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## Financial Stability Notes

# Going Green, The Growth in Green Mortgage Financing in Ireland

Derek Lambert, Paul Lyons and James Carroll  
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# Going Green – The Growth in Green Mortgage Financing in Ireland

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Central Bank of Ireland

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## Abstract

Green mortgages are a recent financial innovation, being established as a mainstream product in Ireland in 2019. By offering borrowers lower interest rates, green mortgages support wider emissions targets by incentivizing households and businesses to invest in energy efficiency. In this Note, we estimate the growth in green mortgage financing in Ireland and describe the characteristics of green mortgage borrowers and loans. We find that, despite their very recent introduction, green mortgages account for a sizable and growing share of mortgage lending, representing almost thirty per cent of originations in 2022. We also find that first time buyers (FTBs), those switching their mortgage, and borrowers in the Leinster region are the most likely cohorts to avail of green mortgages. Furthermore, green mortgage loan amounts are larger, are associated with higher value properties and are more prevalent in higher income groups, particularly for FTBs. This latter point suggests that there is a risk that the efficiency gap between high and low income groups could widen into the future. We also find evidence that some eligible borrowers have not availed of/received a green mortgage.

## 1 Introduction

Recent energy price shocks have heightened the importance of reducing the energy intensity of the national building stock. In Ireland, energy efficiency is monitored by the Building Energy Rating (BER) labelling system, which audits property performance from “A” (most efficient) to “G” (least).<sup>2</sup> Green mortgages are directly linked to this system, with most banks requiring a minimum B3 BER.

From the borrower perspective, the lower interest rate associated with green loans is an additional incentive to invest in higher levels of energy efficiency – the savings associated with green mortgages (typically 30bps) represent a sizable benefit for borrowers if discounts persist over the term of the loan. Green loans could also play a significant role in meeting Ireland’s wider decarbonisation goals, which includes targets to reduce building emissions by 40 per cent by 2030, primarily through retrofitting half a million homes to B2 BER standard.<sup>3</sup>

By providing favourable lending terms for higher energy efficiency, the banking sector is also signalling that the risks associated with climate change are being embedded into its core business. For example, there is a clear relationship between energy efficiency, energy costs and the overall financial health of the household, the salience of which has increased in the current high-energy price environment (the annual rate of inflation for energy products reached 54 per cent in June 2022). This link between higher energy efficiency and lower default is evident in prior research (Guin & Korhonen, 2020).

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<sup>1</sup> Macro-Financial Division & Climate Change Unit. Thanks to colleagues at SEAI for helpful discussions and comments. All views expressed in this Note are those of the authors alone and do not represent the views of the Central Bank of Ireland.

<sup>2</sup> See background from the Sustainable Energy Authority of Ireland [here](#)

<sup>3</sup> The *Climate Action Plan 2023 (CAP23)* is available [here](#)

In addition, a large body of empirical research shows a significant “energy efficiency premium” in property sales and rentals, a result which has potential implications for bank collateral values (Galvin, 2023, Hyland et. al., 2013). In the long run, such risks could intensify as a result of climate policy and changed consumer preferences. For example, higher carbon taxes would put upward pressure on fossil fuel prices, while higher energy prices combined with a climate-related alignment of consumer preferences would increase the energy efficiency premium.

Measuring banking sector exposure to such risks and mitigants is therefore important as it has possible implications for the stability of the financial system. Internationally, there are acute data gaps preventing an accurate appraisal of transition risk in the household sector.<sup>4</sup> This article partially fills this gap by offering a first glimpse into climate-aligned lending trends in Ireland. Our analysis shows that green mortgages currently represent thirty per cent of new mortgage lending. We also show that there are significant differences between green and non-green properties and borrowers. In particular, green mortgages tend to be drawn on higher value properties by higher income borrowers, which could lead to increasing energy inequality over time. Surprisingly, the data show that not all of those eligible for a green mortgage choose/get one.

## 2 Overview of the Green Mortgage Market in Ireland & Data

Green Mortgages (GMs) were first introduced in Ireland in 2019 and are now offered by the majority of mortgage lenders. According to the price comparison website bonkers.ie, GMs are currently available from AIB, BOI, EBS, Haven, and PTSB (as at Q1 2023). GMs are directly linked to the Irish energy performance certificate (EPC) scheme – the Building Energy Rating (BER) – which measures the energy consumption associated with heating (space and water), ventilation and lighting through a BER assessment. GMs are available on highly efficient “B3” or above properties and provide borrowers with preferential fixed interest rates (30bps lower at the time of writing).

**Figure 1: Building Energy Rating (BER) and Green Mortgage Eligibility**



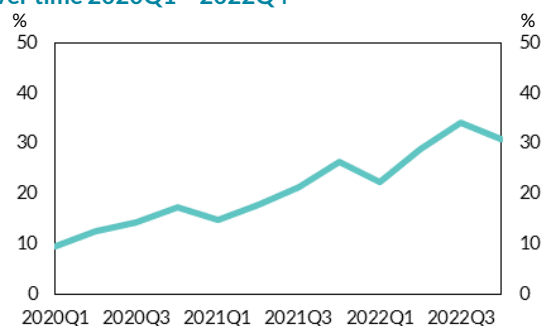
Source: SEAI with author additions.  
 Notes: The Building Energy Rating (BER) is an indication of the energy performance of a dwelling, covering heating, ventilation and lighting.

