

SPRING WORKSHOP SERIES

ATHENS - 22 MARCH 2023



AT TODAY'S WORKSHOP



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AGENDA

1. WELCOME AND INTRODUCTION

- Ioannis Asimelis, Alpha Bank
- 2. UPCOMING CONSULTATION ON THE ESMA TEMPLATES REVISION
- 3. CHANGES ON THE REPORTING OF SME-ACC PORTFOLIOS FOR BANK OF GREECE
 - Marco Angheben, European DataWarehouse
- 4. NEW EBA NPL TRANSACTIONS DATA TEMPLATES
 - Fulvio Pelargonio, NPL Markets
- 5. EDW GAP ANALYIS EBA NPL VS ESMA TEMPLATES
 - Andrea Bedin, European DataWarehouse
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- 8. SUSTAINABLE FINANCE PROJECTS: GREEN AUTO SECURITISATION AND ENGAGE
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- 9. CLOSING REMARKS

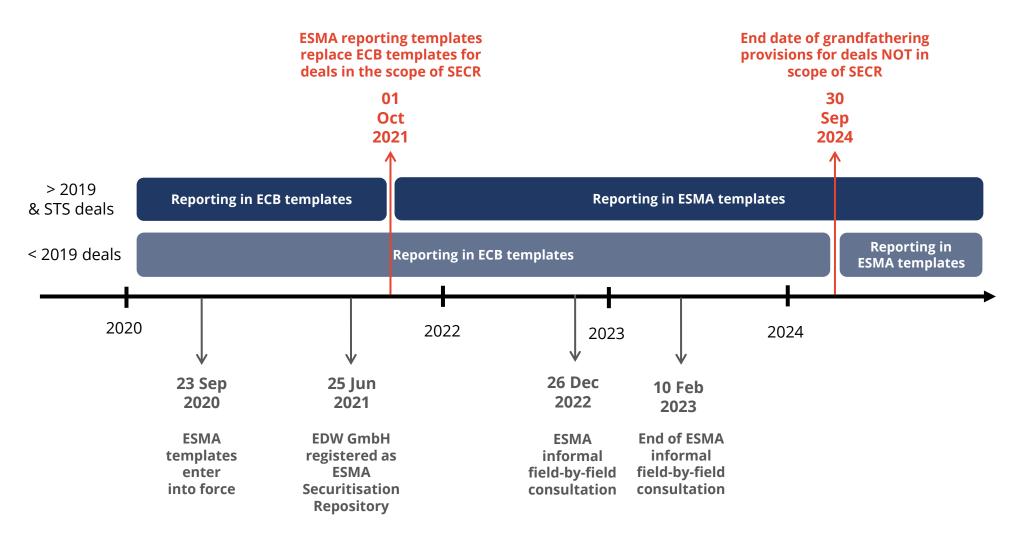


WELCOME AND INTRODUCTION IOANNIS ASIMELIS, ALPHA BANK



UPCOMING CONSULTATION ON THE REVISION OF THE ESMA TEMPLATES MARCO ANGHEBEN, EDW

CHANGES TO THE EUROSYSTEM'S LOAN-LEVEL DATA REQUIREMENTS





NEW ESMA QUESTIONS & ANSWERS

Released in February 2023

| Heading of Q&A | Code | New or Modified |
|---|------|-----------------|
| A summary of the underlying documentation that is essential for the understanding of a transaction | 1 | non or mouniou |
| Required level of completeness of the information described in points (b), (c) and (d) of the first subparagraph of Article 7(1) of the Securitisation Regulation | 2 | |
| Underlying exposure documentation as part of Article 7(1)(b) of the Securitisation Regulation | 3 | |
| STS requirements - application of Article 21 (9) of the Securitisation Regulation on transaction documentation | 4 | |
| Provision of STS+ certification by third party verifier agent (TPV) | 5 | |
| Whether a "vendor financing" structure can be considered a synthetic securitisation | 6 | |
| The inclusion of early amortisation provisions or trigger for termination of the revolving period in the transaction documentation | 7 | *New* |
| Existence of different classes of investors | 8 | *New* |
| Whether a step-up margin to be paid to investors could apply in the event the securitisation is no longer STS | 9 | *New* |
| Whether mortgages secured by non-owner occupied residential and real estate properties can be homogeneous | 10 | *New* |
| The application of the homogeneity criteria to branches | 11 | *New* |
| Replacement of the liquidity providers | 12 | *New* |
| Which reporting templates should apply to a securitisation backed by project finance loan receivables | 13 | *New* |
| Securitisation exposures backed by several collaterals | 14 | *New* |
| The application of EMIR to securitisation transactions | 15 | *New* |
| Institutional investors' reporting obligations | 16 | *New* |
| Heading of Q&A | Code | New or Modified |
| Use of estimated Energy Performance Certificate values | 17 | *New* |

JOINT ESAS - ECB STATEMENT ON CLIMATE-RELATED DISCLOSURE

Released in March 2023









13 MARCH 2023

Joint ESAs-ECB Statement on disclosure on climate change for structured finance products

The European Supervisory Authorities¹ (ESAs) and the ECB are committed to contributing to the transition towards a more sustainable economy within their respective mandates. As investment in financial products meeting high environmental, social and governance (ESG) standards is increasingly important in the European Union (EU), it has also become a priority for structured finance products to disclose climate-related information on the underlying assets. ESMA, with the contribution of EBA, EIOPA and the ECB, is hence working towards enhancing disclosure standards for securitised assets by including new, proportionate and targeted climate change-related information. The ESAs and the ECB also call on issuers, sponsors and originators of such assets at EU level to proactively collect high-quality and comprehensive information on climate-related risks during the origination process. This call for improved disclosure concerns all funding instruments that are backed by the same type of underlying assets.

Enhanced climate related data are needed for securitised assets

- On 13 March 2023 a statement was issued by the European Banking Authority (EBA), the European Securities and Markets Authority (ESMA), the European Insurance and Occupational Pensions Authority (EIOPA), and the European Central Bank (ECB) that work is underway to enhance climate related data
- This is part of the effort to enhance the disclosure standards for securitised assets with climate change-related information
- Focus is on the EU Taxonomy Regulation and Sustainable Finance Disclosure Regulation (SFDR)

Source: ESAs website



CHANGES ON THE REPORTING OF SME-ACC PORTFOLIOS FOR BANK OF GREECE MARCO ANGHEBEN, EDW

CHANGES ON REPORTING OF SME-ACC PORTFOLIOS FOR BANK OF GREECE

Applicable from 1 April 2023 from operational perspective

- The existing ECB SME-ACC template continues to apply and the reporting will continue under the same EDCODE. No new portfolios will need to be created
- The A1 Score continues to be mandatory and calculated from EDITOR
- The impacted fields are:
 - AS46 (Annualized probability of default (PD) of the obligor)
 - AS47 (Source of the PD estimate in field AS46)
 - AS48 (Last Obligor Rating Review)
- These three fields should be reported as ND5 from the PCD of 31st of March 2023 and for all future submissions



NEW EBA NPL TRANSACTIONS DATA TEMPLATES FULVIO PELARGONIO, NPL MARKETS



NEW EBA NPL TRANSACTIONS DATA TEMPLATES FULVIO PELARGONIO, NPL MARKETS



EBA Template Case Study

TRANSFORMING DATA SHARED IN AN ACTUAL PORTFOLIO SALE INTO EBA TEMPLATE

The EBA NPL templates establish a common standard for all types of NPL portfolio sales across many jurisdictions, they will differ substantially from non-standardised data used in prior transactions.

