



# Trends towards the simplification of ESG reporting

Banque de France, Paris  
Friday, 9 January 2026



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# Introduction of the ENGAGE for ESG initiative

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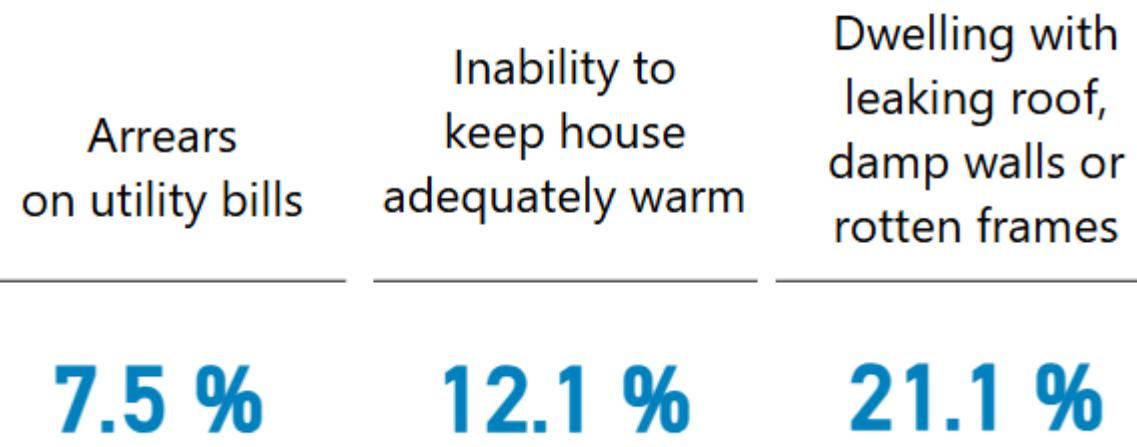
Marco Angheben

European DataWarehouse





# Energy Poverty in France



- **7.5%** of the total population was having arrears on their utility bills.
- **12.1%** of the total population was not able to keep their home adequately warm over the cold periods of the year.
- About **21.1%** of the total population was living in a dwelling with leaking floor, damp walls or rotten windows, frames or floor.

Source: Data as of 2023, [European Building Stock Observatory](#)



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# ENGAGE for ESG initiative

**EUROPEAN  
DATAWAREHOUSE**

 **HYPOPORT**

**UCI**





Università  
Ca' Foscari  
Venezia

  
**DEXAI**  
ARTIFICIAL ETHICS

- Launched in November 2022 and co-funded by the European Union with a LIFE grant.
- The ENGAGE for ESG initiative aims to provide a simple solution for ESG reporting for mortgages and home renovation loans.



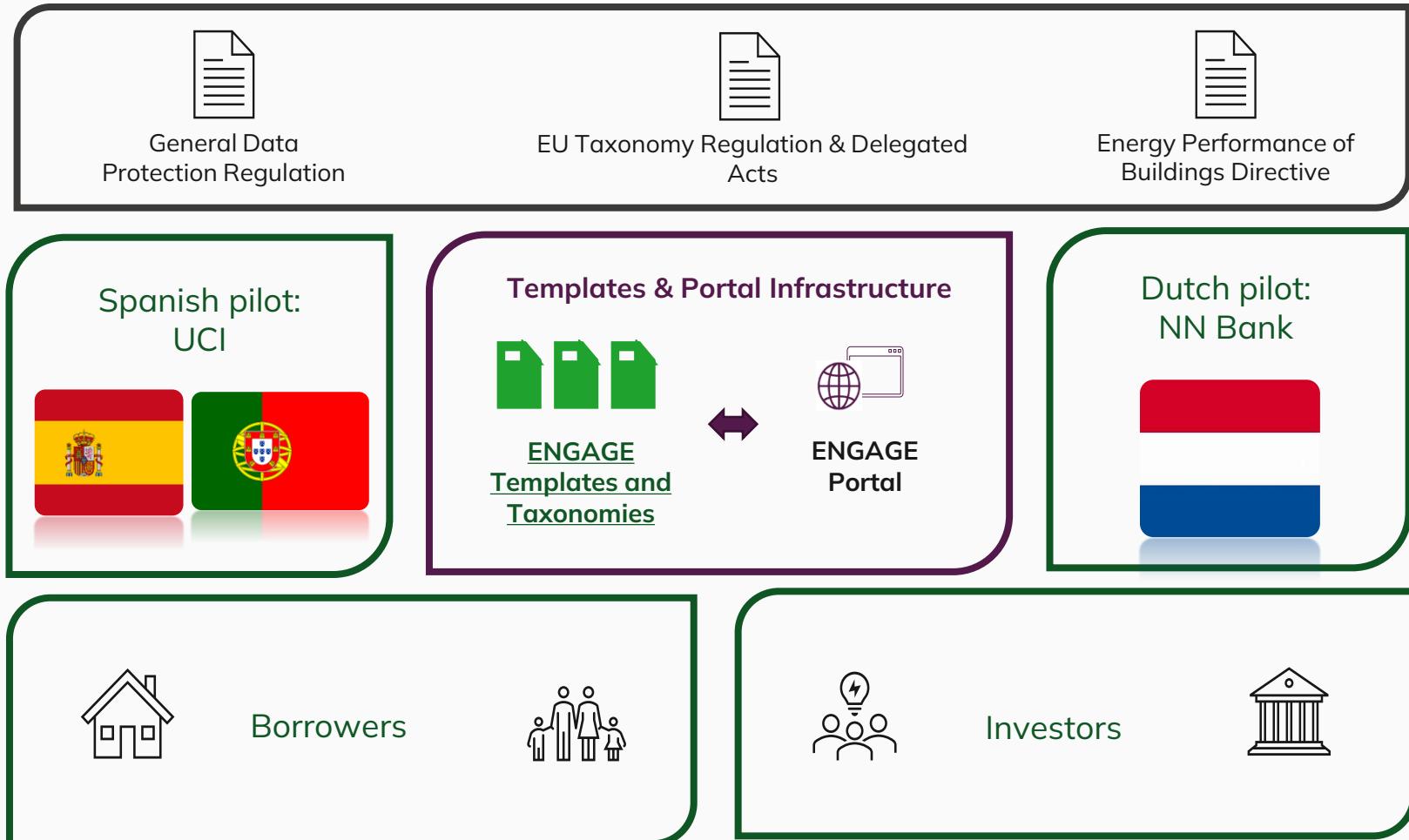
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# ENGAGE for ESG initiative description

