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#### **Complete Research Report**

#### **Consumer Insights on Green Mortgage Propositions** across 8 EU markets

This report includes the full results of the qualitative and quantitative research conducted during 2021



















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#### **Executive Summary (1/4)**

~ 4,000 consumers across 8 European Markets

#### What role does energy efficiency play for consumers when applying for a mortgage?

- Across markets consumers are more ready than ever for energy efficiency conversations, climate change is becoming a mounting concern and there is a sense of urgency. Benefits of energy efficiency measures are also becoming clearer in terms of financial and environmental impact.
- Most consumers have encountered an **EPC** (energy performance certificate) since it is increasingly mandated for home purchases or rental agreements, yet there is poor understanding on what makes a house "A" rated. **Greater education** is needed to bring consumers up to speed.
- Intent/desire to make energy efficiency improvements is widespread, but willingness to act or compromise is low. There are high barriers since energy efficiency improvements are perceived as expensive.
- While sustainability is not a core consideration when choosing a mortgage provider, there is strong consideration for energy efficiency improvements across markets with >50% of respondents considering them. Consumers are willing to finance energy improvements with a loan and even more likely to add additional borrowing for energy efficiency improvements to their new/existing mortgage.

















#### **Executive Summary (2/4)**

- 4,000 consumers across 8 European Markets

#### Which green mortgage proposition did we test?

- In our qualitative phase we tested three products: a "green home discount mortgage" for homes with an already high EPC rating of A/B; a "green home improvement mortgage" for homes with an EPC lower than A/B and a "green loan" for selected energy efficiency improvements.
- For the quantitative phase, we designed and tested a simplified and more flexible "green mortgage" proposition implementing feedback from our focus groups around a higher discount rate and more focus on the larger market of homes in need of renovation.
- We presented to consumers a green mortgage product with roughly 10% discount off a typical interest rate across markets and highlighted
  the benefits of a green mortgages as follows: financial savings, energy costs savings (20-50% of the energy bill), increased property value (310%), improved CO2 footprint and a more comfortable home.
- We also highlighted that the amount for energy efficiency improvements can be added on top of the new/existing mortgage at the same interest rate as the underlying mortgage and much lower than any consumer loan. In addition, if the owner can prove, via an updated EPC rating, that the house has now reached A/B rating, the underlying mortgage interest rate is discounted as well.

















#### **Executive Summary (3/4)**

~ 4,000 consumers across 8 European Markets

How did consumers react to the green mortgage proposition and what barriers need to be overcome?

- All markets were receptive to the green mortgage proposition we tested. In terms of clarity, in all markets >75% were clear on how the green mortgage product works. Appeal correlated closely with relevance, with >80% of consumers finding the proposition relevant and appealing in Italy, Spain, Portugal, Romania and Hungary; >70% in Germany and slightly more muted with ~60% in Sweden and The Netherlands. The slightly lower appeal in Sweden and The Netherlands might be driven by the already higher level of energy efficient buildings in these countries.
- Consumers appreciated the **double win** of a green mortgage with a consumer from Italy stating: "It is interesting for both energy savings and for having lower mortgage rate". Another consumer from Sweden stated: "It seems to be beneficial in the long run both for me and the environment".
- In terms of product pricing, the tested discount rates of 10% feel appropriate to consumers, yet higher discount rates of 15% are likely to increase appeal by up to 20% this varies widely by market.
- A partnership between a financial institution and an energy supplier is bound to increase appeal even further as it brings together expertise and credibility from two different spheres of business.
- The main barriers towards the product mentioned were largely financial, consumers stating that they don't want to or can't afford to take out an additional loan for home energy improvements.

















#### **Executive Summary (4/4)**

~ 4,000 consumers across 8 European Markets

#### Which additional product features can drive appeal even further to overcome stated barriers?

- Appeal for the green mortgage proposition is driven by tangible economic benefits, key drivers being a reduction in energy bills, a more comfortable home, lower borrowing interest rates and flexible repayment terms. Consumers are also aware of wider environmental implications of this product as well, with desire to reduce household carbon footprint amongst the top 6 drivers.
- We also had a long list of additional product features we showed consumers. We wanted to see which additional features, if added to the proposition, would increase appeal. The top 3 were: using the energy bill savings to finance all/part of the improvements, no mortgages fees and ability to use the funds for other improvements in the home.
- Government/EU financial incentives would also help to drive take-up even further and especially reduce the amount of the loan needed and making it more affordable. For government initiatives there is no clear stand-out initiative, with VAT reductions, subsidies and lower borrowing rates all holding similar appeal. Creating and ensuring full understanding of these initiatives can supplement the benefits of a Green Mortgage for prospective mortgage buyers.

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The three green financing propositions we tested in focus groups in The Netherlands, Hungary, Romania, Spain and Portugal





#### Which products did we test?

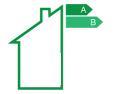
**Green financing product** 

If the EPC of the house is:

Consumer gets an interest rate discount of (in pp):

**1a** "Gr

"Green **Home Discount** Mortgage"



Your discounted mortgage HU & RO: 0.50% for A and 0.25% for B NL: 0.25% for A and 0.15% for B

ES & PT: 0.1% for A & B plus 5% lower down payment

Green Home Improvement

Mortgage"



Extra green loan

Your discounted mortgage

- → Extra discounted loan to the same conditions as the mortgage (interest rate & duration)
- → Tested version with and without discount on mortgage after conversion to green home

2

Green Loan

Regardless of EPC rating

Extra green loan → Discounted loan compared to standard consumer loan (0.5%- 2%) for the ones who want to lower CO2 emissions of their homes & live sustainably and invest in solar panels, EV chargers, new heating systems etc.

Full results from qualitative research



#### **Background**

Following previous consumer research conducted in 2017, and some successful early pilots in the initial markets, we wanted to explore new geographies in which to launch Green Mortgage products. We have selected The Netherlands, Hungary, Romania. Spain and Portugal were also added to the round being kindly sponsored by UCI.

Initial exploratory qualitative research was required to better understand the mortgage landscape and attitudes in each market, and to gain early feedback on a revised set of Green mortgage product concepts.

Research also explored some additional features: the Energy Efficient Mortgage Label (EEML) and a Home Energy Management app.

This qualitative research is meant to inform future product development as well as helped us to optimise stimulus for the quantitative testing.

#### Methodology

Two focus groups of 2-hours per market:











#### Less experienced homeowners

FTB, in process of buying / have taken 1st mortgage

#### More experienced homeowners

Remo/Movers, in the process/ recently remortgaged/ moved

#### **Discussion flow:**

- Housing & mortgage understanding, attitudes
- Green issues at large, and in the home
- Reactions to Green Mortgage products
  - Green Home Discount Mortgage
  - Home Improvement Mortgage
  - Green Loan
- Exploration of additional features
- · Summary and closing

Before we introduced the products, we asked consumers about energy efficiency ...





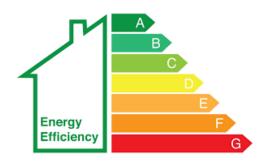
Green topics are becoming increasingly salient

Climate change is becoming a mounting concern, there is a growing sense of urgency

Energy efficiency is increasingly prominent in many spheres of life (politics, products, transport)

Benefits are becoming clear for most in terms of financial and environmental impact

Yet, familiarity with home energy efficiency is patchy and remains remote / abstract



→ Most have encountered an EPC or energy certificate since it is increasingly mandated for home purchases or rental agreements

- → Familiar format from appliances
  - In some markets the appliance energy rating is more well known
  - More frequent purchase drives this?

- Majority do not know their own home'sEPC rating
  - A minor fact for most
  - Not usually central to the home purchase decision, or experience
- Tiers / certification not understood
  - What makes a home an 'A'?
  - Poor understanding of what 'A' means

Intent / desire to make energy efficiency changes is widespread, but will act and willingness to compromise remain low







#### **High barriers**

**Poor understanding:** hard to know how, or what it would look like

Real and perceived cost: efficient homes and/or home improvements perceived as expensive

**Practical limitations:** many homes are hard to improve



#### **Limited motivation**

What's in it for me? direct benefits (comfort, cost savings) are relatively minor

Long-term pay-off: any benefits would take years to actually make a (financial) difference

**No urgency:** why should I act now?



#### **Dream home**

Historic charm: many people dream of living in a historic home with loads of character

No compromise: improvements that conflict with a romantic 'ideal home' are unlikely to be made



Home energy efficiency is a low priority for most homeowners



Different markets are at different levels of maturity in terms of understanding, prioritisation and acting on home energy efficiency

#### Least green-thinking Most green-thinking **Netherlands** Romania **Portugal** Spain Hungary Green issues feel Growing Reasonable Core green Green topics and trendy and futureengagement with understanding of behaviors, home energy facing, but few are environmental green topics but e.g. recycling, efficiency taken prioritizing making issues - but insulation, etc. are seriously and given many feel their home green motivated more by constrained and well established high priority by cost savings than unable to make and broad many - including environmental great changes - by awareness of EPC taking concrete their home or impact within the and home energy steps to improve their home's home financial issues efficiency circumstance



### Broadly – the initiatives were regarded as timely and welcome, but often fell short in terms of an incentive to behavior change

A positive initiative, enabling change that many see as necessary

"This seems like a very good idea – **we need to make this change** so help is good"

"This sounds perfect – where do I sign!?"

Few of the products offer enough incentive to make big impact

"If I wanted to buy an eco-house then this would be useful – but I will never buy such a house"

"They say they are helping us but **this is a joke**... This makes no difference"

But clear appeal for the Improvement Mortgage in lowinterest markets

"Ah, if this had been available when I got my heat pump this would have been very interesting!"