We report on our experience in transforming the data shared with investors as part of some actual NPL portfolio sales on the NPL Markets transaction platform.

We found the following aspects are important for sellers to consider.

- Sellers should expect that there are a few mandatory data fields that they will not have readily available.
- Creating investor data tapes in the EBA NPL template format is not a particularly complex, time consuming nor expensive task when compared with the creation of investor data tapes currently used by sophisticated sellers

Data mapping software can help in

- The creation of the EBA NPL template
- Running detailed data integrity validation checks
- Data remediation after the initial setup, can be largely automated and near instant.



EBA Template Case Study

TRANSFORMING DATA SHARED IN AN ACTUAL PORTFOLIO SALE INTO EBA TEMPLATE

We have run the exercise using a certain number of data tapes of portfolios sold to investors.

The portfolios are a mix of unsecured loans, loans with personal and other financial guarantees, and mortgage loans with property collateral. We report on our experience in transforming the data shared with investors as part of actual NPL portfolio sales on the NPL Markets transaction platform.

| | DATA k | KEY FACTS | |
|-----------------------|--------------------------------------|--|-------------------------|
| TYPE | SOURCE DATA | DATA SHARED | EBA TEMPLATE |
| Data Fields | 400 to 600 | 200 to 250 | 124 |
| Database Tables | 15 to 20 of 100/150 data fields each | 10 to 15 of 75 to 100 data fields each | 9 |
| Historical Collection | Loan by loan or aggregated | 75 to 100 data fields plus aggregated | 36 to 72 (3 years data) |
| Additional date | Tables, stock and flows dynamics | Bespoke analysis | Possible |



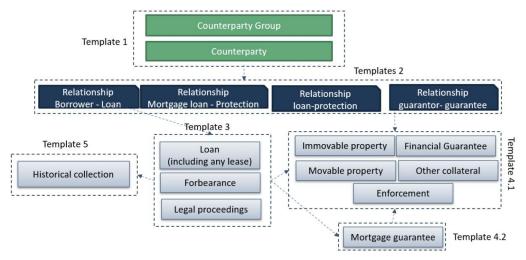
Steps To create an EBA Template from Source Tables

1 - RESHAPING THE RELATIONAL STRUCTURE

We concatenate and join information from different source tables to create the required EBA NPL relational database structure.

The main target tables are:

- T1 Counterparty which is created as a concatenation of borrowers, co-borrowers, guarantors, and co-guarantors
- T3 Loan with the information on loans, leases, or other receivables including some legal process information and forbearance measures
- T4.1 Collateral and enforcement which includes property and nonproperty collateral, guarantees and information on their respective enforcement status
- T5 Historical Collections. In addition, the relational structure is summarised in the relationship tables T2.1 to T2.4 and T4.1 (Figure 1)



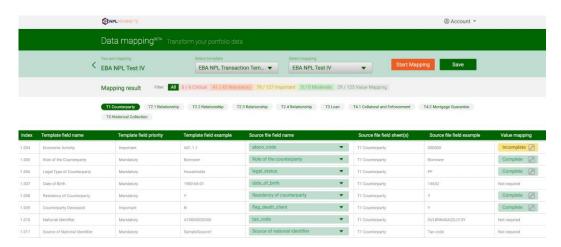


Steps To create an EBA Template from Source Tables

2 - CALCULATED DATA FIELDS

We create certain calculated or derived fields that may not exist in the required form in the source data. E.g.:

- Flag indicating whether some GDPR sensible data points are available
- Details of the agreed payments are not part of the EBA NPL template, but the field 3.039 Type of Forbearance Measure could be set to "rescheduled payments".



3 - FIELD NAME AND VALUE MAPPING

Source data needs to be aligned with the field names and formats used in the EBA NPL templates.

NPL Markets Data Mapping tool which helps users to map their data to a series of different data templates which now includes the EBA NPL transaction template in addition to templates for the regulatory disclosures of securitisation transactions (ESMA and FCA templates).

Each EBA NPL target field is matched with the correct source field and for list fields each available value is matched with the correct target value defined by the EBA NPL template.



Steps To create an EBA Template from Source Tables

4 - ADDING ADDITIONAL FIELDS

The EBA NPL template allows for additional data fields to be provided. We expect that banks will either use this option and add data fields and tables to the EBA NPL templates or provide a separate non-standard loan data tape containing additional information.

Examples for potential additional fields:

- · Payment plan information mentioned above
- Additional details on court procedures
- URLs or coordinates to identify property collateral on an interactive map
- Personally identifiable information like address, email, and phone numbers

5 - DATA QUALITY CHECKS

Once the field and value mapping is completed, the mapping is saved and the standardised template outputs are generated. At this stage, with the use of the Data Mapping tool, we conduct thorough availability and consistency checks on the output data reporting missing values, outliers, duplicates in the data keys, or relational inconsistencies. Detailed data mapping and data quality reports complete the generation of the EBA NPL transaction templates.



CONCLUSIONS

For complex secured portfolios investors currently receive more data fields than proposed by the EBA NPL templates. This contrasts with some industry comments that claimed that the proposed templates are too extensive.

Data mapping tools can support and accelerate the process of creating compliant templates including validation,

Banks should expect some manual data preparation steps as summarised above.

Once the raw data is gathered, depending on the asset class and complexity of the source data, the preparation of the first EBA NPL template is expected to take a few days and can sometimes be completed within hours.



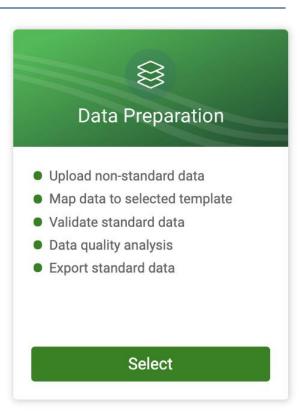
NPLM Data Preparation tool

DESCRIPTION

The Data Preparation tool allows our users to automatically standardise, run consistency checks and validate non-standard data tapes across different jurisdictions, languages and asset classes (performing & non-performing). The data tape can be transformed in line with different regulatory templates (EBA, ESMA, FCA, Valuation in Resolution, GACs etc.) as well as specific requirements. The software incorporates «machine learning» to speed up processes, ensure accuracy and can map portfolios in any language.

