



European DataWarehouse

TSI Presentation| Frankfurt, 20 February 2013

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01

History and Development

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Our Vision

To create a central point [or forum] where industries, associations and national agencies can lodge their data and information in an open, transparent and trusted environment.

Our Mission

To deliver a product that is simple to operate, simple to price, simple to understand and that is available to all. ED's concept is to operate as a utility providing a range of services.

Fostering Transparency and Restoring Confidence in Structured Finance

ED is the first central data warehouse in Europe for collecting, validating and making available for download detailed, standardised, asset class specific loan-level performance data (LLPD) for asset-backed securities (ABS) transactions. Developed, owned and operated by the market, and endorsed by the Eurosystem, ED helps facilitate risk assessment and improve transparency standards for European ABS deals.

Allowing ABS servicers, trustees and other data providers to submit loan-level data electronically in accordance with reporting templates developed by the European Central Bank (ECB), Edwin (the ED software application) is an integrated platform that collates deal, bond and loan-level ABS information into a single, centralised database. As an ABS LLPD data aggregator, Edwin allows investors, traders, risk managers and others to access fast, timely and reliable performance information.

2008

Following the economic crisis of 2008, it became clear that more transparent and timely information on the underlying loans or asset pools of asset-backed securities (ABSs) and their performance, in a standardised format, was needed to help investors and rating agencies to perform an improved due diligence.

2009

The European Central Bank (ECB) together with LCM Partners, created the concept of a fully transparent data handling infrastructure which would facilitate the disclosure and timely access to ABS information for investors, originators, rating agency's and other interested parties. Moreover it was the absolute requirement to introduce the concept of standardised loan-level reporting across the Eurosystem that would eventually be accessed through a centralised database or portal.

2010

In December 2010, the Governing Council of the ECB announced its intentions to establish loan-by-loan data requirements for ABS in the Eurosystem collateral framework, with the aim of improving transparency and helping to restore investor confidence in the European securitisation markets (the ABS Loan-level Data Initiative). A number of Technical Working Groups (TWG) were created that would advise and assist the ECB to help it formulate and finalise the specific ABS reporting templates. The TWG members were chosen from leading investors, originators, rating agencies, industry associations and five NCBs.

2011

Together with the introduction of loan-by-loan level reporting the ECB believed that a central utility (portal or warehouse) should be created where investors, originators, rating agencies et al could access their data. This utility would be an independent constructor (external to the Eurosystem) that would process, verify and manage the data. ECB president Jean-Claude Trichet invited market participants to lend their support to this important initiative. A procurement process was initiated for the selection of the constructor and over 50 organisations participated in the process. In December 2011, the project developer and the constructor were announced at the launch of the European DataWarehouse (ED). The ECB published specific reporting templates for small and medium-sized enterprises (SME) ABS and for commercial mortgage-backed securities (CMBS).

2012

At the end of June 2012, following the private placement of shares, the European DataWarehouse GmbH was formed in Frankfurt, Germany. Shareholders include a diverse mix of leading institutions including issuers, rating agencies, guarantors and associations from across Europe. In November 2012 ED is officially launched with an event at the ECB in Frankfurt and at ED offices.

2013

ED starts officially operations on schedule on 3 January in Frankfurt.

ED Client Groups:

- 1. Data Owners:** Data owners are issuers/originators who register the deals within Edwin and receive a unique global transaction identifier, or ED-Code. As part of registration of a deal, the data owner is also expected to appoint a data provider for the deal.
- 2. Data Provider:** Data providers are servicers, trustees or other designated entities that upload performance data files on a periodic basis against the deals for which they are nominated as providers by the data owner. Note that in many cases Data Owners will also be the Data Providers.
- 3. Data Users** are usually investors, rating agencies, European Central banks, National Central Banks, and other parties that access and analyse the underlying loan performance data by searching and downloading deals from Edwin.

The ED Global Transaction ID number (or "ED-Code") is a unique electronic identification scheme for ABS which is required in order for Customers to interact with Edwin. The ED-Code identifies the entire ABS deal structure, encompassing all constituent liabilities (i.e. bonds/tranches) and assets.