We utilise Central Bank of Ireland “Loan Level” data to estimate new green mortgage originations. This dataset collects information on all new mortgage originations and is mandatory for all lending

<sup>4</sup> In this Note, transition risk for the household sector refers to the costs associated with and the vulnerability of household financial stability to transitioning towards a zero or low carbon economy.

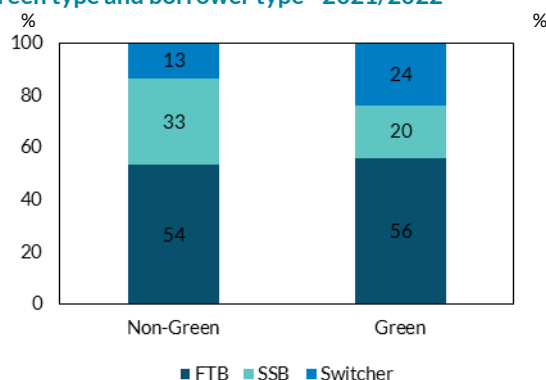
institutions which issue more than €50 million of new mortgage lending within a six-month period. There is no explicit GM flag in the lending data reported by banks to the Central Bank of Ireland. For this Note, we identify GMs through existing loan characteristics. Specifically, for a given term and loan-to-value (LTV) ratio, we identify GMs through their interest rate discounts.<sup>5</sup> Using this approach, we estimate that GMs represent almost a third of all new mortgage lending provided by these banks in 2022 (Figure 2). Additionally, it is clear that GM originations have grown steadily since their introduction, up from 10 per cent in Q1 2020. This growth is aligned with the increased focus and priority being placed on climate transition risks and ways in which banks and consumers can support the transition to net zero. First-time buyers (FTBs) received the highest share of all GM originations in the period (56 per cent) versus switcher mortgages (24 per cent) and second-time and subsequent buyers (SSBs) (20 per cent). On switcher mortgages, there was a large increase in switching activity across the board in 2022 as borrowers tried to lock in more favourable interest rates ahead of ECB interest rate rises.

**Figure 2: The proportion (%) of green mortgage lending over time 2020Q1 – 2022Q4**



Source: Author calculations using bank data.  
Notes: Green mortgage originations from 2020Q1 - 2022Q4 from banks that had a green mortgage product offering during this period.

**Figure 3: The proportion (%) of mortgage lending by green type and borrower type - 2021/2022**



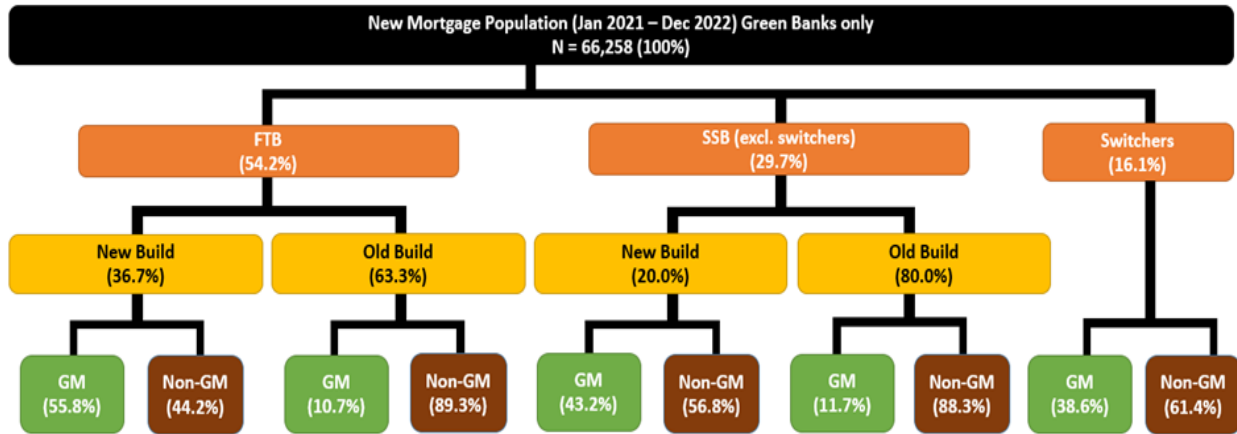
Source: Author calculations using bank data.  
Notes: Mortgage originations in 2021 - 2022 from banks that had a green mortgage product offering during this period.

In Figure 4, we decompose our total population of 66,258 (2021 and 2022) new mortgage loans by type (FTB, SSB or switcher) and then, in each case, by property type (New Build or Old Build) and finally by GM. Firstly, of all mortgages originated in the period, 54.2 per cent went to FTBs, 29.7 per cent went to SSBs with the remaining 16.1 per cent going to switchers.

