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ROAD MAP FOR AN ENERGY EFFICIENT (EE) MORTGAGE INITIATIVE

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European Covered Bond Council

EUROPEAN MORTGAGE FEDERATION

WHY A PAN-EUROPEAN APPROACH?

- Buildings are responsible for 40% of EU energy consumption
- Buildings are responsible for 36% of CO2 emissions in the EU
- 75-90% of EU building stock is predicted to remain standing in 2050
- Improving EE of buildings could reduce EU energy consumption by 5%-6% and CO2 emissions by 5%
- EU has set itself an overall 20% energy savings target by 2020 and is now considering increasing this to a 30% target by 2030
- Scale of investment needed to meet the 2020 target is estimated at €100 billion per year – European Commission has underlined need for private investment

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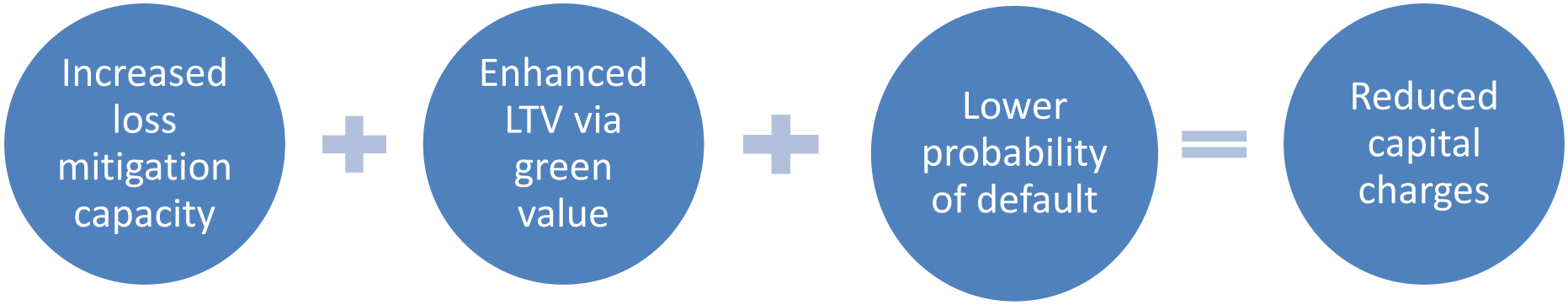
OBJECTIVE & UNDERLYING BUSINESSES CASE

The **ultimate objective** is a pan-European private bank financing mechanism, based on a standardised approach, to encourage energy efficient improvement by households of the EU's housing stock by way of financial incentives linked to the mortgage, and in this way support the EU in meeting its energy savings targets.

Independent from, but complementary to, public funds or tax incentives

Underlying business case



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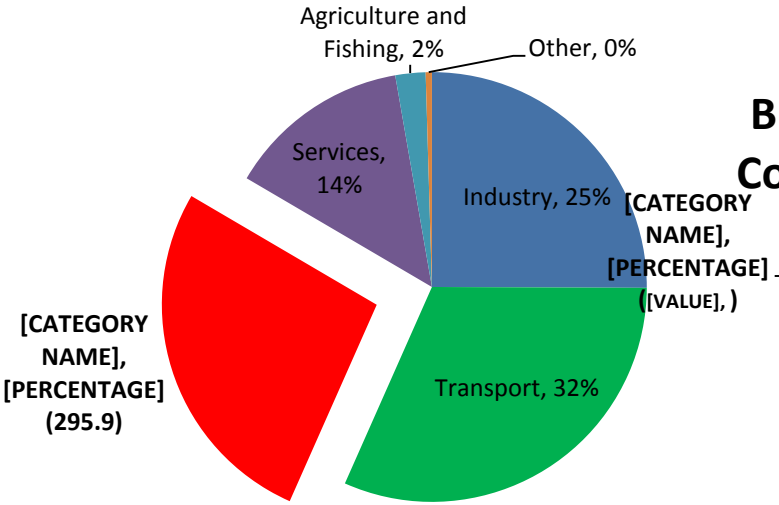
ENVIRONMENTAL IMPACT OF HOUSING IN THE EU