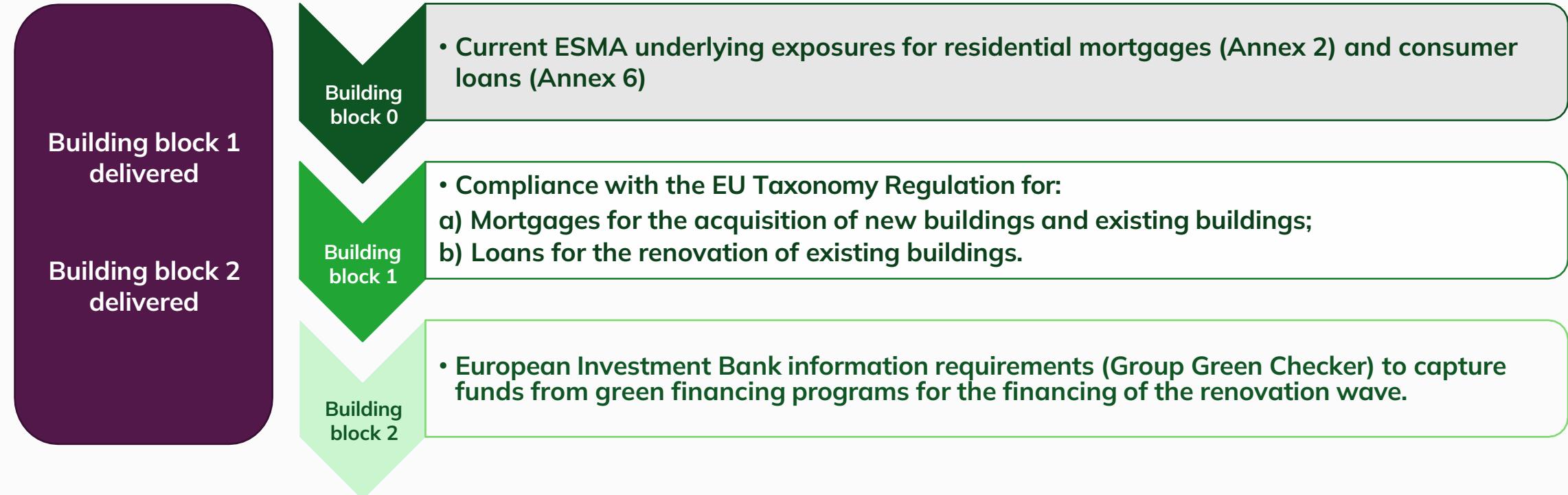
## Two main pillars:

1. A **disclosure template** for residential real estate data;
2. A **portal** to assess EU Taxonomy alignment and data quality.



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# The ENGAGE Templates: structure





## The ENGAGE proposal: a limited number of data fields to check EU Taxonomy compliance

**Green:** the minimum data needed for SCC checks

**Purple:** minimum data for the DNSH check

**Blue:** PCAF / CO2 financed emissions

	FIELD CODE	CONTENT TO REPORT	Section 7.7.1 - EPC class A	Section 7.7.1 - Top 15%	Section 7.7.2 10% lower NZEB
<i>Identifiers</i>	EREC1	Unique Identifier			
	EREC2	Underlying Exposure Identifier Building block 0			
	EREC3	Collateral Identifier Building block 0			
	EREC4	General Activity Designation	Y	Y	Y
<i>SCC 7.7</i>	EREC5	Construction Year	Y	Y	Y
	EREC6	Construction permit application date			
	EREC7	Energy Performance Certificate (EPC) Class	Y		
	EREC8	Estimated or officially produced EPC	Y		
	EREC9	Issuance date of most recent EPC	Y		Y
	EREC10	EPC original Validity	Y		
	EREC11	EPC Methodology			
	EREC12	Energy Performance Certificate (EPC) Status			
	EREC13	EU-Equivalent EPBD-Regime			
	EREC14	Primary Energy Demand (PED) of the building			Y
	EREC15	Estimated or officially produced Primary Energy Demand (PED)			
	EREC16	Primary Energy Demand (PED) Based on Reference Building			
	EREC17	Primary Energy Demand (PED) Based on Building or Building unit			
	EREC18	Nearly zero-energy building (NZEB) threshold			Y
	EREC19	Climatic zone code			
	EREC20	Geographic Region - climatic zone			
	EREC21	Building unit in top 15% indicator		Y	
	EREC22	Top 15% Explanatory Variable			
	EREC23	Top 15% Object Reference Value		Y	
	EREC24	Top 15% Object Threshold Value		Y	
<i>DNSH</i>	EREC25	DNSH EO2 Indicator	Y	Y	Y
	EREC26	DNSH EO3 Indicator			
	EREC27	DNSH EO4 Indicator			
	EREC28	DNSH EO5 Indicator			
	EREC29	DNSH EO6 Indicator			
<i>Renovation SCC</i>	EREC30	Balance for renovation of existing buildings			
	EREC31	Balance of IMR of EE equipment			
	EREC32	Balance of IMR of RE equipment			
	EREC33	Balance of EE equipment			
	EREC34	Balance of RE equipment			
	EREC35	Large new constructions			
<i>Financed Emissions</i>	EREC36	Financed CO2-emission	Y	Y	Y
	EREC37	Surface Area	Y	Y	Y
	EREC38	GHG Data Score	Y	Y	Y
	EREC39	GHG Emission Factor	Y	Y	Y

11

10

10



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# The ENGAGE Portal: high-level overview

- The ENGAGE Portal enables lending institutions to **upload and assess the alignment of their loan portfolios with the EU Taxonomy**.
- The Portal incorporates **detailed loan and collateral level checks**.
- Access to multiple stakeholders (internal reporting, rating agencies, investors, regulatory supervisors, etc.) upon invitation.
- The ENGAGE Portal allows users to assess multiple portfolios based on the EU Taxonomy.
- The Portal output is twofold:
  1. The **data quality feedback**;
  2. The **EU Taxonomy alignment report**.
- **Trial access** available subject to a standard legal arrangement (available upon request).

The screenshot displays the ENGAGE Portal's user interface. At the top, there is a navigation bar with links for 'LOG OFF', 'GET IN TOUCH', 'CHANGE PASSWORD', 'Programs', and 'Administrator'. Below the navigation is a header with 'HOME | PROGRAMS' and the ENGAGE logo. The main content area is titled 'PROGRAMS' and shows a dropdown menu for 'Hypoport B.V.' which is currently selected. Under this dropdown, there is a sub-menu for 'ENGAGE' with options for 'Unión de Créditos Inmobiliarios' and 'Woonnu'. To the right of this, there is a detailed view for 'HYPOPORT B.V.' under 'ENGAGE'. It shows the 'ENGAGE PILOT PORTFOLIO' with asset details: Asset type (RMBS), Country (The Netherlands), Status (Current), and Closing date (11-2024). Below this, there is a section for 'ENGAGE Data Templates' with a download link for 'PoolABC\_2024-10-20.zip'. At the bottom of the page, there are three columns: 'ENGAGE SOLUTION' (FAQS, DISCOVER ENGAGE, GET IN TOUCH), 'LEGAL INFO' (PRIVACY POLICY, TERMS & CONDITIONS, IMPRINT), and 'LOGIN AREA' (LOGIN, LOGIN REQUEST). The footer contains the 'Life' EU logo, a note about co-funding by the European Union, and a copyright notice for Engage for ESG Activation Investments.