Secondly, within FTB and SSB originations, the majority were for old builds (63.3 per cent and 80.0 per cent, respectively). Thirdly, of those FTB borrowers who purchased new (and highly energy efficient) properties, 44 per cent were not on a green rate (the equivalent for SSBs was 57 per cent). While the latter share appears relatively high given the clear savings associated with GMs, it is important to note that the majority (61 per cent for FTBs) were for self-build properties which typically do not receive a final BER certification until the completion of works. Such buyers could switch to a GM at a later date. Informational gaps and/or behavioural biases could explain the remaining 39 per cent (of the non-GM, FTB, new-build share) and this is an area that may warrant future analysis.

<sup>5</sup> We identify the precise discounts that were offered at each lending institution for green mortgage originations and apply each discount to our green mortgage identification.

Figure 4: The Share of Green and non-Green mortgage lending by borrower type in 2021/2022<sup>6</sup>

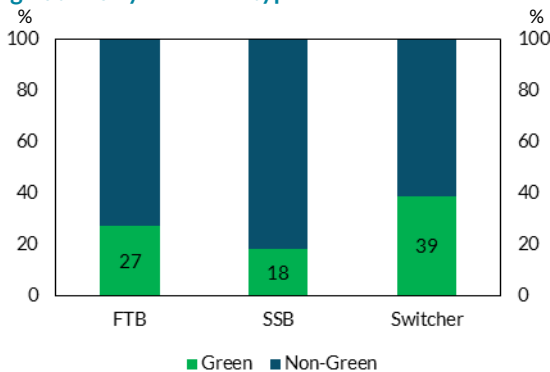


Source: Author calculations using bank data  
 Notes: Green and non-green mortgage originations in period from banks that had a green mortgage product offering or offerings at any point during this period.

### 3 Comparing Green and non-Green Market Shares

In this section, we compare GM uptake across a range of characteristics. Figure 5 shows that GM uptake was highest for switchers (39 per cent), followed by FTBs (27 per cent) and SSBs (18 per cent). In Figure 6, we further split the sample into four income quartiles and plot the proportion of GMs within FTB and SSB samples. It is clear that GM originations are more prevalent within higher income groups, particularly for the FTB sample.

Figure 5: Proportion of Green and non-Green mortgage originations by borrower type.



Source: Author calculations using bank data.  
 Notes: Green and non-green mortgage originations 2021 – 2022 from banks that had a green mortgage product offering during this period.

Figure 6: Proportion of Green mortgage originations by income quartile.



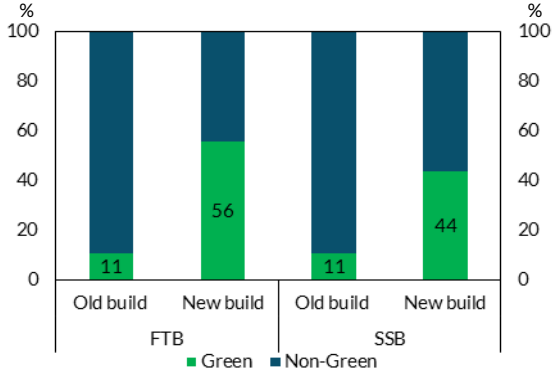
Source: Author calculations using bank data.  
 Notes: Green and non-green mortgage originations 2021 – 2022 from banks that had a green mortgage product offering during this period. The '25' or 25th Percentile, also known as the first, or lower quartile is the value at which 25% of the incomes lie below that value, and 75% of the incomes lie above that value. The 25<sup>th</sup> percentile represents household incomes from €9,776-€64,720, the 50<sup>th</sup> percentile €64,720-€86,867, the 75<sup>th</sup> percentile €86,867-€118,367, and the 100<sup>th</sup> percentile €118,367-€2,842,708.

Under building regulations, new residential dwellings (houses or apartment) typically reach a minimum A2 rating.<sup>7</sup> For new build FTBs and SSBs, GMs were drawn by 56 per cent and 44 per cent of borrowers respectively (Figure 7). For old builds, this drops to 11 per cent. Among borrowers purchasing new builds, we can see from Figure 8 that the GM rate generally increases with income (with exception of the fourth quartile).

<sup>6</sup> Data for Green Banks only - mortgage lending from banks that had a green mortgage product offering during this period.

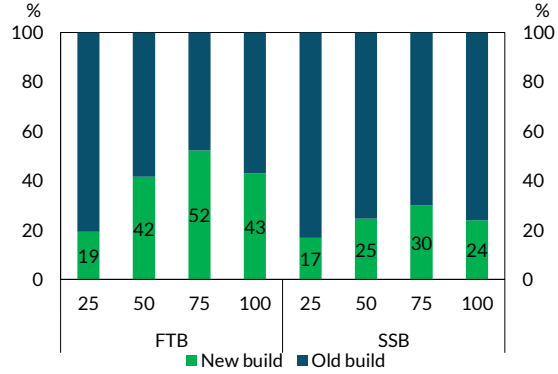
<sup>7</sup> New Energy Efficiency Standards for New Dwellings From [Department of Housing, Local Government and Heritage](#), Published on 4 October 2019.