- Simplify complex processes
- Receive automated feeds
- Reduce time involved in mapping data
- Create standardised & consistent data sets
- Low cost infrastructure & maintenance

- Ensure accuracy of data
- Reduce risk discount with data accuracy
- User friendly drag & drop functionality
- Improve speed of delivery of data
- High quality cloud-based data warehouse





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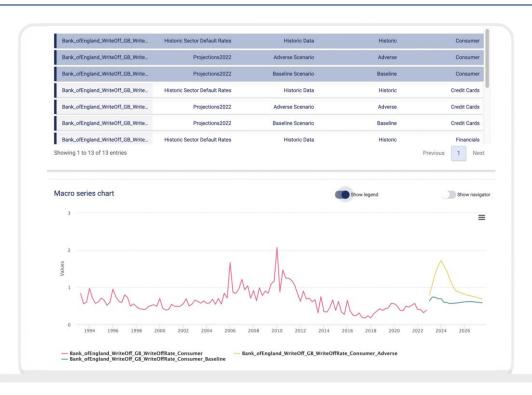
COMBINING TEMPLATES AND DATA FROM DATA HUB CASE STUDIES



Valuation & Analytics – Performance Data Hub

LOAN VALUATION - MARKET VALUE & HOLD VALUE

- Market valuations (IFRS 13) require current market discount rates by country, asset class, rating, maturity, seniority, interest rate type, and available collateral
- Hold valuations (IFRS 9) require the use of forward looking scenarios to estimate expected credit losses i.e. point in time risk parameters for default, loss and prepayment
- Both valuations are required for bank credit portfolio management to decide whether and which loans to sell
- We have created a data hub for loan valuation.
 - 1. market discount rates and lending rates
 - 2. credit risk indices for default, loss and prepayment
 - 3. macro economic scenarios

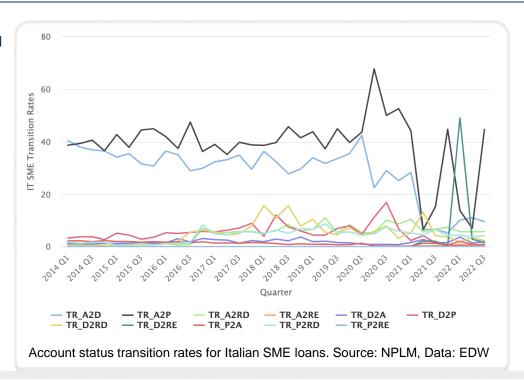




Valuation & Analytics – Performance Data from European DataWarehouse

USING EDW AND ESMA TEMPLATE DATA FOR LOAN VALUATION

- We use EDW data for several purposes
- Monitoring credit performance of individual ABS transactions and the market overall
- As Annex 12 aggregates for CPR, CDR, and arrears may be unreliable, we recalculate all risk measures at loan level
- Monitor loan pricing for newly extended loans
- Calculate loan level performance transitions to use in valuation models:
- ✓ Roll rates from PERF -> ARRE, ARRE -> PERF, ARRE -> DFLT
- ✓ Cure and danger rates for loans in distress to value Stage 2 loans and Unlikely to Pay: DFLT -> PERF, DFLT -> LOSS
- ✓ Cumulative recoveries and losses for NPL valuations





Valuation & Analytics - Credit Models - EDW Data

- PD/CDR, CPR and arrears performance is directly available in ESMA Annex 12 in the EDW database
- However, we found this data unreliable and recalculated CDR,
 CPR and arrears buckets from underlying exposures
- Other risk parameters like the cure rate are required to value performing SME loans, sub-performing loans like IFRS9 Stage 2 or Unlikely to Pay loans in each country where such data is available (IT, ES, FR, DE, PT, BE, NL)
- We combine historical data from EDW delivered under the ECB SME template with more recent ESMA data to create one reference data sets from 2013 to 2023 with 10m transitions
- In Italy the cure rate shows the expected dependencies on interest type (higher for floaters), and number of days in arrears (negative, lower cure rates the longer in arrears)

| | Estimate | Std. Error | z value | Pr(> z) |
|--------------------------------|----------|------------|---------|-----------|
| (Intercept) | -4.352 | 0.3061 | -14.22 | < 1.0e-10 |
| 'Amortisation Type'FIXE | -1.309 | 0.2800 | -4.68 | 2.93e-06 |
| 'Amortisation Type'FRXX | -0.761 | 0.2787 | -2.73 | 6.30e-03 |
| 'Amortisation Type'OTHR | -1.762 | 0.2896 | -6.08 | 1.17e-09 |
| InterestRateTypeSimpleFloating | 0.246 | 0.0387 | 6.37 | 1.91e-10 |
| InterestRateTypeSimpleOther | 0.437 | 0.0805 | 5.43 | 5.55e-08 |
| LoanAgeMonth.bin(12,24] | -0.096 | 0.1161 | -0.82 | 4.09e-01 |
| LoanAgeMonth.bin(24,60] | -0.090 | 0.1096 | -0.82 | 4.10e-01 |
| LoanAgeMonth.bin(60,Inf] | 0.310 | 0.1103 | 2.81 | 5.03e-03 |
| 'Number Of Days In Arrears' | -0.005 | 0.0001 | -43.50 | < 1.0e-10 |
| NumberUniqueCollaterals | 0.149 | 0.0126 | 11.84 | < 1.0e-10 |
| NumberUniqueGuarantees | -0.085 | 0.0193 | -4.40 | 1.10e-05 |
| PastArrearsFlagY | 3.469 | 0.0660 | 52.53 | < 1.0e-10 |

Logistic regression model for the cure rate of Italian SME based on 350,000 cures out of a total of 10 million loan-quarter observations. Source: NPLM, Data: EDW



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EDW GAP ANALYSIS EBA NPL VS ESMA TEMPLATES ANDREA BEDIN, EDW

CURRENT ESMA REPORTING FRAMEWORK UNDER SECURITISATION REGULATION (EU) 2017/2402

ESMA

Annex 2-9

Annex 10 - add on NPL

Investor Report

Inside Information (optional for private transactions)



- Annex 3: Underlying exposures commercial real estate
- Annex 4: Underlying exposures corporate
- Annex 5: Underlying exposures automobile
- Annex 6: Underlying exposures consumer
- Annex 7: Underlying exposures credit cards
- Annex 8: Underlying exposures leasing
- Annex 9: Underlying exposures esoteric
- Annex 10: Underlying exposures add-on non-performing exposures
- Annex 11: Underlying exposures ABCP
- Annex 12: Investor report Non-ABCP securitisation
- Annex 13: Investor report ABCP securitisation
- Annex 14: Inside information or significant event information Non-ABCP securitisation
- Annex 15: Inside information or significant event information ABCP securitisation