"To borrow and add it to your mortgage – you know that it is **safe**"

# Afterwards, we introduced three green financing products and received their feedback

### The Green Home Discount Mortgage falls short of its potential due unimpressive discount and a sense that most could not access it

**1**b

"Green **Home Discount** Mortgage"

#### **Product details:**

RO/HU/NL: A discounted interest rate on your mortgage when mortgaging an A or B rated home (0.15%-0.50%) ES/PT: a lower minimum down-payment required when mortgaging an A or B rated home, and a discount on the mortgage interest rate (0.1%)

- A clear proposition rewarding green behaviors
- At a basic level: discount = good
- Offers a tangible, monetary incentive towards green homes as this becomes established it will begin to have wider market effects
- In very low interest environments (NL), a small discount feels quite meaningful

- The discount itself is **too low** to be motivating in most cases
- EPC is almost never a major factor in choosing a home, regardless of a small discount on borrowing costs
- Many assume that top-rated homes are hard to get, and would be expensive – low relevance, and negates the benefit of the discount
- Feels unfair a discount only for those who can afford it



### Green Home Improvement Mortgage is most attractive where it's a 'win-win' proposition, offering both short and long-term benefits

Green Home Improvement

Mortgage"

#### **Product details:**

Borrow money to make energy efficiency improvements to your home. This additional borrowing is added to your mortgage, and takes on the same conditions (interest rate, term) as your main mortgage. This makes the monthly repayments much cheaper than for an equivalent personal loan

Note: We also tested additional discount on the mortgage itself

- Greatly reduces monthly cost of borrowing by spreading repayments over 25+ years
- Makes home energy improvements more affordable/accessible for many
- In markets with low mortgage costs (NL, ES) it offers longterm savings as well as short-term
- In markets where mortgages feel safer than loans (NL, ES, PT), it makes additional borrowing much more acceptable
- A double benefit: cheaper borrowing and an additional discount (when additional discount tested)

- In markets where mortgages are more expensive, this saves in the short term but **costs more in the long term**
- In markets where people are wary of long-term debt, this can feel like an inflexible burden
- The process of selecting installers and certifying the work can feel complex & off-putting
- The prospect of failing the accreditation and being penalized feels frightening and risky

### The Improvement Mortgage can be improved by minimizing bureaucracy, increasing trust and offering greater flexibility

#### **Bureaucracy**

- The process of selecting an approved provider; creating an improvement plan; and getting the work installed and certified could feel daunting
- In "greener" markets the energy audit could feel valuable
- In other markets, this could feel meddling and controlling

#### **Trust**

#### Offering a list of **approved providers** had divided response:

- In more trusting markets this is a fair, convenient & straightforward way to find a provider
- In other markets (RO, HU) this felt restrictive and raised doubts about cozy relationships between bank & installer

#### Little flexibility

### A range of options for borrowing, installing and repaying will broaden appeal

- Many value the 'full-service' option, while others will want to manage their own project
- 'Do it now' vs 'do it later' also depends on personal circumstance
- Early repayments will be very attractive

Streamline the process by using digital tools

Allow more customer choice for less trusting markets

Offer flexibility in product and payment

### The simplicity and clarity of the Green Home Improvement Loan is valuable — but the discount falls short of expectations

2

**Green Loan** 

#### **Product details:**

A loan for home energy efficiency improvements, at a reduced interest rate (0.5% - 2% pp)

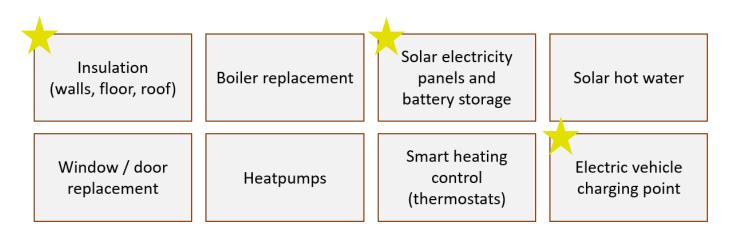
- A very simple offer that feels clear and straightforward
- Shorter term and separation from mortgage makes it feel more flexible, simple and streamlined
- No long-term cost just a straight saving on the cost of the loan
- In markets wary of additional long-term borrowing, this feels safer and simpler (RO & HU)

- The value of the discount is very underwhelming
- For such a limited saving, the loan comes is seen as having lots
  of conditions and restrictions this loss of flexibility outweighs
  the saving for many
- In markets that strongly favor mortgages, loans are often viewed very negatively (NL)



### Consumers find insulation, solar and EV charging as the most promising improvements

Example of potential energy efficiency improvements that can be covered by the green mortgage/ green loan





### Insulation is universally popular – but more innovative solutions like solar and EV charging also have strong appeal

#### **Insulation & Windows**

- Universally known & understood nothing intimidating or confusing about it
- Benefits to household comfort/warmth, as well as to running costs, are clear & understood
- The simplest home Energy Efficiency measure

#### Solar

- Desirable and high-profile many people have thought about getting solar
- But **high cost of entry** new financing options make them more achievable
- Solar hot water less well known, but also some interest

#### **EV Charging**

- A widespread sense that EVs are on their way
- But still aspirational, exciting for many
- Feels **future-facing**, high-tech; a standout feature that will enable a more modern driving lifestyle in the future

#### Heating

- Smart heating & boiler replacement weren't mentioned as often – not broadly understood as 'sustainability' measures?
- Heat pumps / renewable heating less well understood, unfamiliar to many except the more green-engaged

### Brand reveal: Association with a known energy brand like E.ON brings an extra degree of credibility to the propositions

#### Different spheres of expertise for a green mortgage product

#### Mortgage and lending

#### A uniquely specialised role

Only a bank/financial institution would be **trusted** to deliver these services

Most generally favouring well-known, established local banks

The involvement of an energy company in this world can feel **surprising** 

#### **Energy efficiency**

#### A separate sphere of expertise

Banks are **not expected to be expert** here – although it's less of a stretch than vice versa

E.on lends **real expertise and credibility** to this area – trusted to provider energy consultancy & guidance

Seen as a **socially-positive scheme** for E.on to be involved in, encouraging efficiency (rather than maximising consumption)

# Insights from focus groups per market

- The Netherlands
- Spain & Portugal
- Romania
- Hungary



#### Netherlands the most advanced in green thinking



Most agree that environmental issues are a **high priority** and something needs to be done

General support for **regulation**, **intervention and action** on climate change

A willingness to **make changes** to their lifestyle

#### **Knowledge** is power

High familiarity with green issues, including with home energy efficiency tech

Broadly good understanding of **EPC**, how it works, and what it means

Including many with a decent understanding of their own home's EPC rating

#### **Desirable efficiency**

While many still prefer historic houses – efficient & modern homes are generally seen as quite desirable

Many aspire to live in a **new**, **efficient home** 

Others have real plans for improving their homes, or have already done so

More than other markets, Netherlands appears to agree an the importance of home energy efficiency and shows greater willingness to act on this

### The Netherlands unique housing market has important effects – favoring mortgages over loans, and limiting choice of home



Two key market dynamics at play:

#### Highly favourable mortgage conditions

Mortgages are available at rates around 1%, even fixed for long terms

This makes mortgage borrowing **extremely affordable and secure**By contrasts, loans are seen to be **highly risky**, **expensive** ways to borrow

- Accepted wisdom: loans = bad news
- Irresponsible or desperate
- A certain social stigma

#### **Extremely competitive housing market**

Typically there are multiple bidders for each property, and it can be difficult to buy at all

Homebuyers are not simply free to choose

Often having to **bid on many properties** in the hope of winning something

Highly open to compromise

- Likely to have to buy something close to the dream house and then work on it
- Can't hold to specific criteria (i.e. EPC)

The Netherlands housing landscape has produced a strong – almost phobic – resistance to loans, and a market that necessitates compromise and/or work to get a dream house



These effects drive strongly towards the mortgage products, and away from the improvement loan





#### **Improvement Mortgage**

Leverages the inherent features of the market to create a really powerful benefit: extremely affordable credit

Aligns with cultural beliefs about mortgages being safe, responsible & desirable



#### **Discount Mortgage**

High-efficiency homes are already desirable – so **inherent appeal** in a discount on these homes

But difficult in this market to set **firm criteria** like this

And the discount itself is **only moderately appealing** 



#### **Improvement Loan**

**Rationally**: borrowing via a loan is vastly more expensive than borrowing via mortgage

**Emotionally**: loans symbolise financial mismanagement, irresponsibility, spiralling debt

The combined mortgage could be powerful here, if communicated more clearly and simply

### Spain and Portugal both show high engagement with green topics generally – with substantial government support for green home improvements



#### Spanish tax discounts for green homes

**Discounts or rebates** are available on local property tax, construction tax and even personal income tax for either owning a green home, or doing work to make your home greener

- Understanding of these schemes is patchy
- But there is some general, low-level awareness of these incentives
- This sets a **benchmark** for green schemes

#### Portuguese subsidy for green improvements

The government is able to offer an **incentive** for completing green home energy improvements of up to  $\[ \in \]$ 7,500

- This drives awareness & interest in making such improvements
- It also sets a standard for how such a scheme might be administered
   e.g. to be eligible for this scheme you need only do the work and then submit an invoice

Existing and reasonably well-known schemes present high expectations for any kind of green home incentive or subsidy



High property prices and secure, affordable mortgages make home ownership desirable, but high minimum down-payment requirements are a key barrier



#### Affordable, long-term fixed rates

Across both markets, lifetime fixed-rate mortgages are available at less than 3% APR

This makes mortgages **very easy to service** over the long-term, and extremely affordable

It creates an environment, similar to NL, where mortgages are **viewed much more favourably** than other forms of borrowing

#### **High barriers to entry**

Many lenders require a minimum down-payment of 15% or more

A key barrier, especially for first-time buyers

A highly **salient** feature of the market

- a common talking point
- generally agreed to be a **dysfunction** of the market
- locking **young people** out of the housing market

The mortgage market is generally very favourable, but can be difficult to enter – this is a powerful hook for first-time buyers but not for experienced homeowners



The Improvement Mortgage offers clear advantages – and the Discount Mortgage could be of interest to first-time buyers



#### **Improvement Mortgage**

Makes borrowing for improvements much more affordable – with negligible short-term cost

Potentially helps unlock **government** incentives



#### **Discount Mortgage**

The lower down-payment requirement stands out as a key benefit

But only really of value to **first-time buyers** – and the starting point of a 20%
deposit feels higher than market rate,
undermining the benefit

The discount itself is **negligible**, and not a strong motivator





#### **Improvement Loan**

Limited appeal – it falls short of the improvement mortgage in terms of how much it can save on **monthly expenditure** 

## **EEMI**

#### Romania has extremely high rates of home ownership, and a relatively slow-moving market

#### High home ownership

Romania has one of the world's highest rates of home ownership

This makes owning a home a key rite of passage and a default expectation for many

This is enabled by (relatively) **affordable housing** and **accessible mortgages** – often denominated

in Euros

#### Time to get it right

Many plan to stay for a **long time** in their property

Less dynamism/mobility, people often stay put

This means homeowners are more often looking to **upgrade the home they're in**, rather than move somewhere new

This aligns with products enabling home improvements

#### **Debt wariness**

While mortgages are relatively accessible, they are **relatively expensive** – and the fact that they are often denominated in different currencies adds to their volatility

This creates an aversion to carrying debt, and a desire to pay it down rapidly

Additional **short-term loans** for home improvements are more familiar

The Romanian housing market favours staying put, upgrading your home, and paying down mortgage debt early

### **DEEMI**

### Home energy efficiency is more often understood in terms of economy/running costs, but environmental considerations beginning to become relevant



#### An economic argument for efficiency

Environmental concerns are **growing in relevance** but remain less mainstream than in other markets

However there are clear benefits to energy efficiency in terms of **cost saving** 

 Aligned with wider preference towards financial prudence, debt reduction, etc.

This drives interest in **home energy improvements**, solar panels, insulation, etc.