**Figure 7: Proportion of Green loans originated by build type and borrower category.**



Source: Author calculations using bank data.  
 Notes: Green and non-green mortgage originations 2021 – 2022 from banks that had a green mortgage product offering during this period.

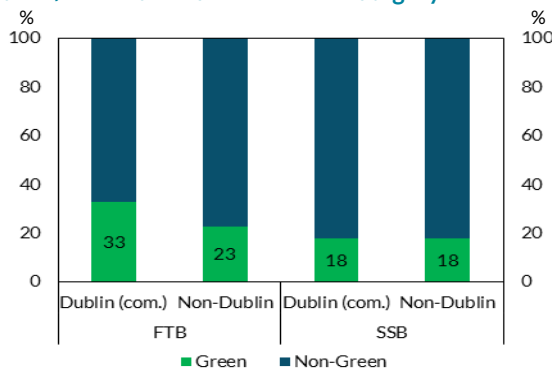
**Figure 8: Proportion of Green loans originated by build type, income quartiles and borrower category.**



Source: Author calculations using bank data.  
 Notes: Green and non-green mortgage originations 2021 – 2022 from banks that had a green mortgage product offering or offerings during this period. The '25' or 25th Percentile, also known as the first, or lower, quartile is the value at which 25% of the incomes lie below that value, and 75% of the incomes lie above that value. The 25<sup>th</sup> Percentile represents household incomes from €9,776-€64,720, the 50<sup>th</sup> percentile €64,720-€86,867, the 75<sup>th</sup> percentile €86,867-€118,367, and the 100<sup>th</sup> percentile €118,367-€2,842,708.

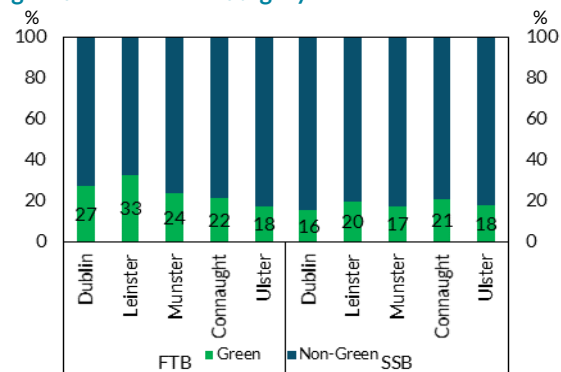
Figure 9 and Figure 10 compares geographical characteristics of the properties connected to the GM originations issued during this period. In Figure 9, we split our sample into two regions, (1) Dublin including commuter belt counties of Meath, Kildare and Wicklow and (2) non-Dublin/non-commuter belt counties.<sup>8</sup> Among FTB purchases in Dublin/commuter counties, 33 per cent received a GM, which was higher than the share for the rest of the country (23 per cent). For SSBs, a similar share (18 per cent) were green regardless of whether the property was located in Dublin/commuter counties or non-Dublin. Figure 10 splits the originations by five different regions (Dublin, Leinster (excluding Dublin), Munster, Connaught and Ulster). Among FTBs, the highest proportion of GMs were to borrowers in Leinster followed by borrowers in Dublin. Among SSBs, there was lower regional variation.

**Figure 9: Proportion of Green mortgages originated by Dublin/Non-Dublin and borrower category.**



Source: Author calculations using bank data.  
 Notes: Green and non-green mortgage originations 2021 – 2022 from banks that had a green mortgage product offering or offerings during this period. Dublin (com.) consists of mortgage originations for properties located in Dublin and commuter counties of Meath, Kildare and Wicklow.

**Figure 10: Proportion of Green mortgages originated by region and borrower category.**



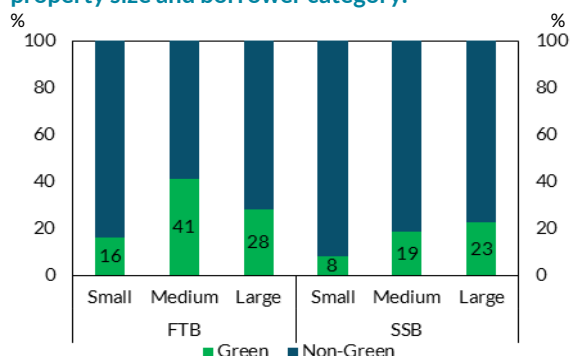
Source: Author calculations using bank data.  
 Notes: Green and non-green mortgage originations 2021 – 2022 from banks that had a green mortgage product offering or offerings during this period. Leinster here refers to Leinster excluding Dublin.

