A REALITY CHECK ON GREEN FINANCE

ANALYSIS OF THE SIZE, GROWTH & PENETRATION OF GREEN FINANCE IN EUROPEAN CAPITAL MARKETS

June 2022

By Christopher Breen

> *This report shows that while green finance in Europe has grown rapidly to more than €300bn last year alone, it is still a long way short of the sort of levels required for Europe to meet its net zero targets - and still only represents about 12% of all capital markets activity. The report drills behind the headline numbers, analyses the growth and trends in different sectors and types of green finance over the past five years, and highlights some of the challenges ahead.*

The growth and penetration of green finance

In recent years, the climate emergency has risen to the top of the global political, business, and financial agenda. In response, the EU and the UK have established themselves at the forefront of building clean and more sustainable economies. The recent invasion of Ukraine has increased the urgency of addressing this problem: while many European governments have (temporarily?) turned back towards fossil fuels, the war has focused minds on energy security and the potential for renewables and other forms of clean energy to reduce Europe's dependence on fossil fuels and accelerate the shift towards a more sustainable and resilient energy supply.

One of the most critical tools to enable this transition is finance: if Europe is to invest anything like the sums needed to meet its net zero commitment by 2050 it will need massive funding from the capital markets. The broad estimates of the sums involved range from around €600bn to €1 trillion per year in green investment. This report provides a 'reality check' on Europe's progress so far in green finance and shows that while it has grown rapidly, it is still a long way short of where it needs to be.

Green finance is about a lot more than green bonds. We estimate that European capital markets raised more than €750bn in green finance from 2017 to 2021 across bond, equity, and loan markets, with more than €300bn raised in 2021 alone. While our estimate is higher than others, these numbers probably need to double or triple again - and quickly - to enable the sort of investment required. In addition, our report raises questions about the role of carbon-intensive industries in driving the transition and the role of the capital markets in funding them.

This report addresses the following questions:

- What is the growth, value and penetration of green finance in Europe from over the past five years?
- What types of issuers and companies are the main users of green finance?
- What types of instruments (ie. bonds, loans, equity) are being used to channel funding to green investment?
- What is the composition of corporate green finance, and what types of companies are raising capital?
- And how 'green' is green finance?

Methodology & acknowledgements

This report focuses on the size, growth, and penetration of green finance in Europe, which for the purposes of this report is the EU and the UK. We define 'green finance' as capital which funds projects that progress the transition to a clean energy economy, such as solar farms, wind turbines, hydroelectric projects, and electric vehicles. In addition to 'labelled' green bonds, we analysed activity in the equity, loan and venture capital markets to identify 'green finance' based on the use of proceeds of the capital raised. We also split corporates into three (perhaps simplistic) buckets from a climate perspective of 'good', 'bad', and 'neutral'. Each bucket relates to a company's primary activity and whether it is progressing or delaying the transition to net zero. This helps us better understand how different types of companies are using different types of green finance.

This report is a work in progress and we welcome any feedback on how to improve it. We apologise for any errors, which are entirely our own. Please email any queries, comments or corrections to info@newfinancial.org.

I would like to thank Sheenam Singhal and Seethal Kumar for their research on this report, William Wright for his support and feedback, and Dealogic and Preqin for providing access to much of the data.

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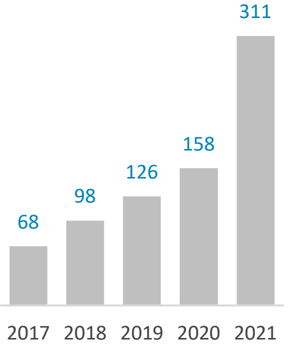
Here is a short summary of this report:

A big increase
Total value of green finance in Europe from 2017 to 2021 (€bn)



Source: New Financial analysis of data from Dealogic and Preqin

1) Rapid growth
The value of green finance raised in the capital markets in the EU and UK has risen significantly over the past five years to over €300bn last year. Since 2017, green finance activity has increased fivefold across bond, equity and loan markets, and it doubled last year alone. We estimate that more than €750bn has been raised by corporates, financials, and governments in green finance over the past five years, with corporate activity playing the leading role. Green finance is about a lot more than labelled green bonds, which account for about two thirds of overall green finance activity. Our headline estimate is higher than some other estimates because we have included our estimate of explicitly green activity in equity markets, loan markets, and venture capital.

2) Towards net zero
Although green finance is big and growing fast in Europe, the level of activity is a long way short of the sort of investment that European governments, corporates, and financials need to make fund the transition to a clean energy economy and meet their net zero targets. The range in annual investment required in Europe is between €600bn and €1 trillion, which suggests that green finance activity will have to double or even triple again - and quickly - to ensure that the European economy is on track to reach net zero.

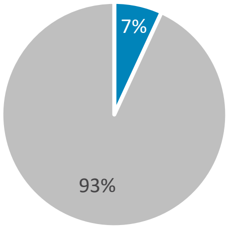
3) A lack of penetration
For all of the noise around green finance and the urgency of addressing the climate emergency, green finance still only represents a relatively small proportion of capital markets activity in Europe. Overall, we estimate that green finance accounted for just 12% of capital markets activity across bond, equity, and loan markets last year. The good news is that this penetration is increasing: over the five year period it was just 7%, but the overall penetration of green finance doubled last year. Penetration is highest in the corporate bond market (16%), slightly lower in loans (12%), and much lower in equity markets (5%).

4) An important metric
Despite the growth in green finance there is a disconnect between the amount of capital being raised by 'good' companies whose primary business activity is actively trying to address climate change (such as renewable energy firms), and 'bad' companies whose primary business is actively delaying the transition to net zero (such as fossil fuel companies). Over the past five years, 'bad' companies have raised 18 times as much money in capital markets as 'good' companies, although this ratio fell last year for the first time below 10 to one. This (perhaps simplistic) ratio reflects the difference in scale and maturity of these companies, but we think it is an important metric to watch.

5) Playing catch up
The UK is lagging behind the EU in green finance: UK issuers raised €106bn in green finance over the past five years, representing 14% of all green finance in the capital markets in Europe. This share is significantly lower than the UK's share of over 20% in all capital markets activity in Europe. This is reflected in the lower penetration of green finance in UK capital markets: over the past five years, green finance accounted for just 5% of all capital markets activity in the UK, roughly half the level as in the EU and roughly where the EU was four years ago.

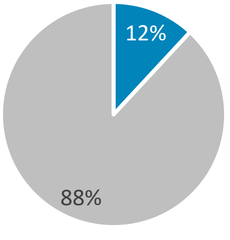
A small slice of the pie..

Green finance as a proportion of all capital markets in Europe from 2017 to 2021



…but an increasing share

Green finance as a proportion of all capital markets in Europe in 2021



Source: New Financial analysis of Dealogic and Preqin data

6) A debt-driven market

The vast majority - over 95% - of green finance activity in Europe comes from the bond and loan markets. Labelled green bonds are by far the biggest single component of green finance, raising €425bn over the past five years and nearly €200bn last year alone. Companies raised a further €225bn in green finance in the loan markets, including nearly €100bn last year. Corporates are the biggest issuers in the bond market, representing about 40% of all activity over the past five years, ahead of governments (35%) and financials (25%). Across all green finance, corporates account for 60% of activity.

7) A small role for equity

Equity markets - including public equity markets and venture capital investment in cleantech - have raised just €26bn in green finance. This is less than 4% of all green finance, and reflects the relatively small scale and immaturity of the standalone green sector in public equity markets. However, activity is growing fast: green equity has increased from €1bn to €13bn over the past five years, and doubled last year alone.

8) The good, the bad, and the neutral

The profile of companies that are driving the green finance market is perhaps surprising. Using our taxonomy of 'good' and 'bad' companies from a climate perspective, just over a fifth (22%) of all green capital markets activity by corporates came from 'good' companies such as standalone renewable energy firms. 'Bad' companies accounted for more than a quarter of activity (27%) and this green finance adds up to just 12% of their total capital markets funding. Perversely, green finance probably needs more 'bad' companies to raise money (because these companies have the highest impact on emissions) and more 'good' companies to raise money to accelerate change.

9) How 'green' is green finance?

Not all green finance is created equal. We estimate that around 40% to 50% of green bonds are 'dark green' and are being invested in projects that will play a significant role in actively driving the transition to net zero. In the loan market, we estimate that only around 40% of all SLLP loans (based on Sustainability Linked Loan Principles) are green in terms of their use proceeds. It is also important to avoid the trap of double counting green finance: more than 50% of the money raised in the green bond market can be allocated by issuers to (re)financing existing projects, and issuers are able to apply this funding retrospectively to projects that are more than two years old.

10) The challenges ahead…

One of the main findings of this report is that while green finance in Europe is growing fast, it is still not enough to meet the required levels of investment for Europe to fulfil its net zero commitments. Policymakers and issuers alike will either need to adjust their targets and expectations (not a great idea) or find new ways to raise more green capital at scale. An essential part of this will be improving the transparency and clarity of green finance, including: better and more consistent definitions of green and not green activity; more information about use of proceeds from green finance; and more robust KPIs, transition plans, and targets. Perhaps the biggest challenge is going to be designing a sensible transition framework: companies that play a significant role in driving climate change need access to capital need to invest in net zero, but they need to be held accountable for their progress.

CONTENTS

Part 1: Summary and main themes

Part 2: Sector-by-sector analysis

A reality check on green finance in Europe

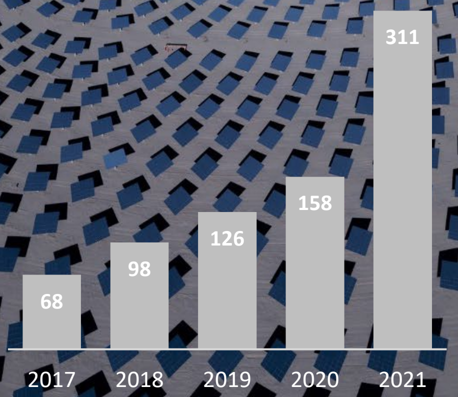
There are a lot of numbers and data in this report, and it would be pretty exhausting to read it all in one go. This section provides 10 key takeaways on the scale, growth, and penetration of green finance in Europe.

>>> SHOW ME THE MONEY

€300 bn+ The value of green finance raised in European capital markets in 2021

The value of green finance in Europe increased last year to €311bn across bond, equity and loan markets. Over the past five years, more than €750bn has been raised by companies, governments and financials to address climate change and finance the transition to net zero. Our estimate of the value of green finance is higher than some others as we include not just labelled green bonds but activity in the equity, loan, and venture capital market that is identifiably green.

The value of green finance raised in European capital markets 2017 to 2021 €bn



>>> RAPID GROWTH

97% The growth in the value of green finance in Europe in 2021

Green finance is growing fast: last year the total value of activity doubled and it has grown fivefold over the past five years. Last year, green capital markets activity by financial sector issuers more than doubled, and government issuance tripled.

>>> PLAYING CATCH UP

€1 trillion The estimated value of annual green investment required to meet net zero targets by 2050

Despite this growth, Europe is a long way short of the sort of levels of green investment needed to hit its net zero targets. Estimates from the European Commission, McKinsey & Co, and the Intergovernmental Panel on Climate Change suggest activity needs to double or triple again - and fast.

