



Green Tagging: Mobilising Bank Finance for Energy Efficiency in Real Estate

REPORT FROM THE BANK WORKING GROUP 2017

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CLIMATE STRATEGY & PARTNERS | UN Environment Inquiry



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About this Report

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About Climate Strategy & Partners

Climate Strategy & Partners is a leading consultant in climate finance, energy efficiency investments and the corporate strategies and Government policies required to up-scale both. For 8 years, the Climate Strategy team has been providing global companies, banks and Governments advice on how to accelerate the economic transition to a low carbon economy. Climate Strategy's chief executive, Peter Sweatman, has authored or co-authored thirteen white papers, is rapporteur to the G20's Energy Efficiency Financial Task Group and the EU Commission and UN Environment Finance Initiative's Energy Efficiency Financial Institutions Group (EEFIG). Climate Strategy has supported energy transition policy development in Mexico, France, UK and Spain and continues to implement leading low carbon business solutions for clients. Two years ago, Climate Strategy launched a subsidiary, Energy Efficiency Capital Advisors (EECA), which has advised on the refinancing of multiple energy efficiency investments in Spain and is considered a leader in that sector in the region. More information can be found at www.climatestrategy.com

About The UN Environment Inquiry

The Inquiry into the Design of a Sustainable Financial System has been launched by the United Nations Environment Programme (UN Environment) to improve the financial system's effectiveness in mobilizing capital for sustainable development. Established in January 2014, it published the first edition of 'The Financial System We Need' in October 2015, with the second edition launched in October 2016 and the third in November 2017. The Inquiry has worked in over 20 countries and produced a wide array of briefings and reports on sustainable finance. More information on the Inquiry can be found at: www.unep.org/inquiry and www.unepinquiry.org or from: Ms. Mahenau Agha, Head of Outreach mahenau.gha@un.org.

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1

Executive Summary

This report presents the findings and recommendations from a survey of green tagging practices among 10 European banks: ABN Amro, BBVA, Berlin Hyp, HSBC, ING, Lloyds, SEB, Suedtiroler Volksbank, Triodos and UniCredit. The survey shows that many are now active in identifying, analysing and promoting green finance ('green tagging') in their lending and debt capital markets operations. But even among these leaders, the process remains at a relatively early stage of its evolution. Actions by individual banks, banking associations and policy makers could help to consolidate and scale up this practice both to enable banks to better serve their clients and also enable the European Union to deliver its climate, energy and sustainability ambitions.

The concept of green tagging emerged in 2016 as a way to enable the expansion of financing investments with positive environmental attributes, improve management information and disclosure as well as strengthen the resilience of loan portfolios. Real estate energy efficiency in the loan books of banks was considered a useful place to start; given its importance as a proportion of bank balance sheets, its importance in climate change terms and the existence of established systems for energy performance labelling as a basis for tagging. Also if banks tagged their real estate and mortgage loans to existing energy and environmental standards, there would be a leap in market transparency on the flows of finance to energy efficient assets and products. This data would provide valuable information on the portfolios of energy efficient loans that could be packaged as asset backed securities and refinanced by green bonds, and it would also provide the basis for evaluating the financial performance of energy efficient loans relative to less efficient ones.

The pace of change is clearly accelerating – particularly around real estate and energy efficiency – and is driven by a number of forces:

▶ **Financial innovation:** Banks are designing a new range of green finance products both in

terms of lending, but also in debt capital markets and securitisation.

▶ **Policy priority:** Energy efficiency in buildings is the area where there is the greatest investment gap to deliver Europe's climate goals.

▶ **Market disclosure:** Initiatives such as the FSB's Task Force on Climate-related Financial Disclosures (TCFD) are prompting banks to become more focused on quantitative reporting on green finance.

▶ **Financial regulation:** The EC's review of the European Supervisory Authorities concluded that the ESAs should now "promote sustainable finance, while ensuring financial stability". Sustainability is part of the new securitisation framework and is being taken forward by national regulators in France, Italy, Netherlands, Sweden and the UK.

This report seeks to provide practical insights into this fast-moving agenda by examining the current practices of 10 of Europe's leading banks¹. It describes how they are approaching and developing a systematic approach to green tagging with a focus on commercial and residential real estate mortgage loans. Over one third of the banks surveyed are well advanced and have a functioning approach to green tagging, and 40% have launched green products, and all are keen to see this market develop. The key findings of the survey are:

▶ **first, new green business opportunities are a stronger incentive than improved risk management for banks at present:** Led by commercial real estate groups and wholesale finance, in many cases, bank units who perceive green tagging as leading to increased revenues are more advanced than banks who perceive green tagging as leading to better risk management and lower losses.

▶ **second, there is no clear definition of "green", but energy efficiency and greenhouse gas emissions are the green attributes seen as most material by banks**

¹ ABN Amro, BBVA, Berlin Hyp, HSBC, ING, Lloyds, SEB, Suedtiroler Volksbank, Triodos and UniCredit.



and their stakeholders: Banks use various taxonomies of green including their own and those offered by the Climate Bonds Initiative and others. There is no standard for what constitutes “green” although it is clear that energy efficiency and greenhouse gas emissions intensities are seen as more material by banks than more subjective or location specific attributes like biodiversity or land-use factors.

▷ **third, the financial case for green is sufficiently compelling for banks to undertake green tagging without a perfect, multi-annual green performance data history:** Safer decisions are made with a deeper and broader set of data upon which to base them, and more data substantially de-risks such decisions. However, leading banks are sufficiently convinced of the benefits of green assets, and the opportunities and insights offered through green tagging, that they are implementing it, and providing improved pricing for client's green actions, to create the data they will need to determine the quality of these decisions.

▷ **fourth, there is a strong case for connecting green tagging with the maturing agenda on the links between sustainability factors and prudential regulation.** The inherent risks of non-green or assets with a low environmental performance are not a leading driver for banks to implement green tagging. There is also no penalty for banks which cannot reliably describe the environmental or climate impacts of their financing activities. One reason why commercial real-estate departments lead in green tagging is because in many countries, low energy performing buildings will cease to be legally rentable in the future, and therefore their value will be significantly impaired. This risk to bank clients and to bank lenders is a strong motivation for action.

▷ **fifth, financial institutions want to see stronger analytical foundation, investigating the correlations between financial performance in mortgage portfolios with energy performance (as a proxy for green):** Nearly all of the participating banks expressed interest in a further examination of the

correlation between green performance and financial performance. While there are multiple barriers to such an examination (including Energy Performance Certificate data quality, data privacy, definition of green, time series and sample set of loans and availability of property energy performance data in some member states), project partners believe that this can be explored in further work. Based on these lessons, this report concludes by recommending five next steps for 2018:

▷ **Assess the quantitative relationships between building performance and loan performance:** Market players and policymakers still lack more robust analysis of how energy performance of buildings related to loan performance. This would provide the foundation for better loan pricing, stimulus for market development and feed-into regulatory alignment.

▷ **Build a common EU database of EPCs and other building data:** Tagging is currently held back by a variety of barriers that prevent easy matching of EPCs with loan data. Banks need more transparent availability of EPCs and buildings performance and energy usage data across Europe.

▷ **Evaluate the links between building performance and regulatory capital:** In the context of the review of the European Supervisory Authorities, green tagging needs to be considered as an important tool for banks to understand the environmental exposures in their balance sheets.

▷ **Focus on real estate as a pilot for a common classification system:** Efficient markets require shared protocols for defining financial attributes. Work is underway for a common EU classification system for sustainable assets. After renewable energy, real estate offers a financially sizeable and environmentally significant sector to focus on for convergence.

▷ **Connect green tagging with the new EU securitisation rules:** To help implement Article 103a, banks could begin to tag the energy performance of the underlying property as a voluntary data field.

2 The Financial Case for Green Tagging

Green Tagging refers to a systematic process whereby banks identify the environmental attributes of their loans and underlying asset collateral as a tool for scaling up sustainable finance. The green tagging of bank assets allows for easier access to green bond markets, better tracking of green loan performance and provides greater transparency of climate risks and portfolio resilience.

The Evolution of Green Tagging for Energy Efficiency

The momentum behind green finance is growing both in Europe and across the world. The concept of green tagging emerged as a response to the increased policy and market momentum - and the need for market clarity around capital allocations. Real estate energy efficiency in the loan books of banks is a core place to start given its importance as a proportion of bank balance sheets, its importance in climate change terms and the existence of established systems for energy labelling as a basis for tagging.

If banks tagged their loans to existing energy and environmental standards, aggregated these and then published the results, we could take three steps forward in catalyzing the finance market for energy efficiency:

- ▶ There would be a leap in market transparency on the flows of finance to energy efficient assets and products;
- ▶ This data could provide valuable information on the portfolios of energy efficient loans that could be packaged as asset backed securities into green bonds; and
- ▶ It would provide the basis for evaluating the financial performance of energy efficient loans relative to their inefficient alternatives².

Scaling up energy efficiency finance faces

² ABN Amro, BBVA, Berlin Hyp, HSBC, ING, Lloyds, SEB, Suedtiroler Volksbank, Triodos and UniCredit.

a range of barriers and two stand out: the first is the lack of basic data on the energy performance of asset investments; and the second is the challenge of aggregating many small investments into a size that the capital markets or large banks will accept. At the system level, there could be a relatively simple way of removing these barriers that would improve market transparency, enable market creation in green bonds for energy efficiency and form the basis for valuable insights into the relative financial performance of energy efficient assets: "Green Tagging".

Energy performance labelling programmes exist for multiple products, most notably in white goods, and for buildings: They simplify communication to customers and "make the invisible visible". These energy performance labels have revolutionised consumer behaviour in the purchase of white goods and has impacted their manufacturers and respective supply-chains' approach to energy efficiency. Globally, 62 countries have energy performance standards for buildings³. In the EU, all properties when sold have to obtain an energy performance certificate that places the property on an A-G scale⁴. The 10 countries and markets, accounting for three-quarters of global vehicle sales, have fuel economy and/or greenhouse gas automobile labelling⁵. Green tagging can make the invisible sustainable attributes of banks' loans visible and thereby jumpstart the investment market for energy efficiency and green finance.

The green finance and energy efficiency investment momentum exists at three levels: the global dimension (G20 and TCFD), the European level (EEFIG, EeMAP and HLEG) and in EU Member States.

³ GABC. (2016). Towards zero-emission efficient and resilient buildings: Global Status Report 2016. Retrieved from <https://wedocs.unep.org/rest/bitstreams/45611/retrieve>

⁴ EPBD. (2016). Implementing the Energy Performance of Buildings Directive (EPBD). Retrieved from <https://www.epbd-ca.eu/outcomes/2011-2015/CA3-BOOK-2016-A-web.pdf>

⁵ GFEI. (2016). Fuel Economy State of the World 2016: Time for global action. Retrieved from <https://www.globalfueleconomy.org/media/203446/gfei-state-of-the-world-report-2016.pdf>

The Global Dimension

Mobilising capital for renewable energy is often the starting point for green finance. Yet the funding required for energy efficiency is even larger in scale, broader in application across various asset classes and further behind in terms of market evolution. Efficiency lies at the heart of national and global strategies to drive down energy costs as well as environmental damage, comprising half of what countries must do in the energy sector to deliver against their collective pledge in the Paris Agreement⁶.

The gap between what is being financed and what is needed is considerable. UN Sustainable Energy for All estimates that US\$560 billion a year is needed to double the global rate of energy efficiency improvements⁷ – but only around US\$200 billion is currently being deployed⁸. So, while renewable investment on the supply side needs to be doubled to hit global targets, energy efficiency finance needs to be nearly tripled.

In April 2015, G20 finance ministers and central bank governors mandated the Financial Stability Board “to convene public- and private- sector participants to review how the financial sector can take account of climate-related issues.” To implement this mandate, the FSB launched the industry-led taskforce on climate-related financial disclosures (TCFD) that published the FSB Task Force Recommendations⁹ this year.

The market participants who form part of the task force recommend the mainstreaming of climate disclosures into financial filings, thereby ensuring that disclosure users such as institutional investors and finance providers can understand the financial impact resulting from investee company’s response to the risks and opportunities generated by the transition



and the impacts of climate change. The major contribution of the task force is that with the disclosure framework, disclosure users will be able to understand the link between climate change and financial performance (in a similar way that green tagging links financial asset performance to energy performance), thereby enabling an improvement in the efficiency of capital allocation.