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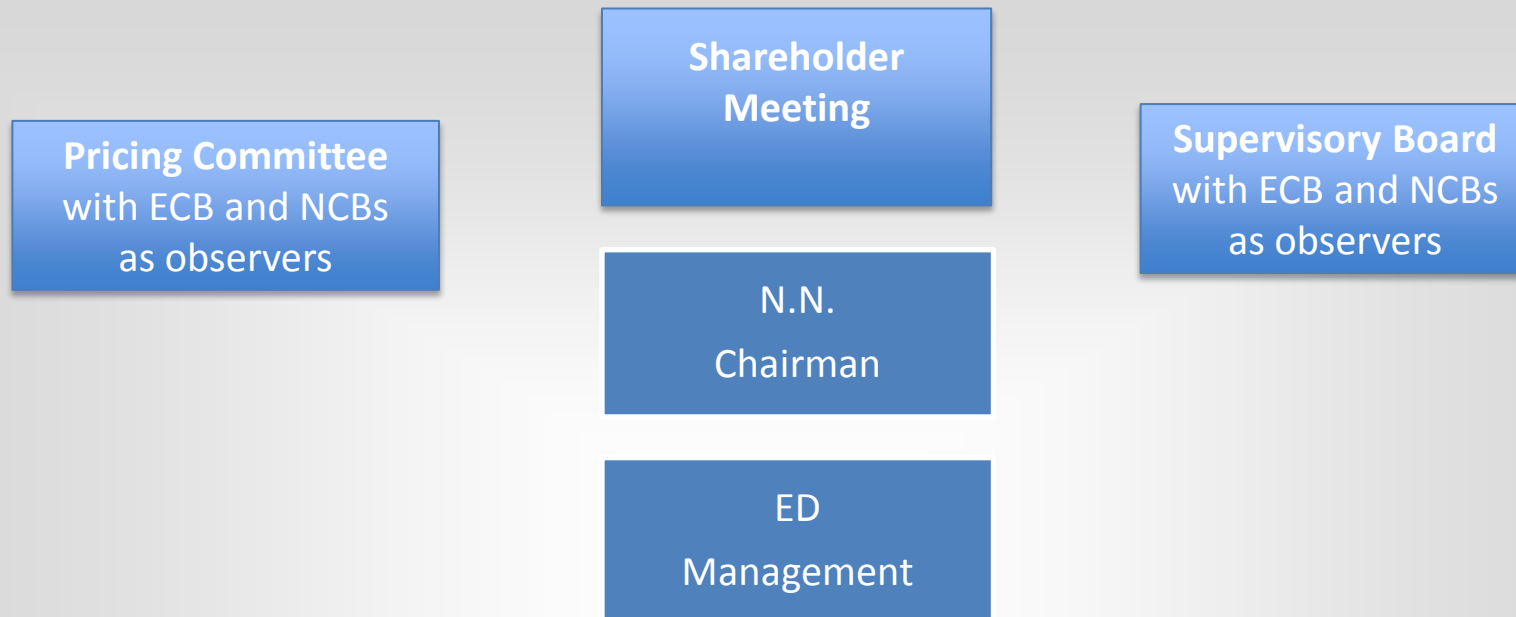
Corporate Governance

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List shareholders as of February 2013

1. Banco Bilbao Vizcaya Argentaria S.A.
2. Banco Santander S.A.
3. BNP Paribas S.A.
4. Caixa Bank S.A.
5. Crédit Agricole S.A.
6. Crédit Foncier de France
7. DBRS Ratings Limited
8. Intesa Sanpaolo S.p.A.
9. Instituto de Crédito Oficial
10. Moody's Group Cyprus Limited
11. Perella Weinberg Partners Group LP
12. Sapient Holdings Luxembourg S.à.r.l
13. Société Générale S.A.
14. True Sale International GmbH
15. UniCredit S.p.A.
16. Unione di Banche Italiane S.c.p.A.

ED is the first ABS warehouse ever created that is owned by its market users, but has the unique feature of being supported and endorsed by the European Central Bank and members of the Eurosystem.



Supervisory Board: Consists of 8-16 members (mainly shareholder representatives plus ECB/NCBs as observers) and is responsible for strategy and monitoring activities

Pricing Committee: Consists of 8+ members from the ABS industry and is responsible for setting the fee structure for ED clients. The fees are set in line with a “costs-plus” approach, meaning that profits above a certain operational margin must be redeployed to the market in the form of lower fees.

Data Owner / Provider	Fee Schedule	Fee
ECB Repo Eligible ABS Assets		
ED-Code (3) Issue: On-boarding of Legacy and New Issuance ABS Assets	One time deal registration and administrative fee (invoiced upon issuance of ED-Code)	€3,000 per ABS Transaction*
ED-Code Surveillance: Monthly or Quarterly uploads of ABS Loan-Level Surveillance Data	Annual data upload, management and surveillance fee (payable in advance)	€6,000 p.a. per ABS Transaction*
*Plus taxes as applicable		

Non-ECB Repo Eligible ABS Assets have a reduced fee of €4,000 for deal registration and €3,000 for annual data upload. These are ABS transactions not intended to be included in the Eurosystem Collateral Framework at the time the ABS transaction is uploaded into ED.

Institutional investors will not be charged for accessing ABS loan-level data

Data User	Fee Schedule	Fee
Institutional Investor User Log-In Fees (includes maximum of five unique Log-ins per institution)	Annual fee (invoiced on issue of Log-ins)	€500 per annum*
*Plus taxes as applicable		

The €500 p.a. fee is relevant for institutional investors , defined as investors in ABS who manage positions for either themselves or on behalf of clients but are not engaged in commercial trading activities (i.e. market maker), creation or licencing of derivative products derived from data obtained from ED and/or brokerage.