>>> RELATIVELY LOW PENETRATION

12% Green finance as a share of all capital markets activity in Europe in 2021

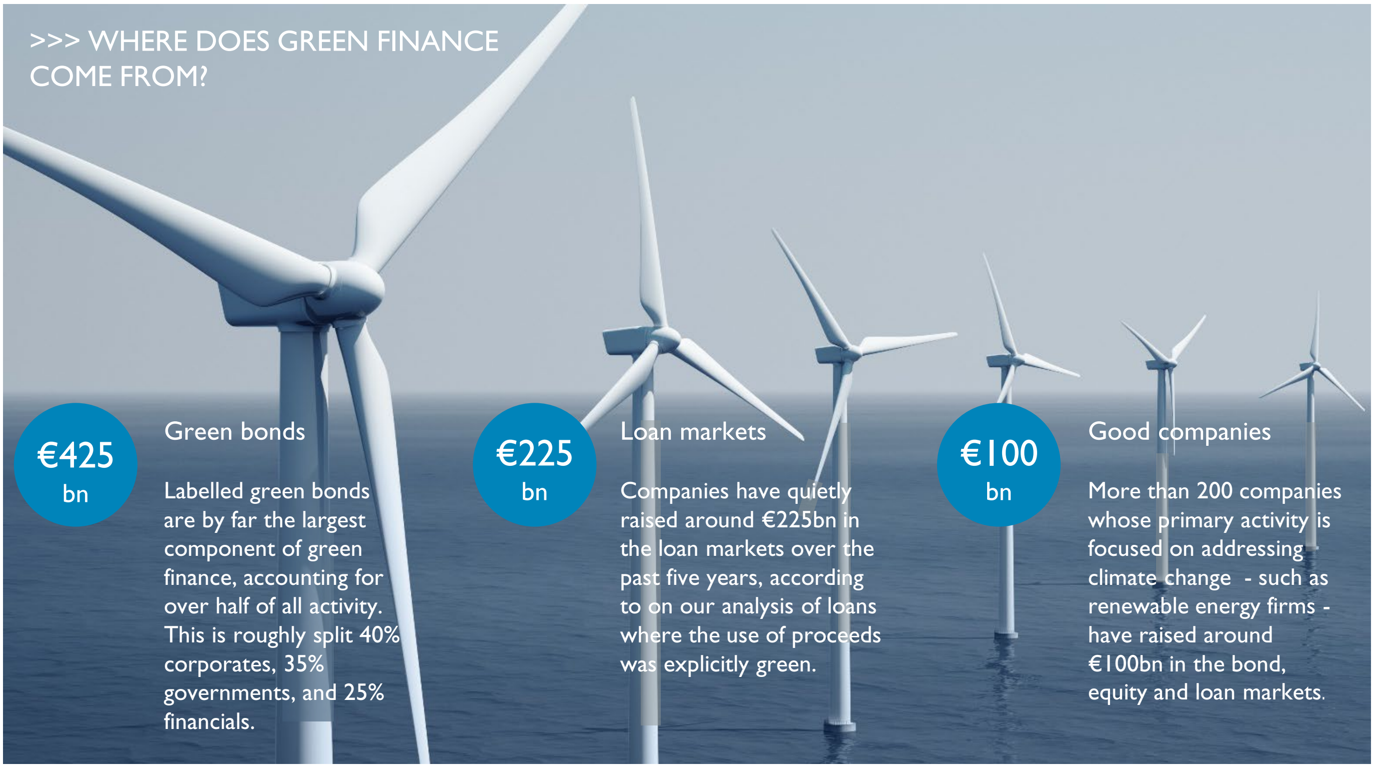
Green finance still only represents 12% of all capital markets activity in Europe, despite this rapid growth. The penetration of green finance is highest in corporate bonds (16%), ahead of loans (12%), and equity markets (just 5%).

>>> A LONG WAY TO GO

18 to 1 The ratio of capital raising by 'bad' companies to 'good' companies

For every euro raised by a 'good' company whose primary business activity is focused on addressing climate change, €18 are raised by 'bad' companies that make the problem worse. Last year this ratio dropped below 10 to 1 for the first time.

TEN KEY TAKEAWAYS



>>> WHERE DOES GREEN FINANCE COME FROM?

€425 bn

Green bonds

Labelled green bonds are by far the largest component of green finance, accounting for over half of all activity. This is roughly split 40% corporates, 35% governments, and 25% financials.

€225 bn

Loan markets

Companies have quietly raised around €225bn in the loan markets over the past five years, according to on our analysis of loans where the use of proceeds was explicitly green.

€100 bn

Good companies

More than 200 companies whose primary activity is focused on addressing climate change - such as renewable energy firms - have raised around €100bn in the bond, equity and loan markets.

>>> CORPORATE ACTIVITY

65% The share of all green finance raised by corporates in the past five years

European companies are the biggest single users of green finance: over the past five years they have raised just under €500bn in green finance across bond, equity and loan markets. Governments represent a fifth of activity, while banks and other financial issuers who recycle green capital markets activity into other green finance products account for a steady 15%.

>>> FALLING BEHIND

5% Green finance in the UK as a proportion of all capital markets activity

Green finance is one of the few areas of banking and finance where the EU is a clear global leader. The UK accounts for 14% of European green finance, much lower than its share of more than 20% of all capital markets activity. Penetration of green finance in the UK is roughly half the level as the EU, and the UK is roughly four years behind the EU in terms of penetration.

>>> BEWARE OF DOUBLE COUNTNG

50%+ The proportion of green bonds that can be allocated to previously announced projects

Just over half of the capital raised by green bonds can be used to (re)finance existing green projects, and issuers can allocate this funding to projects that were started more than two years ago (known as the 'look back' period). This doesn't negate any particular bond but it reduces the net new amount of green finance and raises the risk of double counting.

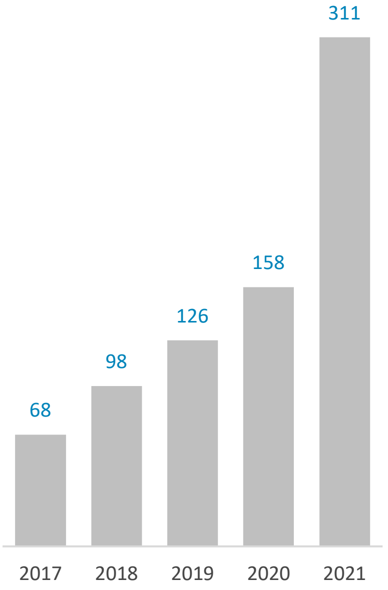
>>> DIFFERENT SHADES OF GREEN

40% to 50% The share of green finance that is actively 'green'

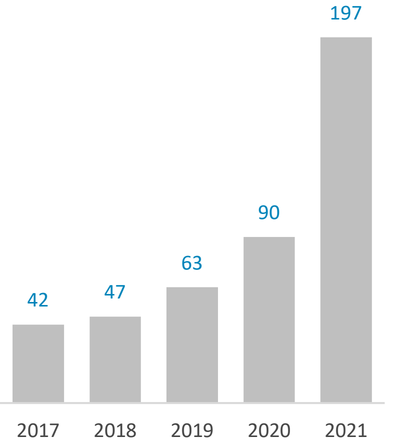
Not all green finance is created equal: the proceeds of green finance are put to work on a wide range of different investments. Our analysis of second opinions on green bonds issued by third party providers and of the use of proceeds from green bond and loan issues suggests that between 40% and 50% of the capital raised is 'dark green' or 'actively green'.

Fig. 1 The total value of green finance in Europe

Total green finance
i) Total value of green finance in Europe €bn 2017 to 2021



Total labelled green bond issuance
ii) Total value of labelled green bond issuance in Europe €bn 2017 to 2021



Required amount of green investment
iii) Estimated annual amount of green investment required to meet Europe's 2050 net zero goal

European Commission:

€1,019 bn

McKinsey & Co

€933 bn

iv) Estimated increase in green investment required in Europe according to the IPCC

100% to 200%

Source: New Financial analysis of Dealogic and Preqin data; required amounts from European Commission, McKinsey, and IPCC

A broader definition

Our report shows that the value of green finance in Europe has risen dramatically from 2017 to 2021 but is still a long way short of the levels needed for Europe to meet its commitment to reach net zero by 2050. When we talk about green finance: 'green' means activities that actively progress rather than delay the transition to a clean energy economy, and 'finance' means all capital market activity that is channelled towards particular projects, investments, and companies (which for the purposes of our report are 'green' projects).

When most people think about green finance, they think about green bonds. Labelled green bonds are a critical part of the clean energy transition, but they are not the whole story. While the value of labelled green bonds (issued by corporates, governments and financials) has grown rapidly to just under €200bn last year, we think this misses about a third of total green finance activity. This is in the form of loans where the use of proceeds is identifiably green, as well as capital markets activity across bond, equity, and loan markets by 'green' companies , and 'green' venture capital.

The chart on the top left shows that in 2021 the value of green finance activity in European capital markets was €311bn, nearly 60% higher than the €197bn in labelled green bond issuance (the middle chart). The third chart shows the estimated amount of annual green investment required in Europe to meet its net zero ambitions by 2050 according to the European Commission, McKinsey & Co, and the Intergovernmental Panel on Climate Change.

In other words: green finance is growing fast, our estimate of activity is higher than many others, but even this is not enough. To get on track, we think green finance activity in Europe will need to maintain its recent high growth rate and double or triple again in the next few years.

An overall increase

While the headline growth in the total value of green finance in Europe over the past five years is striking, it is useful to analyse the distribution of activity and sources of growth by type of issuer.

Figure 2 shows the rapid overall growth in green finance activity and the value of activity broken out between corporates, governments and agencies, and financials. Over the past five years, total activity has increased more than fourfold, and in 2021 it nearly doubled. Corporate activity increased last year by two thirds to €184bn; issuance by banks and other financials more than doubled to €48bn; and issuance by governments and agencies tripled to €79bn.

Over the past five years, the value of green finance has increased for all types of issuers by between four and five times, and - with the exception of a blip in government activity in 2019 - has grown each year.

The €75bn increase in corporate activity in 2021 meant that it accounted for just under half (48%) of the overall growth in green finance last year, with the €52bn increase in government activity representing another third of overall growth.

Corporate issuers account for the majority of green finance: over the past five years corporates represented an average of 65% of all issuance (see Figure 3). In 2019 and 2020 the share of corporates increased to more than 70%, before falling to just under 60% last year, mainly as a result of the tripling in government issuance.

The share of banks and other financial issuers has remained remarkably constant over the past five years at around 15%. Green capital raising by government issuers has been the most volatile, ranging from a share of just 11% in 2019 to 26% last year, with an average over the five year period of 20%. This share is likely to increase in the coming years as more governments and agencies issue green bonds - but the high share of corporate issuers underscores how companies have an important role to play in financing the transition to net zero.

Fig.2 Green finance by type of issuer - value

The value of total green finance in Europe by type of issuer including government, corporates, and financials (€bn)
2017 to 2021

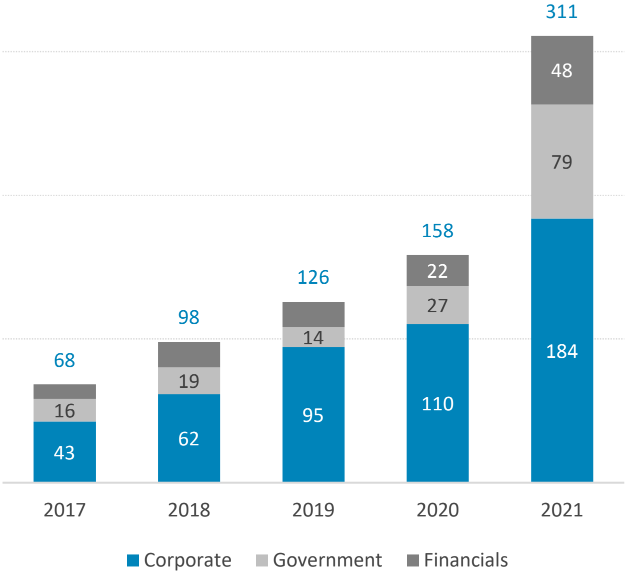
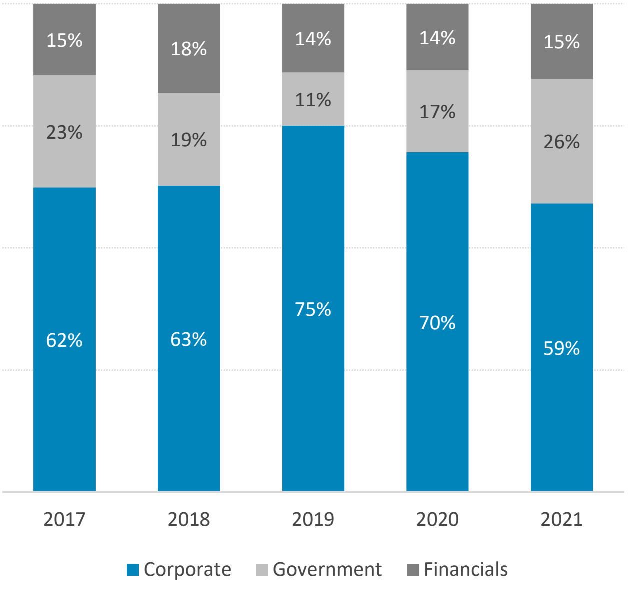


Fig.3 Green finance by type of issuer - % share

The proportion of total green finance by type of issuer (corporate, government, financial) in Europe
2017 to 2021



Source: New Financial analysis of Dealogic and Preqin data

A debt-driven market

Another way of understanding green finance is to look beyond the type of issuer to see what sort of instruments they are using to raise capital. The charts on this page show the value and distribution of green finance between the bond, loan and equity markets, and underline that green finance is almost exclusively a debt market.