#### **Energy efficient homes out of reach?**

Understanding of EPC generally patchy

- Many at least generally aware of it
- But few understand it well
- Not clear what an EPC 'A' home would look like, or do differently

Nonetheless, a general assumption that a top-rated home would be **very expensive** 

 Despite the fact that many new-build apartments and houses in Romania already meet this standard



Greatest openness to the Improvement Loan, but none of the concepts cutting through as market-leading or revolutionary at this stage





#### **Improvement Loan**

A simple, short-term borrowing tool that feels clear and easy to manage — and aligns with savings mindset (cheaper to borrow, improvements will save money: it's win-win)

**Familiar** borrowing structure: a 5-10 year renovation loan

But the discount itself was **not substantial enough**, so overall appeal was muted

2

### **Improvement Mortgage**

The relatively high cost of mortgages in Romania means there's a **real trade-off**: it costs more in the long run

This feels risky in a context where people are keen to **minimise the cost of debt**, and favour early repayment where possible



### **Discount Mortgage**

Familiarity with EPC ratings is low so this doesn't feel relevant

More **education** around modern apartments / houses could broaden the appeal

But, again, the discount is **very modest**; many feel they could find equivalent savings just by shopping around



# The financial market in Hungary feels more volatile, and mortgages don't carry the same sense of safety and security as other markets





### A complex borrowing landscape

Mortgages not strongly differentiated from other loans

- Mortgage interest rates are relatively high
- Mortgages are called 'loan' in Hungarian

Borrowing in other currencies (CHF) exposes borrowers to **currency fluctuations** 

 Strong memories of 2008 financial crisis & the difficulties that caused

**Government** offers a range of cheap loans and subsidies for homeowners

#### This contributes to a lack of trust

Hungarians are wary of debt and of mortgages in particular

Keen to pay down debt

Low trust in banks also

- Cautious around new products, deals, offers that may have hidden costs
- "It sounds good but they will be the winners and we will the losers"

Mistrust permeates the financial sector in Hungary; any new mortgage products need to work to reassure their audiences



# Energy efficiency and environmental concerns are seen as quite trendy, and a priority of the government, but aren't as motivating to individuals



#### Of the moment

Green topics feel **relevant and current** on a global as well as a
domestic scale

This cuts both ways:

- greater relevance can help drive engagement
- for more cynical people, it can be seen as 'following the trend' or 'jumping on the bandwagon' to talk about green issues

#### **Government-backed**

**Emissions reduction** is a stated goal of the government

Government support is often linked to **family status** 

**Subsidies** available for home renovation work for anyone with at least 1 child

csok grants and loans available to buy homes for families who (intend to) have 1-4 children

### Less personal

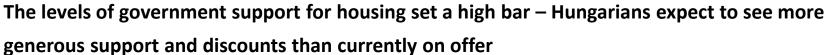
Greener homes (and bigger families, more home construction) feels like a **political goal** 

Many less personally motivated towards green homes and lives

Expect sizeable subsidies & support to make these types of change

Green improvements tend to be framed in terms of state activity and subsidies, not something that individuals make sacrifices/compromise for









### **Improvement Loan**

The **simplicity** is attractive – but the level of discount **isn't enough** to motivate

Feels like it involves **excessive red tape** compared to a standard loan –
many would rather take a more **flexible** loan, even if slightly more
expensive



### Improvement Mortgage

**High cost** of mortgages diminishes benefit

Deep wariness about taking on further long-term debt

Suspicious of complex products that carry **hidden costs** (e.g. lifetime repayments are higher)



### **Discount Mortgage**

Very **limited understanding** of EPC ratings

Discount feels **insignificant** – especially compared to a CSOK subsidy or other government-backed loan or home loan

Across both, simplified accreditation / certification procedures would help

The improved and adapted Green Mortgage proposition based on qualitative research feedback



Based on feedback from the qualitative phase, we refined the green mortgage proposition to test in the qualitative phase



### The new green mortgage proposition we presented:

# **Green Mortgage product description**

The Green Mortgage is a new product that rewards customers whose homes are energy efficient. It provides a discounted mortgage rate (varies by market) vs. other available mortgages – meaning you pay less interest each month!

To qualify for the mortgage, your home needs an energy efficiency rating of **A+/A/B**. Should your energy efficiency rating be below that, you can make your home more energy efficient by:

- · Borrowing discounted funds to make your home more energy efficient:
  - You can choose to pay the loan back over a time period that suits you
  - The interest rate for the additional borrowing is discounted at the same rate as the mortgage (i.e. much lower than a consumer loan)
- Using your own funds to make your home more energy efficient:
  - You can pay for any work required to make your home more energy efficient from savings or money you have available

Improvements which can boost your home's energy efficiency include insulation, heating systems, solar panels, solar hot water, smart heating thermostats, electric vehicle charging points etc.



# **Green Mortgage product benefits**

### The Green Mortgage will deliver the following benefits to customers:

- **Financial savings** the Green Mortgage provides a discounted rate of **(varies by market)** vs. standard rate, saving you money each month on your mortgage payments. Any additional borrowing is also provided at the same discounted rate
- Energy cost savings energy efficient homes can save you between 20-50% on your energy bills, saving you money!
- **Increased property value** energy efficient homes typically generate a higher sale price in the market (potential increase of 3-10%)
- Improved CO2 footprint homes with a higher energy efficiency rating produce less CO2 typically around 1 tonne per year, the equivalent of an extra 100 trees!
- A more comfortable home!



# **Green Mortgage customer journey**

### **How the Green Mortgage works:**

If you already have an energy efficient home with a rating of A+/A/B, you can simply apply for the Green Mortgage straight away. If the energy efficiency of your home or the home you're looking to buy needs to be improved, you go through the following steps: Quick Purchase **Product** Enjoy your Final audit offer & install benefits In-person Home Audit Our network of partners We will offer you the Our partner installers will take care of the Once the final audit certifies Use our Quick suggests the most online Home will provide you with a relevant financing sales and installation of your chosen solution your home as energy Analysis tool to suitable price quote on the options efficient, your mortgage rate Alternatively, you can choose your preferred find out what improvements for products you need will be discounted, and you installers. We'll then conduct a final audit to your home which energy efficiency will see impact on your Alternatively, you can use measure the new energy efficiency of your would qualify you for energy bill improvements a provider of your choice home and give you a new certification the Green Mortgage you could make

Results from quantitative phase of research across all 8 markets: Germany, Italy, Sweden, The Netherlands, Hungary, Romania, Spain, Portugal





### The quant phase marks the second and final stage of the research

### **Qualitative phase**

### 2x 2-hour groups per market

### Less experienced homeowners

FTB, in process of buying / have taken 1<sup>st</sup> mortgage

### More experienced homeowners

Remo/Movers, in the process/ recently remortgaged/ moved

### **Quantitative phase**

Sample of n=500 respondents in 8 markets

















To qualify, respondents need to have taken out a mortgage in last two years or considering doing so in the next two years

Sample mix of demographics and home ownership

20-minute online questionnaire



We collected responses from consumers with a varying level of familiarity with mortgages

		4		<b>(B)</b>				
First time buyers	6%▽	13%	7% ▽	18%	6% ▽	8% ▽	13%△	10%
One mortgage	57%	55%	51%	57%	68%△	48%	49%	49%
Multiple mortgages	37%	32%	42%	26%▽	26%▽	44%	38%	40%

In this report, indexing is used to compare across markets to understand where markets are similar and where they differ.

Individual market scores are indexed against the average for all markets – any market with an index score of <u>less than 80</u> for a particular measure is categorised as under-indexing, with anything <u>above 120</u> categorised as over-indexing

Objectives: The quantitative phase aimed to answer the following questions

A

B

C

D

What role does energy efficiency play for consumers when applying for a mortgage?

How do consumers react to the Green Mortgages proposition?

Which product features drive appeal, and what barriers need to be overcome to increase appeal further?

To what extent does the Home Energy Management App appeal to consumers?



# Summary and key takeaways at a glance:

A. What role does energy efficiency play for consumers when applying for a mortgage?

While sustainability is not a significant factor in deciding which mortgage provider to use, consideration of making energy-efficient improvements is relatively widespread, and there's relative openness to borrowing from mortgage provider to pay for this

→ Clearly communicate any borrowing is likely to save money in the long term

B. How do consumers react to the Green Mortgages proposition?

The proposition has high appeal across markets, although is more muted in NL and SW where there's already a high proportion of energy efficient homes — while most remain likely to stick with the existing provider, there's a sizeable opportunity amongst first-time buyers

→ As a mass market product, we can target all types of home buyers

C. Which product features drive appeal, and what barriers need to be overcome to increase appeal further?

Communicate key financial benefits, such as lower energy bills and enhancing property value, supplemented by flexible loan conditions and payment options offered – however, we'll need to allay fears' of significantly higher mortgage costs for some consumers

→ Ensure comms illustrates potential long term savings, as well as key benefits

D. To what extent does the Home Energy Management App appeal to consumers?

Energy monitoring appeals to consumers in general, with high appeal for the App across most markets – messaging around making financial savings is most likely to resonate, and also dovetails with the wider messaging around the benefits of the Green Mortgage

→ The App holds strong appeal, but is perhaps unlikely to drive take-up of the mortgage

A. What role does energy efficiency play for consumers when applying for a mortgage?



This section covers the following key questions

**A.1** 

**A.2** 

**A.3** 

How prevalent are energy efficient homes in each market?

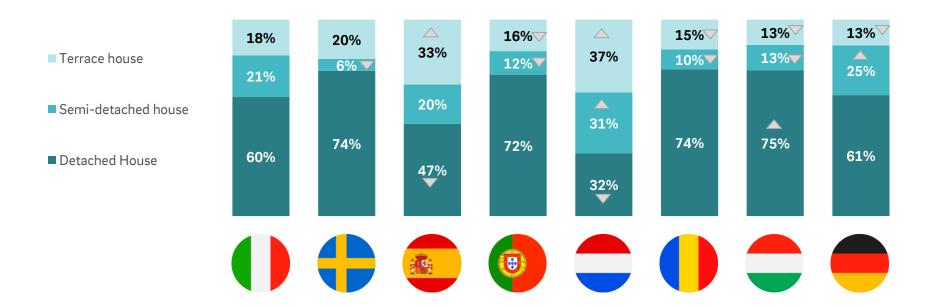
What are the key influences on choosing a mortgage provider?

What is the size of the opportunity for additional borrowing?