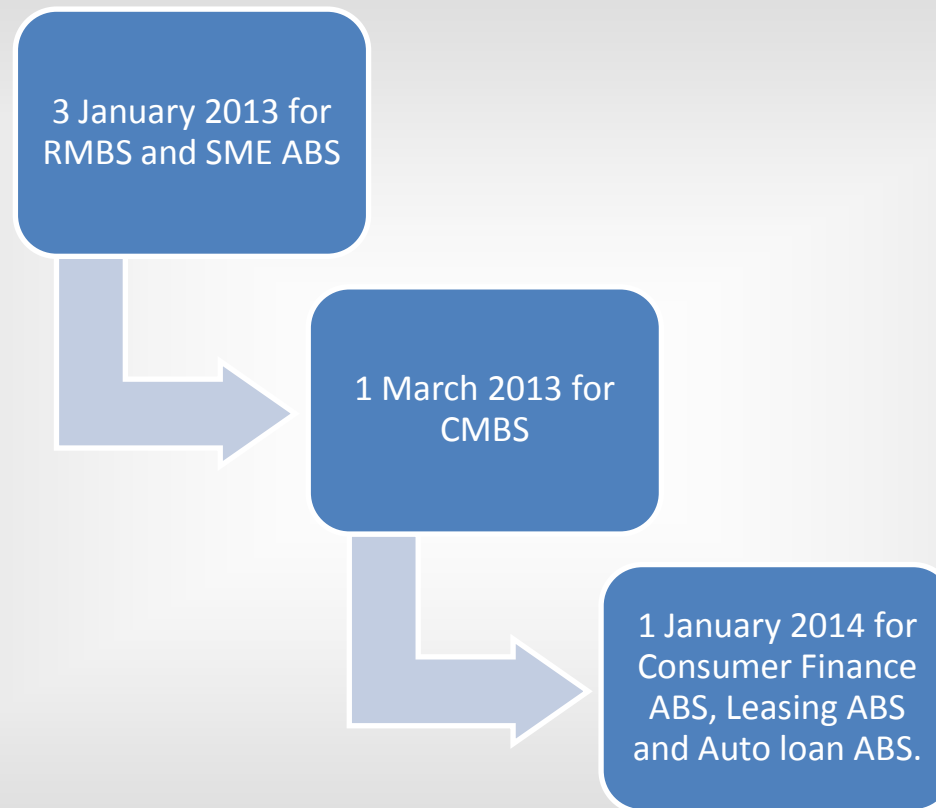
Different fees are applicable for Data users which are rating agencies or active market participants

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Operations and Practical Questions

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The ABS loan-level reporting requirements started as follows:



Source: ECB website at <http://www.ecb.int/paym/coll/loanlevel/transmission/html/index.en.html>

ECB Asset classes

[RMBS template](#) - last update: 22 January 2013

[CMBS template](#) - last update: 17 January 2013

[SME template](#) - last update: 14 December 2012

[Consumer Finance ABS template](#) - last update: 18 January 2013

[Leasing ABS template](#) - last update: 18 January 2013

[Auto Loan ABS template](#) - last update: 18 January 2013

ECB Compiling manual

A dedicated manual (taxonomy) is available on the ECB website for each template to assist market participants when they submit ABS loan-level information.

Source: ECB website at <http://www.ecb.int/paym/coll/loanlevel/transmission/html/index.en.html>

The onboarding process started in late December 2012 and has significantly accelerated in the last 3 weeks. In early January the first wave was focused on registrations with contract signing, deal creation and data uploads following.