Green bonds are the primary instrument for raising green finance: last year green bonds raised a shade under €200bn alone, and over the past five years bonds accounted for nearly €450bn in issuance. Last year green bond issuance more than doubled (up 115%) and this increase of €106bn accounted for roughly 70% of the overall growth in green finance in Europe.

If we take a closer look at green bond issuance, we see that growth in value was driven by governments. Last year almost half of the €106bn increase in green bond issuance (€52bn) came from governments. The other half of the growth in issuance came evenly from financials and corporates, who issued an additional €27bn and €26bn respectively. Before 2021, the growth in green bonds was driven mainly by corporates.

The loan market is the second largest component of green finance. Our analysis of the use of proceeds on a representative sample of sustainability-linked loans and standard loans shows that companies used the loan market to raise €100bn in green finance last year, an increase of more than 60% compared with 2020. Meanwhile equity markets (public equity markets and venture capital) accounted for just €13bn in green finance last year.

Debt markets accounted for 96% of all green finance in Europe last year, with a rough split of two thirds bonds and one third loans. It is interesting to note that this split has changed in the past few years: in 2018 and 2019 the balance between loans and bonds was roughly 50 / 50. The share of equity issuance, while small, has increased from 1% in 2017 to 4% in 2021 and we expect the equity component of green finance to continue growing as the sector matures.

Fig.4 Green finance by type of instrument

The value of total green finance in Europe by type of instrument including loans, bonds, and equity (€bn)
2017 to 2021

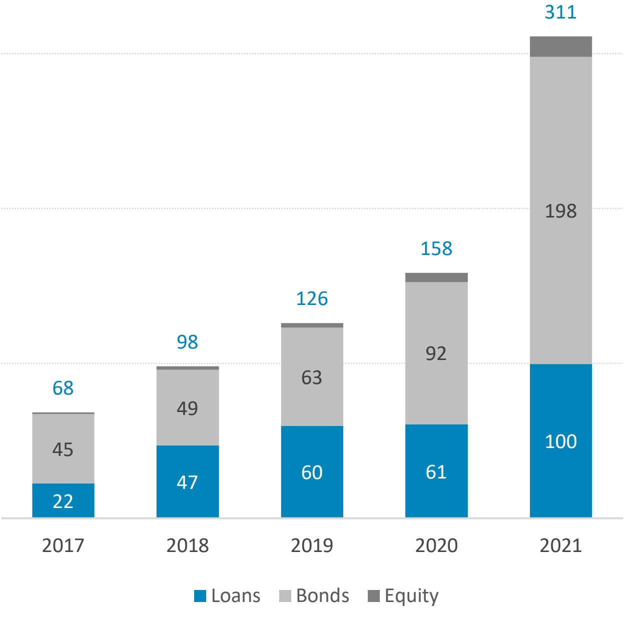
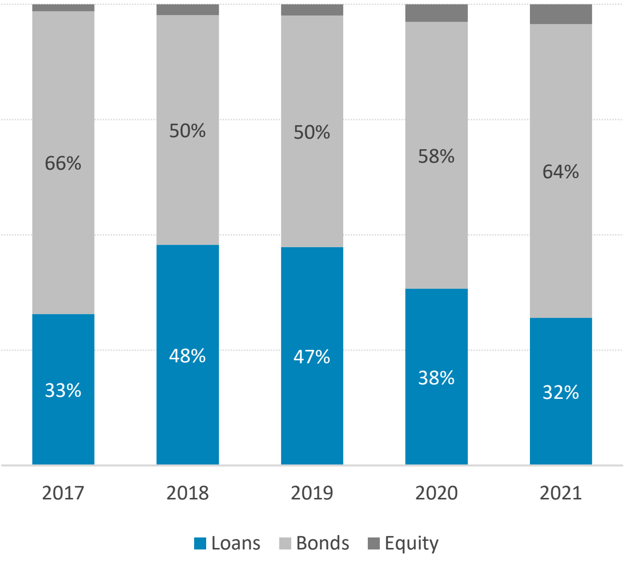


Fig.5 Green finance by type of instrument - % share

The proportion of total green finance by type of instrument (loans, bonds, and equity) in Europe
2017 to 2021



Source: New Financial analysis of Dealogic and Preqin data

AT A GLANCE: WHAT IS GREEN FINANCE?

The components of green finance

Measuring the value and growth in green finance in Europe is harder than it sounds and - given the importance of funding the transition to net zero - a lot harder than it should be. There is a lot more to green finance than labelled green bonds, and it is important not to assume that all designated 'ESG' activity is green. The main components of our analysis of green finance include: labelled green bonds; loans where the use of proceeds is identifiably green; all bond, loan and equity capital raising by companies whose primary activity is addressing climate change (such as renewable energy firms); and venture capital investment in identifiably green companies.

For this report, we have not included private debt or direct investments by asset managers or insurers in green projects (mainly due to the lack of consistent data) and we have excluded bonds that are labelled 'ESG, 'sustainable' or 'transitional'. We have also excluded sustainability-linked loans unless the use of proceeds are explicitly green. Our definitions are imperfect and we recognise that we may have missed a significant amount of green finance. However, we think it important to create a baseline of demonstrably green finance. And, as we demonstrate later in the report, not all 'green' finance is particularly green and a lot of the proceeds are used for refinancing or financing previously announced projects. This raises the risk that the headline numbers on labelled green bonds overstate the net new value of green finance in any given year.

Labelled green bonds €425 bn — *Value 2017 to 2021* 56% — *% of green finance 2017 to 2021*	Bonds that are officially labelled as 'green bonds' are by far the largest single component of green finance in Europe with a total value of €425bn in the five years from 2017 to 2021, accounting for over half of all activity (and two thirds of activity last year). They can be issued by corporates, financials or governments. Officially, green bonds are "committed to financing or re-financing investments, projects, expenditure, or assets helping to address climate and environmental issues."
Loans with green use of proceeds €225 bn 30%	The syndicated and leveraged loan markets are the second largest component of green finance. 'Sustainability linked loan products' are a fast growing sector of the market which links the terms of the loan to various aspects of ESG, but we have only included those SLLPs which have an identifiably green use of proceeds. In the absence of an official 'green loan' label we also analysed the use of proceeds in the standard loan market and estimate that companies have raised €225bn in green loans over five years, or 30% of all green finance activity.
'Good' company financing €100 bn 13%	The third largest source of green financing is all capital raising in bond, equity and loan markets by a sample of more than 200 'good' companies in Europe, which we define as companies whose primary activity is addressing climate change or supporting the transition to clean energy and net zero, such as renewable energy firms. Since 2017, good companies raised an average of €20 billion per year or 13% of all green finance. *Note that we have adjusted our numbers for labelled green bonds and loan markets to avoid double counting.*
Green venture capital €12 bn 2%	The last - and smallest - component of our green finance analysis is green venture capital. Green venture capital is investment in smaller companies that are focused on developing clean energy or other activities to address climate change. While activity has grown rapidly in the past few years, this segment only accounts for €12bn between 2017 and 2021, representing less than 2% of all green finance.

Source: New Financial analysis of Dealogic and Preqin data

AT A GLANCE: PENETRATION OF GREEN FINANCE

A lack of depth

For all of the noise about the climate emergency and commitments to reach net zero, it is striking that green finance still only represents a relatively small share of overall capital markets activity. In 2021 - a break out year for activity in which the value of green finance roughly doubled to over €300bn in Europe - green capital raising accounted for just 12% of all capital markets activity in Europe by corporates, governments, and financials (see Figure 6). In other words, for every euro raised in the capital markets to finance a specifically green project or company, roughly seven euros are raised for projects or companies that are not specifically green.

The market where green finance has the deepest penetration is the corporate bond market, with green bonds making up 16% of all corporate bond issuance in 2021. This is just ahead of the penetration of 13% for all bond issuance (including financials and governments) and the same penetration as all corporate capital raising (including loan and equity markets).

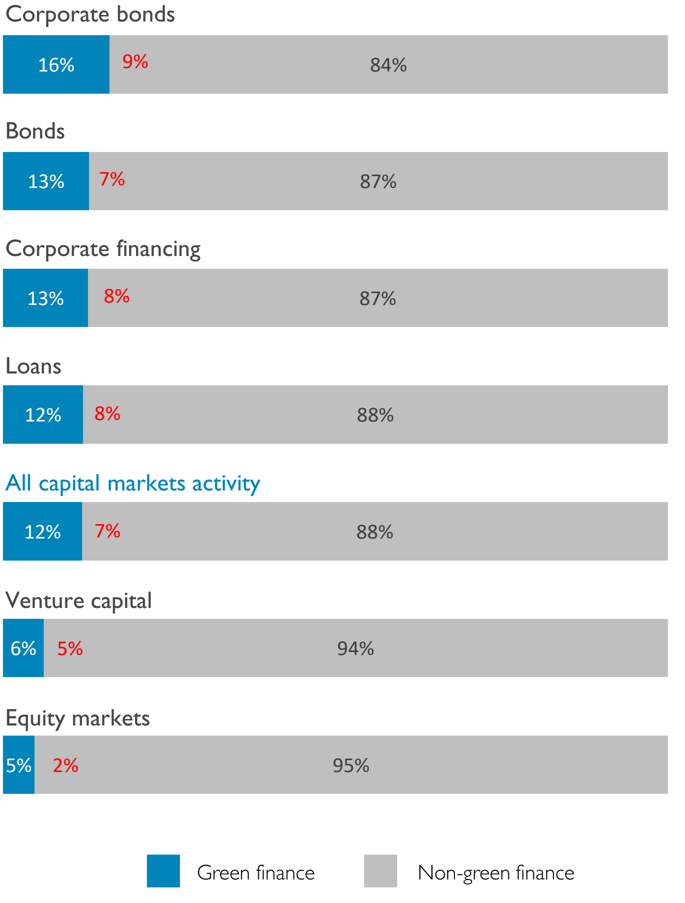
The penetration of green finance is lowest in equity markets and venture capital, accounting for just 5% and 6% respectively of all activity (or just one euro in every 20 euros raised).

It is encouraging to see a significant increase in the penetration of green finance across the board from 2017 to 2021. The percentages in red show the average share of green finance over the five year period, and in every segment the penetration of green finance increased in 2021 as growth accelerated. Across all capital markets, the penetration of green finance has increased fourfold since 2017 and doubled to 12% last year. In the bond and corporate bond markets the penetration of green finance last year was not far short of double its average level over five years.