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# ENGAGE EU Taxonomy alignment report

**Portfolio Name** Example Portfolio 2024  
**Portfolio Date (DD-MM-YY)** 01-08-2024

Total # of Loans 1300  
Total # of Building Units 1100  
Total Balance €444,600,000.00  
TSC passed % 50.94%

## TSC assessment\*

Section	Economic Activity	Subsection	SCC (check passed)			DNSH* (check) passed			TSC Passed (SCC + DNSH)		
			# of loans	# of Building Units	Balance	# of loans	# of Building Units	Balance	# of loans	# of Building Units	Balance
7.7(1)	Acquisition and ownership of buildings	<i>Buildings built before 31 December 2020: building has at least an Energy Performance Certificate (EPC) class A.</i>	460	411	€133,400,000.00	414	370	€120,060,000.00	411	363	€119,190,000.00
7.7(1a)		<i>Buildings built before 31 December 2020 - Alternative: building is within Top 15%</i>	392	301	€113,680,000.00	353	271	€102,370,000.00	349	301	€101,210,000.00
7.7(2)		<i>Buildings built after 31 December 2020</i>	23	22	€6,670,000.00	21	20	€6,090,000.00	21	22	€6,090,000.00
<b>Total</b>			875	734	€253,750,000.00	788	661	€228,520,000.00	781	686	€226,490,000.00

This block displays the Technical Screening Criteria (TSC) assessment, per Economic (Sub) Activity. This section of the report displays the absolute number of loans, building units and corresponding balance that passed these checks.



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# ENGAGE EU Taxonomy alignment report

Portfolio Name  
Portfolio Date (DD-MM-YY)

Example Portfolio 2024  
01-08-2024

Total # of Loans  
1300  
Total # of Building Units  
1100  
Total Balance  
€444,600,000.00  
TSC passed %  
50.94%

## TSC pass Total Portfolio

SCC (check passed)			DNSH (check) passed			TSC Passed (SCC + DNSH)		
% of all loans	% of total Building	% of total Balance	% of total loans	% of total Building	% of total Balance	% of total loans	% of total Building	% of total Balance
35.38%	37.36%	30%	31.85%	33.64%	27%	31.62%	33.00%	27%
30.15%	27.36%	26%	27.15%	24.64%	23%	26.85%	27.36%	23%
1.77%	2.00%	2%	1.62%	1.82%	1%	1.62%	2.00%	1%
67.31%	66.73%	57.07%	60.62%	60.09%	51.40%	60.08%	62.36%	50.94%

This block displays the Technical Screening Criteria (TSC) assessment, per Economic (Sub) Activity. This section of the report displays the relative (vis-à-vis the portfolio) number of loans, building units and corresponding balance that passed these checks.



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# ENGAGE for ESG: a tool for investors, rating agencies, regulators, and auditors

✓ The ENGAGE solutions help you:



Gain insights into RMBS, covered bonds, and residential real estate mortgage and home renovation loan portfolios



Collect granular ESG information to produce your ESG ratings



Access granular information to prepare reports and policy recommendations



Co-funded by the European Union



# Free ENGAGE trial period until July 2026



- Version 1.2 of the ENGAGE Templates available now through [Request for Access to the ENGAGE Templates](#)
- **80 institutions** have requested access to the ENGAGE Templates

- The ENGAGE Team is available for clarifications

- Signature of a [standard legal arrangement](#) for the safe processing of the data
- Possibility to submit the ENGAGE sample files various times enriching the information

- For each sample file submission two reports are generated: 1) a data quality report; 2) an EU Taxonomy alignment report.





# Stay Informed

- Scan the QR code to stay up to date on ENGAGE for ESG with all initiative updates, research insights, and upcoming events;
- Visit our [website](#);
- And follow us on [LinkedIn](#)!





# The ENGAGE experience of UCI and NN Bank

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Philippe Laporte (UCI)

Martijn Breed (NN Bank)





# UCI At-A-Glance

## More than 35 years of experience

Founded in 1989 and presence in Spain, Portugal and Brazil.

## Our way of work

Transparency, quality, responsibility, accessibility and proximity define the way in which UCI works, with over 190,000 customers having placed their trust in the entity.

## Recognised in the Real Estate Industry

A main recognised actor in the Real Estate Intermediation Industry.

Spain

Portugal

Brasil

Owned equally  
by BNP Paribas  
Group and Banco  
Santander.





# Since 2017, we've been boosting sustainability through a clear ESG roadmap

Aligned with the European Green Deal and the Paris Agreement, we've focused on helping to decarbonize the real-estate stock by promoting energy-efficient renovations through innovative financial solutions such as the Green Mortgage and condominium Loans.

We are leaders in the Spanish RE sustainable finance market.

Our approach demonstrates that achieving environmental goals is, at the same time, a responsible and profitable business model.

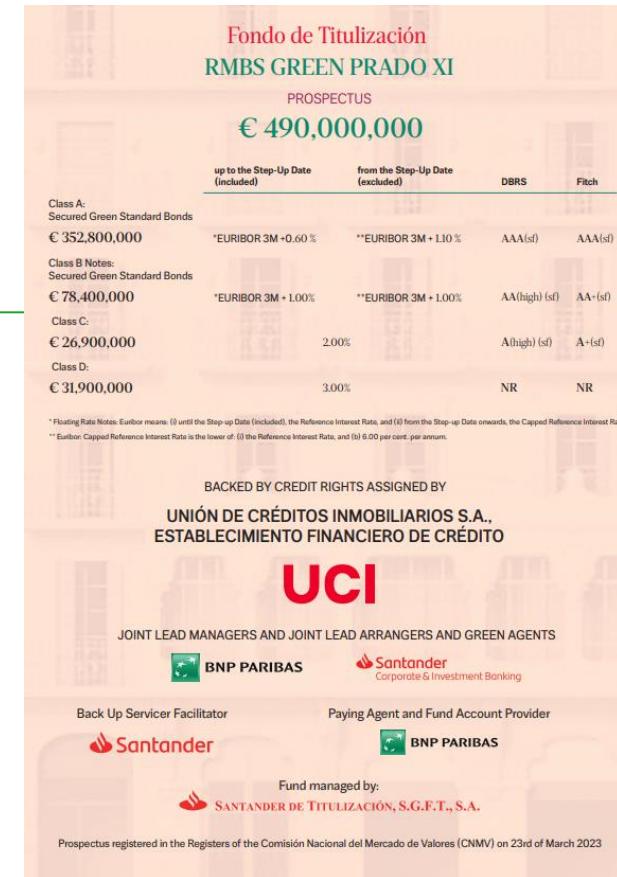




# More than 30 years of experience in the Iberian Securitisation experience

More than € 17 bn placed issues, among which 16.6 bn of Spanish RMBS - the Prado and previous UCI programs- and 0.7 bn of Portuguese RMBS – the Belem programs.

All UCI RMBS transactions are available on European DataWarehouse.