The task force identified energy efficiency as a key opportunity inherent in the energy transition, contextualizing energy efficiency as the key component within the resource efficiency category also noting energy efficiency’s role in strengthening resilience. TCFD believes that a comprehensive disclosure framework would enable institutional investors to better assess and encourage the alignment of corporate behaviour with the transition and build resilience to the physical impacts of climate change which would also encourage the analysis and full utilization of energy efficiency opportunities. Specifically, the TCFD recommends that “banks should provide the amount and percentage of carbon-related assets relative to total assets as well as the amount of lending and other financing connected with climate-related opportunities”.

In 2016, G20 heads of state recognized the need to “scale up green financing”, setting out a series of steps to improve the ability of the financial system to support the transition and 2017 issuance of green bonds has already surpassed 2016’s total of US\$80 billion (in turn a 40% growth from 2015).

6 EFTG. (2017). G20 Energy Efficiency Investment Toolkit. Retrieved from https://ipeec.org/upload/publication_related_language/pdf/626.pdf
 7 Sustainable Energy for All. (2015). Energy efficiency and its contribution to the climate agenda. Retrieved from http://se4all.org/cop21_concept-note
 8 IEA. (2016). Energy Efficiency Market Report 2016. Retrieved from <https://www.iea.org/publications/freepublications/publication/mediumtermenergyefficiency2016.pdf>
 9 TCFD. (2017). Implementing the Recommendations of the Task Force on Climate - related Financial Disclosures. Retrieved from <https://www.fsb-tcfid.org/wp-content/uploads/2017/06/FINAL-TCFD-Annex-062817.pdf>

Banks are slowly starting to focus on providing capital for improving energy efficiency for households, enterprises as well as public sector organizations. 122 banks and investors with more than US\$4 trillion in assets under management have signalled their desire to expand allocations in this area. Interest is also growing in the so far largely untapped potential for issuing green bonds backed by energy efficient buildings and vehicles. Policymakers are also exploring how best to attract private capital. The G20's Energy Efficiency Finance Task Group published a G20 Energy Efficiency Investment Toolkit¹⁰ in May 2017 that contains an agreed set of voluntary energy efficiency investment policy principles as well as specific pledges by banks, long-term investors and

...the green bond market has seen exponential growth over the past few years, from US\$ 11 billion of annual issuance in 2013 to surpassing the US\$ 100 billion landmark in November 2017.

public financial institutions to integrate energy efficiency more broadly across their business models. More broadly, the International Finance Corporation (IFC) has developed a green tagging

initiative¹¹ identifying the roles for international financial institutions, the private sector, financial regulators and data providers over the short, medium and long-term.

Furthermore, the green bond market has seen exponential growth over the past few years, from US\$ 11 billion of annual issuance in 2013 to surpassing the US\$ 100 billion landmark in November 2017. The drive has come from investors looking for environmentally-friendly assets to include in their portfolios

that match their relatively long-term liabilities and at comparable returns. The green label is a discovery mechanism for investors, which facilitates the identification of such assets. For issuers, green bonds are a means to attract dedicated green investors, enhance reputation, and improve internal collaboration around sustainability themes. For energy-efficient or green mortgages, repackaging these loans into green asset-backed, covered or senior unsecured bonds can be an important strategy to refinance these loans and expand bank's green lending capacities.

Globally, the United States has been developing Energy Efficient Mortgage (EEM) loans from as early as 1980. They have since expanded to all mortgage programs sponsored by the US government, including Fannie Mae, Freddie Mac, the Federal Housing Administration (FHA) and the Veterans Administration (VA), which have all adopted special underwriting guidelines to take into account energy efficiency in the mortgage underwriting process for homes. Experience from the US also shows that there is a significant correlation between mortgage and portfolio performance with green rating of the home – controlling for other loan performance variables, a study by the Institute for Market Transformation¹² showed that owners of Energy Star homes were, on average, 32% less likely to default on those homes compared to comparable homes without such a rating. To account for the lower risk of default associated with EE, the FHA has launched two initiatives to further encourage energy efficiency improvements in homes: 1) homes with better home energy scores will qualify for a 2% "stretch ratio" on a new or refinance mortgage; and 2) FHA approval of Property Assessed Clean Energy (PACE) financing on homes.

¹⁰ EFTG. (2017). G20 Energy Efficiency Investment Toolkit. Retrieved from https://ipeec.org/upload/publication_related_language/pdf/626.pdf

¹¹ UN Environment & World Bank Group. (2017). Roadmap for a Sustainable Financial System. Retrieved from <http://unepinquiry.org/publication/roadmap-for-a-sustainable-financial-system/>

¹² Institute for Market Transformation. (2013). The SAVE Act – S.1106: Sensible Accounting to Value Energy. Retrieved from http://www.imt.org/uploads/resources/files/SAVE_Act_Fact_Sheet_2013.pdf

The European Dimension

The EU Commission has indicated that it will assess all regulatory tools available to ensure that the additional private finance is available to meet Europe's 2020, 2030 and 2050 energy efficiency and buildings decarbonisation targets¹³. To provide an analysis of the barriers to energy efficiency investments and set of recommendations to policy-makers and market stakeholders, the Commission and UN Environment Finance Initiative co-convened the Energy Efficiency Financial Institutions Group (EEFIG) in late 2013.

In February 2015, 120 individuals from 100 organisations forming EEFIG delivered their conclusions in a landmark report launched¹⁴. Since that publication, the Commission has used funding from its Horizon 2020 programme, and its regulatory powers, to resolve the barriers EEFIG identified, including: Launching Europe's largest energy efficiency investment database (DEEP¹⁵), publication of the EEFIG Underwriting Toolkit¹⁶ to support banks' processing of energy efficiency investments, launch of EU Investor Confidence Project¹⁷ (to support investment grade project preparation), resolution with Eurostat of the accounting treatment for energy performance contracts for local authorities and the launch of the European Energy Efficient Mortgage project (EeMAP)¹⁸, among others.

The interim report (July 2017) of the High-Level Expert Group ("HLEG") on Sustainable Finance, also convened by the European Commission,

¹³ Deloitte. (2017). Energy Efficiency in Europe: The levers to deliver the potential. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Energy-and-Resources/energy-efficiency-in-europe.pdf>

¹⁴ EEFIG. (2015). Final Report: Covering Buildings, Industry and SMEs. Retrieved from <https://ec.europa.eu/energy/sites/ener/files/documents/Final%20Report%20EEFIG%20v%209.1%2024022015%20clean%20FINAL%20sent.pdf>

¹⁵ EEFIG. (2017). The EEFIG De-Risking Energy Efficiency Platform (DEEP). [Website]. Retrieved from <http://www.eefig.eu/index.php/deep>

¹⁶ EEFIG. (2017). EEFIG Underwriting Toolkit: Value and Risk Appraisal for Energy Efficiency Financing. [E-version]. Retrieved from <https://valueandrisk.eefig.eu/>

¹⁷ Investor Confidence Project. (2017). ICP Europe. [Website]. Retrieved from <http://europe.eepperformance.org/>

¹⁸ EeMAP. (2017). The Initiative. [Website]. Retrieved from <http://energyefficientmortgages.eu/services/>



noted that Europe needs €180 billion in additional annual clean energy investment, three quarters of which is required for energy efficiency in buildings, to keep the increase in global temperatures to well below 2 degrees Celsius¹⁹. Making this happen will require European banks to better understand the environmental performance of their housing loan book. The HLEG also noted that most banks and primary lenders do not track whether loans are sustainable.

Addressing this gap, according to HLEG, would enable primary lenders to keep track of their exposure to sustainable investment and facilitate the securitisation of loans as asset-backed securities (for example, green bonds). HLEG notes that this is especially important in certain key sectors of the economy, such as energy efficiency in buildings and finance for electric vehicles, as these investments are too small for institutional investors to access directly.

In Europe, the estimated size of the outstanding mortgage market is Euro 7.3 trillion²⁰ and most of these mortgage loans provide no information to help investors understand the energy characteristics of the properties

¹⁹ EU High-Level Expert Group on Sustainable Finance. (2017). Financing a Sustainable European Economy: Interim Report. Retrieved from https://ec.europa.eu/info/sites/info/files/170713-sustainable-finance-report_en.pdf

²⁰ European Commission. (2017). Covered Bonds in the European Union: Harmonisation of legal frameworks and market behaviours. Retrieved from http://publications.europa.eu/resource/celellar/8df6d9cd-8c65-11e7-b5c6-01aa75ed71a1.0001.01/DOC_1

mortgaged. The EMF - ECBC²¹ is exploring an “energy efficient mortgage” with their members and have launched a new Horizon 2020 funded initiative called EeMAP to encourage banks to offer cheaper interest rates to people buying energy efficient homes or committing to implement energy saving measures. This initiative aims “to design a private bank financing mechanism, based on a standardised approach and a market benchmark, to encourage energy efficient improvement by households of the EU’s housing stock by way of financial incentives linked to the mortgage, and in this way support the EU in meeting its energy savings targets”.

a new Horizon 2020 funded initiative called EeMAP, aims “to design a private bank financing mechanism, based on a standardised approach and a market benchmark, to encourage energy efficient improvement

EeMAP²² is working at the customer research level to validate end user/homeowner needs and requirements to ensure that “customer pull” for the EE mortgage product can be cultivated by lending

institutions across all of the EU. EeMAP is developing the following four areas:

- ▶ A standardised approach to the financing of EE investment in properties;
- ▶ A framework for the robust and accurate measurement of EE improvement;
- ▶ The conditions and framework required

for valuers to take account of EE features in valuations, including instructions from lenders;

- ▶ The correlation between EE improvements and lower probability of default of borrowers.

In addition, EMF-ECBC published results of a survey on Green Mortgage Funding Instruments²³ among their members that had received 30 eligible responses (from a total of 53) from 14 countries. These results show a strong willingness for development of and entrance into the green market and particularly highlight the Importance of standardisation and gaining a better understanding of how to differentiate between ‘green’ and conventional funding within data gathering, portfolios and risk management processes. In addition, responders wanted to have a better understanding of how to capture energy efficiency within lending practices and how it translates into impact on property value.

The integration of sustainability factors into the EU’s regulatory architecture is set to continue. In September 2017, the European Commission announced the results of its review of the three joint European Supervisory Authorities (ESAs), European Banking Authority (EBA), European Insurance and Occupational Pensions Authority (EIOPA) and European Securities and Markets Authority (ESMA). This concluded that “the ESAs will promote sustainable finance, while ensuring financial stability. They will take account of environmental, social and governance-related factors and risks in all the tasks they perform.”²⁴

Banks must ensure that key data fields on the collateral (assets) against which they lend are kept up to date. The ABS (asset-backed securities) loan-level initiative, launched by the ECB in 2013, establishes specific loan-by-loan information requirements for ABSs

21 Established in 1967, the European Mortgage Federation (EMF) is the voice of the European mortgage industry, representing the interests of mortgage lenders and covered bond issuers at European level. The EMF provides data and information on European mortgage markets, which were worth around EUR 7.0 tn at the end of 2016. As of December 2017, the EMF has 17 members across 14 EU Member States as well as a number of observer members. In 2004 the EMF founded the European Covered Bond Council (ECBC), a platform bringing together covered bond issuers, analysts, investment bankers, rating agencies and a wide range of interested stakeholders. As of December 2017, the ECBC has 116 members across more than 30 active covered bond jurisdictions and many different market segments. ECBC members represent over 95% of covered bonds outstanding, which were worth nearly EUR 2.5 tn at the end of 2016.

22 The work was launched in Italy, Sweden and Germany in June 2017 by a consortium comprised of: the Ca’Foscari University of Venice, RICS, European Regional Network of Green Building Councils, E.ON and SAFE Goethe University Frankfurt.