RESULTS OF THE EDW NPL GAP ANALYSIS (1/3)

- GAP Analysis highlights key differences between EBA NPL transaction data templates and ESMA technical standards as of 23 September 2020
- EBA templates have been streamlined and new fields added:
 - "No data option" has been simplified (ND1, ND2 etc. into one ND only)
 - € 25,000 threshold has been eliminated
- Among the 129 fields plus 5 identifiers proposed by EBA, EDW found a potential correspondence with the ESMA fields in 71 cases
- Scope of application for the EBA templates, as per the proposed Regulation Article 2, is for the sale or transfers of portfolios of NPLs held in the banking book of credit institutions that meet the criteria set out in Article 16 (7) of Directive (EU) 2021/2167 on credit servicers and purchasers.
- Out of scope, among others:
 - Securitised NPL loans where Regulation (EU) 2017/2402 applies
 - Loans held in the trading book of credit institutions
- NPL data quality is key to improve investor confidence and boost secondary market liquidity

RESULTS OF THE EDW GAP ANALYSIS (2/3)

| Template | Number of Fields | Number of fields with potential correspondence |
|--|------------------|--|
| 1 - Counterparty | 33 | 14 |
| 2 - Relationship | 4 | 3 |
| 3 - Loan | 44 | 21 |
| 4 - Collateral guarantee and enforcement | 43 | 28 |
| 4.2 Mortgage Guarantee | 5 | 4 |
| 5 - Historical collection of repayments | 5 | 1 |
| Total number of fields | 134 | 71 |

RESULTS OF THE EDW GAP ANALYSIS (3/3)

- Based on three Annexes of the ESMA templates:
 - 1. the Underlying exposure add-on non-performing exposure (NPL) (Annex 10),
 - 2. the Underlying exposure residential real estate (Annex 2); and
 - 3. the Underlying exposure corporate (Annex 4)

| | EBA Temp | plates | | ESMA Templates |
|-------------|--------------------------------------|--|-------------------|---------------------------------------|
| Index - EBA | Template - EBA | Data field - EBA | Field code - ESMA | Field name - ESMA |
| 1.04 | Counterparty | Economic activity | CRPL14 | NACE Industry Code |
| 1.06 | Counterparty | Legal Type of Counterparty | RREL15 | Borrower Type |
| 1.16 | Counterparty | Country of Counterparty | RREL81 | Original Lender Establishment Country |
| 1.21 | Counterparty | Currency of Financial Statements | CRPL23 | Financial Statement Currency |
| 3.12 | Loan | Legal Balance | RREL71 | Default Amount |
| 3.13 | Loan | Days in Past-Due | RREL68 | Number Of Days In Arrears |
| 3.14 | Loan | Interest Rate | CRPL53 and RREL43 | Current Interest Rate |
| 3.15 | Loan | Interest Rate Type | CRPL52 and RREL42 | Interest Rate Type |
| 3.19 | Loan | Interest rate reset frequency | RREL47 | Interest Rate Reset Interval |
| 3.21 | Loan | Last Payment Date | NPEL30 | Last Payment Date |
| 3.23 | Loan | Date of the default status of the instrument | RREL72 | Default Date |
| 3.40 | Loan | End Date of Forbearance measure | NPEL41 | End Date of Forbearance |
| 4.10 | Collateral guarantee and enforcement | Higher Ranking Loan | NPEC 10 | Higher Ranking Underlying Exposure |
| 4.29 | Collateral guarantee and enforcement | Enforcement Status | NPEC7 | Enforcement Status |



REPORTING FRAMEWORKS UNDER THE SEC REG & UPCOMING EBA NPL SECONDARY MARKET DIRECTIVE

Reporting Framework for Reporting Framework for Type of Assets Securitisation Straight Sale **Performing Loans ESMA Templates** Non-performing loans **ESMA Templates with EBA Templates Add-on Annex 10** (NPL) One ESMA Annex with Homogeneous NPL pool **EBA Templates Add-on Annex 10** Non-Homogeneous NPL **Multiple ESMA Annexes EBA Templates** with Add-on Annex 10 pool

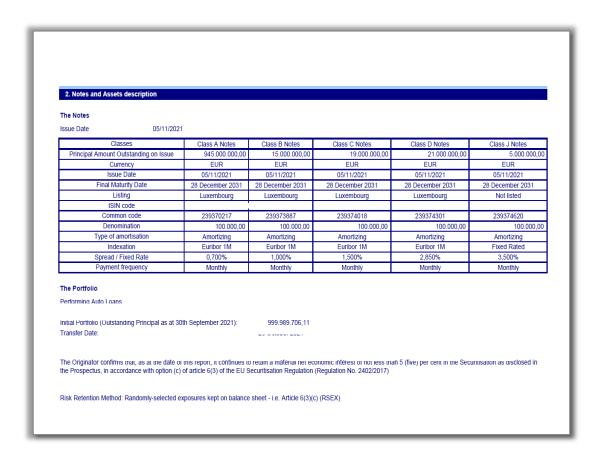
Sources: EBA Templates, ESMA Templates and EDW assessment



ENHANCEMENTS FOR PRIVATE DEAL REPORTING & EDITOR NEXTGEN FEATURES ANDREA BEDIN, EDW

INVESTOR REPORTS DIFFER FROM ISSUER TO ISSUER

- Investor reports are instrument to share key data with investors in a securitisation.
- Investor reports vary by jurisdiction and asset class
- Data extraction can be a time consuming task.
- Compared to loan level data investor reports lack standardisation, centralisation, and transparency.





THE NEW EDW DEAL REPORT: A STANDARDISED SOLUTION

- EDW launched the new **Deal Report** in October 2022.
- The **Deal Report** combines information from the submitted reporting templates with benchmark data from EDW's extensive database.