# With the Highest Score



European Securities and Markets Authority

UCI has consistently achieved the highest score in every quarterly assessment for all its uploaded RMBS deals since the ESMA templates became mandatory

Deals / RMBSE000088101620237  
**RMBS GREEN PRADO XI**

Information Data & Documents Insights ECB Template ESMA Template Documents

Securitisation Identifier : 95980020140005209368N202301 | Selected PCD : 2023-09-13

Download Feedback File Name & Size Limit Upload New Publish

Summary

Score : A1 A ESMA Score Data Quality Score (Only visible to Data Owners & Providers)

Performance Data

Submission Status: Your files have been Accepted with Warnings (WARN)

Next Steps: No further action required.

Quick Statistics

ND Threshold Report

Asset Class	Threshold 1	Threshold 2	Result
Residential	0 / 30	0 / 30	ACPT

Processing Steps

- Underlying Exposures (Published)
- Signature Validation
- File Validation
- Data Extraction
- PCD
- Trigger Data Processing Pipeline

Deals / RMBSE00008810152025  
**RMBS BELÉM No. 2**

Information Data & Documents Insights ECB Template ESMA Template Documents

Securitisation Identifier : 95980020140005209368N202301 | Selected PCD : 2023-09-31

Download Feedback File Name & Size Limit Upload New Publish

Summary

Score : A1 A ESMA Score Data Quality Score (Only visible to Data Owners & Providers)

Performance Data

Submission Status: Your files have been Accepted with Warnings (WARN)

Next Steps: No further action required.

Quick Statistics

ND Threshold Report

Asset Class	Threshold 1	Threshold 2	Result
Residential	0 / 30	0 / 30	ACPT

Processing Steps

- Underlying Exposures (Published)
- Signature Validation
- File Validation
- Data Extraction
- PCD
- Trigger Data Processing Pipeline

Deals / RMBSE00008810142022  
**RMBS GREEN BELEM No.1**

Information Data & Documents Insights ECB Template ESMA Template Documents

Securitisation Identifier : 95980020140005209368N202301 | Selected PCD : 2023-09-31

Download Feedback File Name & Size Limit Upload New Publish

Summary

Score : A1 A ESMA Score Data Quality Score (Only visible to Data Owners & Providers)

Performance Data

Submission Status: Your files have been Accepted with Warnings (WARN)

Next Steps: No further action required.

Quick Statistics

ND Threshold Report

Asset Class	Threshold 1	Threshold 2	Result
Residential	0 / 30	0 / 30	ACPT

Processing Steps

- Underlying Exposures (Published)
- Signature Validation
- File Validation
- Data Extraction
- PCD
- Trigger Data Processing Pipeline

Deals / RMBSE00008810142022  
**FT RMBS PRADO X**

Information Data & Documents Insights ECB Template ESMA Template Documents

Securitisation Identifier : 95980020140005209368N202301 | Selected PCD : 2023-09-13

Download Feedback File Name & Size Limit Upload New Publish

Summary

Score : A1 A ESMA Score Data Quality Score (Only visible to Data Owners & Providers)

Performance Data

Submission Status: Your files have been Accepted with Warnings (WARN)

Next Steps: No further action required.

Quick Statistics

ND Threshold Report

Asset Class	Threshold 1	Threshold 2	Result
Residential	0 / 30	0 / 30	ACPT

Processing Steps

- Underlying Exposures (Published)
- Signature Validation
- File Validation
- Data Extraction
- PCD
- Trigger Data Processing Pipeline

Deals / RMBSE00008810132028  
**FT RMBS PRADO IX**

Information Data & Documents Insights ECB Template ESMA Template Documents

Securitisation Identifier : 95980020140005209368N202301 | Selected PCD : 2023-09-12

Download Feedback File Name & Size Limit Upload New Publish

Summary

Score : A1 A ESMA Score Data Quality Score (Only visible to Data Owners & Providers)

Performance Data

Submission Status: Your files have been Accepted with Warnings (WARN)

Next Steps: No further action required.

Quick Statistics

ND Threshold Report

Asset Class	Threshold 1	Threshold 2	Result
Residential	0 / 30	0 / 30	ACPT

Processing Steps

- Underlying Exposures (Published)
- Signature Validation
- File Validation
- Data Extraction
- PCD
- Trigger Data Processing Pipeline

Deals / RMBSE00008810122030  
**RMBS PRADO VIII**

Information Data & Documents Insights ECB Template ESMA Template Documents

Securitisation Identifier : 95980020140005209368N202301 | Selected PCD : 2023-09-08

Download Feedback File Name & Size Limit Upload New Publish

Summary

Score : A1 A ESMA Score Data Quality Score (Only visible to Data Owners & Providers)

Performance Data

Submission Status: Your files have been Accepted with Warnings (WARN)

Next Steps: No further action required.

Quick Statistics

ND Threshold Report

Asset Class	Threshold 1	Threshold 2	Result
Residential	0 / 30	0 / 30	ACPT

Processing Steps

- Underlying Exposures (Published)
- Signature Validation
- File Validation
- Data Extraction
- PCD
- Trigger Data Processing Pipeline

Deals / RMBSE00008810112024  
**RMBS PRADO VII**

Information Data & Documents Insights ECB Template ESMA Template Documents

Securitisation Identifier : 95980020140005209368N202301 | Selected PCD : 2023-09-08

Download Feedback File Name & Size Limit Upload New Publish

Summary

Score : A1 A ESMA Score Data Quality Score (Only visible to Data Owners & Providers)

Performance Data

Submission Status: Your files have been Accepted with Warnings (WARN)

Next Steps: No further action required.

Quick Statistics

ND Threshold Report

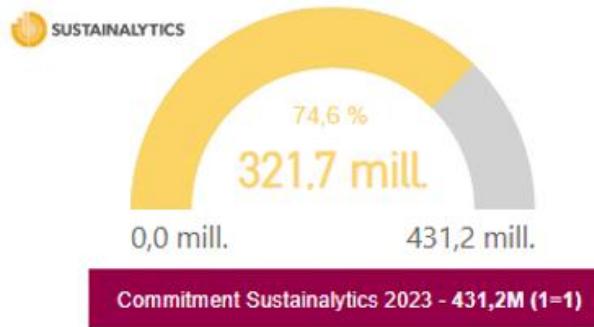
Asset Class	Threshold 1	Threshold 2	Result
Residential	0 / 30	0 / 30	ACPT

Processing Steps

- Underlying Exposures (Published)
- Signature Validation
- File Validation
- Data Extraction
- PCD
- Trigger Data Processing Pipeline