23 EMF & ECBC Energy Efficient Mortgages Initiative. (2017). Energy Efficiency (EE) Financing Key Parameters Survey: Preliminary Analysis. Retrieved from <http://figbc.fi/wp-content/uploads/2017/02/2017-00008.pdf>

24 European Commission. (2017). Creating a stronger and more integrated European financial supervision for the Capital Markets Union. [Press Release]. Retrieved from http://europa.eu/rapid/press-release_IP-17-3308_en.htm

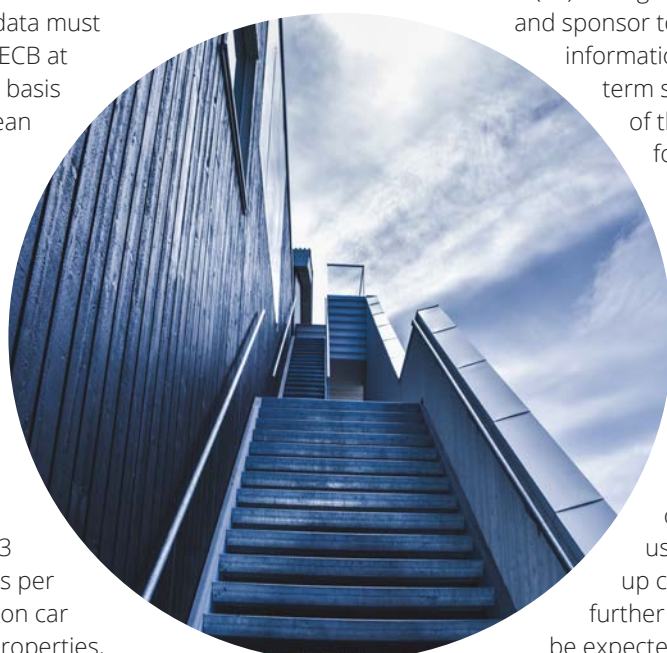
accepted as collateral in Eurosystem credit operations. This increases transparency and makes available more timely information on the underlying loans and their performance to market participants in a standard format. Loan-level data must be reported to the ECB at least on a quarterly basis through the European Datawarehouse ("EDW" - an operational data clearinghouse established by a number of the EU's participating banks). Today, EDW holds key information on over 14 million mortgages (with 183 individual data fields per record) and 10 million car loans²⁵. Clearly for properties, value, income levels and ownership are key fields; and for cars: date of registration, make and serial number.

In October 2017, the European Parliament voted to adopt the EU regulation intended

²⁵ European Datawarehouse. (2017). [Website]. Retrieved from <https://eurodw.eu/>

to lay down common rules on securitisation and to create a European framework for "simple, transparent and standardised" ("STS") securitisation. As one of the STS criteria, article 10 (3a)²⁶ "obliges the originator and sponsor to publish information on the long-term sustainable nature of the securitisation for investors, using environmental, social and governance (ESG) criteria to describe how the securitisation contributed to real economy investments and the way the original lender used the freed-up capital". While further clarification can be expected, through official guidance, as to what information may be needed on loan-level environmental performance and amendments to existing templates for loan-level data, this is the clearest regulatory signal so far to banks of the need to deepen their work on Green Tagging.

²⁶ European Parliament. (2016). A8 - 0387/2016. [Draft Legislative Resolution]. Retrieved from <http://www.europarl.europa.eu/sides/getDoc.do?type=REPORT&reference=A8-2016-0387&format=XML&language=EN>



The National Dimension

A decade of academic research suggests that there is a correlation between a property's energy performance and its financial value²⁷. The new emergence of minimum energy performance standards regulation, in the UK and Netherlands, signals that banks need to better identify and monitor "green" and "brown" risks in real estate assets.

► **France: Disclosure.** Article 173 of the Energy Transition law²⁸ requires listed companies and financial institutions to show how their activities are aligned to a low-carbon economy. This has encouraged banks operating in France to tag and disclose their green loans. Examples include Société Générale, Paribas and HSBC.

► **The Netherlands: Transition Risks.** Lending to properties with poor energy efficiency standards poses potential credit risks for banks. This threat was recently underscored by the Dutch central bank, DNB, in its most recent report on climate risks²⁹. DNB found that 46% of bank loans related

to commercial real estate in the Netherlands involve collateral with labels from D to G. DNB concluded that financial institutions should "make efficient use of relevant and available data to assess these risks" such as "the label distribution for the types of real estate exposures in their portfolios". So, effective from 1st January 2023, all Dutch office buildings must have at least a level C energy label, or else they must be taken out of use.

► **The UK: Green mortgages.** As part of their climate strategies, policymakers are also increasingly focused on how to encourage green mortgages to close the energy efficiency investment gap. In the UK, for example, the government's Clean Growth Strategy highlighted the importance of expanding green mortgages. It is committed to "working with mortgage lenders to develop green mortgage products that take account of the lower lending risk associated with more efficient properties and the reduced outgoings for customers living in more efficient homes."³⁰ This builds on the results of the LENDERS project and comes at the same time as the Bank of England is conducting a prudential review of the implications of climate risks for the UK banking sector.

27 Appraisal Institute & Institute for Market Transformation. (2013). Green Building and Property Value: A Primer for Building Owners and Developers. Retrieved from <https://www.appraisalinstitute.org/assets/1/7/Green-Building-and-Property-Value.pdf>

28 FIR. (2016). Article 173-VI: Understanding the French regulation on investor climate reporting. Retrieved from http://www.frenchsif.org/isr-esg/wp-content/uploads/Understanding_article173-French_SIF_Handbook.pdf

29 DNB. (2017). Waterproof? An exploration of climate-related risks for the Dutch financial sector. Retrieved from https://www.dnb.nl/en/binaries/Waterproof_tcm47-363851.pdf?2017112716

30 UK Department for Business, Energy & Industrial Strategy. (2017). Clean Growth Strategy <https://www.gov.uk/government/publications/clean-growth-strategy>

Using Data at the Right Time can Yield Great Results



The UK's LENDERS Project (Levering Economics for New Drivers to Energy Reduction & Sustainability) groups eight³¹ partners seeking to promote the use of accurate estimates of energy bills when calculating residential mortgage affordability. The Project relied on an extensive dataset of 40,000 properties to examine and map the correlation between property energy performance and household fuel bills in the UK. Potential homebuyers can access the project's calculator which allows them to estimate energy bills prior to

³¹ Nationwide Building Society, the Buildings Research Establishment, the UK Green Building Council, Principality Building Society, the Energy Saving Trust, UCL Energy Institute, Constructing Excellence Wales and Arup

purchasing a particular property. Through its work, the project asserts that while relationship between home occupancy, home energy efficiency and UK household's expenditure on fuel is indeed tangible and quantifiable, homebuyers are not aware of this relation during the home buying process. Mortgage lending in the UK amounts to close to £127 billion a year. With 14.9 million privately owned residential properties in country, this represents a great opportunity to persuade and positively change homebuyers' attitudes and trends regarding energy performance and improvements.

More Accurate Calculations, Potential Benefits ³²

The project had identified a series of opportunities that stem out of a more accurate fuel estimation in the affordability calculation:

- ▶ Changes in the household expenditure in relation to the property's EPC band. Properties within the "G" and "A" energy performance spectrum could see maximum borrowing amounts up to £11,500.
- ▶ Improvement of the property's EPC band, frees income from energy bills which can be used to support extra borrowing repayments.
- ▶ Behavioural impacts are indeed hard to predict, yet correlation between energy performance and lending capacity could result in persuading UK homebuyers to seek for energy efficient housing.

³² Lenders. (2017). Improving energy costs in mortgages, Promoting energy efficiency in homes. Retrieved from http://www.ukgbc.org/sites/default/files/Lenders_Core_Report_1.pdf

Clearly, there is significant momentum at the global, European and national levels for green tagging that is driven by a mix of factors: disclosure, risk and opportunity. Each individual bank will have its own perspectives on and ranking of these three factors in terms

of how they may drive each of their business units to develop and implement green tagging mechanisms. The 2017 bank working group survey and its results described in the following chapter outlines this in detail for ten leading European banks.

3 Current Practice in Green Tagging: Results from the European Banking Survey

The analysis in this chapter is based on a survey of 10 European banks. The survey's objective was to deepen the group's understanding of current practices on "green tagging" and note regional differences with a focus on real estate, in both residential and commercial lending.

2017 Green Tagging Bank Survey

The analysis in this chapter is based on a survey of 10 European banks: ABN Amro, BBVA, Berlin Hyp, HSBC, ING, Lloyds, SEB, Suedtiroler Volksbank, Triodos and UniCredit. The survey's objective was to deepen the group's understanding of current practices on "green tagging" and note regional differences with a focus on real estate, in both residential and commercial lending.

The survey results were summarised and reviewed in full by the participants for feedback in September 2017, directly prior to the drafting of this report. This report and the case studies included were also reviewed, edited and approved by the members of the informal bank working group to ensure that the views and results have been drafted to represent a consensus view³³.

The 10 banking members of the informal Green Tagging Bank Working Group agreed to dedicate time from selected people in different departments to answer a detailed online survey designed to better understand the past, present and future of green tagging implementation and practice – with a focus on commercial and residential real estate.

³³ We note that the definition of consensus is that not every bank working group member agrees with every point in this report, but that the report does faithfully reflect the consensus view of the participating banks.

The survey was provided online to enable banks to distribute the link internally among various key departments which included: sustainability, credit research, commercial real estate, treasury/ bank liquidity, debt capital markets, and advisory. The results are drawn from 15 high quality responses to the survey from individuals fairly evenly spread across these departments in the 10 banks. These individuals also identified that they brought together experience from 21 of the EU28 nations with natural concentrations in France, Germany, Netherlands, Italy, Spain and the UK.

With a total of 20 questions, the survey addressed three main areas:

- ▶ Separating the broad Green Tagging concept into its component parts, defining green with an analysis of the drivers and motivations for banks to use green tags;
- ▶ A deep-dive into the use and potential for green tagging residential mortgages and commercial real estate loans, respectively; and
- ▶ A set of forward looking questions designed to orient thinking through the regulatory context for green tagging and connect to other initiatives working in this space.

Identifying Internal Leadership and Definitions for Green Tagging

For the purpose of the 2017 bank survey, Green Tagging was introduced as the operational process by which the environmental performance of bank lending and financing is incorporated into routine decision-making. This includes green tagging at origination of a loan: e.g. for questions around creation of green loans, customer up-take and sales; and green tagging of existing mortgage portfolios: e.g. for questions around data on credit performance. Responders were asked to consider three potential dimensions of green tagging including:

- ▶ identifying and scaling up assets with positive environmental performance;
- ▶ incorporating environmental risk factors into credit analysis and asset pricing; and
- ▶ tracking flows of finance for internal management and external reporting purposes.

The first survey questions were designed to identify where green tagging has most interest and practical application within banks, how they define “green” and which of the potential “components of green” are more or less material to the bank’s core stakeholders. A “consensus opinion” from responders was created through the requirement to score alternatives (from 0 to 5 points) and then provide verbal comments to clarify and detail the thinking.

Interest & Ease of Implementation

Leading the interest in green tagging (Chart 1) is commercial real estate where over half of banks noted that a green taxonomy was already being used. Debt Capital Markets also leads in interest as well as units which work with large businesses and corporates.

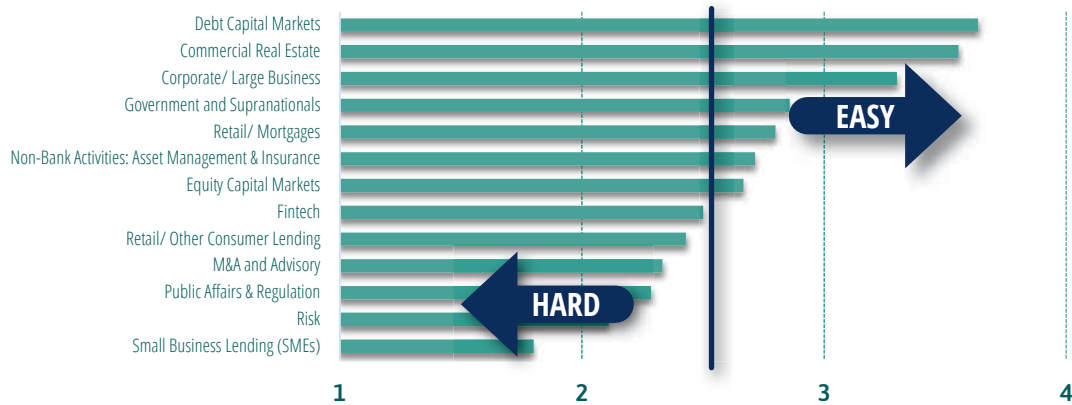
Banks note that retail mortgages sit comfortably high in both level of interest (Chart 1) and ease of implementation (Chart 2) with four responders with them already in use. There is a significantly stronger interest in green tags from the corporate and large business bank lending areas, than from those covering SMEs with banks suggesting that it would be significantly easier to implement green tags across their large corporate businesses (where five already do) than for loans to SMEs (Chart 2).