In our sample of ~500 consumers per market, mortgaged property type varies considerably by market, although detached houses dominate ownership

Type of mortgaged property – mortgage holders



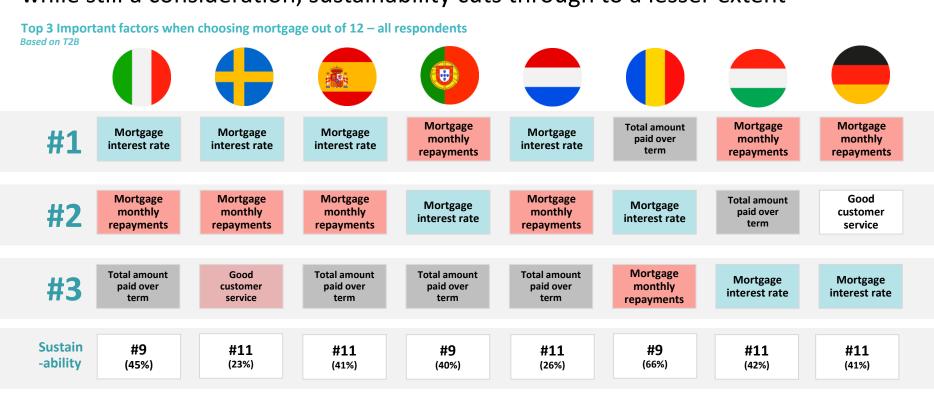


# Most homeowners consider their property to be reasonably energy efficient, but there is certainly room to improve this across markets

Over/under index (120/80) vs. all-market average **Energy efficiency of property – mortgage holders** Energy efficient (NET) 84% 81% 89% 76% 86% 93% 73% 87% Not energy efficient (NET) 16% 19% 11% 24% 14% 7% 27% 13% 24% 31% 31% 34% Very energy efficient 37% 43% 44% 64% Quite energy efficient 57% 42% 45% 55% ■ Not very energy efficient 49% 40% 44% 30% ■ Not at all energy efficient 24% 20% 19% 14% 12% 12% 10% 6%

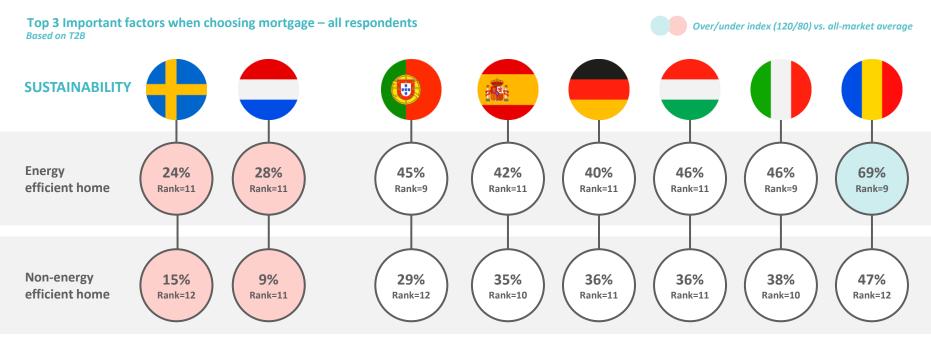


# Payment terms are key in all markets when choosing a mortgage provider – while still a consideration, sustainability cuts through to a lesser extent





# While those with an EE home are more environmentally-conscious, there's opportunity to push sustainability credentials for both groups



Less receptive markets

More receptive, opportunity markets

NB. Base too low to show barriers to non-consideration of energy improvements



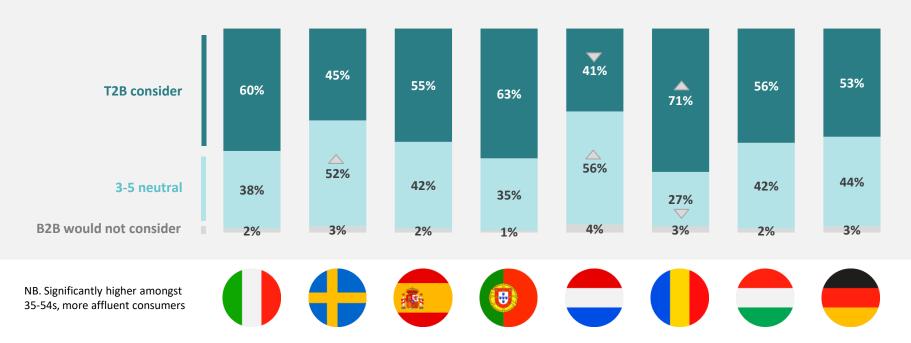
# Sustainability is not a core consideration when choosing a mortgage provider

Importance of factors when choosing mortgage – all respondents  Based on T2B						Over/under index (120/80) vs. all-market average				
			<u> </u>	(#)						
Mortgage interest rate	63%	73%	67%	69%	70%	77%	72%	60%		
Mortgage monthly repayments	64%	45%	66%	70%	58%	77%	74%	63%		
Total mortgage amount paid over the term	59%	44%	60%	68%	54%	79%	72%	57%		
Good customer service	54%	45%	58%	63%	51%	72%	58%	61%		
Service fees applicable during your mortgage (e.g. early repayment charges)	54%	36%	60%	58%	39%	73%	64%	53%		
The advice / guidance provided	54%	37%	55%	54%	47%	72%	58%	54%		
Upfront fees (e.g. product, administration fees)	44%	32%	58%	54%	43%	73%	61%	47%		
Incentives to take out a mortgage (e.g. cashback, free valuation)	56%	32%	58%	59%	28%	73%	60%	44%		
Extra features of the mortgage (e.g. optional payment holiday, additional loan to be used for home improvement)	51%	27%	48%	40%	30%	65%	53%	46%		
Brand / mortgage lender	41%	26%	45%	37%	31%	64%	44%	44%		
Sustainability policy of the lender / effort on environmental issues	45%	23%	41%	40%	26%	66%	42%	41%		
Recommendation from people I know	36%	23%	37%	32%	22%	63%	37%	36%		



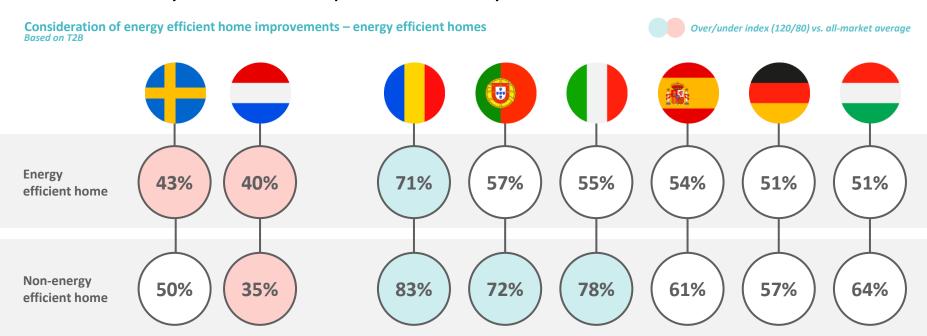
# There is strong consideration across all markets for home improvements

Consideration of energy efficient home improvements – all respondents





However, as we'd perhaps expect, it is those in less energy efficient homes who are most likely to want to improve efficiency



NB. Base too low to show barriers to non-consideration of energy improvements



However, as we'd perhaps expect, it is those in less energy efficient homes who are most likely to want to improve efficiency

Consideration of energy efficient home improvements – energy efficient homes



# What is the best way of fulfilling home energy improvements with consumers?



NB. Base too low to show barriers to non-consideration of energy improvements



Familiarity with EPC ratings was inconsistent across markets during the qual phase, with many consumers unsure as to what it exactly means

**Qualitative findings** 

### **Growing awareness of EPC**

Increasingly **mandated** for home purchases or tenancy agreements

Most have encountered an EPC or energy certificate

#### Familiar format from domestic appliances

- In some markets the appliance energy rating is more well known
- More frequent purchase of appliances may drive this

### But detail is patchy

Majority do not know their own home's EPC rating

- A minor fact for most
- Not usually central to the home purchase decision, or experience

Tiers / certification not understood

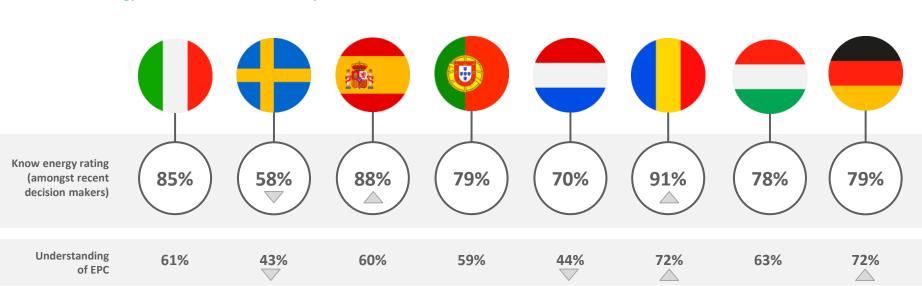
- What makes a home an 'A'?
- Poor understanding of what 'A' vs 'B' means

While most are at least somewhat aware of home energy ratings – and the importance of energy efficiency – few truly understand this area



This is reflected in the quant as well – there is still a knowledge gap to bridge with consumers when it comes to EPC ratings

Awareness of Energy Performance in home – all respondents

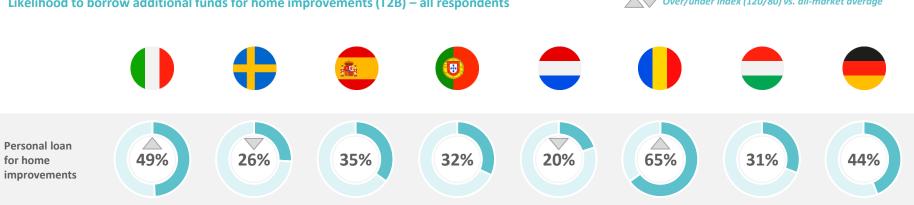




Using a personal loan to make home improvements has a degree of appeal in most markets...