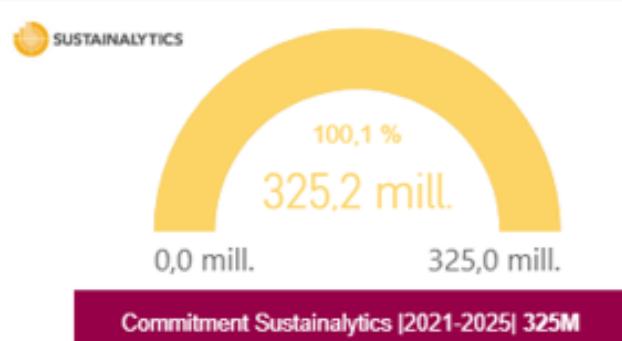
# Delivery Status of Commitments

## Active commitments (as of Nov-25)

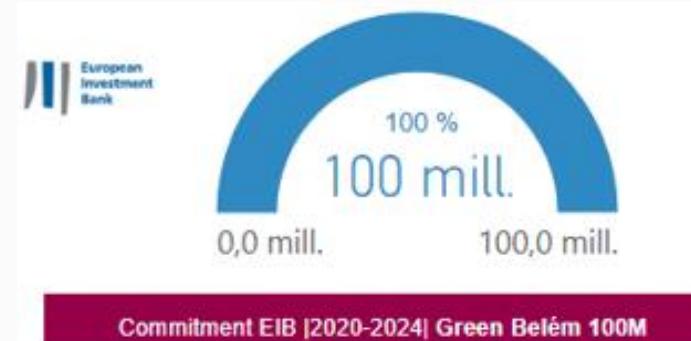


## Completed commitments

Completed Q4. 2023



Completed Q4. 2023



Completed Q4. 2024





With the backing of our investors, we developed a strategy based on solid commitments to launch and expand the Green Plan within the real-estate sector, with the aim of growing our business.

## Green Belém

In 2020, we reached an agreement with EIB for the first issuance designed to boost our Green mortgage origination in Spain and Portugal.

## Green portfolio

We are expanding our Green portfolio, with around 25% of new business origination aligned with the EU Taxonomy.

New RMBS Issue in Portugal:



RMBS Green Belém No.1



## Investors

There is strong market appetite for sustainable products.

We structured and launched the first green securitisation fund (RMBS Belém 1), STS, Sustainalytics-labelled, and part of the EMF's EEMi initiative in collaboration with the EIB.

“Use of proceeds”.  
A shift in the way mortgages and loans are marketed, ensuring they are aligned with sustainable criteria..

## Business



# UCI & EIB Journeys

**May '20**

EIB and Unión  
de Créditos Inmobiliarios:  
Portuguese RMBS Green  
Belém No.1

Euronext 2021  
Sustainable  
Finance award



**April '21**

EIB and Unión  
de Créditos Inmobiliarios:  
Spanish RMBS Prado VIII

**June '22**

The European Commission  
and EIB provide UCI with  
€2.6 M to mobilize €46.5 M  
for energy efficient housing.  
ENGAGE for ESG project is  
launched



Co-funded by the Horizon 2020 Programme of the European Union  
European Local ENergy Assistance - www.eib.org/elena

**March '23**

Spain and Portugal: EIB  
Group and ICO invest in UCI  
securitisation fund (RMBS  
Green Prado XI) for  
renovating and building  
residential homes using  
sustainable criteria





# The UCI Experience: Benefits and Challenges

UCI



## BENEFITS

- Serves for **self-assessment** and to verify the percentage of information we have about these relevant points.
- **Enhances our data quality and accuracy.**
- Increases our **market visibility and reputation.**
- The Templates **mitigate our reporting process operational risk.**
- Gives us leverage to ask Spanish and Portuguese authorities to update mandatory property information.
- **Transparency, standardization, simplification, EU taxonomy and EPBD aligned**



## CHALLENGES

The Spanish challenge is to release to the financial sector information needed to calculate certain classifications.

Spanish public information about the energy certification of buildings can be found at <https://www.miteco.gob.es/>.

The **Portuguese challenge** is aligning our internal data systems and processes with the ENGAGE Templates.

This requires an investment in IT infrastructure and human resources to map, extract, transform, and load our data into the ENGAGE Templates.

Portuguese public information about the energy certification of buildings can be found at <https://www.sce.pt/>.



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# Relevant case studies



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# Traffic Lights Classification



Economic Activity information	General Activity Designation	Construction Year	Top15 Denominator	Top15_Explanatory Variable	Top15 Methodology Description	Building unit in top-15% indicator	Top15_Object Reference Value	Energy Performance Certificate (EPC) class	Energy Performance Certificate (EPC) Validity Length
Energy Performance Certificate (EPC) Status	Primary Energy Demand (PED) of the building	Primary Energy Demand (PED) Based on Building or Building unit	Top15 Document Geographic Scope	Top15 Numerator	Description on how Minimum Safeguards are complied with	Estimated or officially produced (EPC)	Certificate (EEU-Equivalent EPC) Method / EPBD-Regime	Issuance date of most recent available (EPC) registration	Energy Performance Certificate (EPC) Methodology
Climatic zone code	Geographic Region - Climatic zone	Estimated or officially produced Primary Energy Demand (PED)	URL towards MSS Issuer Statement	Environmental Objective	Link alignment with the OECD Guidelines for Multinational Enterprises		Nearly zero-energy building (NZEB) threshold	Construction permit application date	
Top15_Document URL	Top15_Document Issuance Date	Top15_Object Treshold Value	Link towards UN Guiding Principles on Business and Human Rights	Link towards eight fundamental conventions	Top15_Document Name		Waiting for a unique definition/ Unification of criteria	Not available Some of the data was extracted manually for the case studies	

## Building in Madrid

- External thermal insulation system (ETICS) on façades and courtyard walls.
- Accessibility improvements and conservation works in the ground floor entrance hall.



- Which section of the ENGAGE Templates is most relevant in this case and how do we see the actual data in the ENGAGE Templates?



## Building in Barcelona

- Repair of deficiencies and improvement of energy efficiency on the main façade, courtyard, party wall, general roof, common terraces, and attic.
- Sanitation system installation.





## Building in Valencia

- Structural rehabilitation: reinforcement of secondary structural elements and waterproofing of the roof.
- Replacement of windows and doors in common areas and the attic apartment (owned by the homeowners' association), external insulation of all façades, insulation of the main roof and rooftop utility room, and installation of solar panels for photovoltaic energy.
- Conservation repairs and accessibility improvements.