| BOND REPORT | | | | | | |
|-----------------------------|------------------|------------------|------------------|------------------|---------------|--|
| | CLASS A NOTES | CLASS B NOTES | CLASS C NOTES | CLASS D NOTES | CLASS J NOTES | |
| ISIN | | | | | | |
| Туре | Scheduled Amort. | Scheduled Amort. | Scheduled Amort. | Scheduled Amort. | Other | |
| Cur | EUR | EUR | EUR | EUR | EUR | |
| Original Balance | 945,000,000 | 15,000,000 | 19,000,000 | 21,000,000 | 5,000,000 | |
| Current Balance | 514,697,037.75 | 15,000,000 | 19,000,000 | 21,000,000 | 5,000,000 | |
| Issue Date | 2021-11-05 | 2021-11-05 | 2021-11-05 | 2021-11-05 | 2021-11-05 | |
| Maturity Date | 2031-12-29 | 2031-12-29 | 2031-12-29 | 2031-12-29 | 2031-12-29 | |
| IPD | 2023-01-30 | 2023-01-30 | 2023-01-30 | 2023-01-30 | 2023-01-30 | |
| Paym.Freq | Monthly | Monthly | Monthly | Monthly | Monthly | |
| | | | | | | |
| Current Coupon (%) | 2.59 | 2.89 | 3.39 | 4.74 | 3.50 | |
| Cur. Int.Rate Mrgn/Sprd (%) | 0.70 | 1 | 1.50 | 2.85 | 3.50 | |
| Step Up/Dn Coupon | - | - | - | - | | |
| Step Up/Dn Date | - | - | - | - | | |
| Coupon Floor (%) | 0 | 0 | 0 | 0 | 0 | |
| Coupon Cap (%) | - | - | - | = | - | |
| Current Int. Rate Index | Euribor | Euribor | Euribor | Euribor | | |
| Next Call Date | - | - | - | - | | |
| Next Put Date | - | - | - | - | - | |
| | | | | | | |
| Curr.Attch Point (%) | 13.61 | 11.09 | 7.90 | 4.37 | 3.53 | |
| Orgl.Attch Point (%) | 5.24 | 3.74 | 1.84 | 0 | 0 | |
| Curr. Cred Enhcmnt (%) | 10.92 | 8.33 | 5.04 | 1.40 | 0.54 | |
| Orig. Cred Enhcmnt (%) | 6.44 | 4.95 | 3.07 | 0.99 | 0.50 | |
| Protection Type | - | - | - | - | - | |
| Unpaid P.Dfcy Ldgr Bal | - | • | | • | | |
| | | | | | | |
| | | | | | | |



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EDW DEAL REPORT

Example of information provided in the EDW Deal Report

| Securitisation Identifier | 567513456WBVSGC4U64N202101 | ESMA Completeness Score |
|--------------------------------|--|---------------------------------|
| Deal Name | DEMO DEAL EDITOR NEXT GEN | |
| EDCode | CMRSES000099900620212 | A2 |
| Pool Cut-Off Date | 2022-07-31 | AZ |
| STS | Yes | |
| | • | EDW Data Quality Score |
| Vintage | 2021 | |
| Asset Type | CMR | R |
| Country of Assets | Spain | Ь |
| Country of Primary Exchange | Luxembourg | |
| Country of SPV Incorporation | Spain | DQS Distribution by Asset Class |
| | | (For all deals on EDW platform) |
| ESMA Templates made available | Underlying Exposures,Sign.Evnt,Inv.Rpt | 120 |
| Is the Securitisation Private? | No | 100 |
| | | 80 OTH |
| Reporting Entity Name | EUROPEAN DATAWAREHOUSE | 60 MIX |
| Report Entity Contact | GOPALA SANKARAN | 40 ■ CRE |
| Phone | +49-(0)609865319 | 20 CMR |
| Email | gs@eurodw.eu | 0 — СМВ |



EDW DEAL REPORT

Example of information provided in the EDW Deal Report

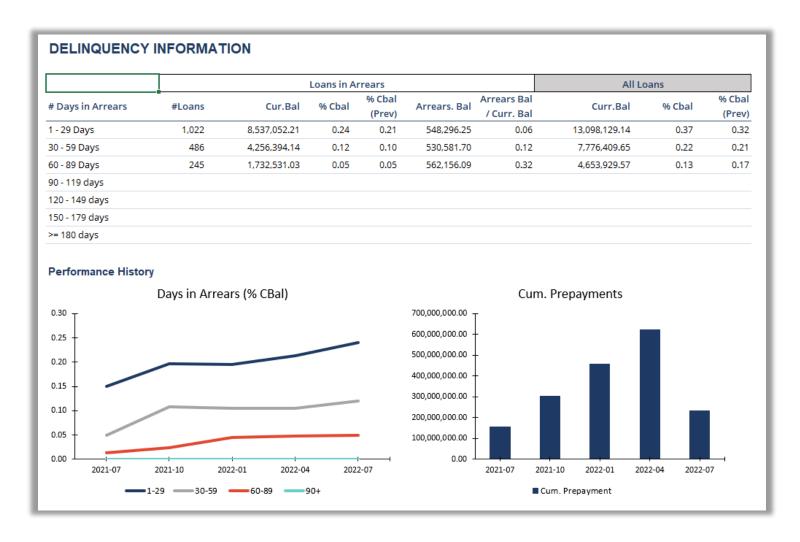
| POOL PERFORMANCE | | | | | A (0/ @k - l) | Defect | + (04 Chal) |
|--|---------------------------|--|-----------------------|-----------------------------------|--|-----------------------------------|----------------------------------|
| | | | | | Arrears (% Cbal) | Defaul | t (% Cbal) |
| Total Loans | 413,538 | Top 10 Borrowers | 1 | ,742,121.49 | 42.41 | 100 | |
| Active Loans | 363,812 | Top 50 Borrowers | 3 | ,704,517.86 | | | |
| Active Collaterals | N/A | Cum. Prepayments | 230 | ,779,793.22 | 3.75 | 1.94 | |
| Active Borrowers | 334,667 | Cum. Recoveries | 12 | ,913,284.24 | | | . |
| Non-Performing Exposures | N/A | WA Int.Rate | | 2.74 | 1.66 | 1.07 | |
| | | WA Seasoning | | 29.96 | 0.58 | 0.03 | |
| Original Balance | 7,349,018,734.89 | WA Term | | 79.20 | 0.50 | | |
| Current Balance | 3,558,996,583.92 | WA CLTV | | N/A | 0 | 0 | |
| | | WA OLTV | | N/A | Deal Val: 0.41 | Dea | al Val: 1.21 |
| | | | | | | | |
| | | WA RTM | | 49.59 | Position: 14/64 | Posit | ion: 35/64 |
| | | WA RTM | | | Position: 14/64 | | |
| Account Status Distribution | | WA RTM | | | | | |
| | _ | | | | Eligible public deals are (| divided into 4 equa | al quartiles |
| Account Status Distribution Account Status | #Loans | WA RTM Cur.Bal | % Cbal | | | divided into 4 equa | |
| Account Status | #Loans 356,191 | | % Cbal 97.91 | % Cbal | Eligible public deals are of | divided into 4 equal Avg. Loan | Avg. Int |
| | | Cur.Bal | | % Cbal (Prev) | Eligible public deals are of Avg. Primary Income | Avg. Loan Term 64.75 | Avg. Int. |
| Account Status Performing | 356,191 | Cur.Bal 3,484,734,043 | 97.91 | % Cbal (Prev) 98.00 | Avg. Primary Income 37,670.07 | Avg. Loan Term 64.75 | Avg. Int Rate 2.97 |
| Account Status Performing Restructured - No Arrears | 356,191 1,529 | Cur.Bal 3,484,734,043 16,723,708.98 | 97.91 0.47 | % Cbal (Prev) 98.00 0.56 | Avg. Primary Income 37,670.07 | Avg. Loan Term 64.75 69.36 | Avg. Int Rate 2.97 3.76 |
| Account Status Performing Restructured - No Arrears Default (acc.to Art 178) | 356,191 1,529 7,263 | Cur.Bal 3,484,734,043 16,723,708.98 40,261,694.41 | 97.91 0.47 1.13 | % Cbal (Prev) 98.00 0.56 | Avg. Primary Income 37,670.07 27,653.89 | Avg. Loan Term 64.75 69.36 61.91 | Avg. Int. Rate 2.97 |