Likelihood to borrow additional funds for home improvements (T2B) - all respondents

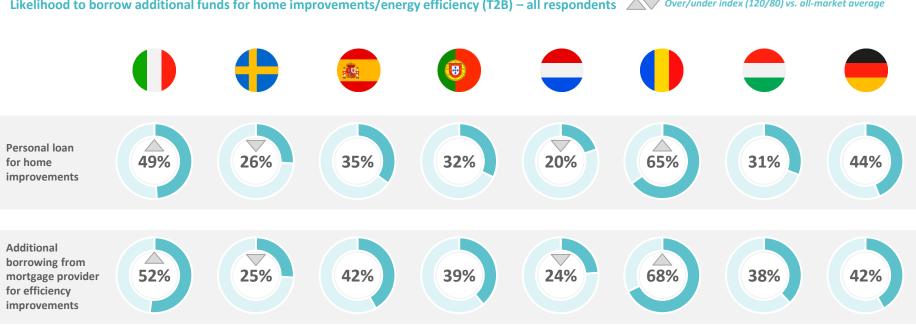






# ... consideration for a mortgage provider loan for efficiency improvements is similar, although clear comms is vital given limited EPC knowledge

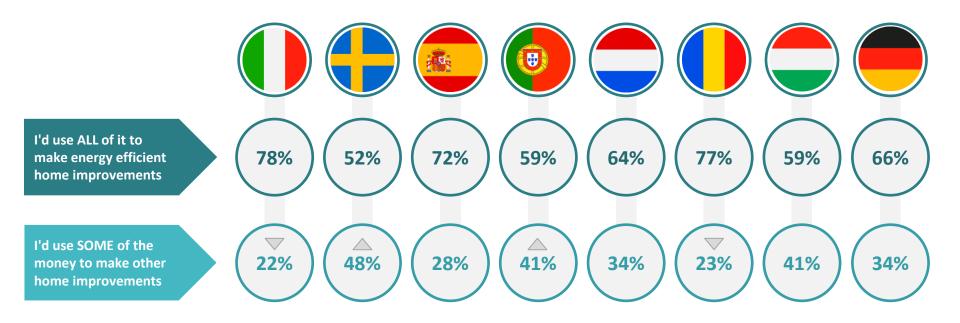
Likelihood to borrow additional funds for home improvements/energy efficiency (T2B) – all respondents Over/under index (120/80) vs. all-market average





While most claim they'd use all additional funds for efficiency improvements, appeal is likely to be widest if this isn't set as a condition of lending

Use of additional funds energy efficient home improvements – all respondents



# B. How do consumers react to the Green Mortgages proposition?



We asked respondents to evaluate the Green Mortgage proposition in the following ways:

**B.1** 

**B.2** 

**B.3** 

Clarity, relevance and appeal of the Green Mortgage

Preference:
Evaluation compared
to current mortgage /
considered mortgage

The impact of partnering with an energy supplier on appeal

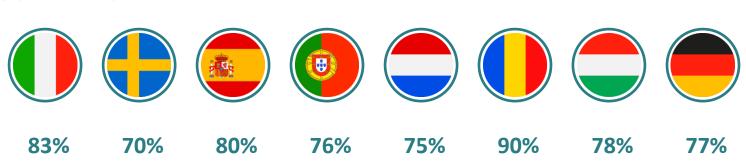
**CLEAR** 

(5-7 on 7 pt. scale)



# Consumers across markets are clear on how the Green Mortgage works...

#### **Clarity of green mortgage product – all respondents**

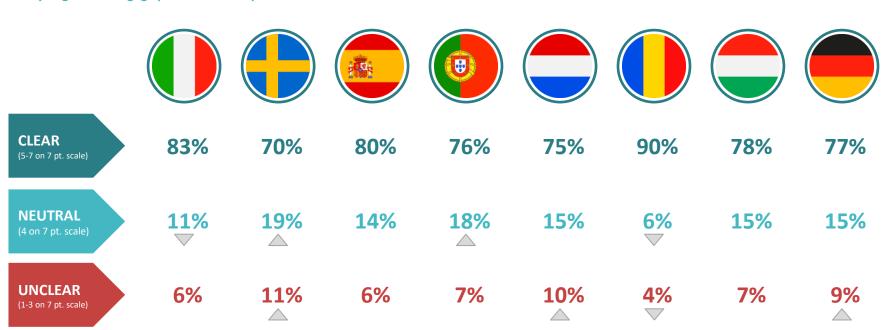


NB. Little difference by demographics or home type



# ... with very low likelihood of consumers claiming to misunderstand the proposition

Clarity of green mortgage product – all respondents

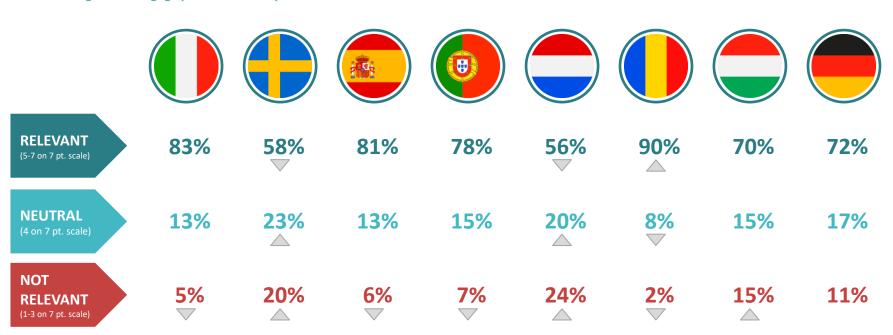


NB. Little difference by demographics or home type



# Green Mortgages is seen as a highly relevant product in most markets, with slightly more hesitation in Sweden and The Netherlands

Relevance of green mortgage product – all respondents

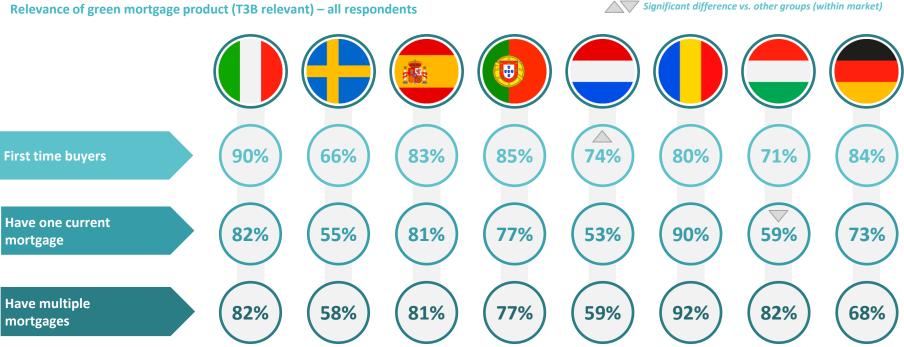


NB. Little difference by demographics or home type



# The Green Mortgage is seen as relevant for all types of buyers, but particularly for first time buyers in NL

Relevance of green mortgage product (T3B relevant) – all respondents

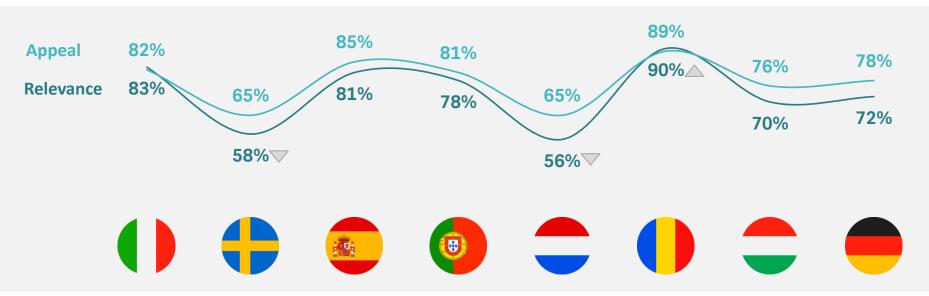




# Appeal closely correlates with relevance – with relatively high appeal in all markets (although slightly more muted in SW and NL)

Relevance vs. appeal of green mortgage product (T3B) - all respondents





NB. Appeal broadly consistent in markets tested previously (IT / SW / PT / SP)





### Appeal is driven by tangible economic benefits of the Green Mortgage

#### Appeal of attributes of the Green Mortgage

Based on T2B

503EU 011 12B			<b>100</b>	(#)				
Would bring down the cost of my energy bills (between 20-50%)	57%	60%	61%	67%	53%	78%	67%	60%
Would give me a warmer, more comfortable home	60%	49%	61%	64%	45%	76%	65%	53%
You can choose to pay the loan back over a time period that suits you	57%	52%	56%	57%	42%	75%	62%	58%
Would increase the value of my property (potential increase of 3-10%)	55%	50%	54%	56%	46%	75%	62%	55%
The interest rate for additional borrowing is discounted at the same rate as the mortgage (lower than consumer loan)	56%	55%	57%	56%	43%	72%	57%	53%
Would reduce my carbon footprint	61%	43%	55%	55%	37%	71%	57%	54%
You can pay for any work required to make your home more energy efficient from savings or money you have available	52%	43%	51%	50%	42%	72%	55%	50%
Can be combined with the government backed Superbonus 110% tax reduction program for energy efficiency measures	59%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Can be combined with attractive funding programs from KfW with repayment subsidies up to 75 EUR	n/a	n/a	n/a	n/a	n/a	n/a	n/a	50%

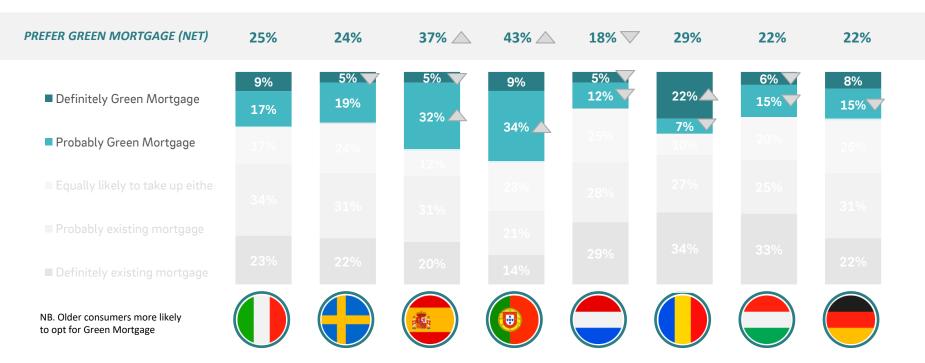
Over/under index (120/80) vs. all-market average



### There is strong opportunity for Green Mortgages in Spain and Portugal...

#### PREFERENCE of Green Mortgage vs. current mortgage – all respondents



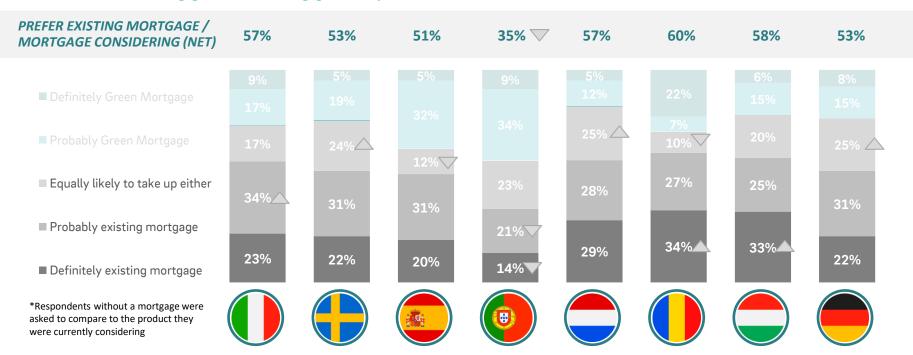




# ... despite this, preference for existing mortgages tends to be stronger in almost all markets (PT the exception)

PREFERENCE of Green Mortgage vs. current mortgage – all respondents





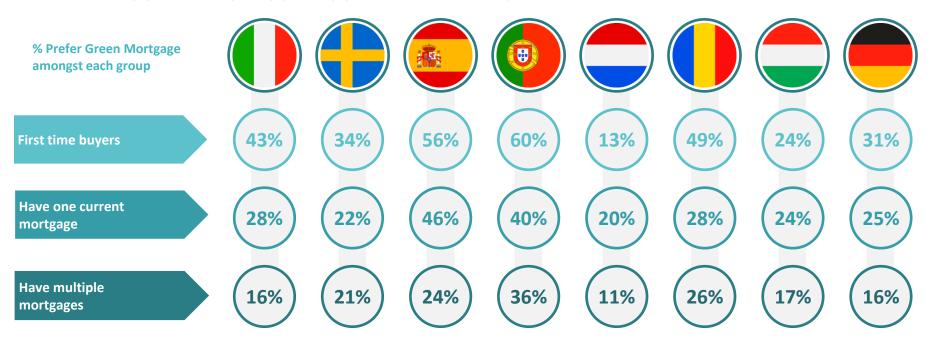
B6. Which mortgage would / are you be most likely to choose?