For some banks this is a timing issue, and they are looking to build on their existing green lending activities beyond the Commercial Real Estate sector (where such activities have focussed on loans > EUR 10m) and the SME and mid-market spheres, where government incentives also play a role. In addition, there is a sense from banks that where systems and processes are more boiler plate (for massive market aggregation, such as SMEs and retail products) it is harder to implement any changes as there is significant institutional, system and procedural inertia.

Chart 1: Observed level of interest in Green Tagging by different bank departments



Chart 2: Ease of integration of Green Tagging in different bank departments



Definitions

Over 40% of responders note that their bank uses its own definition of “green” (Chart 3) with the most popular external public definition set being those provided by Climate Bonds Initiative – and some of the own approaches also are influenced by these. Two of the responding banks do not yet have a clear “green” taxonomy yet and one bank each use respectively S&P and the public financial institutions’ Climate definitions as a proxy for “green”. Debt capital markets units of banks that are underwriting green bonds use the Green Bond Principles³⁴, coupled with second opinions, to evaluate the greenness of the issuer’s green bonds in nine project categories (including energy efficiency). The divergences in “green definitions” were explained by some banks because internally each sector and product has developed its own “sustainable business growth strategy” with its own sector or product specific scorecard approved for use in initial credit proposals and reviews. This also partly explains the fact that different bank departments are at different stages of implementation of green tags (Chart 4).

Different products also do require different approaches, with several banks noting the use of BREEAM, LEED, HQE, DGNB, or Energy Performance Certificates in real estate and the need to address the social aspects of sustainability also. There was also a call for centralising data sources from multiple raters and certificate providers for easier KYC (know your client), regulatory processes and transparency across banks.

³⁴ Green Bond Principles update as of June 2017, from International Capital Market Association website: <https://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

Chart 3: Definitions of “Green”.

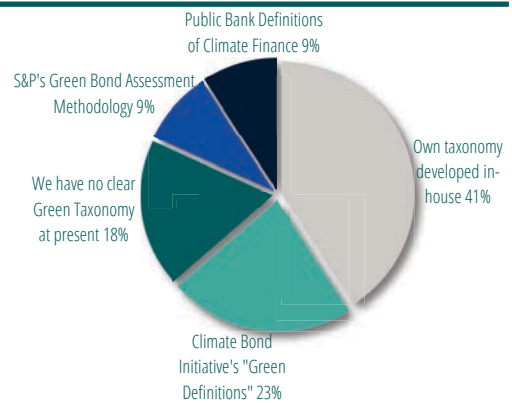
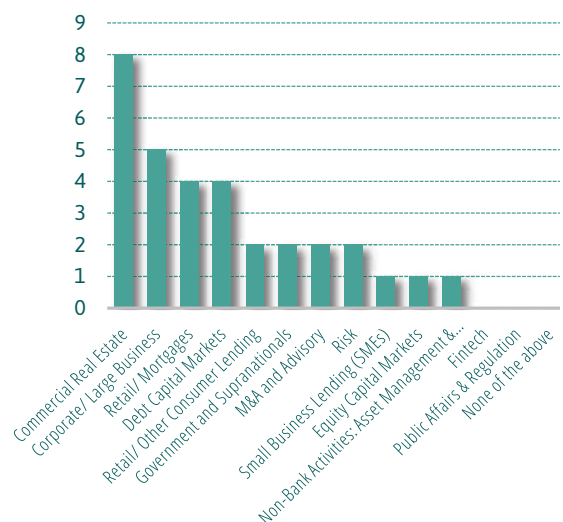


Chart 4: Which departments already use some definition of green



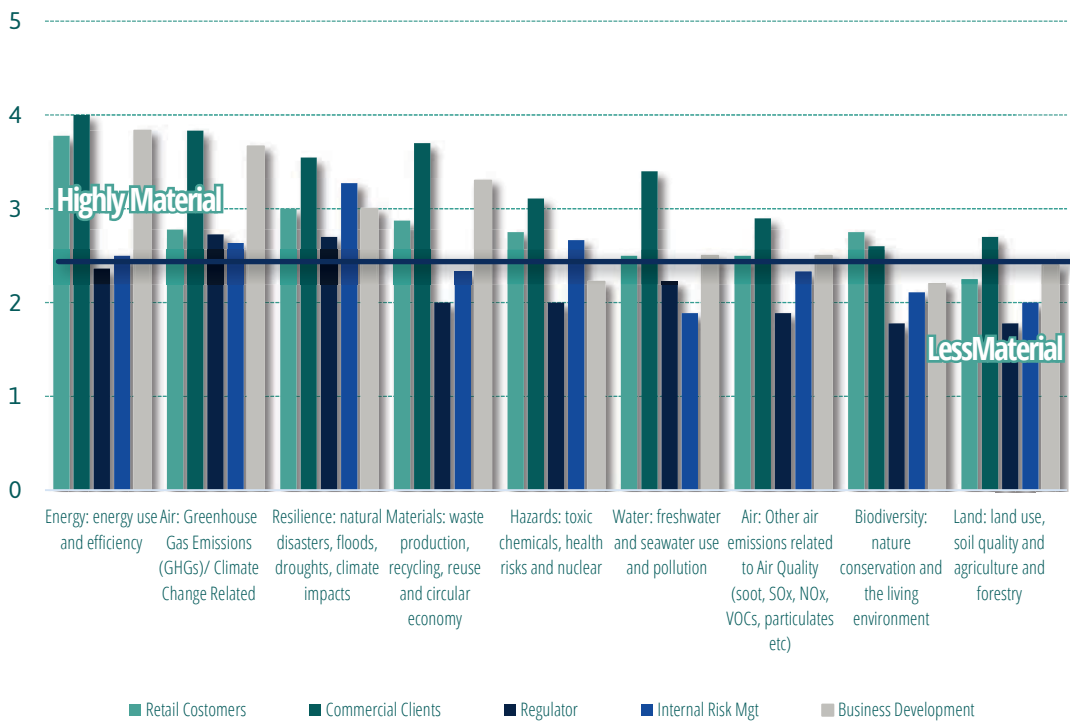
Materiality

Chart 5 (below) shows that banks' commercial clients represent the major pull factor for green tagging. For this reason, the business development teams show a similar materiality score for the leading green components. Retail customers see energy efficiency as highly material, but rank most of the other green components as reasonably "average". Interestingly, banks see their internal risk teams as mainly concerned about assets' resilience to natural disasters, floods, droughts and other climate change impacts and view their regulators as having an average materiality assessment across the board with banks reporting little bilateral regulator dialogue on these issues outside TCFD and G20 formal processes.

Responding banks certainly have a clearer concept of green lending across their

commercial real estate and energy teams, and they expect to extend these green considerations to other areas. Strong alignment was noted between the internal risk and business development teams, with respect of which of the green components has the greatest impact on credit risk in each sector, for the purpose of developing appropriate green lending. Some banks noted that they will focus more on resilience and biodiversity in consumer sectors and energy use and materials in manufacturing. Other banks noted that the (systemic) context of the activity drives which component of "green" is more important - rather than there being an absolute prioritisation - and others noted their response was considered as materiality over and above the "basic standards and regulations that provide a license to operate" (which must be met).

Chart 5: How Banks see the Materiality of Different Components of "Green" to different Stakeholders



Green Tagging in Commercial Real Estate Lending

Clearly, the 10 banks surveyed are more advanced in green tagging in their commercial real estate areas. The drivers of this advance are an increased access to green bond markets, increased value of green properties, improved climate disclosure and an expected positive correlation between loan performance and the energy performance of the underlying building (Chart 6). Banks also noted that green tagging enables better risk management, regulatory compliance and improved customer up-take. While the barriers for greater deployment (Chart 7) are weaker than the drivers, a lack of internal resources and costs of inclusion of additional fields as well as higher quality energy performance data and more evidence for green and economic performance correlation are considered meaningful.

In Europe, an Energy Performance Certificate (EPC) is required to be included in all advertisements for the sale or rental of buildings and in many member states these EPCs also need to be clearly displayed in commercial buildings. While there is no central EU database of EPCs or standard quality control, there are

various common data fields (many of which appear on the horizontal axis of Chart 8). To discover whether this data, combined with that already held by banks in their lending records, is sufficient, survey responders were asked to map the fields which should be the focus for “green tagging” for commercial real estate loans as “mandatory”, “optional” or “not required”.

There is a high correlation between the data provided by EPCs (red lines Chart 8) and that considered important by banks for “green tagging” (green lines Chart 8). Notably, and expectedly, the energy data of the property is, in most banks, not required or captured in a mortgage record; and nor does creditworthiness appear in an EPC – and yet with the number of overlapping fields a correlation analysis would seem easily executable. Banks note their interest to reduce number of data fields and relative complexity, adding that several standards already exist in the market and so the information required should be offered in a standard format that can be sourced easily (eg. EPC) and then is supported by the certificates required for green bonds.

Chart 6: Value Drivers for “Green Tagging” of Commercial Real Estate



Chart 7: Barriers for "Green Tagging" of Commercial Real Estate

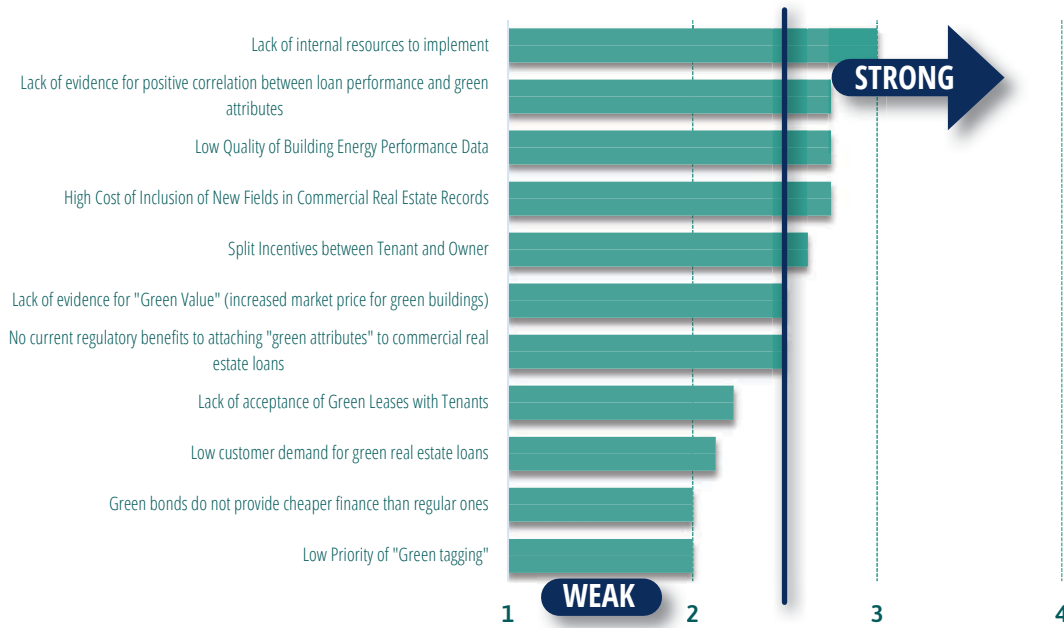
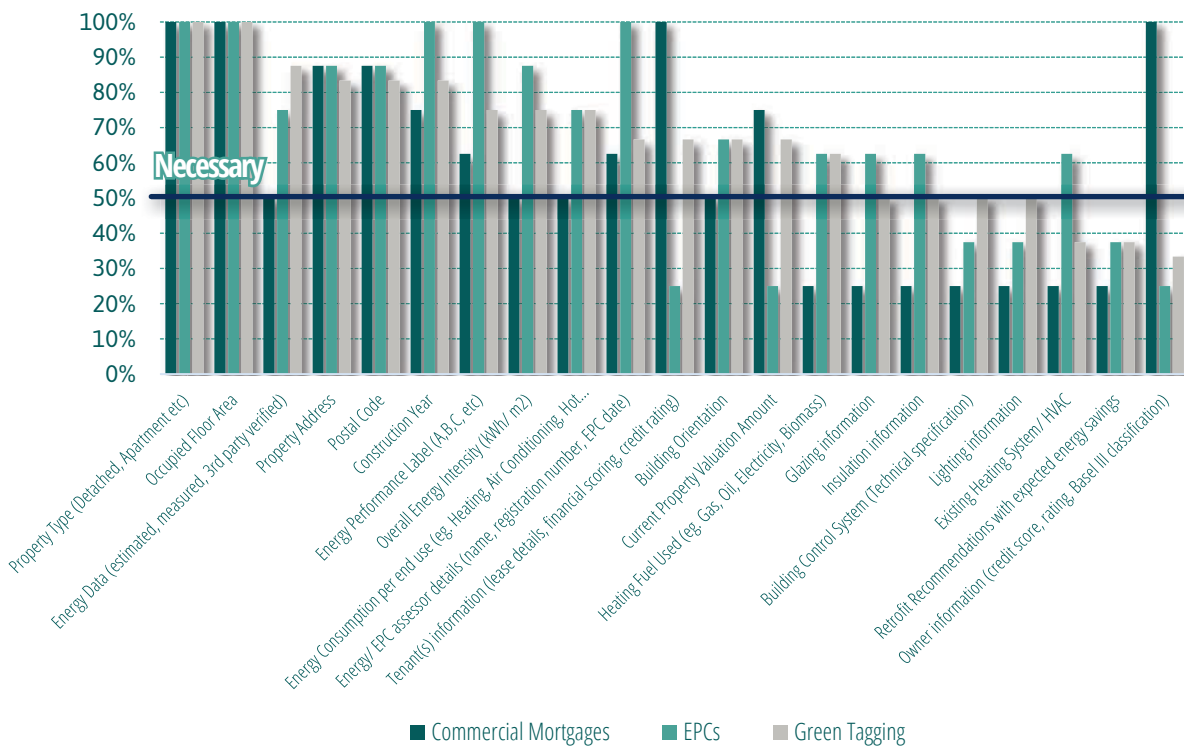