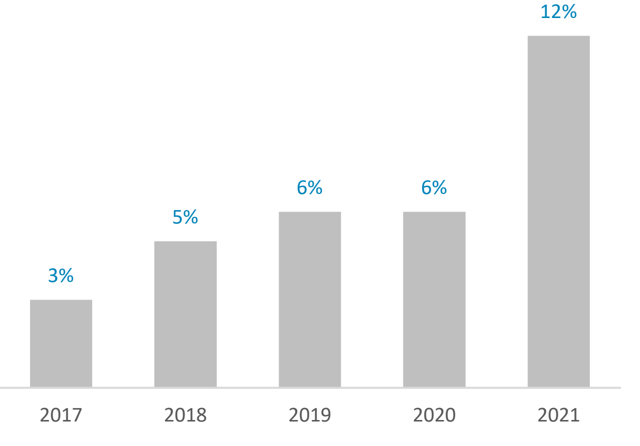
This relative lack of penetration suggests that while corporates, governments, and financials are talking the talk about their green credentials and making pledges to transition to net zero, the amount of capital needed to meet these promises and walk the walk is falling some way short.

Fig.6 Penetration of green finance in Europe

i) The penetration of green finance in European capital markets in 2021 (note: the red % represents the penetration from 2017 to 2021)



ii) The penetration of green finance in all European capital markets activity from 2017 to 2021



Source: New Financial analysis of Dealogic and Preqin data

DEFINING 'GOOD' AND 'BAD' COMPANIES

The good, the bad, and the ESG:

In analysing green finance, it can be tempting to default to measuring capital markets activity that is specifically labelled or designated as being green. While this is the biggest segment of green finance, this approach excludes a significant amount of capital markets activity: first, in equity and loan markets where there is no official 'green' label; and second, capital markets activity by companies that are clearly 'green' in terms of their day-to-day business - such as wind power or other renewables - but which may not use officially-labelled 'green' bonds as part of their financing.

For the purpose of this report we created a universe of companies that we have defined as 'good' companies from a climate perspective and analysed their use of capital markets. To deepen our understanding of green finance, we also created a universe of companies that we have defined as 'bad' companies from a climate perspective, leaving a group of 'neutral' companies in between.

It is important to stress that this not a moral or ethical judgement on the companies but a description of their impact on the environment, emissions, and climate change. We could have called them 'green' and 'brown' companies, but that might have been confusing in a report about green finance and green capital markets.

- **Good companies:** these are companies whose primary activity is to help address climate change and accelerate the transition to clean energy and net zero, such as companies that develop solar panels, or build and operate wind farms. We built this sample based on textual analysis of company descriptions using a list of words associated with the EU's green taxonomy along with other commonly held ways of defining 'green'. We identified 211 'good' companies in Europe that used the capital markets between 2017 and 2021, and a further 328 'good' companies that received funding from venture capital.

- **Bad companies:** these are companies whose main activity plays a significant role in causing the problem in the first place or delaying the transition to clean energy and net zero. Our sample of 'bad' companies includes: companies in the Climate Action 100+ list of the largest polluters in the world; companies in the oil and gas or mining sectors; and companies whose business description includes references to 'bad' activities from a climate perspective. We identified 1,009 'bad' companies in Europe that have used the capital markets over the past five years.

- **Neutral companies:** this leaves a group in between of 'neutral' companies which are not considered actively good or actively bad when it comes to addressing climate change, or whose activities combine a bit of both.

This may seem simplistic but it enables us to better understand green finance: first, by including a significant source of green finance that would not be captured by focusing solely on 'labelled' products; second, by enabling us to analyse the ratio in financing between companies actively trying to accelerate the transition and companies that are delaying it; and third, to better understand what sort of companies are using different forms of green finance.

A stark mismatch

When we apply this taxonomy of 'good' and 'bad' companies to capital markets, it shines an uncomfortable spotlight on the sheer scale of funding for companies whose main activities cause significant damage to the environment.

Over the past five years 'good' companies in Europe raised €111bn in the capital markets - a significant sum. However, it is dwarfed by the €1.8 trillion raised by the 'bad' companies in our dataset (see Figure 7). The value of capital raising by 'bad' companies has remained remarkably constant each year at around €350bn a year, with a spike in 2020 to nearly €450bn.

It is encouraging to see that the value of capital raising by 'good' companies has more than doubled from €17bn in 2017 to €37bn last year, and that the ratio of 'bad' to 'good' is coming down. For most of the past five years for every euro raised by a 'good' company seeking to actively address climate change, more than 20 euros were raised by a 'bad' company whose main activities play a big role in driving it. Last year, for the first time, this ratio dropped below 10 to 1.

This ratio is simplistic, not least because a lot of green finance for projects such as renewable energy comes from 'bad' companies like fossil fuel firms. This is reflected in the shaded grey bars in Figure 7 which show the amount of green finance raised by bad companies. This shows that green finance represents a small proportion of the overall funding of 'bad' companies: just 7% over five years and 12% last year.

Overall, 'good' companies represent a tiny proportion of capital markets activity: just 2% of all financing over the five year period, while the share of 'bad' companies remained fairly constant at between 25% to 30% (see Figure 8). The implications of this imbalance between 'good' capital raising and bad' capital raising is significant: if policymakers and companies are serious about getting to net zero, it will be critical that 'good' companies receive the necessary funding and that the ratio between 'good' and 'bad' financing comes down.

Fig.7 Capital raising by good and bad companies

Value of capital raised by 'bad' companies versus 'good' companies (in €bn), with the ratio of 'bad' to 'good' at the top of chart in blue
2017 to 2021

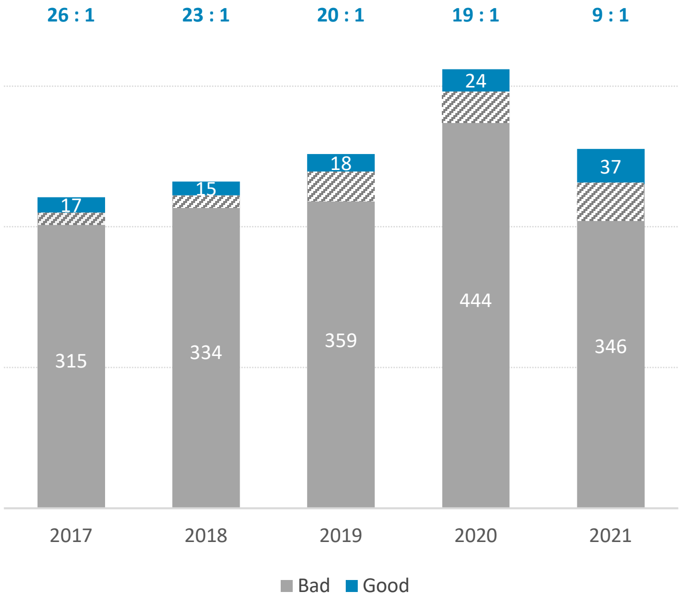
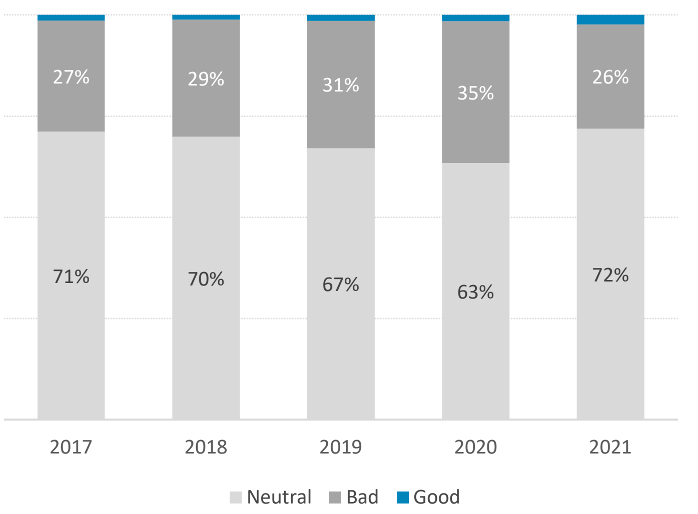


Fig.8 The good, the bad and the neutral

The proportion of total capital markets activity by type of company (good, bad, and neutral) in Europe
2017 to 2021



Source: New Financial analysis of Dealogic and Preqin data

A small share

Another way of showing the balance between capital markets activity by 'good' and 'bad' companies is to look at it across different instruments (ie. bonds, equities, and loans). Figure 9 shows a consistent pattern over the past five years: 'good' companies account for between 1% and 3% of capital raising in each market while 'bad' companies make up around one third of activity.

Of course, this imbalance reflects in part the different scale, development, and maturity of the types of companies that fall into the 'good' and 'bad' categories. Renewable energy, battery technologies, carbon capture, and electric vehicles are relatively nascent technologies and there are relatively few large standalone companies. In contrast, 'bad' sectors like oil and gas, mining and transport are mature industries that pertain to scale and include many of the largest companies in Europe. However, we think it is a useful metric to provide a bit of a reality check on green finance.

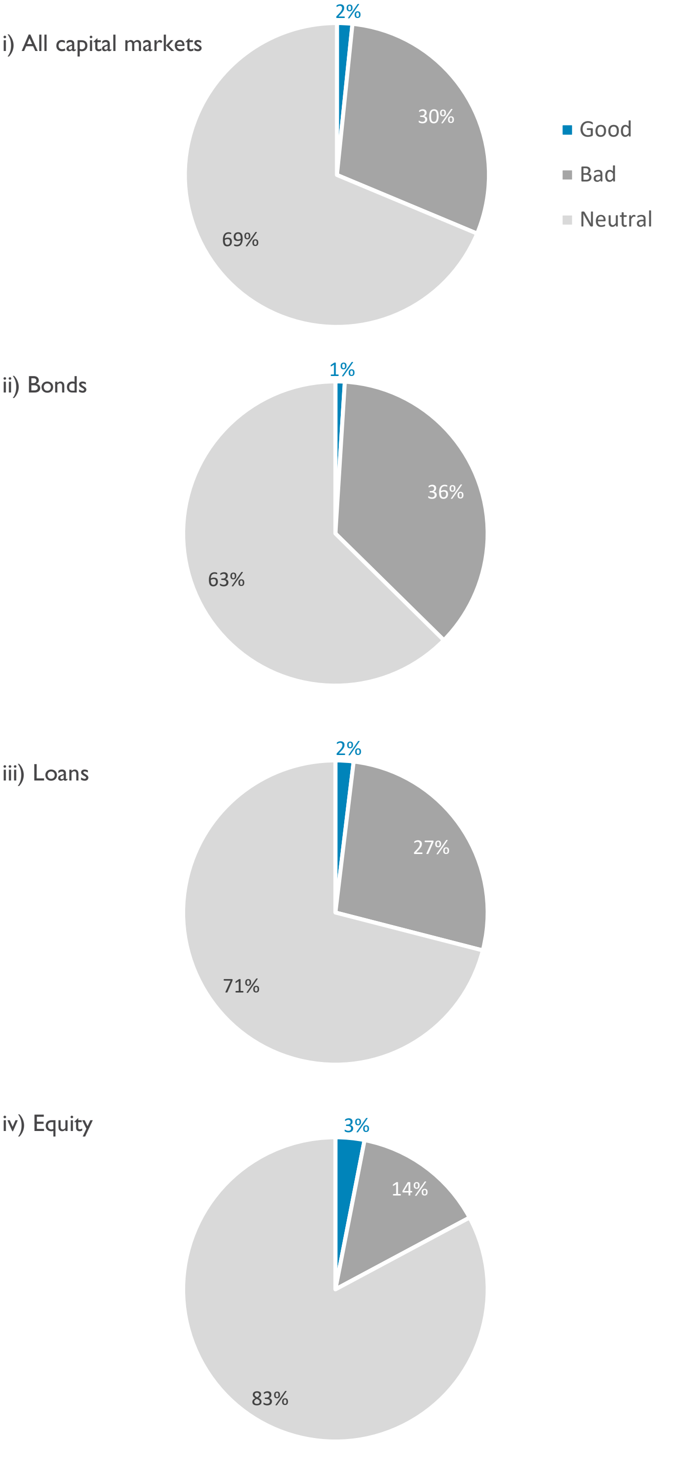
This mismatch is most pronounced in corporate bonds: over the past five years 'good' companies accounted for just 1% of all corporate bond issuance in Europe, while 'bad' companies generated 36% of all activity. One reason for this high ratio is that corporate bond issuance is dominated by larger companies, and the standalone green sector in Europe is relatively small.