Breakdown Energy Consumption in the EU in 2013 (MTOE*)



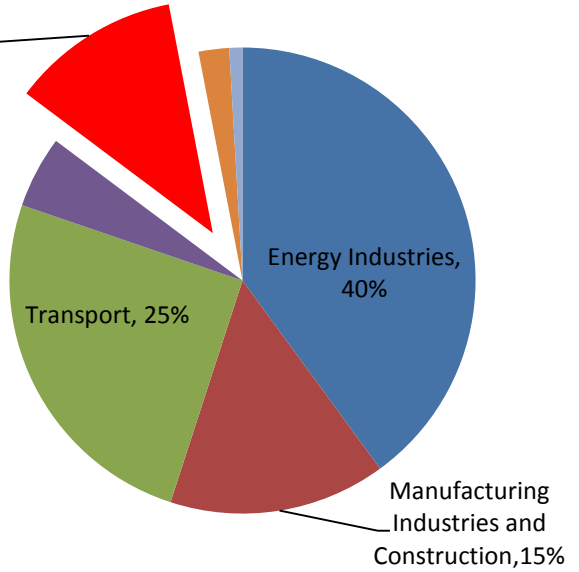
EU Total in 2013: 1103.8 Mtoe*

Source: Eurostat

*million tons of oil equivalent: a unit of energy defined as the amount of energy released by burning a tonne of crude oil

**million tons

Breakdown of CO2 Emissions in the EU Fuel Combustion Activities in 2012 (MT** of CO2)



EU Total Emission Fuel Combustion in 2012: 3495.2 Mt**

Source: Eurostat

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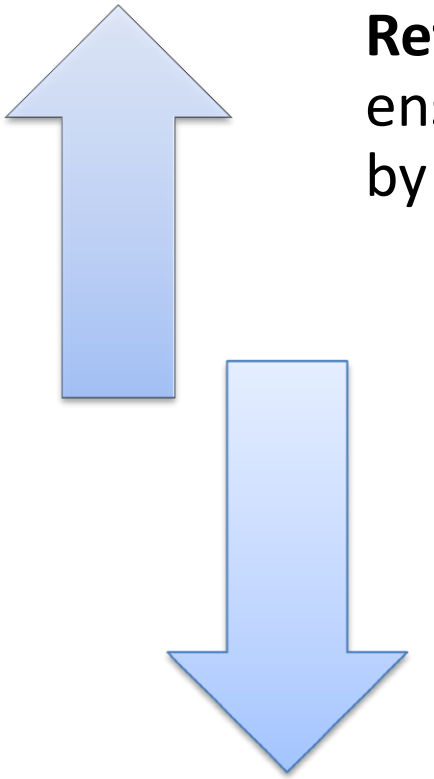
UNDERLYING MARKET CHARACTERISTICS IMPACTED BY EE



Retrofitting impacts positively on property value ensuring **wealth conservation** & **loss mitigation** by preventing "brown discount"

EE leads to a reduction in the impact of energy costs to income, reducing borrowers' **probability of default**

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UNDERLYING INCENTIVE CHAIN

Borrowers:

- Preferential interest rate and/or addition retrofitting funds
- Increased property value due to retrofitting, ensuring wealth conservation
- Lower running costs of the building

Lenders:

- Energy savings result in a lower PD due to increased disposable income
- Increased risk mitigation capacity as increase in property value reduces LGD

⇒ Lower capital requirements for energy efficient mortgages

- Protection of loan portfolio against brown discount

Investors:

- Response to increasing investor demand for investments with sustainable aspect
- Diversification of investor portfolio & protection against brown discount
- Incentivises segregation of existing green assets
- Increased risk management in terms of credit, asset & performance risk

SMEs:

- Additional funds provide a flow of capital into the real economy
- Supports SMEs activity in the retrofitting sector

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FURTHER ASPECTS

Valuation Profession:

- EE is strong potential value driver & risk factor and integration of EE in valuations & credit risk assessment could transform current lending practices
- Whilst conventional market-based valuation methods are fit to account for EE features in valuations, there is limited quality rental & sales evidence to allow valuers to accurately determine incremental value impact
- Initiative could be help to overcome this by building up evidence base and explicitly instructing banks and valuers to request, collect & make use of additional data