Chart 8: Mapping of Green Data for Commercial Real Estate



Green Tagging in Residential Mortgages

Compared to commercial real estate, the drivers of “green tagging” in residential mortgages relate more to improved climate disclosure, access to the green bond markets and better risk management and regulatory compliance (Chart 9). An expected positive correlation between mortgage performance and the energy performance of the underlying building (Chart 9) and the higher value of green properties are also material.

Issues of the increased cost of green data inclusion, the lack of internal resources as well as the lack of regulatory pressure feature (Chart 10) among the key barriers for green tagging in residential mortgages. Yet again (Chart 11), the data required for green tagging of residential mortgages seems to fit well that already available through combining data from EPCs and existing mortgage records.

Chart 9: Value Drivers for “Green Tagging” of Residential Mortgages

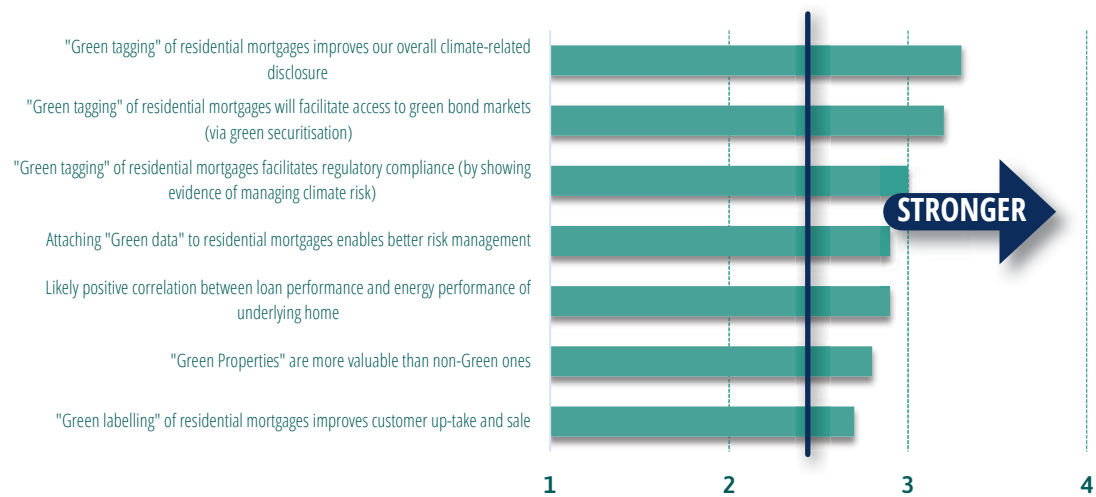


Chart 10: Barriers for "Green Tagging" of Residential Mortgages

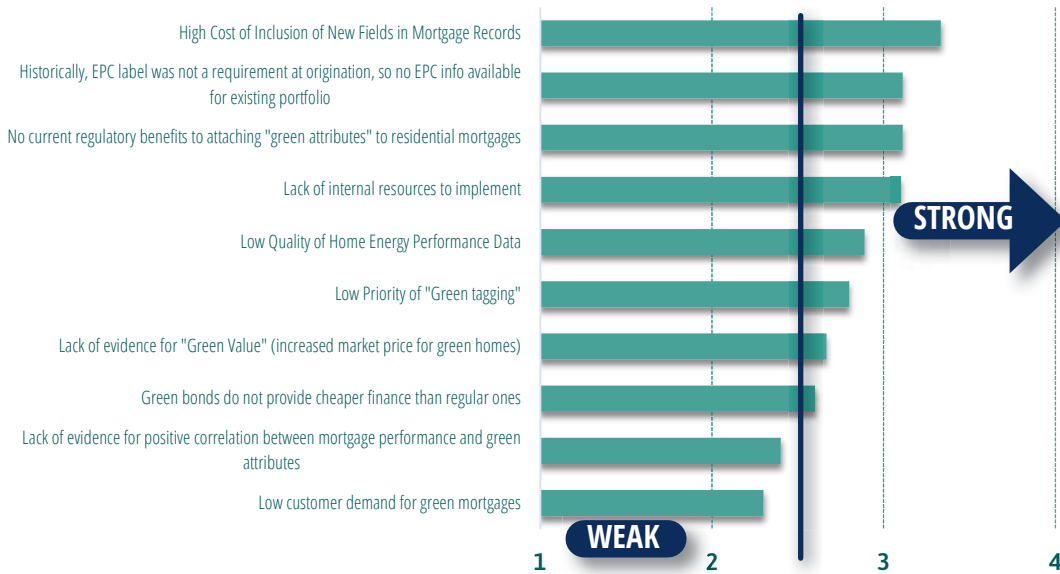
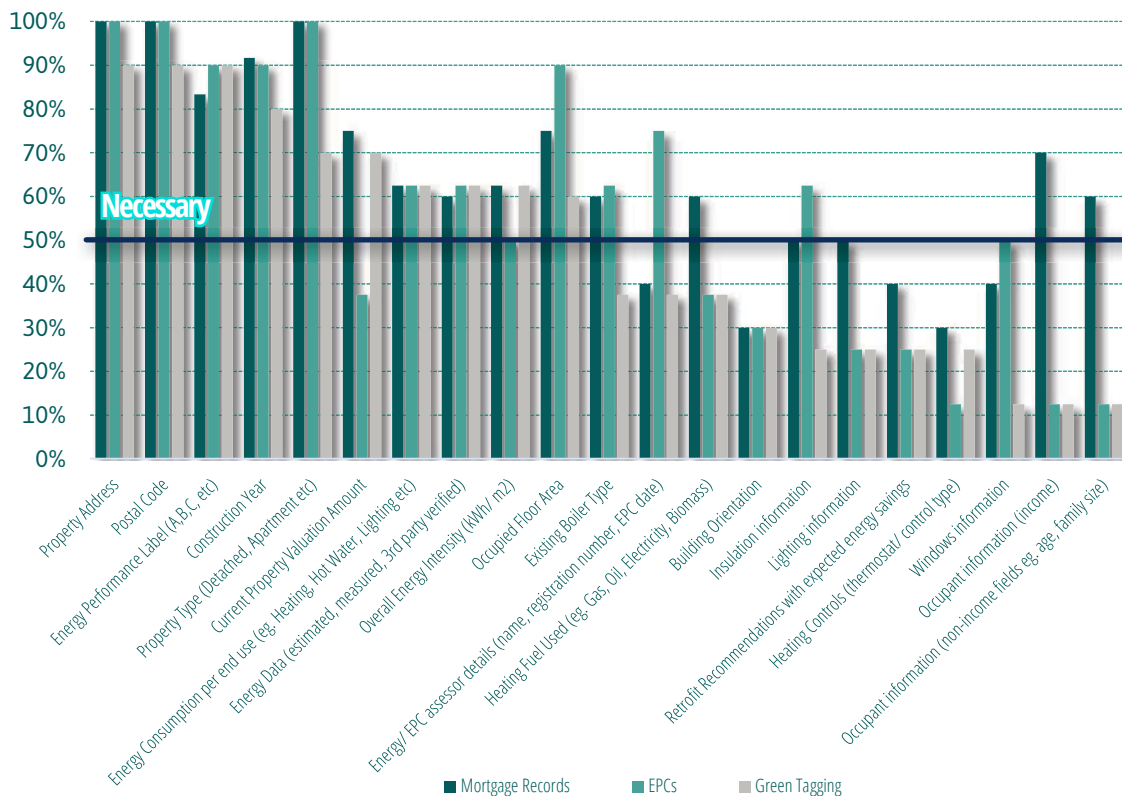


Chart 11: Mapping of Green Data for Residential Mortgages



Existing and Future Progress on Green Tagging

While the average amount of time the surveyed banks have been considering Green Tagging is four years, several of these have been attaching green attributes to the properties that back residential or commercial mortgages for the last three years, on average (Chart 12). The process of integration of green attributes into the systems used by banks has also taken on average just over 3 years, however banks think that including extra green fields in commercial real estate would take just 2 years.

To accelerate green tagging, clearly banks look towards their regulator's agenda to detect its priority (Chart 13). Several of the banks have launched green products already to test their theses around the likely performance and to compile relevant data on how these green products compare to their non-labelled equivalents. More time and dedicated resources appear as necessary to accelerate bank progress on green tagging among the leaders (Chart 13).

While banks refer to the emerging nature of green outperformance, the strong implication from the mentality of some of the leaders is that to create markets "you just do it". The signal that bank regulators are moving on this issue is very helpful as numerous responders believe that greater regulator engagement on green tagging will incentivise bank action and lead to

better quality data and approaches.

One of the most significant challenges identified is automation: Automatically linking portfolios to external certification websites which can cover the entire collateral base would be highly effective for the transparent assessment of portfolios. Many banks have a lot of data that needs to be attached to that required by certifying bodies (eg. EPC, BREEAM, LEED) in an automated way to really upscale engagement and lower costs per record.

One responder recounts that they have internal data which strongly supports (not across the board) a positive correlation between corporate clients which are identified as sustainability outperformers ('green tagged') and lower risk outcomes. This is why some businesses units (real estate and large corporate lending) can offer lower margins for what they assess to be the same risk return.

It is clear that many banks are aware of the green trends and are reacting positively to adapting to new data management methods as another respondent recognized that "although we do not have green label data fully integrated into all registration systems, we can and do collect and maintain databases with this information, this allows for historical correlation".