Base: All respondents Italy (n=503); Sweden (n=505); Spain (n=514); Portugal (n=504); Netherlands (n=507); Romania (n=508); Hungary (n=506); Germany (n=500)



Preference for the Green Mortgages is stronger among those looking to enter the market (perhaps due to having less experience) – a viable potential target

Prefer Green Mortgage over existing mortgage/mortgage considered (T2B) – all respondents

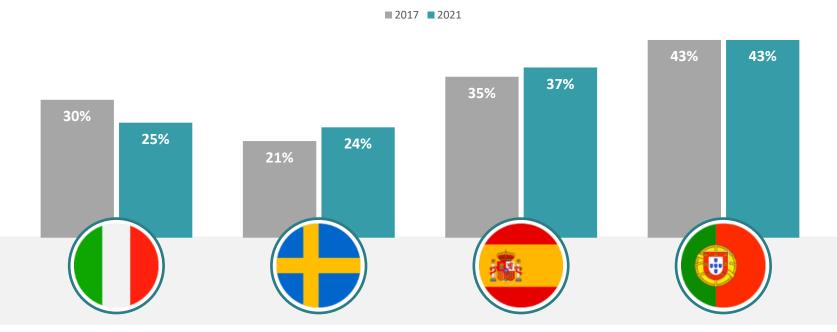




# Appeal of the Green Mortgage is unchanged compared to the previous wave of research

Appeal of Green Mortgage (over current mortgage) – all respondents

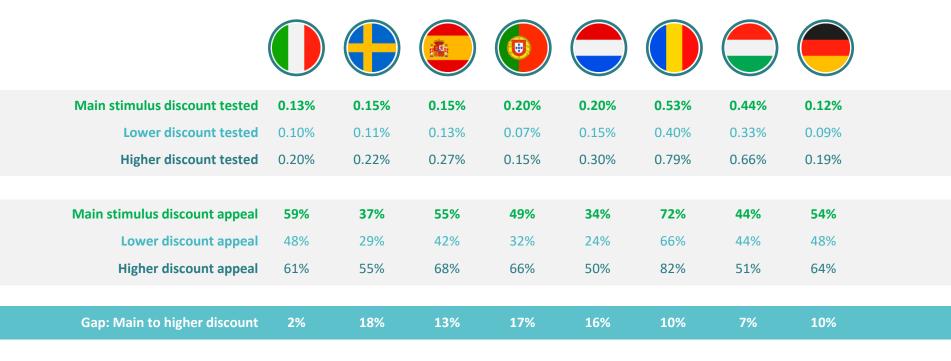
NB. No significant change vs previous wave





## Current discount rates feel appropriate – while further discounts would aid takeup, reducing the discount would have an impact on acquisition

Impact of discount levels on appeal (T3B) – all respondents







We also tested the impact of the Energy Efficient Mortgage Label on perceptions



"Below is a logo that may be associated with the Green Mortgage.

To what extent does having such a logo make you more or less likely to trust the Green Mortgage?"



# We know from the qual that any form of accreditation is likely to moderately support trust in the product

**Qualitative findings** 

#### General familiarity with type of seal

Signifies an industry body or regulator

- A sign of high standards/code of conduct
- Or of following **rules**/regulations

Implies a higher authority, gives reassurance

- A third party vouching for this provider/ product
- "It shows it's not just marketing"
- Someone to appeal to if anything goes wrong

#### Some lack of clarity with EEML

As a new labelling system, it's unfamiliar; a complex industry / territory to apply this type of system to

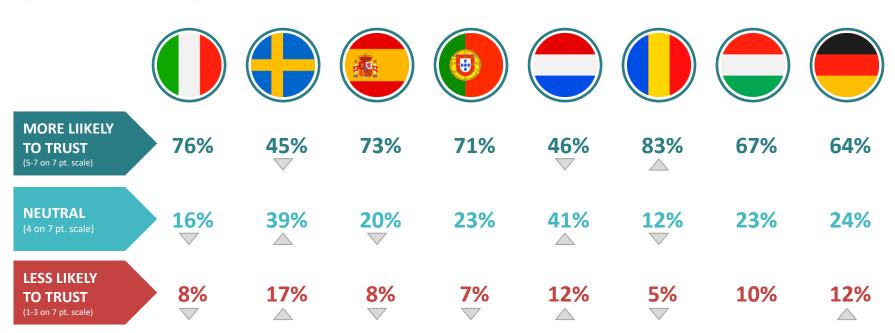
- Product is non-tangible, not clear how a 'green' label applies?
- It's more obvious how a property can be certified 'green' than a mortgage (no obvious carbon footprint)
- Does this label accredit the provider? the product? or even the property?

Despite some complexity, the official-looking label does lend trust to the product, reassuring that it is a genuine and reliable offer



The quant findings support this – the label helps establish trust, although the impact this has on decision-making is arguably likely to be limited

Impact of label on trust – all respondents



Over/under index (120/80) vs. all-market average



# The Energy Efficient Mortgage Label can be further optimized, in terms of how it's presented to consumers

**Qualitative findings** 

#### **Local language**

English-only label could be a barrier for some

**Practically**: hard to understand for non-English speakers

**Symbolically**: some pushback to the Anglicisation of everything

**Politically**: UK no longer in the EU, so why use English?

#### **Consumer framing**

EEML developed primarily as an internal industry tool

The description was very **technical**, didn't focus on benefits to the end consumer, or what the label means for them

#### **Graphic design**

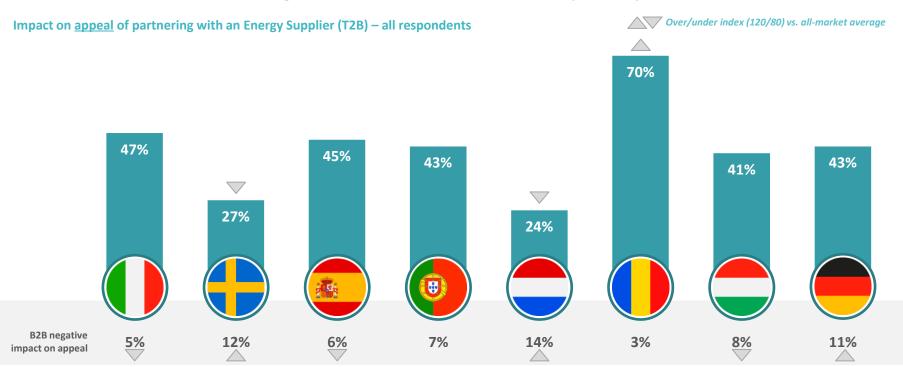
Generally well-received, the logo clearly connects to green issues via the plant/flower and homes via the house motif

Stars nod towards **EU** involvement, but are quite subtle – could be **more overt** 

Some comments that the colour isn't attractive



Partnering with an Energy Supplier lends credence to the overall proposition for most markets, although those in SW and NL are perhaps more neutral

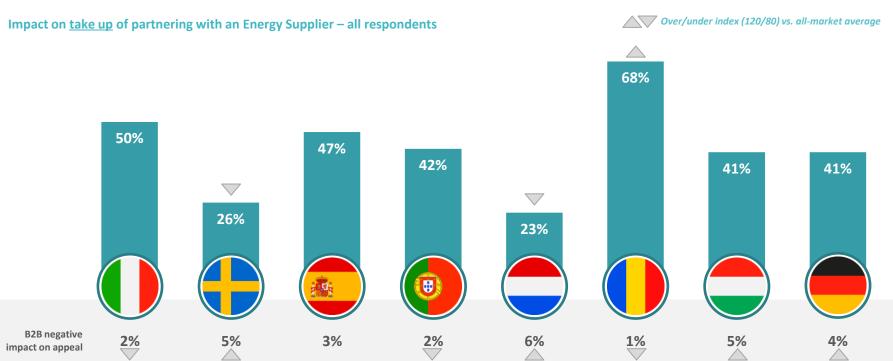


C1. This mortgage product would be provided by the lender of your choice, together with an Energy Supplier. Now that you know a lender would be partnering with an Energy Supplier to offer this new mortgage product, is it more or less appealing to you?

Base: All respondents Italy (n=503); Sweden (n=505); Spain (n=514); Portugal (n=504); Netherlands (n=507); Romania (n=508); Hungary (n=506); Germany (n=500)



# And certainly, this partnership is more likely to have a positive impact on Green Mortgage take-up (rather than detracting from the proposition)





# This echoes the qualitative findings – there's value for both the lender and energy supplier within the partnership

**Qualitative findings** 

#### Mortgage and lending

#### A uniquely specialised role

Only a bank/financial institution would be **trusted** to deliver these services

Most generally favouring well-known, established local banks

The involvement of an energy company in this world can feel **surprising** 

#### **Energy efficiency**

A separate sphere of expertise

Banks are **not expected to be expert** here – although it's less of a stretch than vice versa

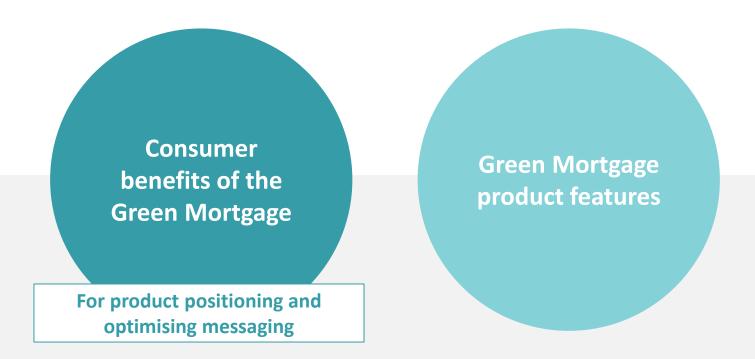
E.ON lends **real expertise and credibility** to this area – trusted to provider energy consultancy & guidance

Seen as a **socially-positive scheme** for E.on to be involved in, encouraging efficiency (rather than maximising consumption)

C. Which product features drive appeal, and what barriers need to be overcome to increase appeal further?



We can split drivers of appeal into two main categories – taking each of these in turn





# A mix of financial and environmental drivers are spontaneously mentioned by consumers

Reasons for being likely to take out the Green Mortgage – all respondents likely to take out