Consumer Behaviour:

- Initiative can also influence consumer behaviour by encouraging good energy behaviour, thus reducing energy consumption (energy bills)
- Academic literature demonstrates potential for energy savings of up to 20% via targeted behaviour

Better Risk Management:

- **Lower Credit Risk**: Due to reduced PD and LGD
- **Lower Asset Risk:** Due to “green value” and protection against “brown discount”
- **Lower Performance Risk:** Due to robust assessment of EE improvement ensuring lower energy consumption and ”green value”

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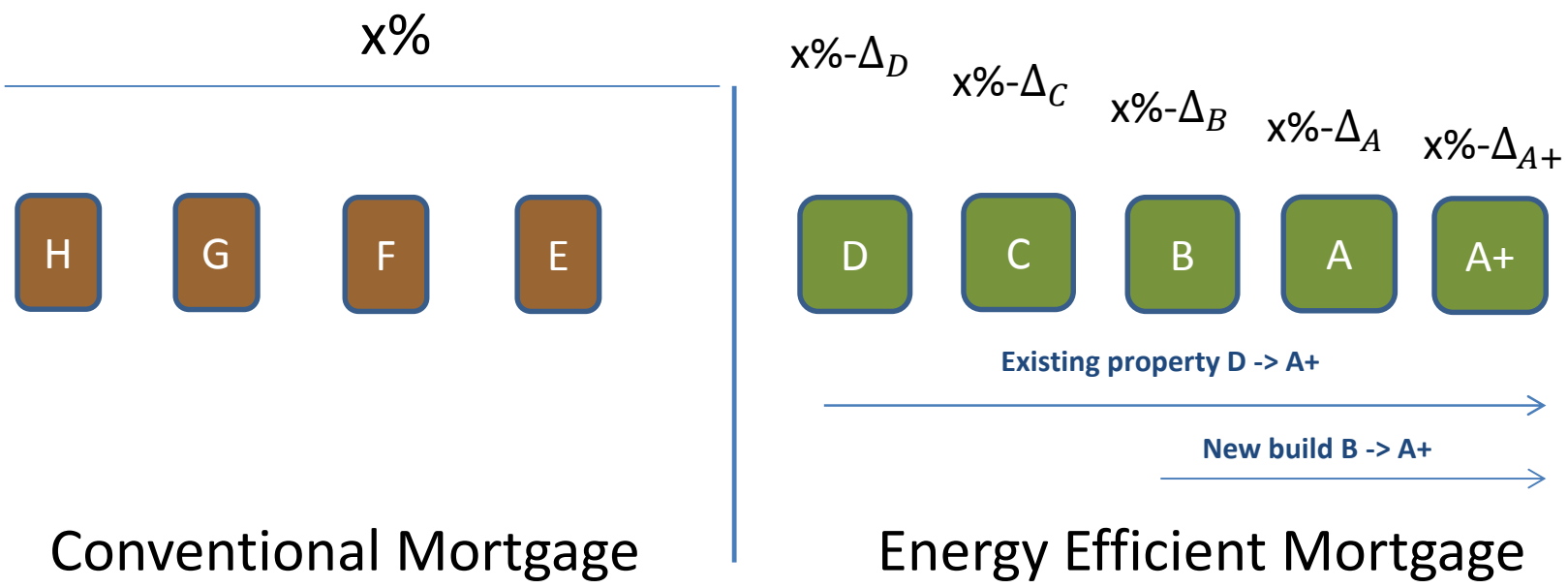
METHODOLOGY - FINANCING MECHANISM

- Key challenge: **<u>to incentivise energy efficient investment in existing dwellings</u>**, which constitute bulk of EU housing stock