In the loan markets the ratio is a little better: 'good' companies account for 2% of activity and 'bad' companies represent only 27%. And in equity markets the ratio is even lower: 'good' companies represent 3% of all public equity and venture capital investment in Europe while 'bad' companies account for just 14% of activity, a ratio of about five to one.

While the numbers in equity markets appear promising, equity markets make up a relatively small percentage of overall capital markets activity in Europe - just 7% over the past five years - and therefore the higher share of 'good' company financing in equity markets is not enough to move the dial on the overall balance in capital markets activity.

Fig.9 Financial activity by type of company and instrument

Distribution of all corporate capital markets activity (bonds, loans, and equity) by type of company, 2017 to 2021



Source: New Financial analysis of Dealogic and Preqin data

Not good enough

When a 'bad' company raises capital, it does not necessarily mean that the capital is being used for a 'bad' project or investment. Figure 10 shows the value of green capital raising by European companies split between good, bad, and neutral companies. It is striking that the amount of green finance being raised by 'bad' companies (in dark grey) has been rising steadily: it has more than tripled from 2017 to €41bn last year. It is also striking that 'bad' companies have raised more green finance than 'good' companies (in blue) in each of the past three years, although the growth in funding for 'good' companies appears to be accelerating.

Most of the growth in green finance at European corporates has come from 'neutral' companies, whose main business is not actively seeking to address climate change and not actively making it worse. The value of green finance from this group has increased nearly 10 times over the past five years and doubled last year alone to €106bn. This means that neutral companies now account for nearly 60% of all green finance. This may suggest that green finance is going mainstream as more and more companies in the wider economy recognise that it is not just fossil fuel companies that need to change.

One of the ironies of green finance is that while the green finance markets is quite dependent on activity by 'bad' companies, 'bad' companies are not at all dependent on green finance for their overall funding. Over the past five years, 'bad' companies have accounted for more than a quarter (27%) of all green finance in Europe, although this share fell to 22% last year. However, green finance only represents a small share of their overall financing.

Figure 11 shows that from 2017 to 2021, green finance accounted for just 7% of all capital markets activity by 'bad' companies. While it is encouraging to see that this share has increased steadily to 12% last year, it underlines that the companies with the biggest impact on climate change do not appear to be investing enough in actively green projects to reduce their impact.

Fig.10 Green corporate finance by type of company

The value of green finance by type of company (good, bad, and neutral) in Europe (€bn). 'Bad' company share of green finance in blue
2017 to 2021

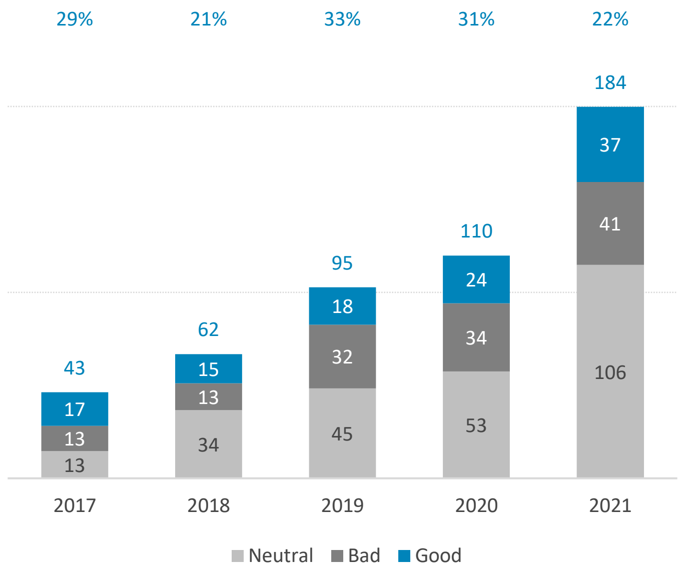
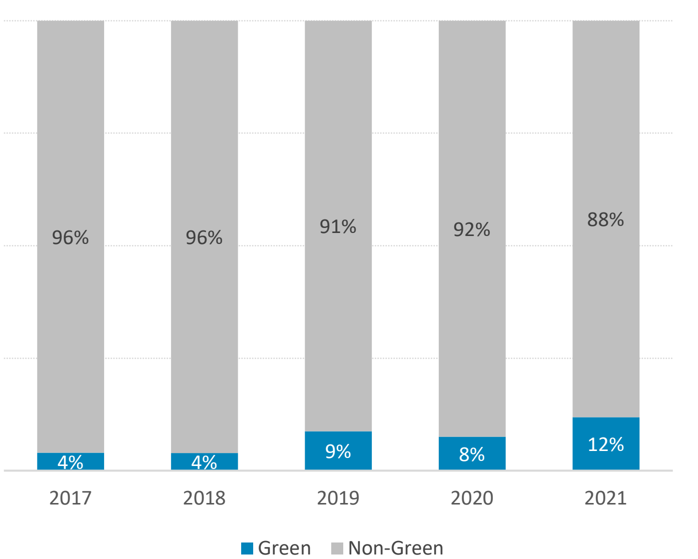


Fig.11 A small slice of green

Green finance as a % of all capital markets activity by bad companies in Europe
2017 to 2021



Source: New Financial analysis of Dealogic and Preqin data

Shades of green

Not all green finance is created equal: there is a big difference between a green bond being used to build a solar farm that will activity reduce emissions (what you might call ‘dark green’), and a green loan being used to reduce the emissions from an oil refinery that will reduce its carbon intensity (‘light green’).

One of the best definitions of shades of green is provided by Cicero Green, an independent evaluator of green bond frameworks. The table in Figure 12 shows the different definitions according to Cicero Shades of Green, with ‘dark green’ and ‘medium green’ more similar to the definition of ‘green’ that we offer in this report. ‘Light green’ applies to ‘transition activities’ which are not, by our definition, ‘green’. An example would be nuclear and gas companies, which the European green taxonomy also considers ‘transitional’.

We analysed a sample of labelled green bonds and loans to better understand how green different types of green finance actually are. Overall, we estimate that 40% to 50% of green bonds and only about 20% of SLLP loans are ‘dark green’.

For bond markets, we analysed a sample of 157 publicly available second opinions on corporate green bonds from Cicero. We also analysed the use of proceeds in a sample of 50 green corporate bonds with a combined value of €76bn (43% of all corporate green bonds in the past five years) to make our own assessment. This shows that 39% to 52% of green bonds are dark green; 35% to 48% are medium green; and 12% to 13% are light green. If we apply this to the total value of the green bond market in Europe last year, it translates into roughly €196bn of dark green bonds, €179bn of medium green bonds, and €51bn of light green bonds.

This analysis is not about passing moral judgment: reaching net zero will require a wide range of different investments and projects. But it is important to stress that some green investments will have a far higher impact than others. The balance between different shades of green will be a key issue for issuers, investors and regulators in the coming years.

Fig.12 Measuring the ‘green’-ness of green bonds

The definitions of ‘shades of green’ and distribution of activity by shades of green

i) Cicero Green: defining ‘shades of green’

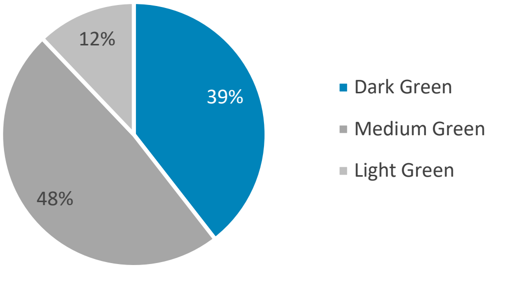
Shades of green and their definitions

Shade of green	Definition
Dark	Allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate resilient future.
Medium	Allocated to projects and solutions that represent steps toward the long-term vision but are not quite there yet.
Light	Allocated to transition activities that may have lower emissions, but do not by themselves contribute to the long-term vision.

ii) Cicero Green: second opinions

The distribution of dark, medium, and light green corporate activity across 157 publicly available second opinions conducted by Cicero

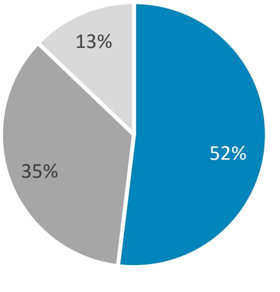
(by number of issuers)



iii) New Financial: sample of green bonds

The distribution of dark, medium, and light green bonds based on analysis by New Financial of a sample of 50 large green bonds

(by value of issuance)



Source: Cicero Green, New Financial analysis of Dealogic data

Beware of labels

If the green bond markets is perhaps not as green as it looks, what about the fast-growing SLLP loan market? We analysed a sample of 50 large SLLP loans in Europe with a combined value of €167bn (45% of all SLLP loans over the past five years) to look at the use of proceeds raised. In contrast to bonds, we estimate that just under a fifth of all activity was identifiably 'dark green' (see Figure 13). Given the small sample and the lack of consistent data, we think it is probably fair to estimate an upper limit of 30% to 40% of the SLLP market as being 'green'.

Beware of doubled counting

Another challenge is that not all new green finance is new. A significant proportion of green finance is allocated to (re)financing existing projects, and many issuers give themselves the flexibility to allocate the capital raised to previously announced projects (known as 'look back').

This means that the net new amount of green finance is lower than the headline figure and raises the risk of double counting. We analysed a small sample of 30 second opinions on green bond issues from two different providers (Moody's and Cicero). The average amount of capital that could be allocated to refinancing (the 'refinancing cap') was between 48% and 59%, and the average lookback period was two and a half years. In other words, for every €1bn raised in green bonds, around €500m to €600m can be allocated to financing projects that were initiated long up to 30 months ago.

If we look at a framework of a specific government green bond - in this case, the UK government's framework for its green gilts issued in 2021 - we see that the government has room for discretion. The proceeds are allocated to clearly defined 'green projects, while the refinancing conditions mean that the government can allocate up to half the money to previously announced projects in the previous 12 months. That means that up to half of the €19bn raised by the government in two green gilts in 2021 could be allocated to green projects announced in 2020.

Fig.13 How green are SLLP loans?

The share of SLLP loans that are 'dark green' and 'green' based on analysis of a sample of 50 large SLLP loans by New Financial

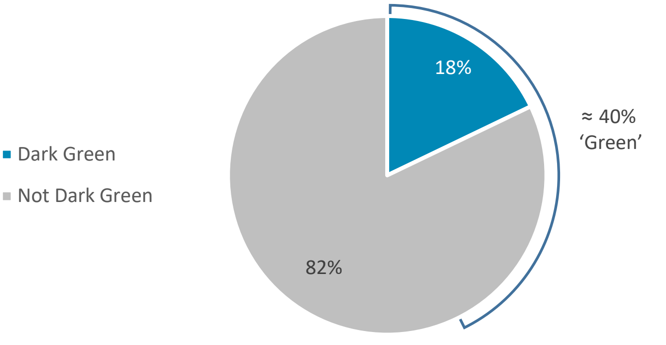


Fig.14 An example of 'refinancing cap' and 'look back'

Summary of the UK government framework for its debut green gilts in 2021

Category	Description
Use of Proceeds	Eligible Green Expenditures include: clean transportation; renewable energy; energy efficiency; pollution prevention and control; living and natural resources; climate change adaptation. Expenditures can be in the form of direct or indirect investment expenditures, subsidies, or tax foregone and selected operational expenditures.
Refinancing	HM Treasury will allocate at least 50% of net proceeds to current and future expenditures.
Look back period	The eligible expenditures are limited to government expenditures that occurred no earlier than 12 months prior to issuance, the budget year of issuance, and the two budget years following issuance.