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# Public-private collaboration, key of success/OSS



Rehabilitación  
Eficiente



Consejo General de Colegios  
Administradores de Fincas  
España



CONFEDERACIÓN DE COOPERATIVAS DE  
VIVIENDAS Y REHABILITACIÓN DE ESPAÑA



# NN Bank - Introduction

- **Introduction: Martijn Breed, 50yrs old, recently from C -> A+++**
- **25 years of experience in the financial sector**
- **20 years of experience in structured finance**
- **Started at NN Bank in 2012 as senior legal counsel**
- **Co-founder of Woonnu, the sustainable mortgage label of Nationale-Nederlanden Bank**
- **Current focus on ESG-related topics**
- **Representing NN Bank in several external ESG committees**





# Only a limited number of data fields are actually needed!

## Only a limited number of data fields are actually needed!

In this example, of the ENGAGE v1.2 EREC file we see that only a limited number of data fields is needed for the economic activity 7.7 assessment checks:

- In green the minimum data needed for SCC checks
- In purple the DNSH check
- In light blue the PCAF / CO2 financed emissions



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	FIELD CODE	CONTENT TO REPORT	Section 7.7.1 - EPC class A	Section 7.7.1 - Top 15%	Section 7.7.2 10% lower NZEB	DSA P&P 2.1	Available in EP-Online
Identifiers	EREC1	Unique Identifier					
	EREC2	Underlying Exposure Identifier Building block 0					
	EREC3	Collateral Identifier Building block 0					
	EREC4	General Activity Designation	Y	Y	Y		
SCC 7.7	EREC5	Construction Year	Y	Y	Y	Y	Y
	EREC6	Construction permit application date					
	EREC7	Energy Performance Certificate (EPC) Class	Y			Y	Y
	EREC8	Estimated or officially produced EPC	Y			Y	Y
	EREC9	Issuance date of most recent EPC	Y		Y	Y	Y
	EREC10	EPC original Validity	Y				Y
	EREC11	EPC Methodology					Y
	EREC12	Energy Performance Certificate (EPC) Status					Y
	EREC13	EU-Equivalent EPBD-Regime					Y
	EREC14	Primary Energy Demand (PED) of the building			Y	Y	Y
	EREC15	Estimated or officially produced Primary Energy Demand (PED)					Y
	EREC16	Primary Energy Demand (PED) Based on Reference Building					Y
	EREC17	Primary Energy Demand (PED) Based on Building or Building unit					Y
	EREC18	Nearly zero-energy building (NZEB) threshold			Y		Y
	EREC19	Climatic zone code					
	EREC20	Geographic Region - climatic zone					
	EREC21	Building unit in top 15% indicator		Y		Y	
	EREC22	Top 15% Explanatory Variable					
	EREC23	Top 15% Object Reference Value			Y		
	EREC24	Top 15% Object Threshold Value			Y		
DNSH	EREC25	DNSH EO2 Indicator		Y	Y	Y	
	EREC26	DNSH EO3 Indicator					
	EREC27	DNSH EO4 Indicator					
	EREC28	DNSH EO5 Indicator					
	EREC29	DNSH EO6 Indicator					
Renovation SCC	EREC30	Balance for renovation of existing buildings					
	EREC31	Balance of IMR of EE equipment					
	EREC32	Balance of IMR of RE equipment					
	EREC33	Balance of EE equipment					
	EREC34	Balance of RE equipment					
	EREC35	Large new constructions					
Financed Emissions	EREC36	Financed CO2-emission		Y	Y	Y	
	EREC37	Surface Area		Y	Y	Y	
	EREC38	GHG Data Score		Y	Y	Y	
	EREC39	GHG Emission Factor		Y	Y	Y	

# Deze woning heeft energielabel **A+**



- 8.3 million homes
- 61% valid EPC
- 35% energy label A or better (A+, A++, A+++)



# Initiatives in the Dutch market

- Legislation allowing higher loans for sustainability
- Availability of low or no-interest loans (Warmtefonds)
- Government and local subsidies
- Mortgage interest discount for energy label A
- Online tools for cost indication of sustainability
- Banks highlighting the benefits of sustainability
- Banks assisting in finding sustainability partners





woonnu



- Interest rate discount per label improvement
- Pilot for full support in making homes sustainable
  - Customer journey from energy advice -> contractors -> new energy label -> subsidies
  - Immediate benefitting label A interest rate discount
  - Quote in advance guaranteeing costs
- Too little interest from financial advisers and customers



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# Lack of willingness



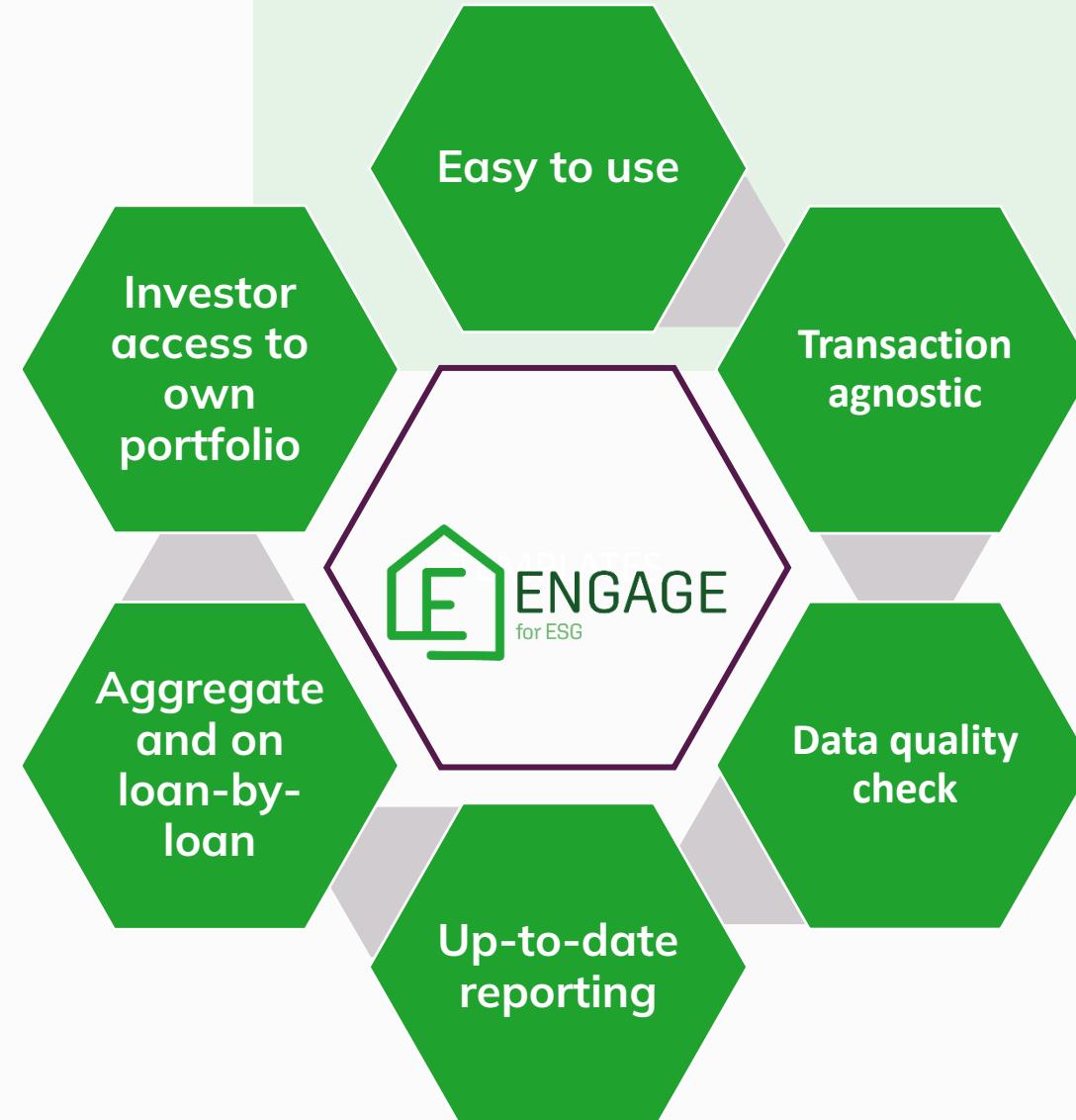


# Green premiums for a better business case

- A lot of homes in the Netherlands need to be refurbished to a better energy label.
- Higher discounts on interest rates are needed to incentivize the customer and improve the business case.
- Green premiums from investors are needed and therefore, benefits should be created for investors (i.e. lower capital charges, guarantee schemes).
- Reliable reporting is needed to prove a mortgage loan (portfolio) qualifies as green.
- ENGAGE for ESG provides the ideal tooling to do so.
- We believe that ENGAGE for ESG can be an important piece of the puzzle towards an energy neutral housing stock in Europe.