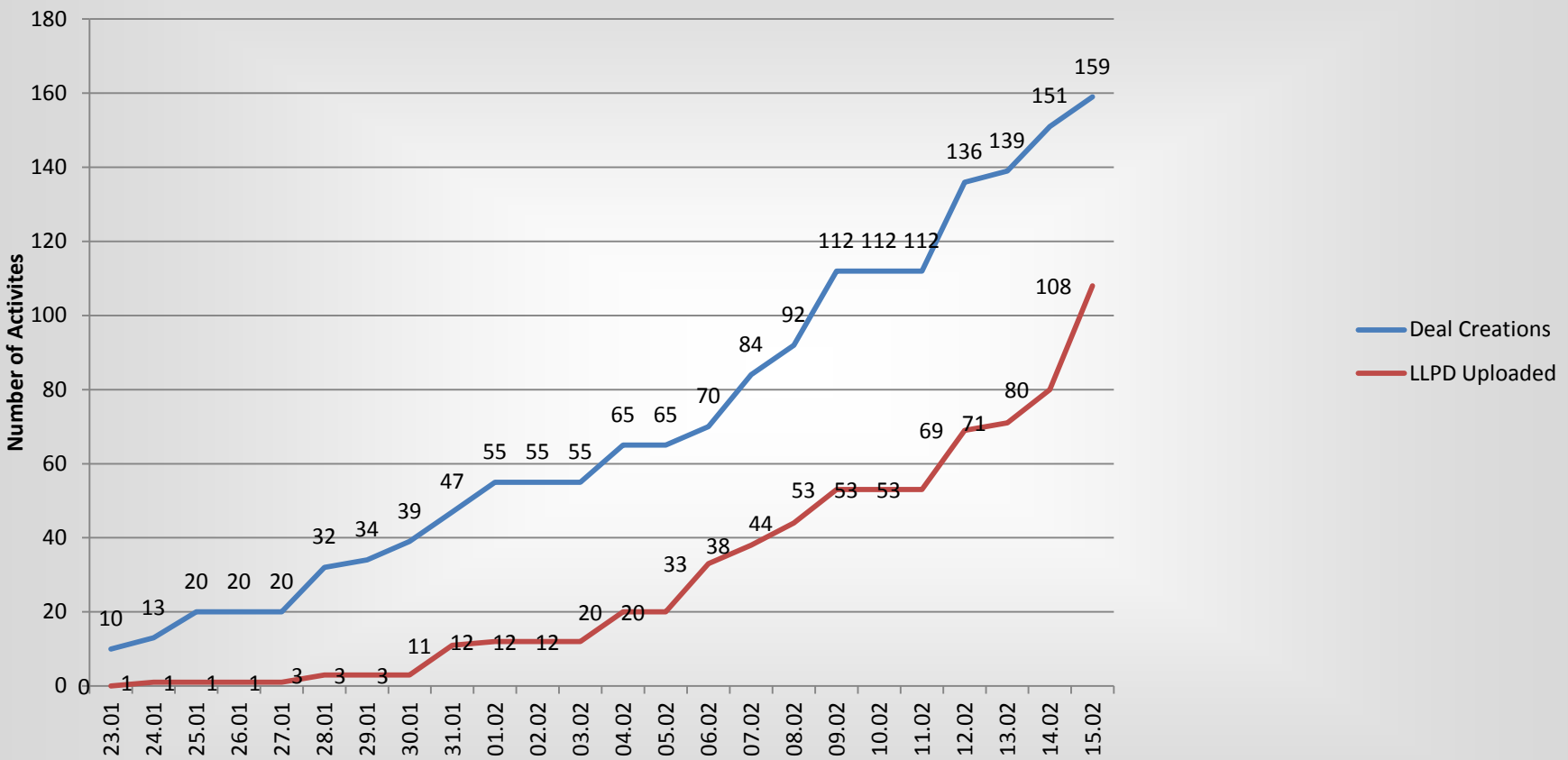
Currently the number of client registration is 140 and still increasing significantly. As of Feb 18th, 110 clients have signed the client contract. These include banks from all larger Eurozone countries plus UK..

Focus at the moment is firmly on Data owners / Data Providers with Data users expected to come in mainly in Q2 2013.

ED's customer account management team has answered a high number of enquiries, most of them have focused on the registration process so far with questions re technical aspects and templates (which also go to ECB) coming 2nd and 3rd.

The following slides shows the increase in deal creations and uploads over the last 3 weeks. While there is a good uptick there is still some way to go in the next weeks and we encourage clients to come in now to avoid a last-minute rush

Customer Production Activity Status



Who answers questions re templates and taxonomy?

- While ED is happy to receive the questions, please note that ECB is responsible for answers on templates and taxonomy. ED cannot give guidance related to questions on T&T

Can I comment on the client contract?

- Client contracts are uniform across the European client base and will not be individually negotiated, hence maintaining consistency and a level-playing field. However, ED does collate market comments and from time to time will issue new contract release versions based on market feedback. These new versions are also available to existing clients

Should the SPV be registered as the Data Owner and the Originator/Service as the Data Provider?

- This is in principle possible but most originators are registering as both Data owner and Data provider for their deals. Contractually it is not necessary that the Data Owner is the actual legal data owner but needs to be authorised by the legal data owner

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Technical Aspects

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What is Edwin?