"For future consumption savings and greening in general" (Male, 44)



"It seems to be beneficial in the long run both for me and the environment"

(Male, 69)



"It would ultimately help me save money and do something good for the environment" (Female, 35)



"The cost of maintaining the home would be significantly reduced, it would pay for itself soon"
(Female, 43)

"It would lower the cost of my bills and contribute to the protection of our planet"

(Male, 36)

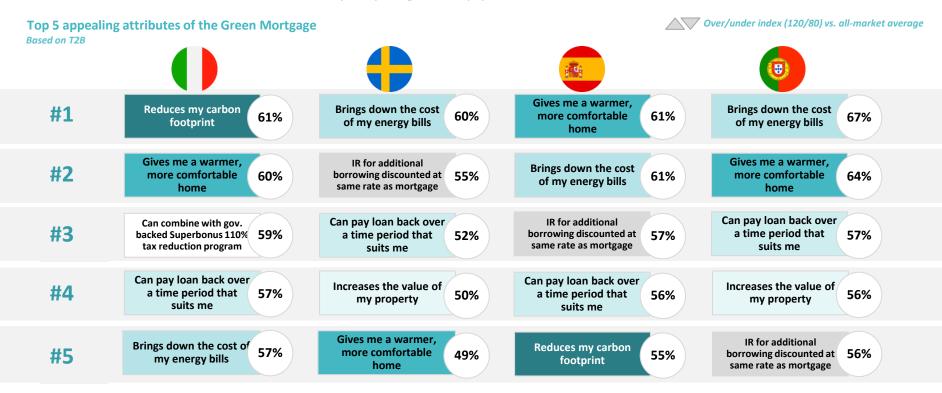


"To improve the ecological footprint and take advantage of incentives"

(Female, 30)

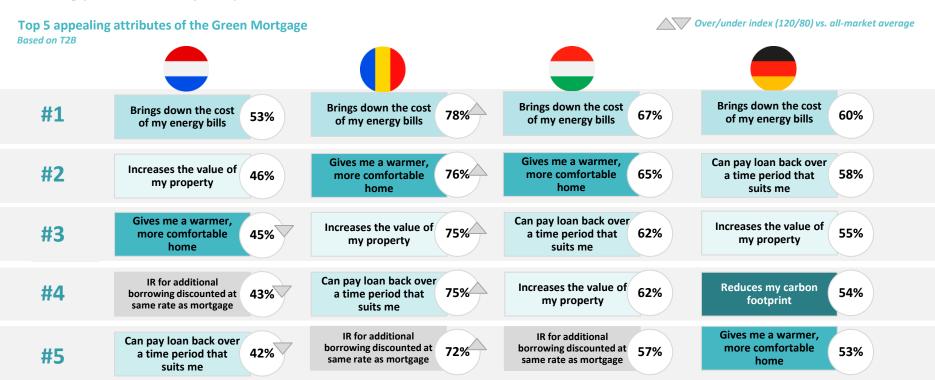


Appeal is largely driven by the tangible economic benefits of the product, with wider environmental drivers playing a supplemental role...



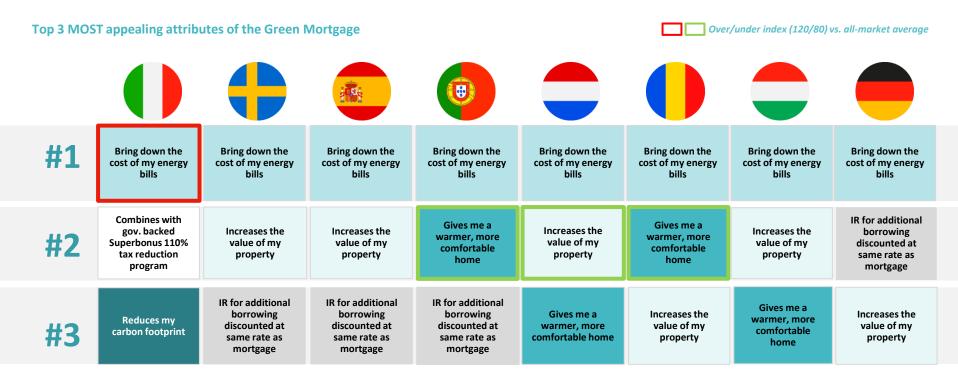


# ... this is also the case for remaining markets, with the potential savings on energy bills a key aspect





## And it is this instant cost saving on energy bills that is the key message to communicate across all markets





# And it is this instant cost saving on energy bills that is the key message to communicate across all markets

**Top 3 MOST appealing attributes of the Green Mortgage** 



The hierarchy of importance is consistent amongst first time buyers, those with one mortgage and those with multiple mortgages – however, first time buyers are generally <u>even more enticed</u> by the financial benefits of the Green Mortgage

#3

Reduces my carbon footprint

IR for additional borrowing discounted at same rate as R for additional borrowing discounted at same rate as IR for additional borrowing discounted at same rate as mortgage

Gives me a warmer, more omfortable home

ncreases the value of my property Gives me a warmer, more comfortable home

Increases the value of my property



### Focusing now on the product features themselves

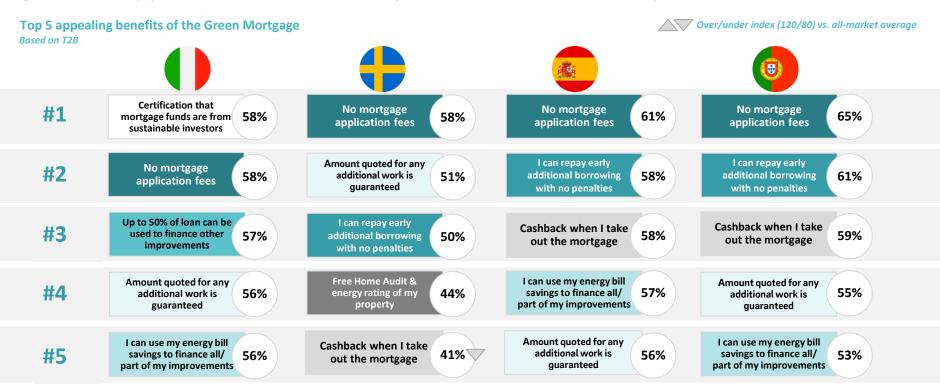
Consumer benefits of the Green Mortgage

**Green Mortgage** product features

For prioritising features to include / dial-up to consumers

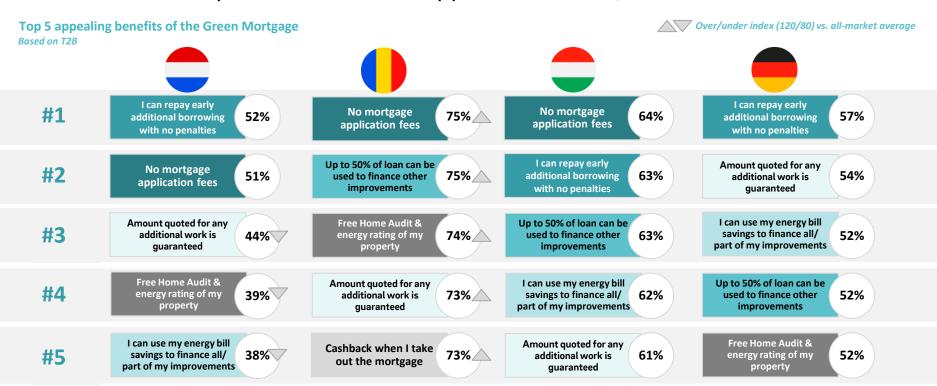


No mortgage application fees with flexible repayment options is another lever to generate appeal, with sustainability of investors a more important benefit in IT...



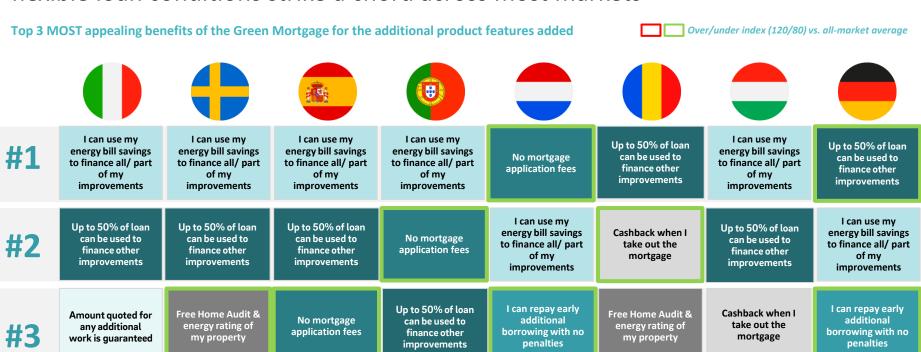


... this is generally consistent across other markets, although the option to use funds for other improvements is also appreciated in RO, HU and DE





When pushed for the most appealing benefit, innovative payment solutions and flexible loan conditions strike a chord across most markets





When pushed for the most appealing benefit, innovative payment solutions and flexible loan conditions strike a chord across most markets



The hierarchy of importance is consistent amongst first time buyers, those with one mortgage and those with multiple mortgages – however, first time buyers are generally <u>even more enticed</u> by low mortgage application fees and flexible payment / borrowing terms



Amount quoted for any additional

ree Home Audit & energy rating of

No mortgage

Up to 50% of loan can be used to finance other improvements I can repay early additional borrowing with no

ree Home Audit & energy rating of Cashback when take out the

I can repay early additional borrowing with no



# No mortgage application fees with flexible repayment options is another lever to generate appeal

### Appeal of benefits of the Green Mortgage

			<u> </u>	(1)				
No mortgage application fees	58%	58%	61%	65%	51%	75%	64%	n/a
The amount you're quoted to complete any additional work to improve your energy efficiency rating is guaranteed	56%	51%	56%	55%	44%	73%	61%	54%
Early repayment of additional borrowing with no penalties	51%	50%	58%	61%	52%	n/a	63%	57%
You can choose to use up to 50% of the loan to finance other improvements you may wish to make to your home	57%	41%	56%	53%	37%	75%	63%	52%
Ability to use your energy bill savings to finance all or part of your renovation improvements	56%	39%	57%	53%	38%	71%	62%	52%
Free Home Audit and energy rating of property worth between 300-500 EUR / 3,000 – 5,000 Kr / 1,500 – 2,500 Leu	53%	44%	52%	51%	39%	74%	59%	52%
500 EURO / 175,000 Forint / 5,000 Kr / 2,500 Leu cashback when taking out the mortgage product	49%	41%	58%	59%	36%	73%	60%	48%
Certification from the bank that your mortgage funds are sourced from sustainable investors	58%	39%	49%	51%	38%	72%	55%	45%
Discounts from furniture stores on energy efficient appliances	n/a	n/a	n/a	n/a	n/a	73%	n/a	n/a