# ENGAGE for ESG – the solution to prove a portfolio is green



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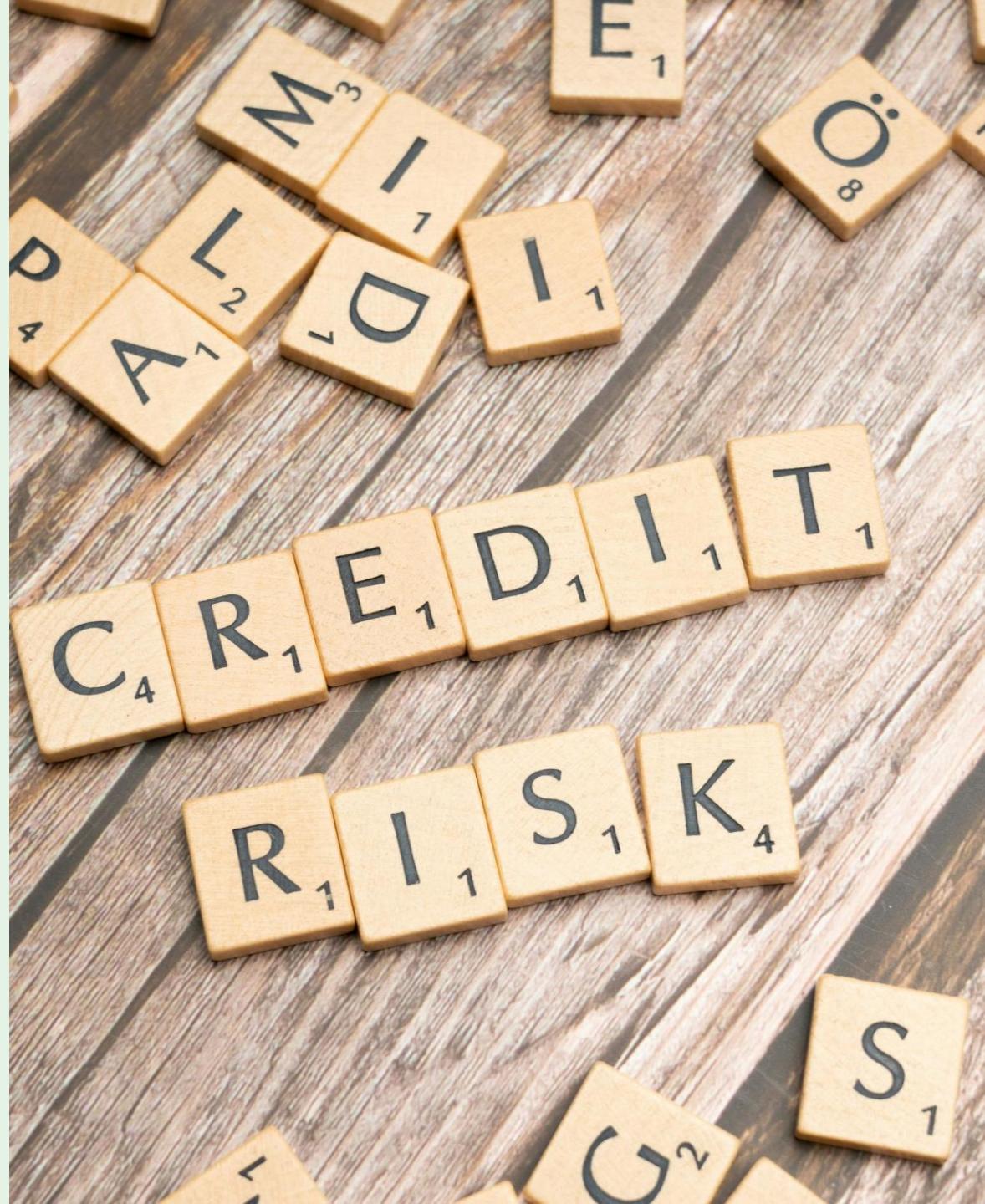


# Technical Report on Risk Mitigation Correlation Analysis

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## Key features for France

**Objective of the report:** to provide empirical evidence on the relevance of property's EE in predicting mortgage default risk.