- Based on a **set of EE indicators**, lenders could offer:
  - *New Builds:* Discount in interest rate for new builds with energy rating A+/A or B;
  - *Existing property:* Discount in interest rate according to improvement in energy rating of property between D and A/A+



x%: mortgage interest rate

EE delta: $\Delta_{A+} > \Delta_A > \Delta_B > \Delta_C$

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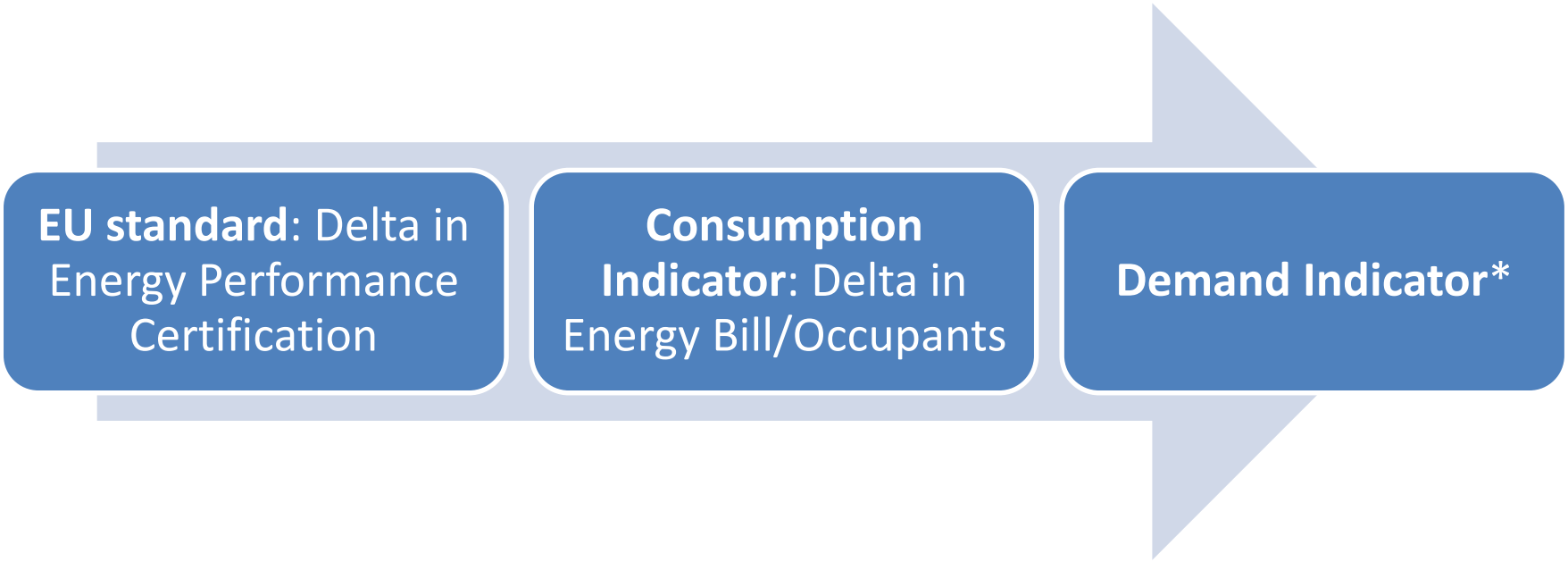
METHODOLOGY - ENERGY EFFICIENCY INDICATORS

Three pillar approach to certification of actual energy performance:



The metrics and value will bring the mortgage industry in-line with the EU on energy

***One possibility:** The EE Directive (2012/27/EU) foresees an 'energy performance contracting' which is a contractual arrangement between the beneficiary and the provider of an EE improvement measure, verified and monitored during the whole term of the contract, where investments (work, supply or service) in that measure are paid for in relation to a contractually agreed level of EE improvement or other agreed energy performance criterion, such as financial savings.

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DATA WAREHOUSE & BUILDING ENERGY PASSPORT

IT Data Warehouse Platform

- Mortgage data line by line
- EE data levels unit by unit
- Funding instruments adopted
- Enhance asset liabilities management
- Increase market transparency

Energy Efficient Passport for Buildings

- For building owners
- Recognised throughout the EU
- Value and clarity of the improvements installed in the building
- Non-performing loans mitigation
- Improving market transparency

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Rue de la Science 14A, 2nd Floor - B-1040 Brussels - Belgium

www.hypo.org emfinfo@hypo.org ecbcinfo@hypo.org

@EMF_ECBC EMF-ECBC

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