Finally, we explore GM rates by property size and property type (Figure 11 and Figure 12). For FTBs, 41 per cent of mortgage originations for 'medium' sized properties were green, the highest proportion of GM originations by categorisation of property size. By property type, the highest proportion of GM originations were for semi-detached properties. For SSBs, properties within the

<sup>8</sup> Commuter belt counties as identified in CSO 2016 Census of Population: <https://www.cso.ie/en/releasesandpublications/ep/p-cp6ci/p6cii/p6www/>

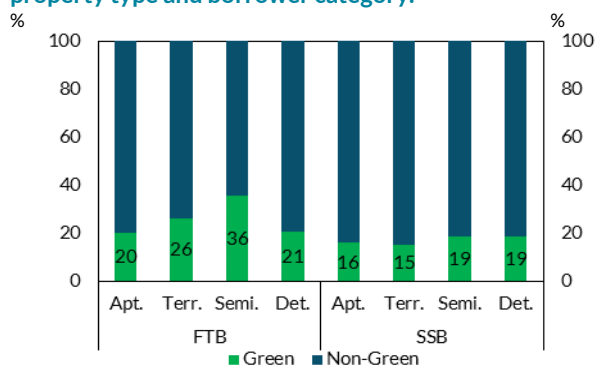
'medium' to 'large' category, and property types within the semi-detached or detached category had higher proportions of green originations.

**Figure 11: Proportion of Green loans originated by property size and borrower category.**



Notes: Author calculations using bank data. Green and non-green mortgage originations 2021 - 2022 from banks that had a green mortgage product offering or offerings during this period. Property size is grouped within three equally sized categories contained within the sample. Outliers were removed prior to categorisation. 'Small' represents property sizes from 50 to 108 square meters, 'medium' represents property sizes from 108-150 square meters, and 'large' represents property sizes from 150-387 square meters.

**Figure 12: Proportion of Green loans originated by property type and borrower category.**



Notes: Author calculations using bank data. Green and non-green mortgage originations 2021 - 2022 from banks that had a green mortgage product offering or offerings during this period.

## 4 Characteristics of Green Mortgages

In this section, we present a comparison of mean loan, property, and borrower characteristics for both FTB's and SSB's by GM and non-GM originations. We also provide a statistical test for significant differences between the two groups. In 2021/2022, the mean loan drawn down by FTBs was €242,765 for non-GM originations, compared to €301,736 for GM originations (Table 1). These differences in average property values may reflect the condition of the properties involved, newly built properties compared to old builds. Similarly, we observe higher mean property values and incomes for GMs which translates into higher LTV and LTI ratios. In line with advertised 'Green' discounts provided by lenders, the mean interest rate charged on GMs is 0.3 percentage points lower.

**Table 1: Mean Loan Characteristics for FTBs for Green and non-Green mortgages originated during the period 2021-2022.**

	Non-Green	Green	Difference
<b>Loan Characteristics</b>			
Loan Size (€)	242,765	301,736	58,971***
Property Value (€)	309,224	370,646	61,422***
Loan-to-Value (%)	79.8	81.9	2.1***
Income (€)	77,983	93,403	15,419***
Loan-to-Income	3.1	3.3	0.2***
Loan Term (Years)	28.8	29.7	0.9***
Interest Rate (%)	2.8	2.5	-0.3***
<b>Property Characteristics</b>			
New property (%)	22.3	75.2	52.9***
Property Size (sq.ft)	1,353	1,475	122***
Apartment (%)	10.3	7.0	-3.3***
Terraced (%)	20.1	19.0	-1.1**
Semi-detached (%)	33.2	49.2	16.0***
Detached (%)	35.0	24.5	-10.5***
<b>Borrower Characteristics</b>			
Borrower Age (Years)	34.9	34.7	-0.3***
Joint Applicant (%)	67.4	80.6	13.2***
Salaried Employee (%)	97.0	97.1	0.1
Broker (%)	24.8	22.2	-2.6
Region, of which:			
Dublin (%)	25.3	25.4	0.1
Leinster (%)	30.1	39.7	9.6***
Munster (%)	26.8	22.9	-4.0***
Connacht (%)	11.7	8.6	-3.1***
Ulster (%)	6.0	3.4	-2.6***

Notes: \*\*\* indicates significance at 1% level, \*\* at 5% level. Significance levels indicate the results from a t-test on unrounded data. Sample used excludes Buy to Lets. Sample of lenders in 2021/2022 which offered Green Mortgage rates. Where multiple loans are originated on the same date to the same borrower(s), we count these as one single 'housing loan' on this date. The individual amounts advanced are aggregated together and a weighted interest rate applied. For all loans, LTV and LTI are reported at facility level.

Regarding property characteristics of FTBs (Table 1), 75 per cent of GMs were to newly built properties (22.3 per cent for non-GMs). The size of this differential likely reflects the fact that newly built properties typically reach an A2 BER rating and are automatically eligible. GM loans are also more likely to originate in the Leinster region (excluding Dublin) with almost 40 percent of GMs originating in this region, with an additional 25 per cent in Dublin, possibly reflecting a larger share of new builds constructed within the Greater Dublin Area. GMs are also dominated by semi-detached and detached properties (49.2 per cent and 24.5 per cent, respectively). In general, these findings hold for FTBs (Table 2).