Chart 12: Timings of Green Tagging

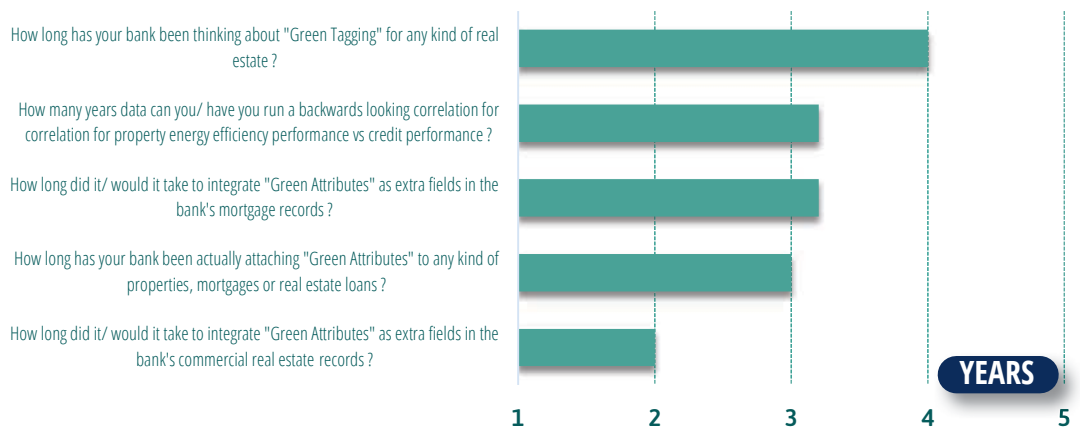
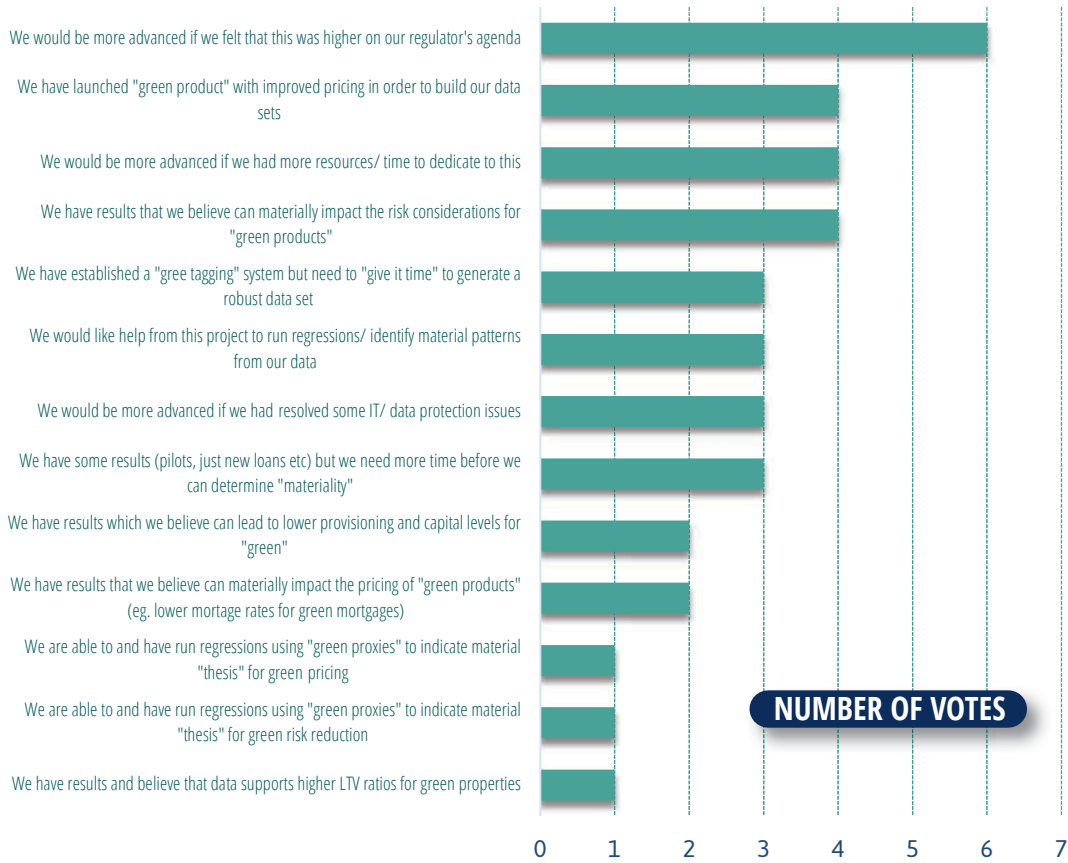


Chart 13: What can accelerate Green Tagging in Banks







4 Bank Case Studies

Members of the informal bank working group provided the following case studies that illustrate various aspects of their implementation of green tagging and sustainable finance:

ABN AMRO	pag 28
Berlin Hyp	pag 30
BBVA	pag 32
ING	pag 34
Lloyds Bank	pag 36
SEB	pag 38
Triodos Bank	pag 40

Online Tools Simplify Processes and Advance the Energy Efficiency Agenda



Dutch bank ABN AMRO finances over 10% of the total number of buildings in the Netherlands. With a balance sheet of EUR 185 billion³⁵ in outstanding loans for residential and commercial property, this represents two-thirds of its loan portfolio. In 2017 ABN AMRO launched an initiative to work closely with its commercial and retail clients in order to improve the energy efficiency of its complete real estate portfolio to an average A label by 2030³⁶. This initiative positions ABN AMRO as the first major Dutch bank to make its residential and commercial property it finances more sustainable. An important component of ABN AMRO's strategy are its online tools.

The tool directed at commercial clients allows them to access information on how to boost the sustainability of their buildings and provides them with personal advice. Through the tool, borrowers

³⁵ ABN AMRO. (2017). ABN AMRO helps clients improve the sustainability of their homes. Retrieved from <https://www.abnamro.com/en/newsroom/press-releases/2017/abn-amro-helps-clients-improve-the-sustainability-of-their-homes.html>

³⁶ ABN AMRO. (2017). ABN AMRO to contribute to carbon emissions reduction in the Netherlands. Retrieved from <https://www.abnamro.com/en/newsroom/press-releases/2017/abn-amro-to-contribute-to-carbon-emissions-reduction-in-the-netherlands.html>

can see investment opportunities at individual building or more general portfolio level.

In addition, the tool connects borrowers with technical partners to implement solutions and highlights the multiple government subsidies available. ABN AMRO will finance 100% of the investment and reserved EUR 1 billion for this purpose.

In the case of homeowners, the bank's Energy Saving Check free online tool provides customers an overview of the sustainability of their homes and the potential positive impact of 'green' improvements regarding: payback time, comfort and environmental contribution. For instance, in under a minute users can calculate savings by adding extra insulation, fitting a new central heating boiler or installing solar panels. Clients requiring personal advice can make an appointment for an expert to assess their home, who will then assign them an Energy Passport – a customised digital report detailing how they can make their homes more sustainable. In certain instances, clients could qualify for a 0.2% discount on their mortgage interest.

ABN AMRO Green Funding³⁷

Besides financing energy efficient buildings, the bank also obtained green funding via Green Bonds, of which the proceeds are used to finance or refinance residential and commercial buildings and renovated commercial real estate with at a 30% energy efficiency improvement.

ABN AMRO own Buildings³⁸

50% of the buildings occupied by ABN AMRO have an A energy label. In the case of properties owned by bank, the proportion of is higher at 89%. ABN AMRO intends for the total of its premises –leased or owned- to have an A energy label by 2023.

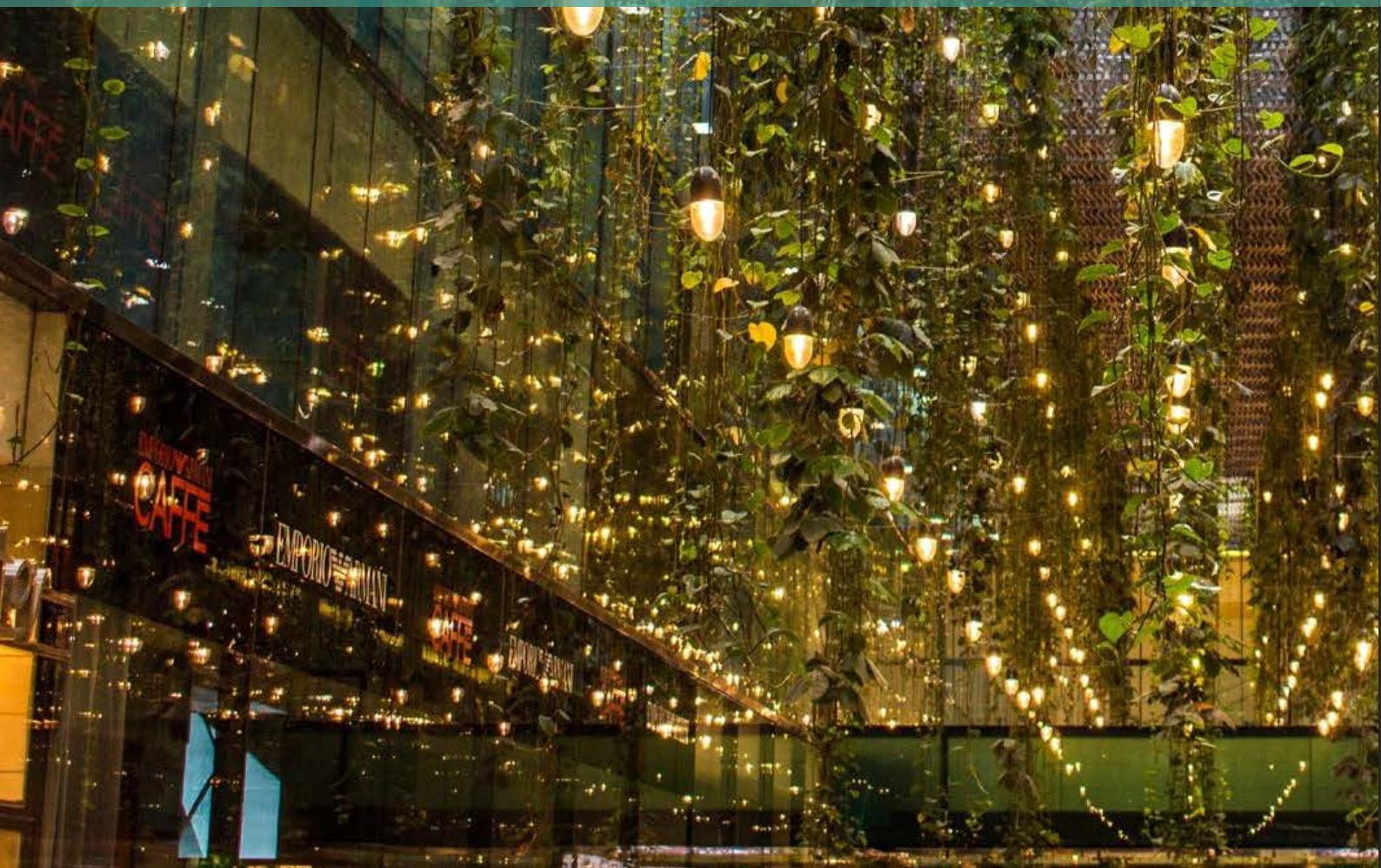
Improving the sustainability of its own properties will give the bank key insight and expertise which will be shared with its partners and clients.

³⁷ ABN AMRO. (2017). Targeting energy label A by 2030. Retrieved from <https://www.abnamro.com/en/sustainable-banking/our-focal-points/climate-change/sustainable-real-estate/index.html>

³⁸ Ibid



Issuer of the First Green Covered Bond



Issuing the first Green Pfandbrief³⁹ in April 2015 positioned the bank as an industry leader, as it was the first ever green covered bond. The start of the ECB's third covered bond purchase programme, led to an environment of spread compression. And what had begun half a year earlier as the bank's approach to diversify its investor base by promoting wholesale funding, resulted in important changes to Berlin Hyp's corporate strategy.

While, the seven year bond was over-subscribed four times and priced at MS -16 basis points, it attracted 15 investors that had never bought any of the issuer's securities before. Following the success of the issuance, the bank took important steps in order to improve its approach to green finance:

- ▶ Its Loan Monitoring System was amended to systemically record sustainability and energy efficiency data of the commercial real estate it finances. Subsequently, processes and responsibilities concerning the bank-internal value

³⁹ A 'Pfandbriefe' is type of bond issued by German mortgage banks, collateralized by long-term assets used. These types of bonds stand as the largest segment of the German private debt market and are deemed as the safest debt instruments in the private market. Source: ECBC. (2017). Pfandbriefe. [Website]. Retrieved from <http://www.ecbc.eu/framework/23/Pfandbriefe>

chain of green finance were defined. Also a Green Building Commission was installed, followed by the revision of the green buildings criteria to include a clear focus on energy efficiency.

- ▶ The bank's unified Green Bond Programme, now allows for the issuance of green bonds in a covered bond and a senior unsecured formats. This process was documented and published on Berlin Hyp's dedicated green bond website www.green-pfandbrief.com. In addition, the website allows the issuer to provide investors with its impact reporting.

- ▶ In 2017, the board of managing directors mandated green finance to become a corporate goal: By 2020, 20% of Berlin Hyp's mortgage portfolio ought to consist of loans for energy efficient and sustainable commercial real estate. This goal is supported by a 10 basis points discount for loans for green buildings.