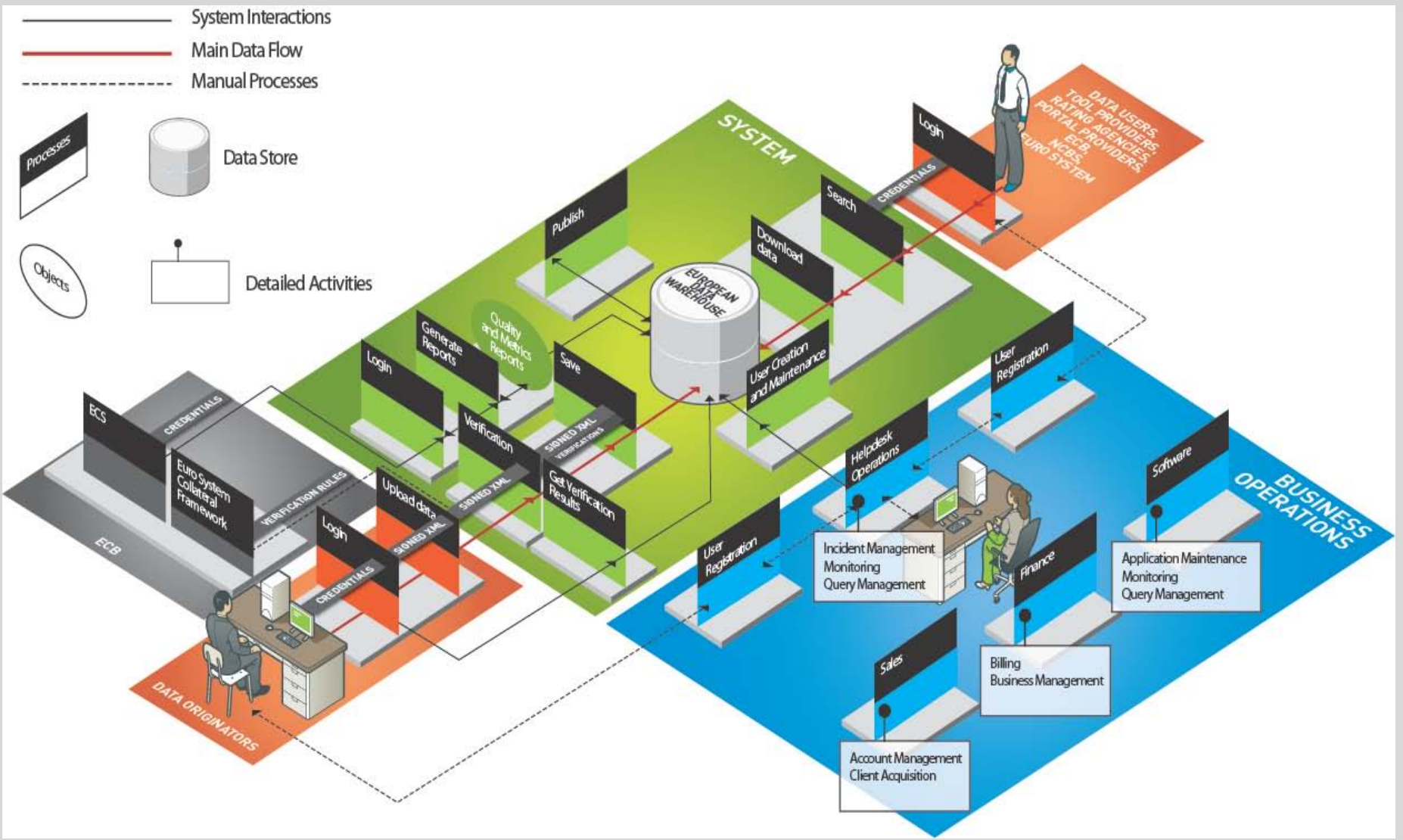
Edwin is a fully integrated software platform designed and developed specifically to collate ABS deal, bond and loan-level information into a single, centralised database.

Edwin provides high performance data processing capabilities, a robust and secure infrastructure, an easy to use web interface, web services for seamless system integration, extensive search features, and real time data quality scoring capabilities that reflect the ECB Eligibility Criteria requirements.