**Table 2: Mean Loan Characteristics for SSBs for Green and non-Green mortgages originated during the period 2021-2022.**

	Non-Green	Green	Difference
<b>Loan Characteristics</b>			
Loan Size (€)	256,072	300,402	44,330***
Property Value (€)	485,253	539,534	54282***
Loan-to-Value (%)	63.3	65.7	2.3***
Income (€)	120,323	130,346	10,023***
Loan-to-Income	2.6	2.8	0.2***
Loan Term (Years)	23.0	24.7	1.6***
Interest Rate (%)	2.7	2.4	-0.3***
<b>Property Characteristics</b>			
New property (%)	13.9	47.9	34.1***
Property Size (sq.ft)	1,773	2,003	230***
Apartment (%)	3.7	3.2	-0.5
Terraced (%)	12.4	10.0	-2.6***
Semi-detached (%)	28.9	30.3	1.4
Detached (%)	53.2	56.0	2.8***
<b>Borrower Characteristics</b>			
Borrower Age (Years)	42.6	41.2	-1.4***
Joint Applicant (%)	76.7	84.8	8.1***
Salaried Employee (%)	94.1	91.3	-2.8***
Broker (%)	15.2	13.6	-1.6**
Region, of which:			
Dublin (%)	31.7	27.0	-4.7***
Leinster (%)	28.2	31.7	3.5***
Munster (%)	25.8	24.8	-1.0
Connacht (%)	10.1	12.4	2.3***
Ulster (%)	4.1	4.1	0.0

Notes: \*\*\* indicates significance at 1% level, \*\* at 5% level. Significance levels indicate the results from a t-test on unrounded data. Sample used excludes Buy to Lets. Sample of lenders in 2021/2022 which offered Green Mortgage rates. Where multiple loans are originated on the same date to the same borrower(s), we count these as one single 'housing loan' on this date. The individual amounts advanced are aggregated together and a weighted interest rate applied. For all loans, LTV and LTI are reported at facility level.

## 5 Conclusion

The energy intensity of borrowers is a growing risk channel for the banking sector. Green mortgages provide lower interest rates on energy efficient properties, thereby creating an incentive for borrowers to invest in energy-saving technologies. Over time, the gradual decarbonisation of the mortgage book will lower energy-related credit risk in the banking sector. Efficiency improvements also improve bank collateral positions, with prior research showing a clear energy efficiency premium in property sales (Galvin, 2023, Hyland et. al., 2013). This relationship could intensify with rising energy prices and growing environmental concern.

Energy efficiency variables are, however, rarely available in credit registers, both in Ireland and internationally. This Note provides a simple methodology to partly remove this data gap. Our method identifies green mortgages through their preferential interest rate treatment and other advertised characteristics, and in doing so, provides an analytic platform to monitor climate-aligned lending trends in Ireland – an important prerequisite for achieving national climate targets in the buildings sector.

We show that green mortgages represent a growing share of the Irish market, and now account for about a third of lending. There are also clear differences in borrower, loan and property characteristics. In particular, we find that green mortgage borrowers have higher income, larger



mortgages and buy higher-value properties. We also find a higher green uptake for semi-detached properties and for those located in the Leinster region (excluding Dublin). The green mortgage share of new properties is, however, lower than expected – for example, of the group of FTBs that bought a new (energy efficient) property, 44.2 per cent were non-GM. While this is a high percentage, most of this group are self builds who might not have been directly eligible to apply for a GM rate at the time of mortgage drawdown. Understanding this lower than expected uptake will require further research, although may be linked to a lack of information on green mortgage benefits and applicability.

The lower green mortgage uptake among low-income borrowers is particularly noteworthy. Previous research suggests that lower-income households are more vulnerable to climate-related energy price rises and are also less likely to be in a position to invest in technologies that help mitigate energy usage (Adhikari, et al., 2023).

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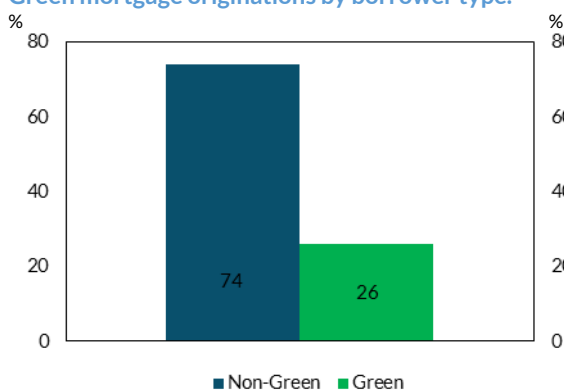
## Appendix

**Table A1: Mean Loan Characteristics for All Borrowers (FTBs & SSBs combined) for Green and non-Green mortgages originated during the period 2021-2022.**

	Non-Green	Green	Difference
<b>Loan Characteristics</b>			
Loan Size (€)	250,215	298,397	48,181***
Property Value (€)	393,005	445,524	52,519***
Loan-to-Value (%)	71.0	72.3	1.3***
Income (€)	97,259	108,893	11,633***
Loan-to-Income	2.9	3.0	0.1***
Loan Term (Years)	25.9	27.0	1.0***
Interest Rate (%)	2.7	2.4	-0.3***
<b>Property Characteristics</b>			
New property (%)	16.7	52.5	35.8***
Property Size (sq.ft)	1,523	1,670	147***
Apartment (%)	7.3	5.3	-2.0***
Terraced (%)	17.4	16.1	-1.3***
Semi-detached (%)	32.8	43.7	10.9***
Detached (%)	40.8	34.6	-6.1***
<b>Borrower Characteristics</b>			
FTB (%)	53.5	56.1	2.5***
SSB (%)	33.1	20.3	-12.7***
Switcher (%)	13.4	23.6	10.2***
Borrower Age (Years)	38.3	37.2	-1.1***
Joint Applicant (%)	71.9	83.3	11.5***
Salaried Employee (%)	95.9	95.8	-0.2
Broker (%)	22.6	22.5	-0.1
Region, of which:			
Dublin (%)	30.2	28.8	-1.4***
Leinster (%)	28.7	35.3	6.6***
Munster (%)	25.6	23.6	-2.1***
Connacht (%)	10.6	9.1	-1.5***
Ulster (%)	4.9	3.2	-1.7***