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EDW DEAL REPORT

Example of information provided in the EDW Deal Report





LATEST DEVELOPMENTS ON STS MICHAEL OSSWALD, SVI



Latest Developments on STS

Michael Osswald

STS Verification International GmbH ("SVI")

EDW Greek Workshop, 22 March 2023







THE STS MARKET SEGMENT AND THE ROLE OF THE THIRD-PARTY VERIFIER

Simple, Transparent & Standardised ("STS") Securitisations



The Role of the Third-Party Verifier ("TPV")



- As part of the European securitization framework, the STS regime has been established in 2019 as a first-class capital market segment with strict and uniform regulation
- The STS label offers access to the widest investor base possible
- Market standard for public securitization, widely used by private securitisations
- STS reduces the capital requirements for investors and originators (for retained senior tranches in synthetic transactions)

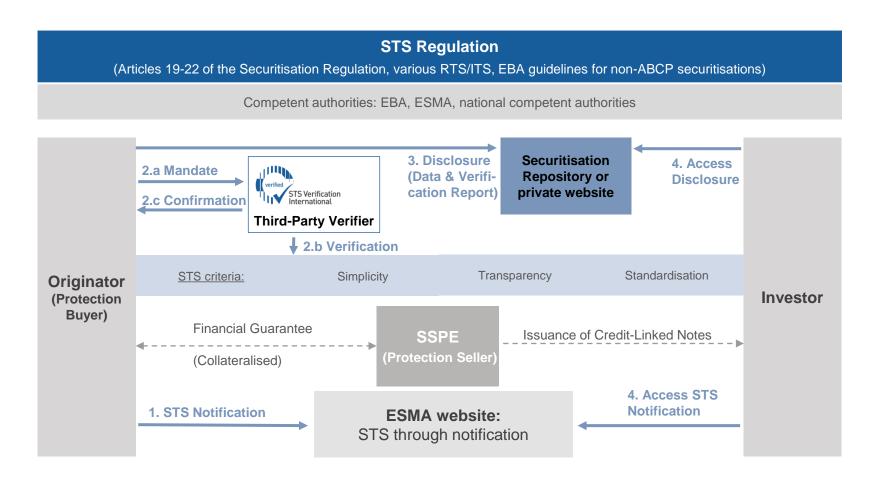
- A Third-Party Verifier can be appointed by the originator, the sponsor or the SSPE to assess, and, where applicable, verify compliance of a securitisation with the STS criteria
- The TPV ensures appropriate interpretation and consistent application of the STS criteria (incl. RTS/ITS and guidelines) during the structuring phase, thereby reducing liability risk for the transaction parties
- The TPV acts as first point of contact for questions and coordinated approach to the competent supervisory authorities





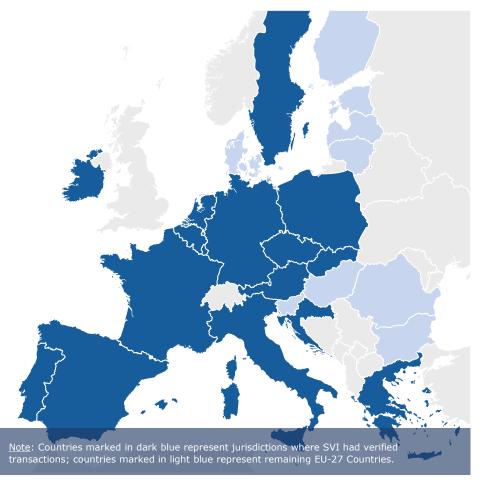
STS NOTIFICATION AND STS VERIFICATION

(EXAMPLE OF SYNTHETICE ON-BALANCE SHEET SECURITISATIONS - FUNDED WITH SSPE)





STS VERIFICATION - A PAN-EUROPEAN APPROACH



■ Jurisdictions where SVI has verified transactions include the following:

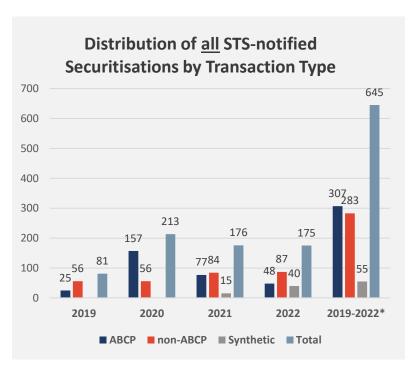


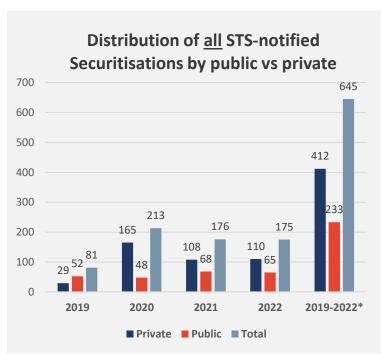
In addition, SVI has verified transactions where the Seller was domiciled in a third country (e.g. UK, Switzerland, US), but a EU-domiciled related company has acted as Originator in line with the Securitisation Regulation.