Source: New Financial analysis of Dealogic data, HM Treasury

A difference in penetration

This report is European in its outlook so most of the data is presented at an aggregate level. However, we thought it would be useful to focus on the UK green finance market and compare it with the EU for two main reason: first, in light of Brexit, the rules and regulations around green finance will be different in the UK and EU. And second, the UK has disproportionately large capital markets in most other sectors.

It is striking that the UK's share of European green finance is surprisingly small. Figure 15 shows the value of green finance activity in the UK and EU over the past five years. UK issuers raised €106bn in green finance over the period with a breakout year in 2021 with €43bn raised alone. Over the past five years, this represents an average of just 14% of the €760bn in green finance activity in Europe as a whole. This is significantly less than the UK's share of European GDP (17%) and its share of around a third of wider banking and finance activity in Europe.

In other words, when it comes to green finance, the UK is punching below it weight. This also highlights that green finance is one of the few areas in banking and finance where the EU is a clear global leader, with more than 40% of all global activity in sustainable finance and ESG.

This is underlined when we compare the penetration of green finance in different sectors of the capital markets between the UK and EU (see Figure 16). On average, the penetration of green finance in the UK is roughly half the level in the EU, and in some sectors the gap is even wider. Across all capital markets, green finance accounted for 5% of total activity in the UK, compared with 9% in the EU, with a similar ratio for corporate green finance and bond markets.

The penetration of green finance in the UK is roughly four years behind the EU, underlining that the UK has been relatively late to the game. While the UK has the scale, concentration, intellectual capital, assets, and expertise to develop a thriving green finance market, it also has a lot of catching up to do.

Fig.15 Punching below its weight

The value of green finance in the EU and the UK in €bn, with the UK's share of European green finance in blue at the top of chart 2017 to 2021

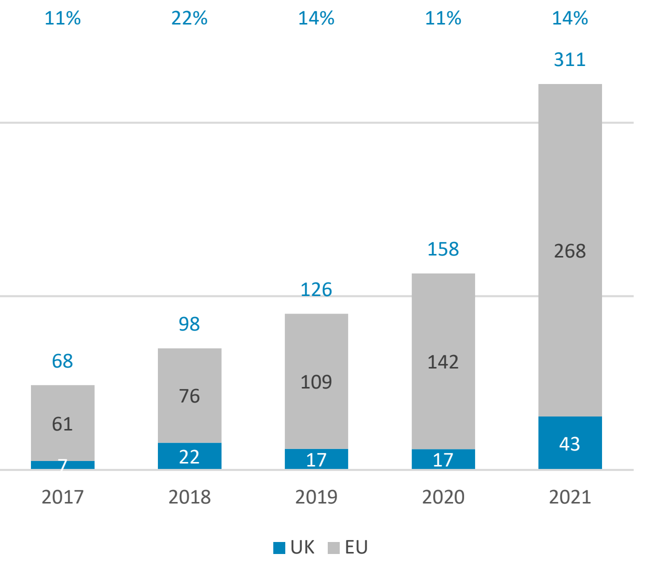
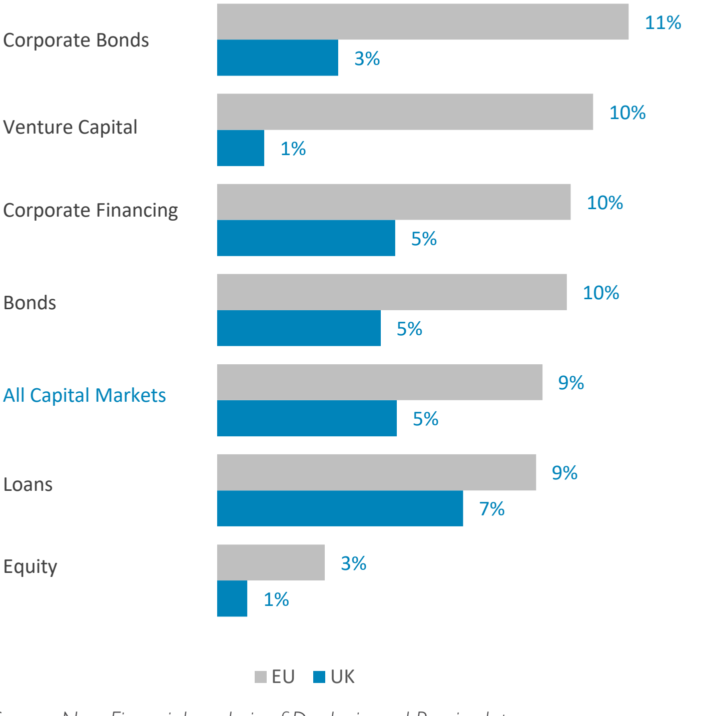


Fig.16 Playing catch up in green finance

The penetration of green finance across different segments in the EU and UK markets, 2017 to 2021



Source: New Financial analysis of Dealogic and Preqin data

A detailed look at green finance across segments of activity

This section analyses different segments of green finance and capital markets activity in more detail, taking a closer look at the bond, loan, and equity markets. We analyse the labelled green bond market, the overall growth in corporate activity and the shifting balance between different instruments, and within each market we measure the growth in activity, identify what sort of companies are raising green finance, and highlight some of the challenges ahead.

>>>

Growth in government issuance

Over the past five years labelled green bonds have become the main way for governments, financials, and corporates to raise green capital. Figure 17 shows that since 2017 the value of green bond issuance in Europe has increased fivefold to just under €200bn. Over the past five years, green bonds have raised an eye-watering €440bn. Activity more than doubled last year and labelled green bonds now account for just under two thirds of all green finance in Europe.

Issuance by corporates increased by two thirds last year, financials more than doubled, and government activity nearly tripled. Government activity accounted for nearly half of the €107bn increase in the value of labelled bond issuance, with the remaining growth split equally between corporates and financial issuers.

Until last year, the main source of green bonds was corporate issuers but they have now been overtaken by government and agency issuance (with €79bn in issuance last year compared with €71bn by corporates). The rapid growth in green bonds issued by banks and other financials suggests that green finance is spreading further downstream: much of this activity is used to provide green lending in the form of corporate lending, project finance, or green mortgages.

The relative share of activity between corporates, financials and governments has been quite volatile over the past five years. Financials have retained a steady share of between 20% and 30%, with an average of 24% over the period (see Figure 18). The share of corporates has seesawed from 30% to 50% (with an average of 41%) and the share of governments has ranged from 22% to 40% (with an average of 35%).

The sharp increase in government activity shows that green finance is climbing the agenda of more governments in Europe, and reflects some debut issues by the UK and Italy. We think this growth is likely to continue. The relatively slow growth in corporate activity raises the question of how much deeper penetration can go, and where future growth is going to come from.

Fig.17 Labelled green bond issuance by type of issuer

The value of labelled green bonds in Europe from 2017 to 2021 (€bn)

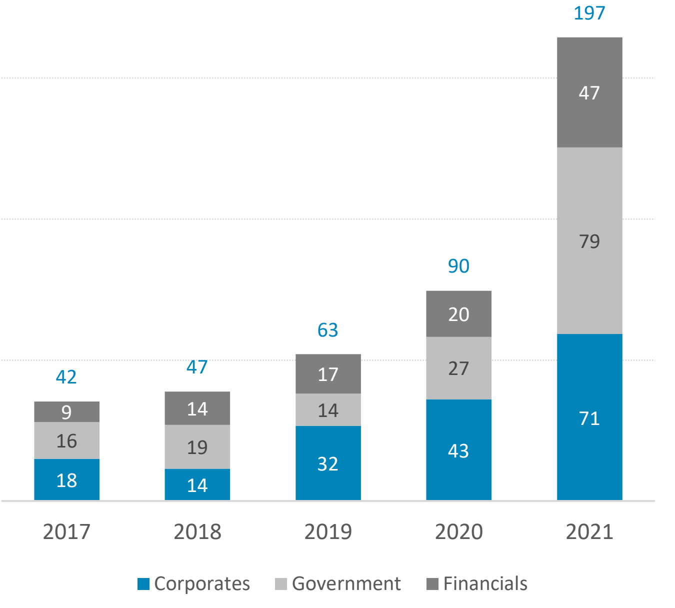
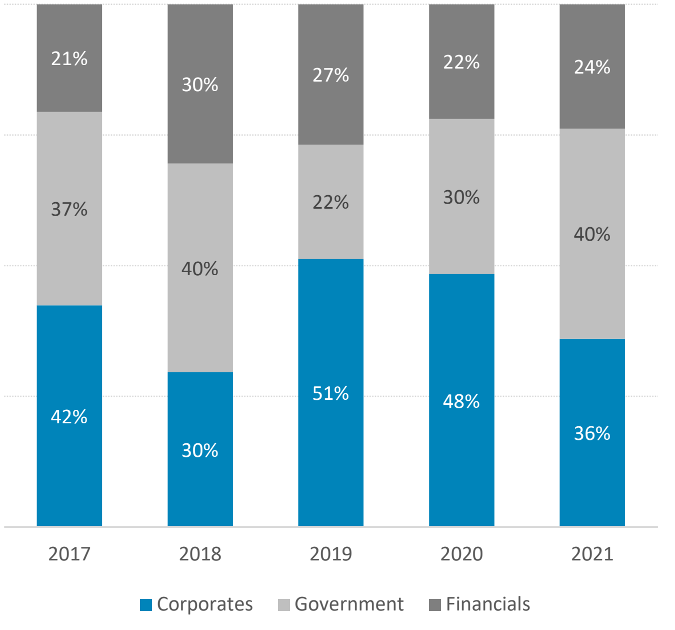


Fig.18 Labelled green bond issuance by issuer - % share

The share of labelled green bond activity in Europe by type of issuer 2017 to 2021



Source: New Financial analysis of Dealogic data

Loans take the lead

For all of the noise around the green bond market, the largest single component of green finance among European corporates is the loan market. Figure 19 shows the distribution of green capital markets activity by corporates over the past five years. Since 2017, the value of green loans has totaled €281bn, representing nearly 60% of all green financing by corporates.

The value of green capital raised in European loan markets increased fivefold from €21bn to €99bn over the five years (a faster growth rate then the 3.5 times increase in the corporate bond market). Last year, loans accounted for just over half of all corporate green finance (54%) and just over half of the growth in green finance activity (54%).

While green bonds are by far the largest component of all green finance when you include governments and financials (accounting for two thirds of all activity), they represent a surprisingly small portion of green capital markets activity by corporates. Green bonds accounted for €72bn of corporate activity (the vast majority of which was in the form of labelled green bonds). This represented 39% of all corporate green finance and 35% of the growth last year.

Equity markets is by far the smallest component: while activity more than doubled across public equity markets and venture capital last year, it still only added up to €13bn. This is more than in the previous four years combined, but still represents only 7% of overall green finance activity. This in part reflects the relative scale and immaturity of standalone green companies in public equity markets, and green finance is likely to increase in value and in overall share of activity in the coming years as the market matures.

Figure 20 highlights this distribution: over 90% of green capital markets activity by companies in Europe over the past five years has been in debt markets. Loans markets have consistently had a market share of 50% to 55%; the share of bond markets has declined to settle at around 40%; and the share of equity markets has grown from a very low base.