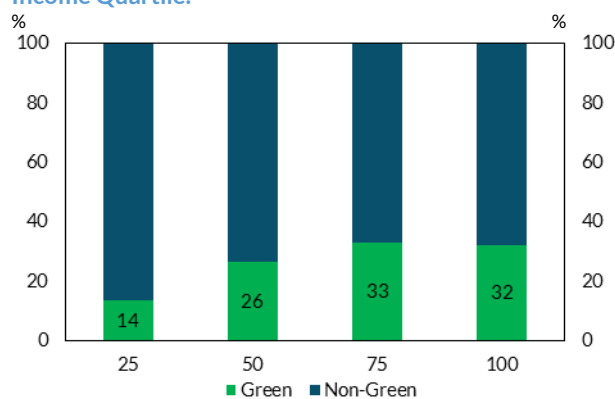
Notes: \*\*\* indicates significance at 1% level, \*\* at 5% level. Significance levels indicate the results from a t-test on unrounded data. Sample used excludes Buy to Lets. Sample of lenders in 2021/2022 which offered Green Mortgage rates. Where multiple loans are originated on the same date to the same borrower(s), we count these as one single 'housing loan' on this date. The individual amounts advanced are aggregated together and a weighted interest rate applied. For all loans, LTV and LTI are reported at facility level.

**Figure A1: The relative proportions of Green and non-Green mortgage originations by borrower type.**



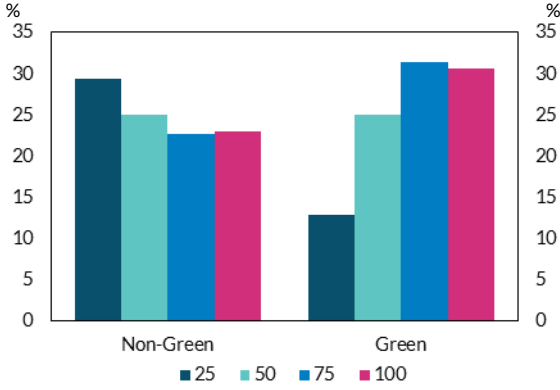
Notes: Author calculations using bank data. Green and non-green mortgage originations 2021 - 2022 from banks that had a green mortgage product offering or offerings during this period.

**Figure A2: Proportion of Green mortgage originations by Income Quartile.**



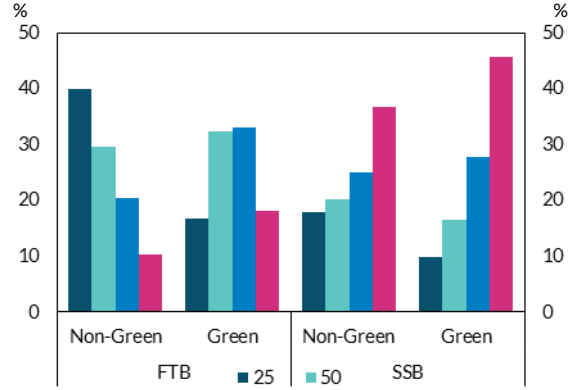
Notes: Author calculations using bank data. Green and non-green mortgage originations 2021 - 2022 from banks that had a green mortgage product offering or offerings during this period. The '25' or 25th Percentile, also known as the first, or lower, quartile is the value at which 25% of the incomes lie below that value, and 75% of the incomes lie above that value. The 25<sup>th</sup> Percentile represents household incomes from €9,776-€64,720, the 50<sup>th</sup> percentile €64,720-€86,867, the 75<sup>th</sup> percentile €86,867-€118,367, and the 100<sup>th</sup> percentile €118,367-€2,842,708.