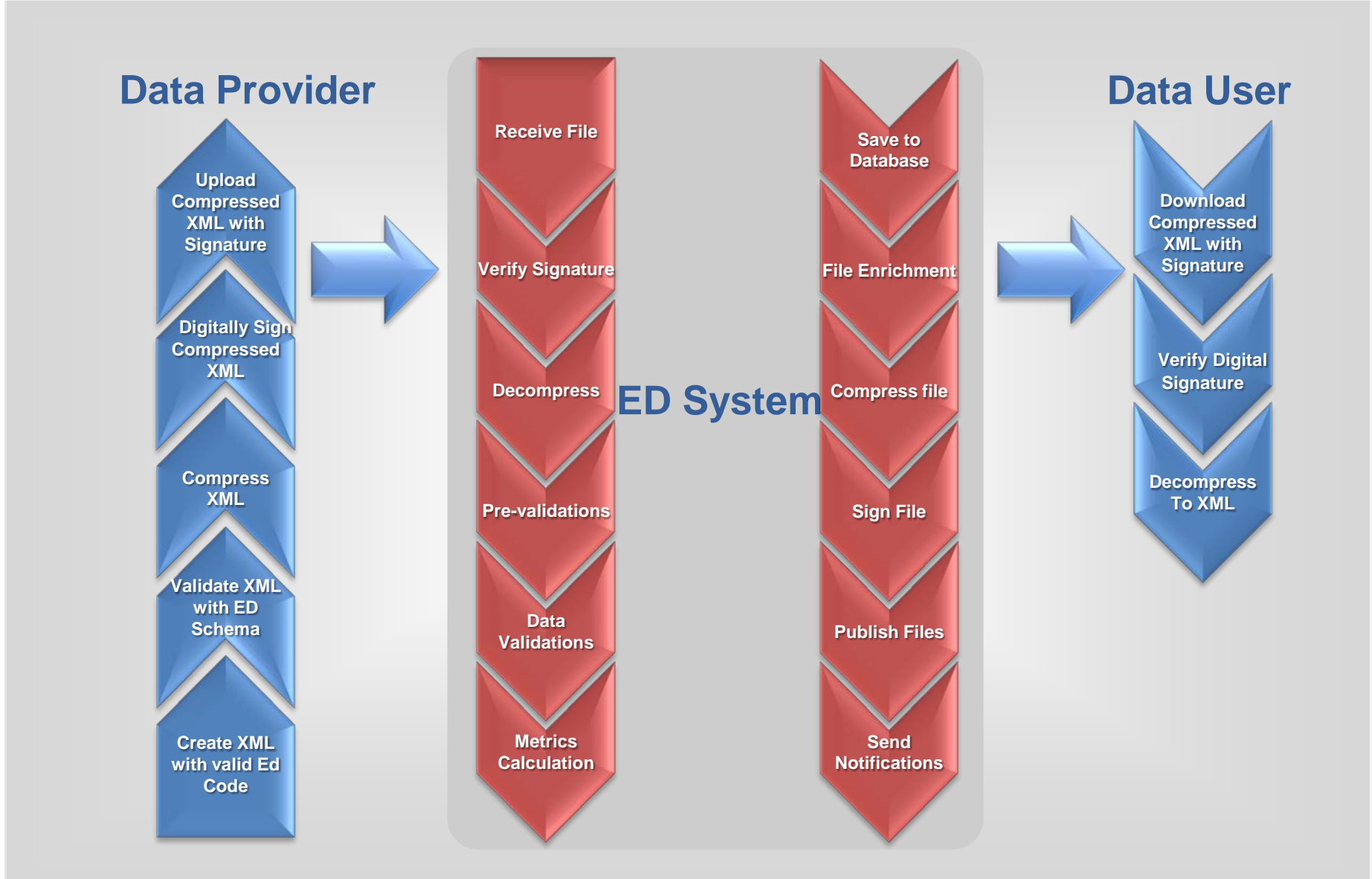
Who uses Edwin?

Investors, traders, risk managers, arrangers, data providers, ratings agencies, researchers and the Eurosystem, among others.