- ▶ As a result of its efforts to green its lending and borrowing business, Berlin Hyp enjoyed upgrades of its ESG ratings by Oekom and Sustainalytics. Furthermore, both sustainability rating agencies positioned Berlin Hyp as the industry leader for October 2017 (Oekom: B-, Sustainalytics: 86/100).

Largest European Commercial Bank Issuer of Green Bonds

Between April 2015 and September 2017, Berlin Hyp was able to increase its green finance portfolio from €657mn to over €2.6 billion. During the same term the bank issued four benchmark-sized green bonds, two Green Pfandbriefe and two green senior unsecured bonds, which added a total of 96 new investors to the investor base. As of October 2017, Berlin Hyp is the largest European commercial bank issuer of green bonds, and is the recipient of several awards for its work.

German Regulation Makes Pfandbriefs Attractive to Investors⁴⁰

Established in 2005, the German Pfandbrief Act establishes high level requirements pertaining to the protection of investors. The act mandates the level of security offered by a Pfandbrief to be equal to government bonds. As a result, insolvency laws for Pfandbrief creditors entail the following:

In the case of an insolvency of a Pfandbrief bank, the cover pools - which act as security for the Pfandbriefe - are available only to the Pfandbrief creditors to cover their claims

- ▶ As such are not affected by the insolvency of the Pfandbrief bank.
- ▶ Pfandbrief banks have to issue reports every quarter on the composition and structure of their cover pools.
- ▶

⁴⁰ Deutsche Pfandbrief Bank. (2017). Debt Instruments: The Pfandbrief. Retrieved from <https://www.pfandbriefbank.com/en/debt-instruments/the-pfandbrief.html>



**Expanding its Work with
Green Loans & Green Bonds**





Over the years, BBVA has developed the precise knowledge and expertise to provide its clients with superior advisory on sustainable financing solutions -both in loan and bond format- and it is currently playing a key role in the development of this market. The Bank was the most active Spanish Financial Institution in the green bond market in 2016, having acted as lead manager in Acciona Green Bond Private Placement, Iberdrola 3rd Green Bond, EDF Green Bond, Mexico City Airport, Nacional Financiera, ICO 2nd Social Bond, as well as Caja Rural de Navarra Sustainable Covered Bond. Having taken part in the placing of €8.275 billion of green and social bonds in the first 9 months of 2017, BBVA has acted as a green/social structuring advisor in the following green and/or social bonds⁴¹:

- ▶ SSE's (€650 million)
- ▶ ADIF AV's (€600 million)
- ▶ Repsol's (€500 million)
- ▶ Community of Madrid's (€700 million) inaugural public bonds.

⁴¹ BBVA. (2017). 10 years of green bonds: when sustainability started to count in investments. Retrieved from <https://www.bbva.com/en/10-years-green-bonds-sustainability-started-count-investments/>

BBVA's Responsible Business model prioritizes the creation of solutions to environmental and social challenges, and as a signatory of the Green Bond Principles (GBP) since 2014, BBVA intends to expand its work with Green Bonds as they have demonstrated great solvency in the market and are an enabling tool in the promotion of responsible finance. The Bank is also a leading player in the booming green loan market, having closed different landmark transactions in 2017.

BBVA expects to see growth rates in the green loan market similar to those achieved in the green bond market a few years ago. Hence, BBVA seeks to promote and facilitate sustainable investments, which are expected to become increasingly relevant within the investment criteria of the banking sector. Furthermore, the green loan market is expected to draw growing interest from issuers and financial institutions, as they continue to pursue increasingly demanding quantitative and qualitative sustainability goals. BBVA believes in this booming innovative financing market and intends to cement its role as the leading institution in its development.

Terna Transmission Line ⁴²

In July 2017, BBVA signed a project finance green loan with Italian energy company Terna. The first of its kind in the world, the funding will enable Terna to build a transmission line between cities of Melo and Tacuarembó in Uruguay. The Funding was structured into a USD 56 million A loan awarded by the Inter-American Development Bank (IDB) and a USD 25 million B loan subscribed by BBVA in its entirety. In addition to heading the green structuring of the funding, BBVA acted as the Green Loan Coordinator. In accordance with the Green Bond Principles, the loan was structured as a green instrument based on the certification by Vigeo⁴³. Benefits of building the transmission line include:

- ▶ Connecting projects for the generation of renewable energy to the country's electrical grid
- ▶ Contributing to the fight against climate change
- ▶ Contributing towards the achievement of the Sustainable Development Goals

⁴² BBVA. (2017). BBVA signs the first green loan with a project finance structure worldwide. Retrieved from <https://www.bbva.com/en/bbva-signs-first-green-loan-with-project-finance-structure-worldwide/>

⁴³ Vigeo is a global provider of ESG services for investors, private and public organizations and NGOs

**Powerful App,
Providing an Encompassing
Energy and Financial Assessment**





ING's global commercial real estate loan portfolio amounts to close to €30 billion. As the largest commercial real estate financier in the Netherlands, ING has worked closely with partners to offer Dutch-based borrowers an app-based tool that allows them to identify optimal energy efficiency measures for their buildings.

As potential borrowers enter particular data on their buildings (e.g. floor area, age, and type) the app provides a detailed analysis⁴⁴ of their energy use and options entailing 10 feasible energy saving measures on how to

44 EFIG. Energy Efficiency Basics: Key Points. [Website]. Retrieved from <https://valueandrisk.eefig.eu/resources>

lower energy costs and reduce CO2 emissions. Analysis of these measures include indicative costs and financial returns. Likewise, should the app's assessment result in annual energy savings of over €15,000 per building⁴⁵, clients are then offered an on-site BREEAM as well as an energy audit at no cost.

The app's results are impressive as it has been used to assess 18,000 buildings, equivalent to 10 million sqm (65% of ING Real Estate Finance financed portfolio). Based on this success, ING seeks to encourage 5,000 Dutch clients to 'green' their portfolio (28,000 buildings).

45 BBP. (2017). Beyond Risk Management: How Sustainability is driving innovation in commercial real estate finance.

New Financing for Office Buildings + Green Energy Label Requirements⁴⁶

As of 2018 ING will only provide finance for office buildings in the Netherlands that meet Green Energy Label requirements. ING's policy is aligned with Dutch regulation mandating buildings housing office space from 2023 onwards to have a minimum of a C energy label to be rentals. Moreover, the Dutch government intends to expand this measure, as all properties will be required to have an A label by 2030.

Sustainability is a Necessity⁴⁷

According to Peter Göbel, Director for Real Estate Finance at ING emphasizes "Sustainability is no longer a wish, it is a necessity, both economically and environmentally". ING sustainability vision puts it at the forefront of the Dutch market, as it entails exclusively having 'green' buildings in its portfolio within the next 6 years.

Sustainability and Real Estate Finance⁴⁸

In line with the United Nations Sustainable Development Goals (SDGs), ING actively works towards facilitating the transition to a fairer, greener economy by financing projects that assist clients become more sustainable. At the end of 2016, ING's Sustainable Real Estate Finance (REF) portfolio totalled EUR 7.2 billion, equivalent to 23% of the bank's total REF portfolio.

46 ING. (2017). ING will only finance 'green' office buildings in the Netherlands after 2017. Retrieved from <https://www.ing.com/Newsroom/All-news/ING-will-only-finance-green-office-buildings-in-the-Netherlands-after-2017.htm>

47 Ibid.

48 ING. (2016). Sustainable Development Goals. Retrieved from <https://www.ing.com/ING-in-Society/Sustainability/The-world-around-us-1/Sustainable-Development-Goals.htm>



Commercial Real Estate Green Loan Initiative

In early 2016, Lloyds Bank launched its Green Loan Initiative for commercial real estate (CRE) lending. This £1 billion initiative provides incentives for clients (through discounted loan margins) to improve the energy efficiency of their investment portfolios and cut carbon emissions. The bank forecasts this initiative will result in CO2 savings of upwards of 110,000 tonnes. Comparative energy savings are expected to equal the annual energy usage of over 22,000 households. As of September 2017 Lloyds Bank has arranged over £800m of green loans across 8 transactions, in which its own participation has been just over £270m, with a growing pipeline into 2018. Central to Lloyds Bank's initiative stands its tool to benchmark sustainability performance. This tool - developed with UK based Trucost - enables the bank to:

- ▶ Assess the initial eligibility for green loans; and
- ▶ Determine and set appropriate energy/CO2

saving KPIs which borrowers will have to meet or maintain to take advantage from the margin improvement.

Meeting precise sustainability requirements for the duration of the loan allows borrowers to benefit from a margin discount of up to 20 basis points. It is worth noting that noncompliance does not entail a loan default for the borrower: The borrower simply does not benefit from the margin discount.

Lloyds Bank intends for its Green Lending Initiative to spark interest among other lenders and in due course foster demand for similar products across the industry. While its initiative encourages borrowers to embed environmental practices and thus drive carbon reductions in their portfolios, it is also helping Lloyds Bank better understand the sustainability risks in its loan portfolio and ultimately drive better credit performance.

Assessment Criteria for Lloyds Bank's Green Lending Scorecard

Property's Sustainability Credentials	Borrowers' Sustainability Credentials
▶ Energy Intensity	▶ Corporate targets
▶ Green Certification e.g. BREEAM, LEED	▶ Sustainability certification programmes
▶ Exposure to Minimum Energy Efficiency Standards	▶ Sustainable management practices
▶ Carbon mix of energy supplies	▶ Occupier engagement strategies

HPH Commercial Property

In late October 2016, Lloyds provided its first green loan under the Initiative to Bath-based HPH Commercial Property. As part of the £14m, five-year funding package, HPH made a commitment to further reduce its carbon footprint and continue its ongoing programme of introducing energy efficiency measures through the refurbishment of its properties. The green loan fitted well with the company ethos and is helping support the business in achieving its carbon reduction targets.

Unibail-Rodamco

In April 2017, under its Green Lending Initiative, Lloyds Bank arranged a €650m syndicated debt financing for Unibail-Rodamco, Europe's largest commercial real estate company. Unibail-Rodamco will be able to refinance an existing debt facility from 2011, providing liquidity for general corporate purposes. The interest margin was set with reference to the company's long term credit ratings and against three green KPIs. These KPIs were based on Unibail-Rodamco CSR strategy and were approved by the bank.

The image features a modern architectural interior. The background is a curved wall composed of numerous vertical wooden slats, creating a textured, rhythmic pattern. A prominent horizontal band of teal color runs across the middle of the image, serving as a backdrop for the text. The lighting is warm and directional, highlighting the textures of the wood and the slats.

**Activating a Green Bank within the Bank
SEB Intends to Continue Driving the
Green Financing Market⁴⁹**



At present, Sweden's Skandinaviska Enskilda Banken AB (SEB) has underwritten green bonds totalling USD 16.5 billion. Furthermore, SEB stands as the second biggest underwriter in the world with a market share of 8.4% and has acted as green structural advisor for around a third of outstanding issuance.

SEB's Own Green Bond

In early 2017, SEB issued its first own green bond valued at € 500 million. The money was allocated for loans related to green initiatives for large companies and institutions, municipalities, county councils and housing associations.

Eligible Assets:

1. Loans to finance and/or refinance projects within the EU and the Nordic region targeting:

- ▶ Mitigation Projects: such as through investments in energy efficiency, renewable energy, clean transportation and green buildings.
- ▶ Adaptation Projects: such as water and wastewater management.
- ▶ Environmental Projects: such as emissions reduction, waste management and sustainable forestry.

2. SSA Green Bonds:

Green Bonds issued by any supranational, sovereign, agency and municipality issuer which meet the SEB's requirement for investments of its liquidity reserves and that in addition have an independent third party Second Opinion that meet specific environmental standards.