Fig.19 Green finance in all corporate markets

The value of total corporate green finance in Europe by type of instrument including loans, bonds, and equity (€bn)
2017 to 2021

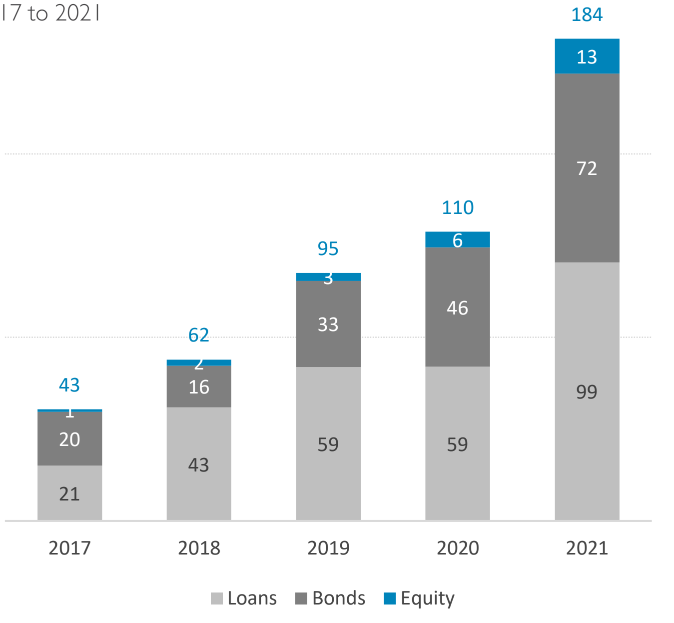
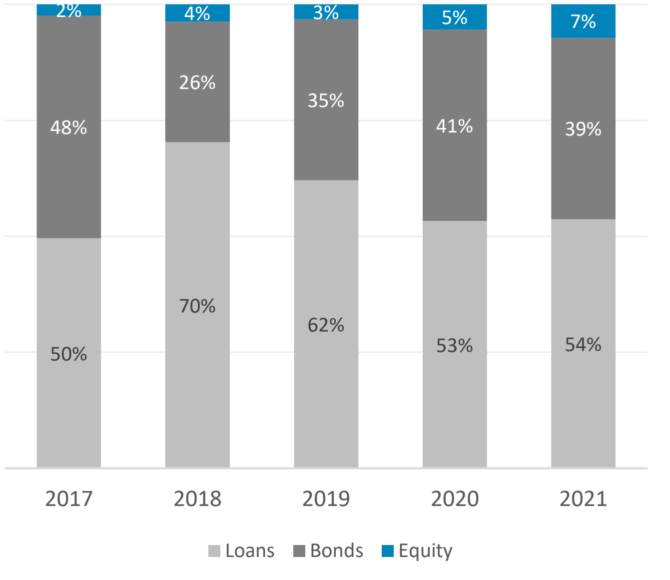


Fig.20 Corporate green finance by instrument - % share

The proportion of total corporate green finance by type of instrument (loans, bonds, and equity) in Europe
2017 to 2021



Source: New Financial analysis of Dealogic and Preqin data

A core strategy

When most people think of green finance, they think of green bonds. They account for nearly two thirds of all green finance activity in Europe (when you include governments and financial sector issuers), are clearly identifiable, and have been around for longer than other 'green' products.

They also form a significant part of green finance in the corporate markets, accounting for nearly €200bn in activity over the past five years. Figure 21 shows that the value of the European green corporate bond market has more than tripled over the past five years from €20bn to €72bn. Last year alone issuance grew by nearly 60%, an increase of more than €25bn. Virtually all of this activity (95%) is in the form of 'labelled' green bonds, although we identified €9bn in bond issuance by 'good' companies that was not structured as a labelled green bond.

When we take a closer look at what sort of companies are issuing these bonds (see Figure 22) the results are perhaps surprising. Green bonds are traditionally associated with big green infrastructure projects, and you might expect the issuers to be either standalone renewable energy companies or fossil fuel companies investing in their renewables business. However, 'good' companies only raised €5bn last year in the bond market - a similar level to previous years - and 'bad' companies only raised €16bn, slightly less than the previous year.

The bulk of green bond activity comes from 'neutral' companies, who between them raised €51bn in green bonds or over 70% of all corporate green bond activity. These companies - whose primary business is not actively addressing climate change and not actively driving it - accounted for all of the growth in corporate green bonds last year. On the one hand, it is positive that a wider range of companies are issuing green bonds. But on the other, it may suggest that the companies who can make the biggest difference on climate change ('good' companies expanding their business, and 'bad' companies reducing their impact) are not getting access to the sort of financing that they need.

Fig.21 Green finance in the corporate bond markets

The value of green bond issuance by corporates in Europe from 2017 to 2021 (€bn)

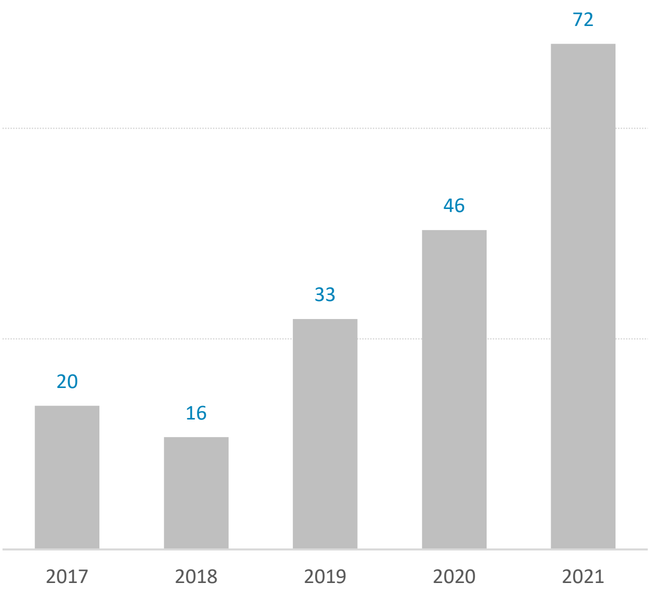
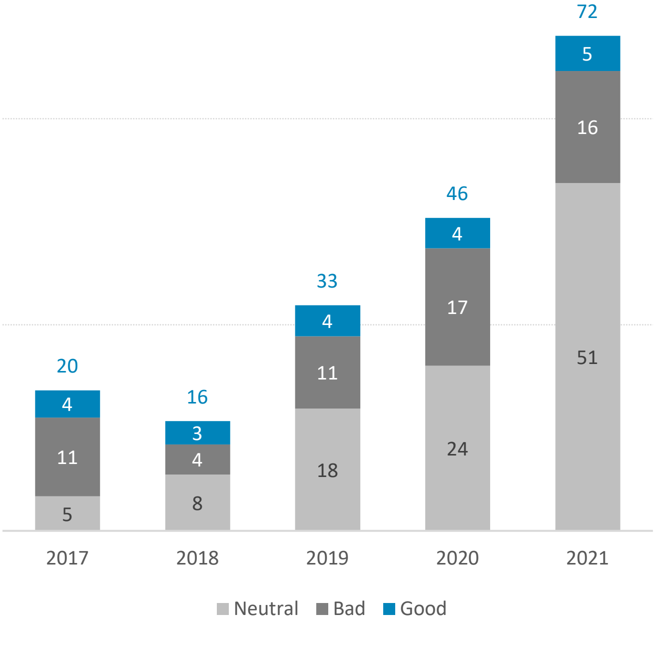


Fig.22 Green bonds by type of company

The value of green bond issuance by type of company (good, bad, neutral) in Europe (€bn)
2017 to 2021



Source: New Financial analysis of Dealogic data

The new kid in town

The loan market may not generate the same sort of headlines when it comes to green finance as the bond market, but over the past five years it has grown rapidly and made a bigger contribution to green capital raising by corporates than its better known cousin. Green loans have increased in value fivefold over the past five years from €21bn to €99bn (see Figure 23). After a brief pause in 2020, activity jumped by €40bn last year, an increase of more than two thirds.

The growth and distribution in green finance between different types of companies in the loan market is more balanced than in the green bond market. Figure 24 shows that 'good' companies whose primary activity is focused on addressing climate change raised €19bn last year in the loan market, an increase of nearly 50% on the previous year. These 'good' companies represent just under a fifth of all green loan funding, far bigger than their 7% share of green bonds.

'Bad' companies (whose primary business actively drives climate change) raised €25bn last year, about a quarter of all green finance in the loan market and an increase of nearly 50% on the previous year. As with corporate bonds, the biggest and fastest growing segment of green finance in the loan market is 'neutral' companies, which raised €55bn last year (over half of all green activity in the loan market). The value of borrowing by these 'neutral' companies nearly doubled last year and the growth of €26bn accounted for two thirds of the overall growth in green loans.

Loans accounted for more than 60% of all of the money raised in the capital markets last year by 'good' companies. This reflects their relative maturity: many standalone 'good' companies are quite small in terms of their market value and not yet big enough to access the bond market at scale. Given that the loan markets are a stepping stone to the capital markets for many companies, the rapid growth in green loans for these companies suggests that there could be significant growth ahead in bond and equity issuance by these companies in future years.

Fig.23 Green finance in the corporate loan market

i) The value of green loan finance activity in Europe from 2017 to 2021 (€bn)

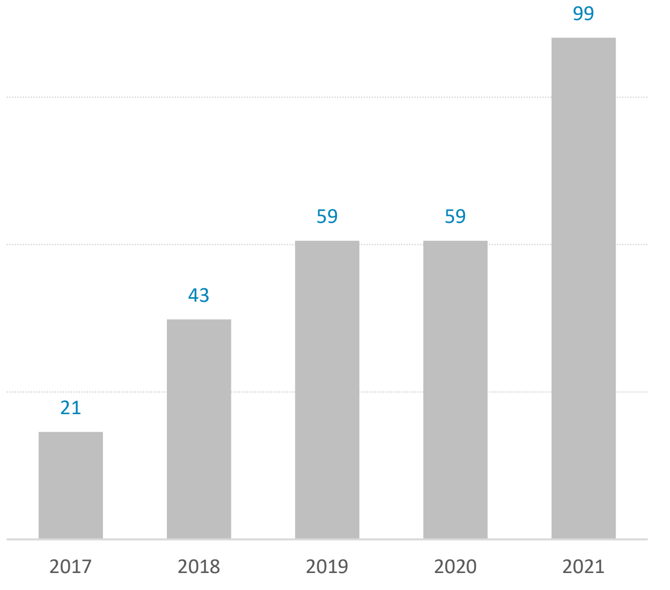
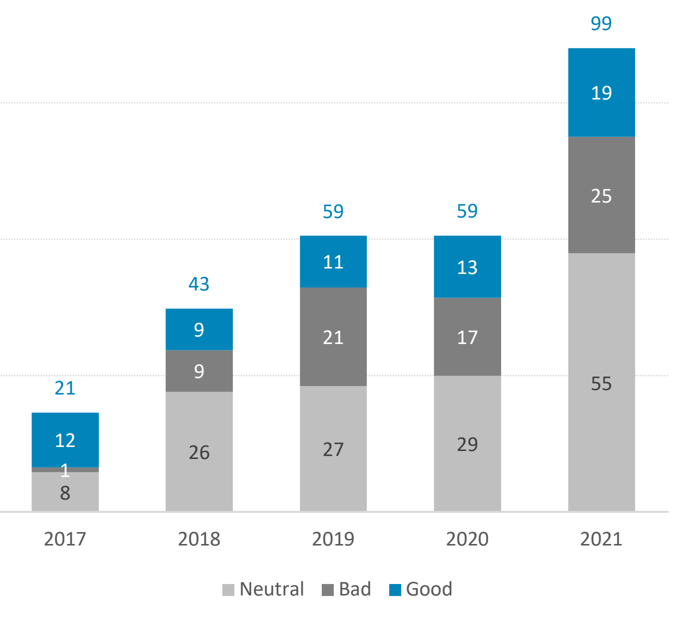


Fig.24 Green loans by type of company

The value of green loan finance by type of company (good, bad, neutral) in Europe (€bn)
2017 to 2021



Source: New Financial analysis of Dealogic data

Labelled loans drive growth

Green finance in the loan market can be even more confusing than in the bond market. In the absence of a specific 'green loan' label, the rapid growth of 'sustainability linked loan products' may encourage people to think of these loans as 'green'. However, our analysis suggests that a maximum of 40% of SLLP activity can be classified as 'green' (see page 18) and that is probably being generous.