ED Services Overview



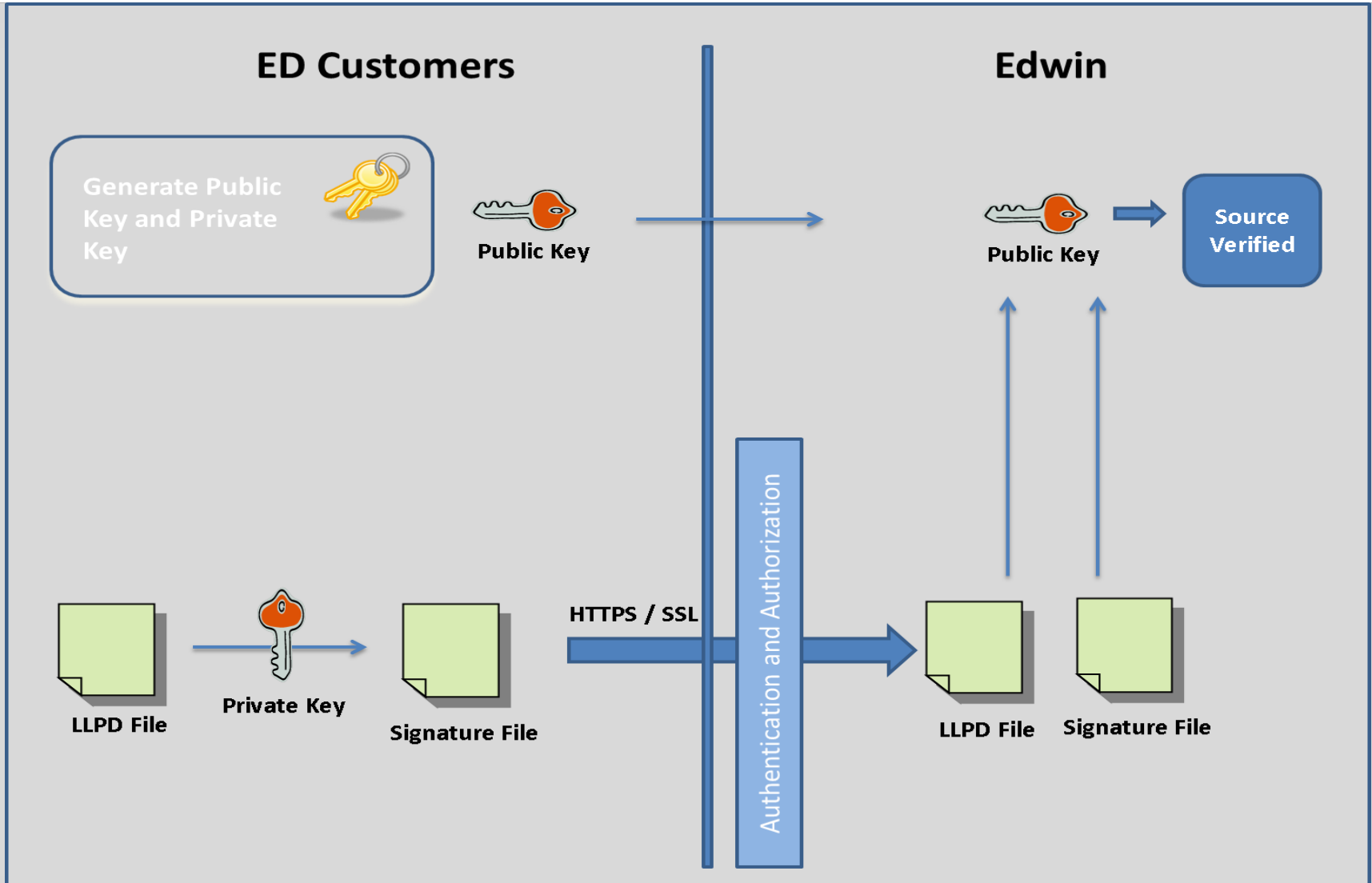
Process Overview – Data Upload/Download



- Technical prerequisites to use the Edwin Web Application:
 - Web Browser: Internet Explorer 7.x or 8.x
 - Email client software e.g. Microsoft Outlook,
 - A GZIP(.gz) compression tool e.g. 7-zip for compression/decompression of loan-level performance data files
 - Internet Connectivity

Edwin Web Application may be used with or without Java-Script

- Separate Data Conversion Toolkit available to upload data to ED in the correct data format. This toolkit uses the programmable interface (API) of the Edwin application.
- Our customers may develop custom applications using this same API to access Edwin functionality.



Data Validation and Scoring based on ECB guidelines

- Data uploaded to Edwin is automatically validated for compliance with the ECB taxonomy by the Edwin application. Also a score is calculated based on the completeness of mandatory data values.

"No Data" Option	Explanation
ND 1	Data not collected as not required by the underwriting criteria
ND 2	Data collected at application but not loaded in the reporting system at completion
ND 3	Data collected at application but loaded in a separate system from the reporting one
ND 4	Data collected but will only be available from YYYY-MM
ND 5	Not relevant at the present time
ND 6	Not applicable for the jurisdiction

Scoring matrix		ND 1 fields			
		0	≤ 10%	≤ 30%	> 30%
ND 2, ND 3 or ND 4	0	A1	B1	C1	D1
	≤ 20%	A2	B2	C2	D2
	≤ 40%	A3	B3	C3	D3
	> 40%	A4	B4	C4	D4

Gradual Introduction of Compliance Scoring based on ECB guidelines

The following transitional timetable (which is based on the implementation date for the relevant class of asset-backed security) applies to all ABSs.

- The **first three months** following the implementation date for the requirements is a test period. Loan-level data must be reported, but no specific limits or thresholds apply – i.e. there are no minimum compliance levels.
- In the **second three-month period**, the number of mandatory fields reported as “ND 1” may not exceed 30% of the total number of mandatory fields, and the total number of mandatory fields reported as “ND 2”, “ND 3” or “ND 4” may not exceed 40% of the total number of mandatory fields.
- In the **third three-month period**, the number of mandatory fields reported as “ND 1” may not exceed 10% of the total number of mandatory fields, and the total number of mandatory fields reported as “ND 2”, “ND 3” or “ND 4” may not exceed 20% of the total number of mandatory fields.
- Thereafter, no mandatory fields for loan-level data may be reported as “ND 1”, “ND 2”, “ND 3” or “ND 4” for any individual transaction.

Scoring Mechanism Calculation Logic

Scoring matrix		ND 1 fields			
		0	≤ 10%	≤ 30%	> 30%
ND 2, ND 3 or ND 4	0	A1	B1	C1	D1
	≤ 20%	A2	B2	C2	D2
	≤ 40%	A3	B3	C3	D3
	> 40%	A4	B4	C4	D4

The two percentages used to determine the score are calculated as follows:

Number of mandatory fields reported as “ND 1”/Total number of mandatory fields

Number of mandatory fields reported as “ND 2”, “ND 3” or “ND 4”/Total number of mandatory fields

Imagine, for example, that you have an ABS backed by 10,000 loans and the template contains 50 mandatory fields for each loan. In total, then, there are 500,000 cells in the Excel spreadsheet that need to be filled out (i.e. 50 mandatory fields x 10,000 loans).