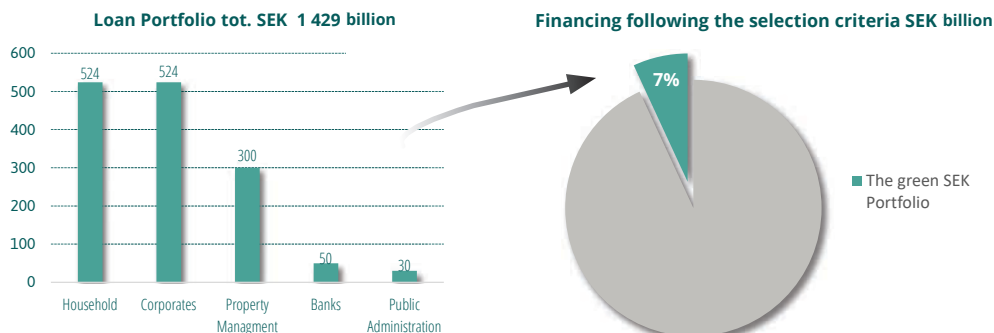
49 SEB Group. (2016). Sustainability Report: How we create value for people, the business and the environment. Retrieved from https://sebgroupp.com/siteassets/about_seb1/sustainability/reporting_package/2016/corporate_sustainability_report_2016.pdf

Central to SEB's Green Bonds is a "green virtual balance sheet" employing various processes for defining, selecting, verifying, monitoring and reporting on Green Asset and Liability Management (ALM)⁵⁰. A separate green financing library offers investors a user friendly tool which allows them to manage their own green bond portfolios. In the case of issuers, this tool allows them to benchmark themselves. Also, SEB is developing a web-based platform to facilitate structuring a Green Bond Framework and to apply for a Second Opinion directly from the Cicero led Expert Network on Second Opinions (ENSO).

50 SEB Group. (2017). Green Bond Investor Presentation. Retrieved from https://sebgroupp.com/siteassets/investor_relations1/green-bonds/seb_green_bond_investor_presentation_final_february_.pdf

SEB's Initial Green Loan Portfolio

As of the end of 2016, SEB had SEK 11.8 billion in the dedicated green loan portfolio, in accordance with their green bond framework, with a stated ambition to grow the portfolio to SEK 20 billion by 2020.





Sustainable Property and Private Sustainable Mortgages

In 2016 Dutch Triodos Bank and Triodos Investment Management financed directly, as well as through sustainable property⁵¹ :

- ▶ 7,200 homes and apartments (2015: 4,500)
- ▶ 310 commercial properties (2015: 310)
- ▶ Comprising approximately 460,000m² of office and other commercial space.
- ▶ In addition, Triodos Bank financed around 27,000m² of buildings and brown field sites

⁵¹ Triodos Bank. (2016). Sustainable property and private sustainable mortgages. [Website]. Retrieved from <http://www.annual-report-triodos.com/en/2016/impact/environment/sustainable-property-and-private-sustainable-mortgages.html>

Approach & Screening Process⁵²

Triodos real estate investments are based on a ground breaking approach which channels the concept of sustainability through what the bank defines as the four P's: People, Planet, Profit and Project. In turn, the four P's serve as the foundation for Triodos's Sustainable Real Estate Test tool which assesses the sustainability dimension within real estate. This tool measures the penetration of energy efficiency measures in buildings incorporating social, economic and spatial aspects alike.

⁵² Triodos Bank. (2016). Impact Investment: Sustainable Real Estate. [Website]. Retrieved from <https://www.triodos.com/en/investment-management/impact-investment/our-sectors/sustainable-real-estate/>

Triodos Sustainable Real Estate Screen

This screen combines a series of environmental traits in buildings with issues such as:

- ▶ Quality from the perspective of the users
- ▶ Experiential value
- ▶ Financial returns it produces

Triodos relies on this screen at different stages for two purposes:

- ▶ When buying a property, the screen becomes an assessment tool.
- ▶ During the management phase, to monitor and enhance the quality of the properties.

Triodos Vastgoedfonds⁵³

Triodos Vastgoedfonds is Europe's first sustainable, listed property fund. With a focus on commercial real estate -mostly offices- the fund's objective is to develop a sustainable real estate sector which pays attractive dividend to its investors. 2016 Impact indicators:

- ▶ CO2 emissions of 2,466 tonnes avoided (2015: 2,528 tonnes)
- ▶ Total generation capacity solar energy 129 kWp

The average energy use of the buildings in portfolio is 30% lower than the average energy use of office buildings in the Netherlands.

Kennedylaan, Monumental office mansion in Baarn⁵⁴

This building turned office space was the first historic building in the Netherlands to be granted a 'green certificate' by the Ministry for housing, regional development and the environment. The sustainable renovation of the building financed by Triodos reduced its CO₂-emissions by 26%, thus improving its energy label from a G to a C.

⁵³ Triodos Bank. (2017). Triodos Vastgoedfonds: First zero-emission investment fund in sustainable real estate. [Website]. Retrieved from <https://www.triodos.com/en/investment-management/our-funds/overview-all-products/vastgoedfonds/about-the-fund/>

⁵⁴ Triodos Bank. (2017). Kennedylaan, Baarn. Retrieved from https://www.triodos.com/en/about-triodos-bank/know-where-your-money-goes/results/?projectId=101269&name=kennedylaan__baarn

5

Lessons and Next Steps

Practice is Evolving, Not Yet Systematic

This survey has shown that among leading banks the practice of green tagging is evolving rapidly. A life-cycle of this agenda can be outlined in five steps (illustrated below) and the 10 leading European banks surveyed would appear to be in steps 2 and 3.



But no bank as yet has applied green tagging to all of its existing loans. Most European banks are likely to be at earlier stages in the life cycle. Furthermore, progress with green tagging involves market-wide actions which individual banks cannot accomplish notably in terms of common norms as well as regulatory refinements.

We draw 10 lessons from survey of current practices on green tagging:

1. Commercial ahead of retail: Bank units covering commercial clients are more advanced in green tagging than their retail equivalents: Green Tagging is being driven more strongly at present by debt capital markets units and commercial real estate departments than by retail banking. The reasons for this vary, but the value-proposition for green commercial retail seems clearer to bank clients, there is less inertia in the commercial banking units and bulk retail data is not easily available to change direction on green across existing mortgages for risk, and retail customer demand is latent.

2. Definitions are Critically Important: 90% of banks with Green Taxonomies either use their own definitions or use the Climate Bond Initiative's Green Definitions: A few banks have no single definition of green or agreed taxonomy, but most have developed an internal taxonomy by this stage. While Climate Bond Initiative's definitions are the widest used (due to the natural connection with green bond issuance and the strength of commercial bank demand), S&P's and the public finance definitions are used respectively by one bank to base their tagging efforts.

3. Simplify and Automate: Convergence, Automation and Simplicity are "watch-words": To ensure faster and wider application within banks, three concepts have emerged: Standards and definitions must converge, application and integration must be automated (especially in retail units) and the whole agenda has to be simplified.

4. Energy efficiency and Climate lead: The Components of "Green" which are most interesting are Energy Efficiency and GHG Emissions: Whether for economic value or climate transparency reasons, the most material components from a wide set of green attributes remain energy efficiency and CO₂e emissions. Surprisingly low on this list are those green components related to land use, biodiversity and air quality emissions.

5. Moving ahead of the Data: Even before having “the definitive green outperformance dataset”, many banks are providing green pricing incentives to clients anyway: Many have said that to create a market “you just do it”. So while for some banks, the academic data remains insufficient to demonstrate additional green value from transactions with high green attributes (eg. highly energy efficient, low emissions, low environmental impact), others do not plan to wait and are experimenting with green products to collect their own data.

6. Regulatory Opportunity: Risk and Regulatory Drivers are Considerably Weaker than Commercial ones, at present: The risk of redundancy of low energy performing properties and of value loss from non-green assets is not as strong a driver among banks today as the opportunity for enhanced returns. Bank regulators are just starting to act in this area and it is expected that (assuming unintended consequences are reasonably considered) there is room for further work in this area to mainstream existing efforts.

7. EPCs have a central role: Energy Performance Certificates hold the data needed for “Green Tagging” in mortgages, yet the quality of this data is important: Banks data mapping of the sources of the attributes they would require for green tagging mortgages suggests that EPCs contain the data required.

EPC data is of notoriously mixed quality, but some felt that this had been improving over the years and that more bank use of the data would potentially place a spotlight on the energy auditors which do not come up to scratch.

8. Internal Priority is Key: Most of the barriers for green tagging relate to its costs, lack of data or internal priority and institutional inertia: In both retail and commercial sides (pages 27 & 22) the costs of change, availability of data/ evidence, internal resources and institutional inertia (manifest in several of the columns) are key barriers.

9. Leaders are Ready: Leading European banks have been thinking about Green Tagging for 3-4 years: For those who have implemented green tagging, it seem to have taken around 2 years, on average, to implement in commercial real estate, but 3 years for residential mortgages.

10. Moving to Performance Analysis: There is an interest to run correlations between property EPCs and financial performance: While many banks are happy to build the data from scratch through the marketing of green lending products, financed by green bonds, there is a genuine interest to find a way to back-test correlations of financial performance with EPCs – although there was not time/ resources in this phase of this project to undertake such analysis.

The Future for Green Tagging

The 10 banks were asked to propose and prioritise next steps. As can be seen from the results (below), an EU-wide study which looks at the correlation between real estate asset energy performance and underlying loan financial performance is the preferred option.

Based on these priorities, a review of the case studies and analysis of policy drivers, this report concludes by recommending five next steps:

1. Assess the quantitative relationships between building performance and loan performance: Market players and policymakers still lack robust analysis of how energy performance of buildings related to loan performance. This would provide the foundation for better loan pricing, stimulus for market development and feed-into regulatory alignment.

2. Build a common EU database of EPCs and other building data: Tagging is currently held back by a variety of barriers that prevent easy matching of EPCs with loan data. Banks need more transparent availability of EPCs and buildings performance data across Europe.

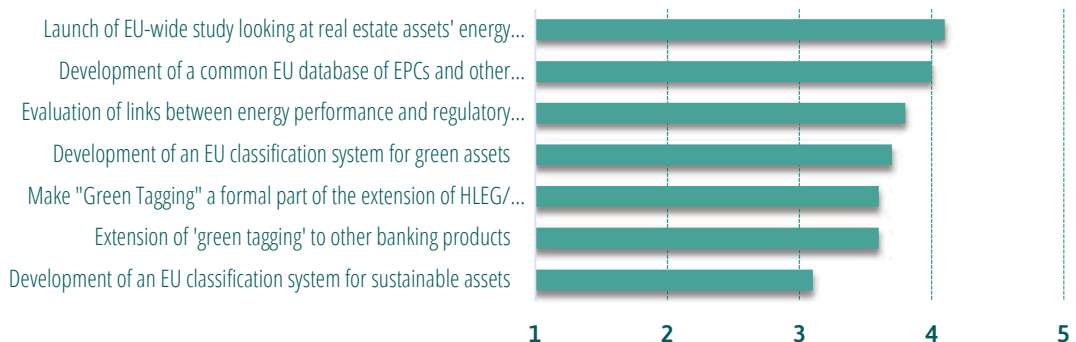
3. Evaluate the links between building performance and regulatory capital: In the context of the review of the European Supervisory Authorities, green tagging needs to be considered as an important tool for banks to understand the environmental exposures in their balance sheets.

4. Focus on real estate as a pilot for a common classification system: Efficient markets require shared protocols for defining financial attributes. Work is underway for a common EU classification system for sustainable assets. After renewable energy, real estate offers a financially sizeable and environmentally significant sector to focus on for convergence.

5. Connect green tagging with the new EU securitisation rules: To help implement Article 103a, banks could begin to tag the energy performance of the underlying property as a voluntary data field.

These five steps could be made during 2018 – and would help to move green tagging from an interesting field of experimentation into a mainstream and trusted tool for expanding energy efficiency finance, improving balance sheet resilience and delivering Europe’s sustainable development ambitions. Moving ahead on a global scale with “green tagging” would be a simple and low-cost way for countries and financial institutions to scale up green finance for energy efficiency using existing standards. It could also help to improve risk management in the financial system and grow the energy efficiency finance market by the multiples which are required to deliver a sustainable future. In fact, key influencers views on these issues and hence the barriers themselves can be greatly impacted by:

- ▶ Statistically relevant evidence that loans to energy efficient properties have lower default rates and better risk profiles than normalized sample sets;
- ▶ Aggregate, multi-geography evidence that energy performance impacts a property’s value; and
- ▶ Recognition that the implementation pathway and costs for the banking industry are understood and sufficiently outweighed by the added value through improved risk and value assessments and knock-on impacts on overall system financial stability.



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Green Tagging: Mobilising Bank Finance for Energy Efficiency in Real Estate

REPORT FROM THE BANK WORKING GROUP 2017

Peter Sweatman & Nick Robins
CLIMATE STRATEGY & PARTNERS | UNEP INQUIRY



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