Over/under index (120/80) vs. all-market average



# Focusing on government initiatives specifically, financial incentives such as tax savings and subsidies have strongest appeal

Appeal of Government benefits (Based on T2B)

Over/under index (120/80) vs. all-market average

	Market average			<b>19</b>	<b>(H)</b>				
No VAT charged for all energy efficient products you buy for your home	63%	64%	59%	61%	66%	56%	76%	64%	57%
Additional subsidies for energy efficient products (50% rebates on products such as solar panels)	62%	57%	59%	58%	66%	54%	77%	65%	58%
Additional borrowing for energy efficient improvements charged at a 0% borrowing rate	60%	56%	52%	58%	66%	45%	75%	66%	58%
Discount on property purchase tax available for energy efficient homes	59%	58%	54%	59%	65%	45%	74%	60%	58%
Lower down payment or deposit on the property when taking out the Green Mortgage	n/a	54%	42%	59%	59%		75%	56%	48%
No property tax charged for the amount invested in energy efficient improvements	n/a					50%			





# This is likely to remain important to those actively searching for a mortgage in the near future

Appeal of Government benefits – next 2 years

Over/under index	(120/20) vc	all-market average
Over/ under mack	(120/00/03.	un market average

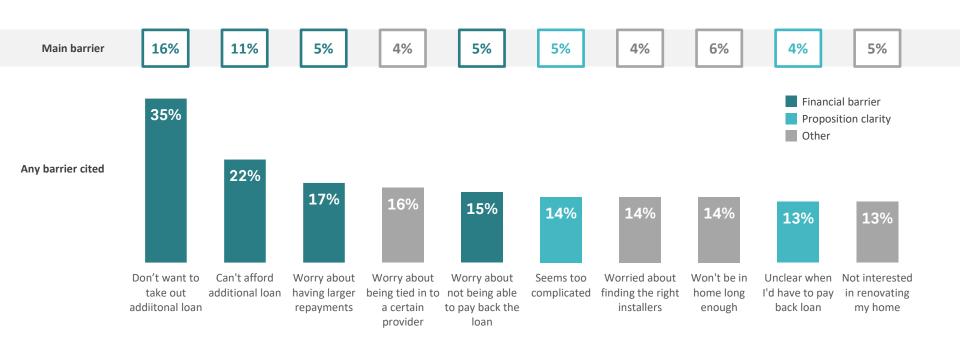
	Market average		<b>+</b>		<b>(B)</b>				
Additional subsidies for energy efficient products (50% rebates on products such as solar panels)	54%	51%	56%	54%	56%	55%	59%	50%	49%
No VAT charged for all energy efficient products you buy for your home	48%	51%	46%	51%	50%	47%	48%	49%	41%
Additional borrowing for energy efficient improvements charged at a 0% borrowing rate	42%	30%	46%	40%	45%	36%	49%	51%	41%
Discount on property purchase tax available for energy efficient homes	41%	41%	48%	48%	46%	30%	42%	38%	35%
Lower down payment or deposit on the property when taking out the Green Mortgage	n/a	34%	36%	42%	46%		34%	37%	33%
No property tax charged for the amount invested in energy efficient improvements	n/a					28%			





### Barriers to uptake are largely financial, with proposition clarity less of an issue

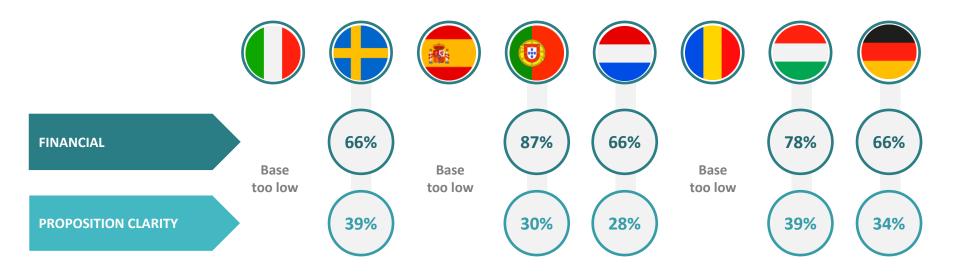
Barriers to taking up the Green Mortgage - all who find GM unappealing (all markets combined)





# While this varies to an extent, financial concerns represent the most significant barrier across markets

Barriers to taking up the Green Mortgage (ANY) - all who find GM unappealing





**BARRIERS:** Cost concerns will need to be addressed, while simplifying comms as much as possible will naturally attract more consumers to the proposition

Reasons for being unlikely to take out the Green Mortgage – all respondents unlikely to take out





"I prefer to determine myself when I make improvements and how I pay this"

(Male, 68)



(Female, 67)

"I feel comfortable and safe with my current mortgage" (Male, 38)



"We don't want to pick up more credit" (Female, 40)



D. To what extent does a Home Energy Management App appeal to consumers?



## This section covers the following key questions

**D.1** 

**D.2** 

**D.3** 

To what extent do attitudes to energy monitoring and usage differ by market?

How likely are consumers to use the Home Energy Management App?

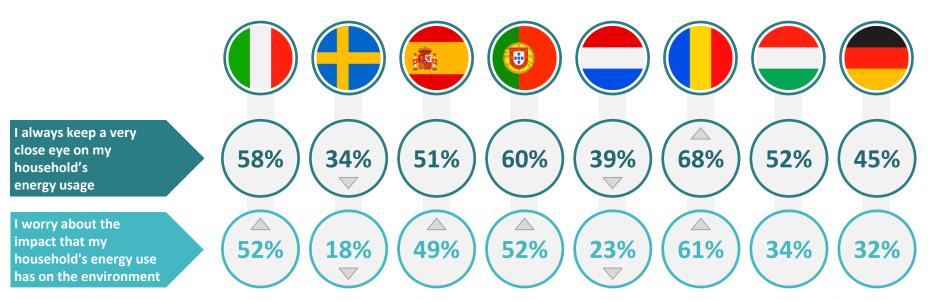
Which features drive appeal of the Home Energy Management App?



Close monitoring of energy usage is relatively common in most markets, although there's less of a concern about household energy use in NL

Consumer attitudes to monitoring energy usage (T2B) – all respondents

Over/under index (120/80) vs. all-market average



NB. Monitoring more common amongst older consumers; general concern more pronounced amongst younger consumers



Before asking respondents to evaluate the Home Energy Management App, we gave them a key overview of how it works:

If you install new <u>solar panels</u> and / or an <u>electric vehicle charging station at</u> your home, you can download the "Home Energy Management App" offered by your installer

#### Within the app, you'll be able to view:

- Your energy performance: See how much solar power you have generated, how you used it to power appliances in the home and how much solar power you will generate based on weather forecast
- Energy cost saving overview: View how much you have saved on your energy bill since you installed solar panels
- Automatic scheduling function: If you have a tariff that offers you lower prices at certain times of day/night, the app can automatically schedule to charge your electric car during this time or other appliances

#### And some further features include:

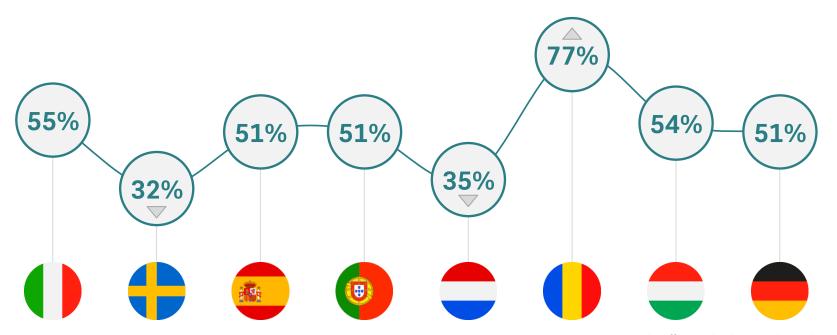
- **Solar car charging:** You can optimize your charging further to charge your electric vehicle when the sun is shining and save even more money
- **Efficiency check:** You can track the performance of your solar panels to ensure they're running as they should
- **Sustainability impact:** See the impact of your new home efficiency measures in terms of how much CO2 you've saved
- Solar Community: Join the community to find out how much energy you generate together with other solar panel owners in your region. Ability to join sustainability causes in your neighborhood



## Appeal of the Home Energy Management is relatively strong across markets, although more muted in SW and NL

Appeal of Home Energy Management App (T2B) – all respondents

Over/under index (120/80) vs. all-market average



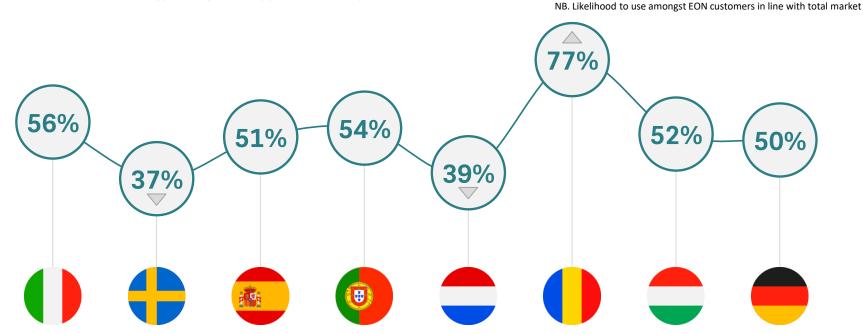
NB. Little difference by demographics or home type



Likelihood to use the app is aligned with appeal as we'd expect – offering as part of the Green Mortgage wider package is certainly unlikely to deter prospects

Likelihood to use Home Energy Management App (T2B) – all respondents

Over/under index (120/80) vs. all-market average



NB. Little difference by demographics or home type





## There's no one feature that drives overall appeal, although messages around cost saving are likely to resonate when communicating the app

Appeal of Home Energy Management App feature	Ou	ver/under index (2	(120/80) vs. all-market average					
			i de	(8)				
How much money you've saved on your energy bills since you installed your solar panels	56%	47%	57%	63%	51%	78%	65%	52%
If you have a tariff that offers lower prices at certain times of the day / night, the app can schedule when to charge appliances to reduce your energy costs	56%	45%	57%	66%	48%	76%	63%	53%
Tracking the performance of your solar panels to ensure they're running as they should be	57%	49%	56%	65%	52%	75%	60%	51%
View your energy performance - how much energy you've used, which appliances it powered and how much solar power you will generate based on the weather forecast	55%	48%	57%	62%	49%	72%	63%	53%
Optimised solar charging - allowing you to charge your electric vehicle when the sun is shining, to save more money	56%	44%	54%	60%	45%	72%	60%	52%
Seeing how much CO2 you've saved	51%	36%	49%	52%	37%	70%	59%	49%
Ability to join neighbourhood sustainability causes and see the collective positive impact	51%	27%	46%	47%	32%	72%	50%	46%

NB. No clear differences by demographics or home type

For questions about the report and further data and documents reach out to:

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