### Specifics of the French sample

**EPC categories:** D-ranked properties predominant; defaults concentrated in F, G and “other” category.

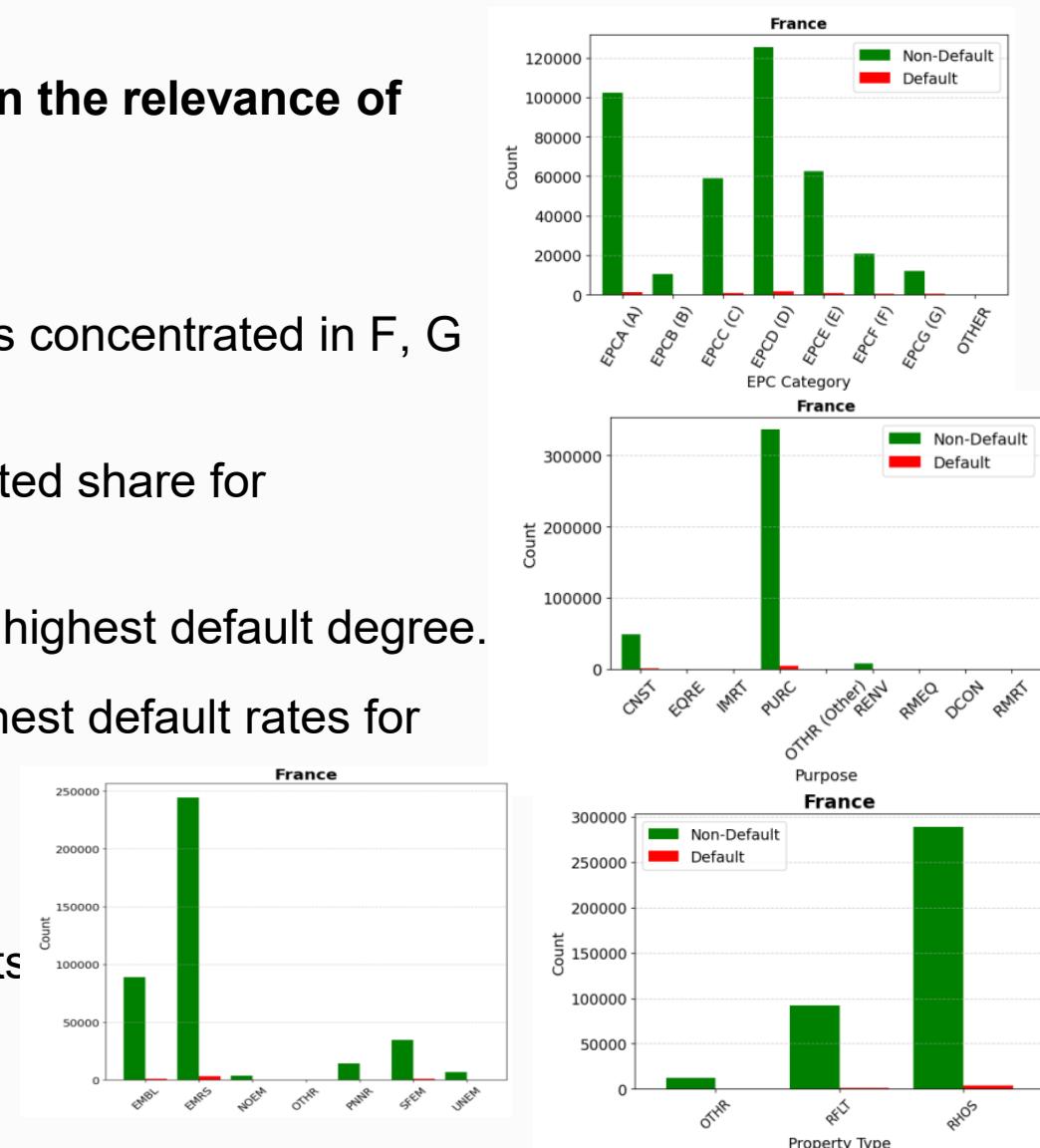
**Mortgage purpose:** mainly purchase and construction, limited share for renovation, presenting highest default levels.

**Property type:** mainly detached or semi-detached houses, highest default degree.

**Employment status:** mainly private sector employees; highest default rates for unemployed and self-employed categories.

### General trends in French mortgage market 2022-2023:

rising interest rates, fewer new loans, lower granted amounts  
longer maturities, increase in defaults  
(Inflation and higher property-related costs (ACPR, 2024)).



- **Logit Regression Results**

⇒ Higher EPC value associated with lower probability of default.

- **Survivor Functions – Kaplan-Meier estimation**

⇒ Higher EE related to longest survival time.

- **Cox Proportional Hazards model**

⇒ Loans secured by low- efficiency properties faced a 43% higher default risk.

EE Value	Median Survival Time (Months)
High	47.0
Medium	39.0
Low	29.0
Other	18.0

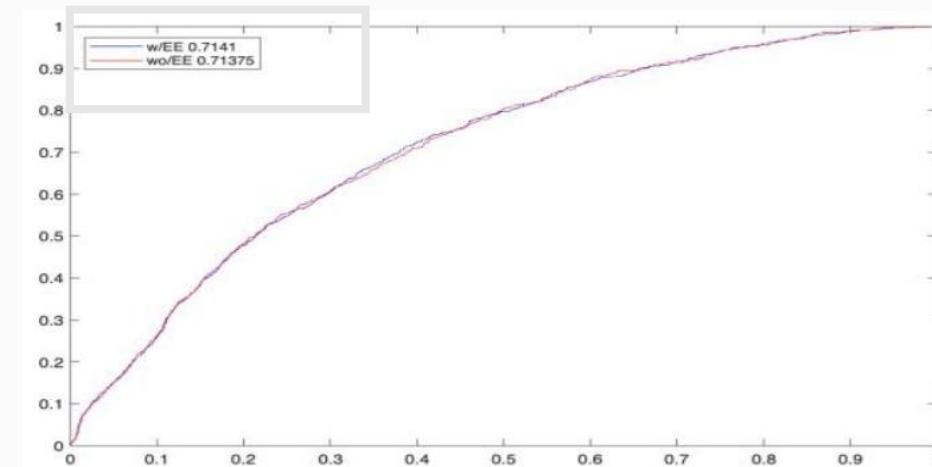
Type	Variable	Name Variable	$\beta$ (with EE)	$\beta$ (without EE)
<b>Constant</b>	Constant		-4.2857 *** [0.9618]	-4.0139 *** [0.6308]
<b>RREC10</b>	Energy Performance Certificate Value	EE	-0.6944 *** [0.1741]	
<b>Maturity-Origination Date</b>	Maturity-Origination Date	(Maturity-Origination Date_4)	-0.8021 * [0.4524]	-0.7252 – [0.4519]
<b>Property Type</b>	Property Type	Residential Flat or Apartment	0.7908 *** [0.1377]	0.8818 *** [0.1353]
	Property Type	Multifamily House	0.4181 ** [0.1519]	0.3950 ** [0.1518]
<b>Employment Status</b>	Employment Status	Self Employed	1.1283 *** [0.3421]	1.1286 *** [0.3404]
	Employment Status	No Employment	-0.6444 ** [0.2876]	-0.6947 ** [0.2858]
	Employment Status	Student	0.3929 ** [0.1828]	0.3806 ** [0.1821]
	Employment Status	Other	1.5378*** [0.4562]	1.5067 *** [0.4549]
<b>Primary Income</b>	Primary Income	Primary obligor annual income	-0.2272*** [0.0675]	-0.2638*** [0.0592]
<b>Interest Rate Type</b>	Interest Rate Type	Fixed with future periodic resets	0.8693*** [0.2601]	0.8957 [0.2582]

## Key results : relevance of EE variable

- *Comparison of the explanatory power of chosen models (“with EE” vs “without EE” specification)*

⇒ Higher pRs: greater explanatory power of the EE model.  
 ⇒ Less negative log-likelihood: greater accuracy of EE model in predicting the probability of default.

Types of models	Model with EE specification	Model without EE specification
Number of Observations	256603	
Number of Events	350	
pRs	0.02686865	0.01717916
Loglikelihood	-2587.3952	-2613.1579



- *Model's performance (France)*

Model with EE: higher AUC  
 => better discriminatory power = improved performance.

- *Cox Proportional Hazards (PH) model*

⇒ Model 5 (includes EE, loan characteristics, FE) better model.

Summary Statistics	(1) (5)	(2)	(3)	(4)
Observations	10690	10690	10690	10690
Events observed	5345	5345	5345	5345
SE	<i>Rob.</i>	<i>Rob.</i>	<i>Rob.</i>	<i>Rob.</i>
C-index	0.61	0.63	0.65	0.67
Partial AIC	92345.43	92281.13	91816.49	90672.66
log-likelihood r. test	747.11 on 3 df	813.41 on 4 df	1284.04 on 7 df	2435.87 on 11 df
				3104.38 on 19 df



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