DEVELOPMENT OF THE MARKET FOR STS TRANSACTIONS (2019-2022)





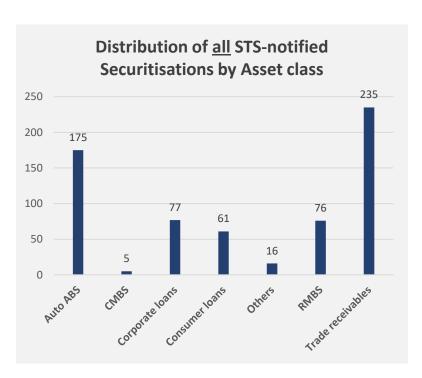
*Period 1.1.2019 - 31.12.2022; Source: ESMA Website, SVI

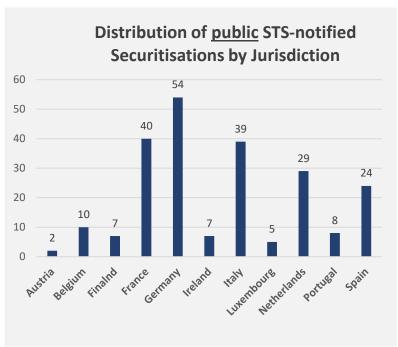
- As per year-end 2022, 645 securitisations have been notified as STS-compliant (283 non-ABCP vs. 307 ABCP vs. 55 Synthetic, 233 public vs. 412 private transactions)
- STS-compliant transactions can be notified to ESMA as either "public" or "private" transactions, with resulting vastly different level of disclosure





DEVELOPMENT OF THE MARKET FOR STS TRANSACTIONS (2019-2022) (CONTINUED)





Period 1.1.2019 - 31.12.2022; Source: ESMA Website, SVI

- The Greek securitisation market is characterized by private securitisations, mainly in the form of non-performing loan (NPL) securitisations and synthetic on-balance sheet securitisations
- Synthetic on-balance sheet securitisations are eligible for STS compliance since mid-2021, when the Securitisation Regulation was amended as part of the EU Capital Markets Recovery Package





STS FOR SYNTHETIC SECURITISATIONS – PRACTICAL ASPECTS

■ Transaction structure and collateral requirements

- Unfunded requires 0% risk weighted counterparty as protection seller
- Funded collateral in the form of cash on deposit or 0% risk-weighted debt securities
- Issuance of Credit-linked notes directly by the originator no specific collateral requirements under STS

Homogeneity requirements

- One asset type, consistent underwriting & servicing, one or more homogeneity factor(s), e.g. jurisdiction, type of obligors
- Potential issues for portfolios where (i) debtors are domiciled in more than one jurisdiction and (ii) both SME and large corporate debtors are mixed in one portfolio

■ Standardisation requirements

■ Performance-related triggers that would trigger a switch from pro-rata to sequential amortisation

■ Transparency requirements

■ CF-model, historical performance data, sample asset audit

Other structural requirements

Interim/final credit protection payments, credit events, termination provisions, synthetic excess spread





CURRENT REGULATORY DEVELOPMENTS

- Outstanding level 2 and level 3 legislation relating to the Securitisation Regulation framework:
 - RTS on risk retention (final draft dated 1 April 2022)
 - RTS on STS securitisations-related sustainability disclosures (consultation period expired on 2 July 2022)
 - RTS on performance-related triggers (final draft dated 19 Sept 2022)
 - RTS on exposure value of synthetic excess spread (consultation period until 14 Oct 2022)
 - RTS on the homogeneity of STS securitisations (final draft dated 23 Feb 2023)
 - * EBA Guidelines on synthetic on-balance securitisations (draft not yet published)
- Surveillance by the National Competent Authorities regarding STS compliance:
 - Increased attention by regulators generally on STS-related compliance matters
 - Recent spot investigation by the French Autorité des Marchés Financiers (AMF):
 - Review of 5 institutions (originators, arrangers, sponsors) covering 31 STS transactions
 - Focus on the internal organisation of institutions to verify the STS status of securitisations at the outset of a transaction, the internal control systems and the ongoing monitoring of STS status
 - Good practices identified by the AMF include the involvement of an independent TPV







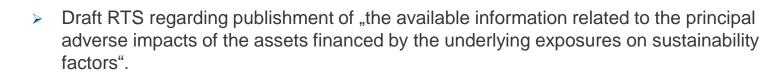
SUSTAINABLE SECURITISATION

■ Initial Securitisation Regulation (as of 12 Dec 2017):

- TASK ANALYSIS

 STS CLEARANCE SKILLS

 STS EQUIPMENT
- Requirement to publish environmental performance data of the assets financed by residential mortgage loans and auto loans & leases as part of the transparency requirements for non-ABCP securitisations
- Proviso that such information is available to the originator and captured in its IT systems
- Amended Securitisation Regulation (as of 31 March 2021):
 - Principal Adverse Impacts on sustainability factors:



- Main benefit: alignment with the sustainability-related disclosures in financial services under the Sustainable Finance Disclosure Regulation ("SFDR")
- EBA Report on Sustainable securitisation framework (March 2022):
 - Status quo of European sustainable securitisation market
 - Key issues identified: lack of common definition about what constitutes a "sustainable securitisation" and lack of green assets
 - EBA views and recommendations endorsed by the EU Commission









SUSTAINABLE SECURITIZATION (CONTINUED)

- State of Play regarding the Sustainable Securitisation framework (as per EBA report):
 - Interaction with STS: serve different purposes, but synergies are clearly recognisable
 - Proposed European Green Bond Standard as "platform" also for green securitisations: Aims to create a common standard for all fixed income products, but amendments necessary to capture the specifics of securitisations:
 - Use of proceeds approach at the level of the originator rather than SSPE to avoid that the securitised portfolio needs to be 100% green and enable the originator to use the proceeds to finance green EU taxonomy-compliant investments
 - Additional disclosures of the environmental performance of the underlying assets to provide investors an insight on the green vs. brown composition of the securitised portfolio
 - Specific "green securitisation" label: possibly at a later stage
- The concept of the External Reviewer as crucial element of the proposed European Green Bond Standard:
 - Authorisation & supervision: by ESMA, both EU and third-country domiciled entities
 - Main tasks:
 - Pre-issuance review of the European green factsheet detailing (taxonomy-compliant) use of proceeds, environmental strategy of the issuer and other aspects of the bond issuance
 - > Post-issuance review of the (use of proceeds) allocation reports (until bond maturity)







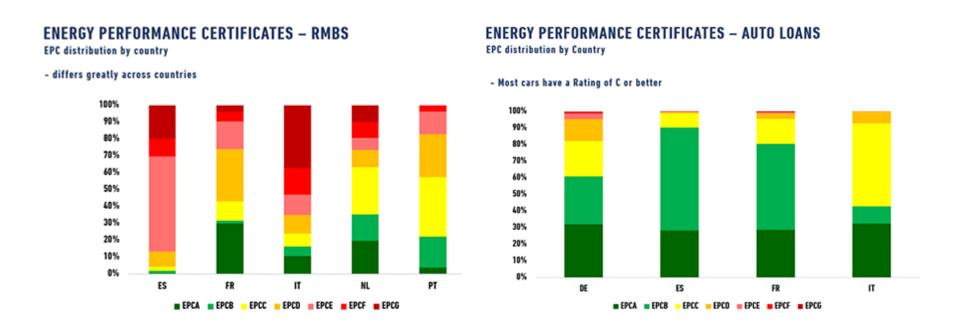
SUSTAINABLE FINANCE PROJECTS: GAS AND ENGAGE MARCO ANGHEBEN, EDW

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MONITORING, ASSESSING, AND ANALYSING ESG MARKETS & RISKS WITH EPC DATA

