for live client's portfolio)
- Mortgage-backed securities (MBS) (securities entered with critical fields and just covered for live client's portfolio and Canada; offering documents processed for live clients; corporate actions not maintained)
- Musharaka Sukuks (securities entered with critical fields and just covered for live client's portfolio; offering documents processed for live clients; corporate actions not maintained)
- Structured Products
- US Municipal Bonds (securities entered with critical fields and just covered for live client's portfolio; offering documents processed for live clients; corporate actions not maintained)

Currently not covered

- Genussschein (AT, CH and DE)
- Mortgage-pass through certificates
- Pass-through certificates

Fixed Income Documenter

Gain access to EDI's huge library of fixed income securities offering documents

WFI Documenter is a web-based application that fully complements the Worldwide Fixed Income proprietary feed and browser products. Users benefit from access to its huge library of offering documentation for fixed income securities.

Documents are available for download in their original format, PDF, Microsoft Word and Excel and include:

- Offering circulars
- Prospectuses
- Term sheets
- Pricing supplements

Easily locate documents for retrieval

Choose from search fields including ISIN, US Code, SEDOL™ or Symbol as well as via Issuer Name or use the portfolio checker feature to locate required documents. If a document is unavailable, subscribers can place an order for it to be traced.

Fixed Income Derived Data (bond²)

The service combines our worldwide fixed income and bond-pricing data with algorithms from our partner who specialises in cloud based financial applications.

bond² currently covers 150,000 exchange traded debt securities including government and corporate, fixed rate, floating, and convertible issuance, providing clients with an insightful report on the global fixed income market.

Value and efficiently manage portfolios

Files comprise of an initial set of 11 fixed income derived data fields along with 16 fields from the Last Trade file and are delivered the next day at 8am GMT.

- | | | |
|---------------------|---------------------|-----------------|
| ▪ Accrued Interest | ▪ Modified Duration | ▪ Low |
| ▪ Yield | ▪ Key-Rate Duration | ▪ Mid |
| ▪ Yield to Maturity | ▪ Exchange Code | ▪ Ask |
| ▪ Yield to Call | ▪ Market Close Date | ▪ Bid |
| ▪ Yield to Put | ▪ Last Trade Date | ▪ Bid Size |
| ▪ Yield to Worst | ▪ Closing Price | ▪ Ask Size |
| ▪ Convexity | ▪ Price Currency | ▪ Traded Volume |

▪ ISIN	▪ Issue date	▪ Interest type	▪ Maturity date
▪ US Code	▪ Issue price	▪ Interest rate	▪ Maturity price as per cent
▪ Security ID	▪ Bond type	▪ Interest payment	▪ Call/Put flag
▪ Local code	▪ Bond	▪ Frequency	▪ Call/Put type
▪ Issuer name	▪ Currency	▪ FRN index benchmark	▪ Callable from/to date
▪ Security description	▪ Nominal value	▪ Mark-up	▪ Call price
▪ Country of incorporation	▪ Outstanding amount		

Files can easily be customised and include another **25 identifiers and reference data fields**, key for the calculations:

Use bond² to get the necessary data required to efficiently control the risk associated with fixed income portfolios, project security or portfolio returns, as well as complying with regulatory requirements.

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 Methodology

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.

Municipal Bond Pricing – End of Day Feed

Provides coverage of over 1.25 Million US Municipal Bonds.

Flexible delivery mechanisms

Have daily end of day pricing feeds for select bonds or the entire database delivered via FTP.

Data items available include: price, bond type, callable flag, puttable flag, country code/description, coupon, coupon class/frequency/pay date/type, currency code, security code, database symbol, day count, description, first coupon date, Issue date/details, issuer code, maturity date, original amount issued, perpetual flag, portfolio date, Sedol code, etc.

Municipal Bond Analytics (Characteristics) Feed

Obtain coverage of over 1.25 Million US Municipal Bonds.

Have municipal bond analytics included within a pricing feed or delivered separately.

Data items available include: yield to maturity, yield to worst, modified duration, effective duration, convexity, effective convexity and option adjusted spread.

Big data analytics provided at the best possible evaluated price

Get a straightforward way of navigating your way through an inefficient Municipal bond market where bond pricing is often inaccurate.

Observation based pricing

Access data rigorously collect from thousands of different sources.

Know that the best possible price will be calculated for every security in our universe.

Stage 1: Layering transactional pricing data

Bid-offer pricing data, positions data from government cash management and pension plans (state / federal / local), Insurance companies, ETF's, open and closed end mutual funds.

Stage 2: Weighted regression analysis

Reconciles observations into a single meaningful price. This means pricing is more accurate to the true value of the security than simple matrix pricing or bid-offer pricing data.

Transparency

Detailed reports provide the number of pricing points used for input, details on the type of pricing points, transactional or institutional, curve analysis and correlation analysis used.

Build a stronger analysis

Use a built in 'confidence quotient' to clearly distinguish the quality of each pricing point.

Providing accurate and timely data

Exploit a powerful data collection platform driven by cutting edge technologies. This means more analysis and checking is conducted prior to data delivery. Ultimately this leads to more accurate and timelier data.

Analytics

Take advantage of best of breed technology for the delivery of both prices and bond analytics (characteristics). Our pricing or, if you prefer, with your pricing... the choice is yours.

Customisation

EDI is proud to offer the most effective and efficient solutions tailored to meet each individual customer's needs.

We offer a range of customisation 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

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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