If “ND 1” is used a total of 5,000 times in the spreadsheet, 1% of all mandatory fields are reported as “ND 1” (i.e. 5,000/500,000). Note that these 5,000 can be for any mandatory field and any loan. As an extreme example, you could have 100 loans for which “ND 1” was used in all 50 mandatory fields. Alternatively, that could be the result of one missing data field for 5,000 individual loans.

“ND 2”, “ND 3” and “ND 4” are added together (rather than being counted individually). So, if “ND 2” is used 3,000 times, “ND 3” 5,000 times and “ND 4” 2,000 times, the total will be 10,000. The total number of cells is 500,000, so the percentage for these three “no data” options will be 2% (i.e. 10,000/500,000). Again, those 10,000 can be for any mandatory field and any loan.

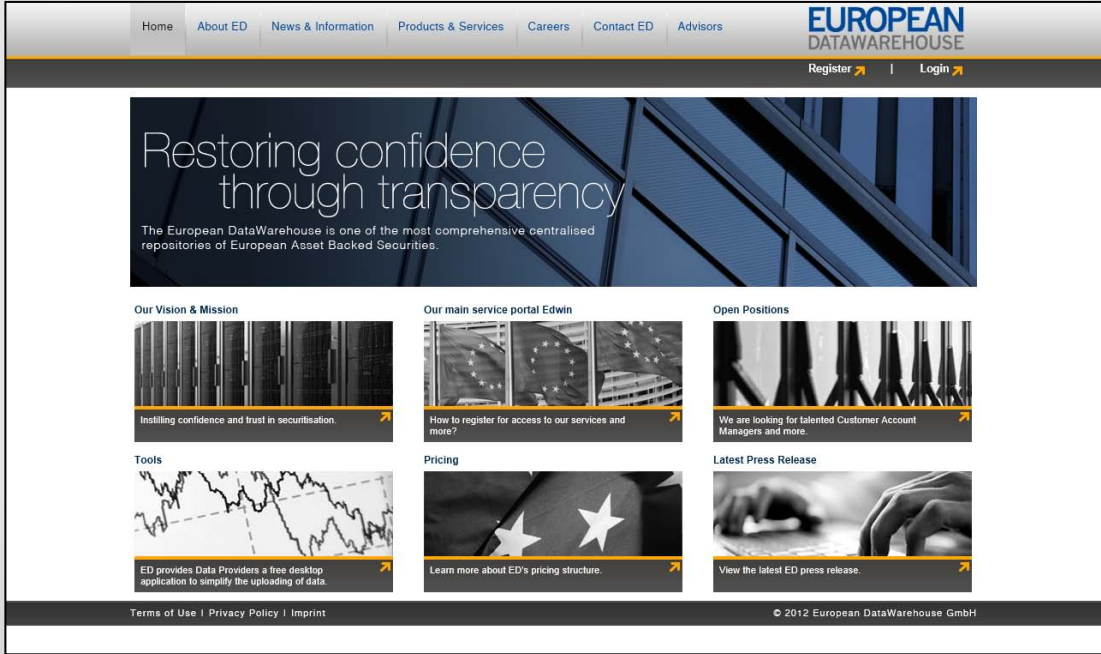
Source: ECB website at <http://www.ecb.int/paym/coll/loanlevel/faq/html/index.en.html>

Information & Updates:

Please visit the European DataWarehouse (ED) website at www.eurodw.eu

Contact Us:

Please email us at enquiries@eurodw.eu with queries related to ED



The background features a light blue color scheme with several semi-transparent data visualization elements. On the left, there are two line graphs with grid lines and numerical values. On the right, a portion of the European Union flag is visible, showing the blue field and a yellow star. The overall aesthetic is clean and professional, typical of a corporate or institutional presentation.

Thanks

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Appendix:

Requirements to Access Edwin

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- A windows based desktop or laptop with:
 - Web Browser: Internet Explorer 7.x or 8.x
 - Email client software such as Microsoft Outlook, configured to receive emails
 - A GZIP(.gz) compression tool such as 7-zip is required for compressing / uncompressing loan-level performance data files
 - Preferred display resolution: 1280X800
 - Internet Connectivity

Note that Edwin can work with or without JavaScript enabled on the web browser

- Client systems to connect with Edwin application programming interfaces (if applicable)

- Understand the ED's XSDs and start preparing loan level performance data
- The following software setup is additionally required for Web and API Users to create and submit data to Edwin:
 - A text or XML editor to create or edit RMBS and SME loan-level performance data files for testing
 - A utility to digitally sign the loan-level performance data files. Example: Gpg4win
 - Private key for digitally signing the data prior to submission to ED's Application and Public key for sharing with ED
 - XML validation tool i.e. utility to validate the conformance of XML data to the ED's XSD