EDW's growing EPC dataset comprises 1.2 million records for Auto Loans and 0.5 million for RMBS

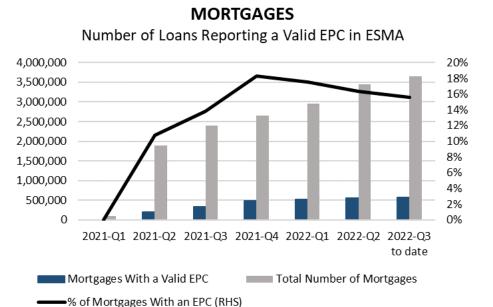
- EDW collects a wealth of sustainable finance information, including energy performance certificates (EPCs) for residential mortgages and auto loans.
- The dataset is growing thanks to the ESMA and FCA exposure templates

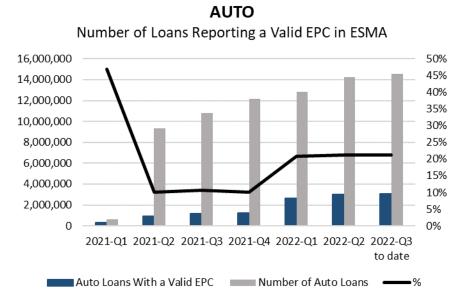


Source: EDW Calculations

ENERGY PERFORMANCE CERTIFICATES - HOW MUCH DATA IS AVAILABLE?

Data availability for EPCs is stagnating





Source: EDW Calculations

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WHAT IS THE GREEN AUTO SECURITISATION (GAS) PROJECT?



Focus:

Securitisation of green auto loans and leases

Relevance:

 A green finance mechanism is needed to incentivise purchase of low-emission vehicles through bank lending

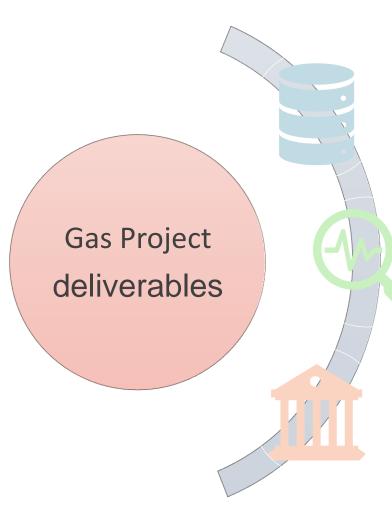
Challenges:

- ESG information disclosure requirements are underdeveloped for green securitisation products
- Lack of harmonisation due to a lagging regulatory framework
- Data availability issues



THE GAS PROJECT IN A NUTSHELL





Development of a model **database** with **four building blocks**:

- (i) the sustainability characteristics of the car manufacturers
- (ii) the characteristics of car models
- (iii) information on car **loans** (and **leases**)
- (iv) the characteristics of **securitisation products**.

Analysis and **definition** of automobile-related transparent **sustainability factors** at the level of the

- car manufacturer
- supply chain
- automobile

Investigation of the relationship between **low-emission vehicles** and **credit risk**

Proposal of a framework for two new green financial products:

- 1) Green Auto and Leasing Loans
- 2) Green Auto and Leasing ABS



ENGAGE for ESG Activation Investments

Project Summary – March 2023







Project Description

- Name: Engage for ESG Activation Investments (ENGAGE)
- Funding: Co-funded by the European Union under the LIFE Programme
- Duration: 1 November 2022 31 October 2025
- Six partners: European DataWarehouse (Coordinator), Hypoport, B.V., Università Ca' Foscari, Unión de Créditos Inmobiliarios, S.A., Establecimiento Financiero de Crédito, Woonnu B.V., DEXAI srls- Etica Artificiale













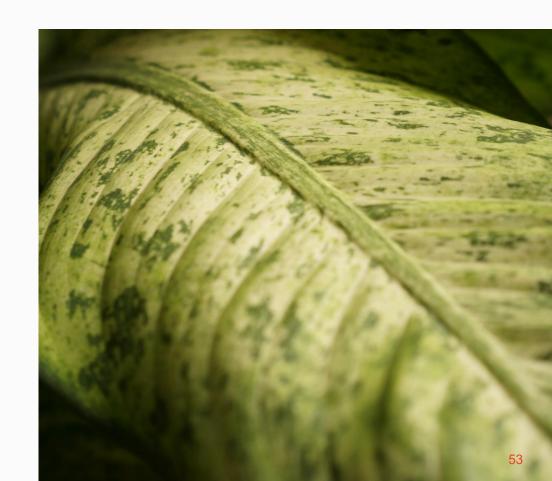
The ENGAGE Solution

Two key building blocks:

- 1) Standardised, harmonised, and comparable sustainability data template combined with credit information
- 2) State-of-the-art financial technology solution the Green Investment Portal (GIP)

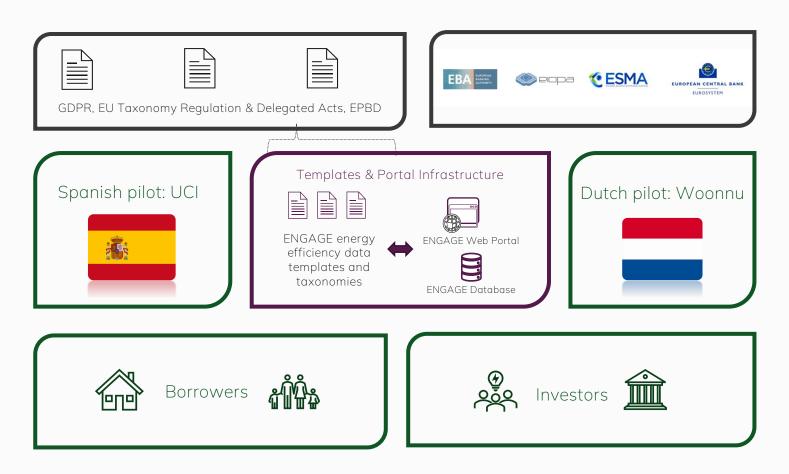
The combination of the energy efficiency template and the GIP will facilitate:

- Adequate ESG risk assessement at micro- & macro-level
- Increased investments in energy efficiency projects in Europe





The High-Level Concept





New Energy Efficiency Template

ENGAGE will leverage the existing ESMA technical standards on disclosure requirements, currently under revision, and more specifically:

- Annex 2: Underlying exposures residential real estate
- Annex 6: Underlying exposures consumer

Additional fields will also be added across sections:

- Documentation: minimum social safeguards, ESG information, EU
 Green Bond Standard adherence
- Assets Collateral: Energy
 Performance Data (EPC) including
 emissions & consumption, climate
 risk related information
- Liabilities: use of proceeds



CLOSING REMARKS

Thanks to **Alpha Bank** for hosting the event!



THANK YOU//CONTACT US

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