**Figure A3: The relative proportions of Green and non-Green mortgage originations by Income Quartile.**



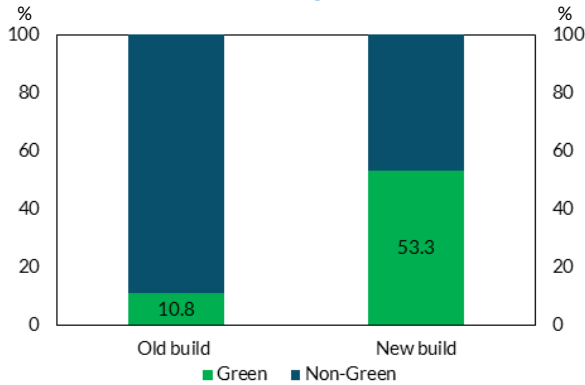
Notes: Author calculations using bank data. Green and non-green mortgage originations 2021 - 2022 from banks that had a green mortgage product offering or offerings during this period. The '25' or 25th Percentile, also known as the first, or lower, quartile is the value at which 25% of the incomes lie below that value, and 75% of the incomes lie above that value. The 25<sup>th</sup> Percentile represents household incomes from €9,776-€64,720, the 50<sup>th</sup> percentile €64,720-€86,867, the 75<sup>th</sup> percentile €86,867-€118,367, and the 100<sup>th</sup> percentile €118,367-€2,842,708.

**Figure A4: The relative proportions of Green and non-Green mortgage originations by Income Quartile.**



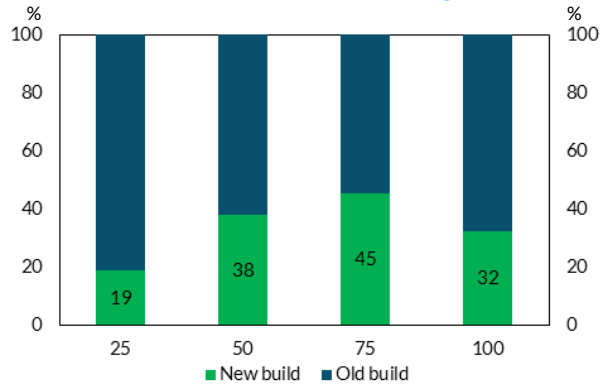
Notes: Author calculations using bank data. Green and non-green mortgage originations 2021 - 2022 from banks that had a green mortgage product offering or offerings during this period. The '25' or 25th Percentile, also known as the first, or lower, quartile is the value at which 25% of the incomes lie below that value, and 75% of the incomes lie above that value. The 25<sup>th</sup> Percentile represents household incomes from €9,776-€64,720, the 50<sup>th</sup> percentile €64,720-€86,867, the 75<sup>th</sup> percentile €86,867-€118,367, and the 100<sup>th</sup> percentile €118,367-€2,842,708.

**Figure A5: Proportion of Green loans originated by build type and borrower category.**



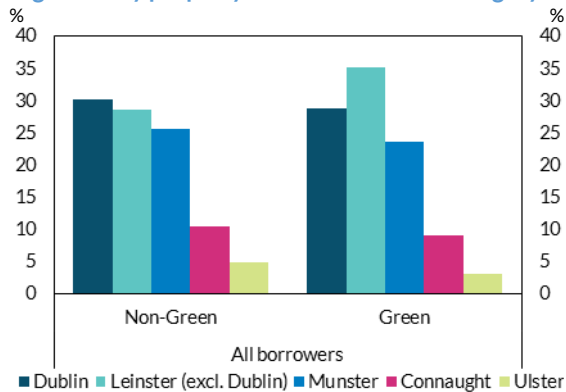
Notes: Author calculations using bank data. Green and non-green mortgage originations 2021 - 2022 from banks that had a green mortgage product offering or offerings during this period.

**Figure A6: Proportion of Green loans originated by build type, income quartiles and borrower category.**



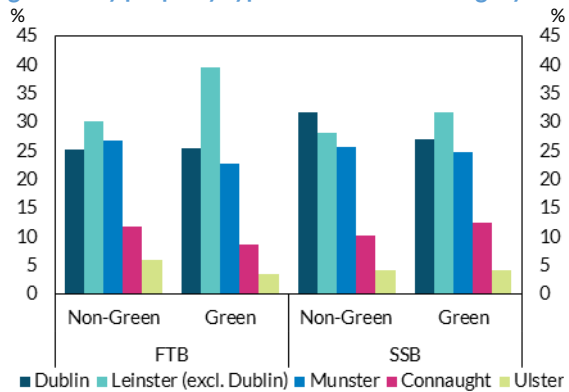
Notes: Author calculations using bank data. Green and non-green mortgage originations 2021 - 2022 from banks that had a green mortgage product offering or offerings during this period. The '25' or 25th Percentile, also known as the first, or lower, quartile is the value at which 25% of the incomes lie below that value, and 75% of the incomes lie above that value. The 25<sup>th</sup> Percentile represents household incomes from €9,776-€64,720, the 50<sup>th</sup> percentile €64,720-€86,867, the 75<sup>th</sup> percentile €86,867-€118,367, and the 100<sup>th</sup> percentile €118,367-€2,842,708.

**Figure A7: The relative proportion of Green loans originated by property size and borrower category.**



Notes: Author calculations using bank data. Green and non-green mortgage originations 2021 - 2022 from banks that had a green mortgage product offering or offerings during this period. Dublin (commuter) consists of mortgage originations for properties located in Dublin, Meath, Kildare and Wicklow.

**Figure A8: the relative proportions of Green loans originated by property type and borrower category.**



Notes: Author calculations using bank data. Green and non-green mortgage originations 2021 - 2022 from banks that had a green mortgage product offering or offerings during this period.

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