Instead, our analysis focuses on three different types of green finance in the loan market: first, standard loans where the money being raised is being directed toward specifically green projects. Second, if the loan is being raised by a company in our universe of 'good' companies whose primary activity is focused on addressing climate change. And third, if the loan is a SLLP where the use of proceeds is identifiably 'green'.

Over the past five years, this mix has changed significantly. Until 2020, the bulk of green finance in the loan market was companies using standard loans with an identifiably green use of proceeds (the blue bars in Figure 25). This raised just under €100bn between 2017 and 2020, or just over half of all green loan activity. Loans to 'good' companies raised just €13bn over this period.

But as the SLLP market has taken off in the past few years, its share of green finance has grown rapidly. Last year, we estimate that SLLP loans with an identifiably green use of proceeds raised €75bn - or three quarters of all green loan finance. Activity more than doubled and SLLPs accounted for all of the growth in the market.

It is important to stress that not all SLLPs are green. Figure 26 shows the growth of the SLLP market from virtually zero in 2017, and divides activity into green and non-green based on our (generous) estimate that up to 40% of SLLPs are put to a green use. That suggests that of the €192bn in SLLP activity last year, nearly €120bn was for non-green purposes, and the only 'sustainable' element was that the terms of the loan are determined in part by the borrower hitting certain ESG or climate targets.

Fig.25 Green finance in corporate loan markets

The value of green loan finance by type of loan in Europe (€bn) 2017 to 2021

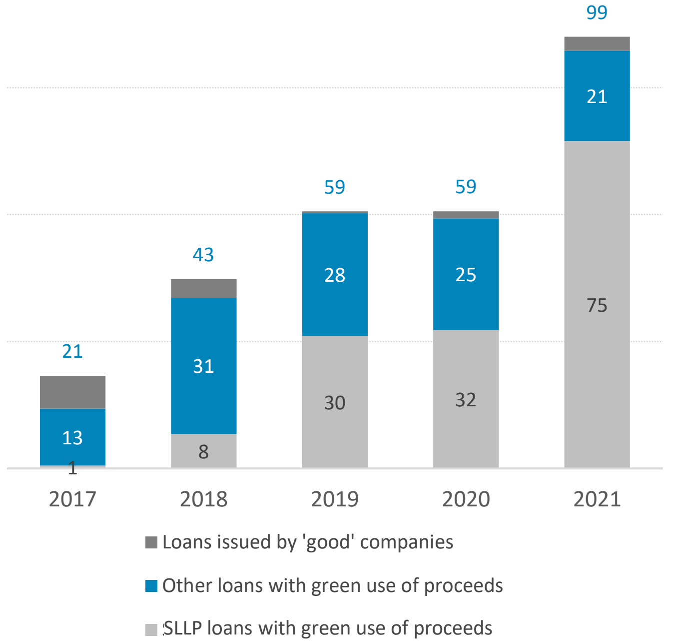
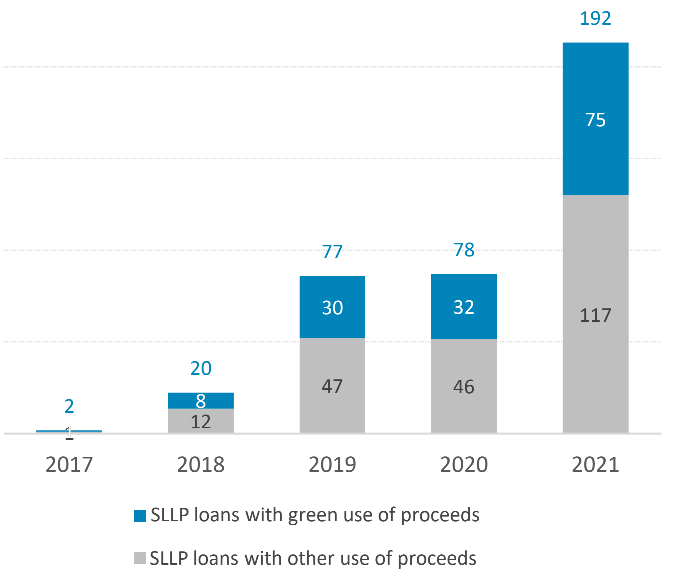


Fig.26 How green are SLLP loans?

The value of SLLP-linked loan issuance in Europe divided into green and non-green use of proceeds (€bn) 2017 to 2021



Source: New Financial analysis of Dealogic data

A small but growing role

The poorer cousin of green finance for the past few years has been the equity market, which accounts for less than 4% of all activity since 2017. For the sake of our analysis, we divided equity into public equity markets and venture capital. In the absence of a common 'green equity' standard across Europe, we analysed the primary activity of companies that had raised equity funding or received venture capital investment to allocate firms to 'green equity'.

Figure 27 highlights how green equity has grown rapidly from a low base: it has roughly doubled in each of the past two years, but is still less than a fifth as large as the market for green corporate bonds. In Figure 28, we can see that green equity finance is roughly equally split between public equity markets and venture capital. Public equity markets account for €14bn in green finance over the past five years, while cleantech investment in venture capital represents €12bn. While the numbers are still small, the rapid growth echoes the early years of the green bond and SLLP loan markets and suggests that there is significant growth potential ahead as the green industry expands and matures.

There are several reasons why the numbers for green equity are low so far. Venture capital investment involves early stage companies: over the past five years, we counted nearly 330 cleantech companies backed by venture capital with an average investment of just over €35m. In equity markets, the standalone green industry is relatively nascent and most companies in our sample are at the smaller end of public equity markets. And companies cannot issue a separate class of 'green equity' in the same way that can issue green bonds or SLLP loans.

Many stock exchanges have launched dedicated markets and segments for green companies. For example, the London Stock Exchange runs a Green Economy segment, on which companies must generate at least half of their revenues from green activities. While more than 100 companies have joined this market, its combined value is less than the market value of oil giant Shell.

Fig.27 Green finance in equity markets

The value of green equity activity in Europe from 2017 to 2021 (€bn)

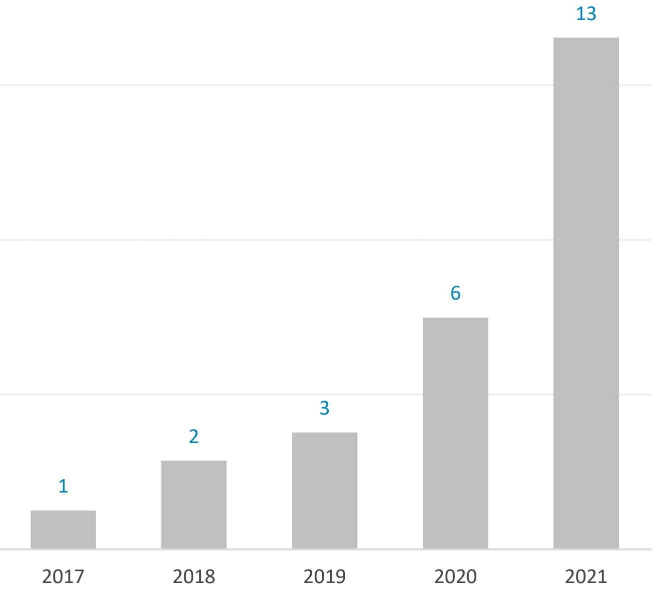
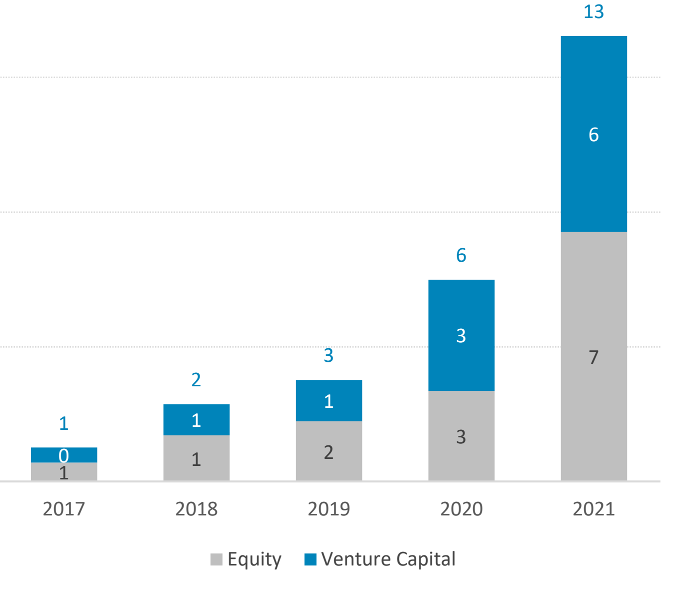


Fig.28 Green equity by type of market

The value of green equity by type of market (public equity markets and venture capital) €bn
2017 to 2021



Source: New Financial analysis of Dealogic and Preqin data

The future of green finance in Europe

This report shows the size, growth, and penetration of green finance in Europe. Our analysis shows that while green finance has grown rapidly to over €300bn a year, it is a long way short of what is needed to meet Europe's goals to transform its economy from one based on carbon-intensive industries to one based on clean energy. Here are 10 points for discussion:

1. **All hands on deck:** the rapid growth in 2021 shows that when all types of issuers contribute to green finance, more capital is channelled toward green projects. To meet the minimum of €600bn a year required to meet Europe's net zero goals, governments, financials and corporates will all need to increase their participation in the green finance market and ensure that 'green' isn't just a temporary marketing fad.
2. **Beware of greenwashing:** the rise in 'labelled' issuance is a mixed story for those seeking to make green a permanent feature of capital markets. On the one hand, labelled issuance enables companies that would otherwise not participate in green finance to play a part. On the other, if robust and consistent frameworks are not in place, then much of the capital being raised may be not be very green, if at all.
3. **Deepening green finance:** one of the main findings of this report is that while green finance is on the rise, its penetration of overall capital markets activity in Europe is still relatively low. As Europe has positioned itself as one of the leaders in 'greening' the global economy, it will require a concerted effort by issuers, investors and regulators to ensure that green finance becomes a mainstream part of activity rather then a nice-to-have but small bolt on.
4. **Financing the transition:** a common argument is that 'bad' companies such as fossil fuels will need more financing to invest in their transformation. This report shows that nearly 90% of the capital raised by these companies is not green and is not being used to fund investment in their transition. What checks and balances are needed to attract investors and avoid the capital markets supporting companies that are actively making the problem worse?
5. **A short-term fix:** the recent war in Ukraine has highlighted the reliance of the European economy on imported fossil fuels and, in the short-term, many countries have turned back towards more carbon-intensive forms of energy. It will be important to ensure that this shift is temporary, and that more investment is made in renewables to ensure a more sustainable, secure, and resilient energy mix in future.
6. **More equity:** it's great that debt markets are becoming greener but that doesn't mean that equity markets should be forgotten. How can European public equity markets - with a combined market value of over €10 trillion - be better deployed to help companies raise more green finance? And how can Europe stimulate and incentivise more innovation and investment in cleantech and green venture capital?
7. **What about 'good'?:** one of the concerning findings in this report is that capital markets activity by 'good' companies that are actively seeking to address climate change represents a tiny proportion of all activity (less than 2%). How can capital markets work better for companies that work in explicitly green activities - such as solar and wind - rather then relying on larger fossil fuel and energy firms to invest in green energy?
8. **More transparency:** measuring the value of green finance in Europe is a lot harder than it sounds and a lot harder than it should be. Without clearer and more consistent reporting - for example, on the use of proceeds, KPIs, or the share of a company's revenues derived from an agreed set of green activities - there is a danger that we will not be able to monitor the progress of green finance until it is too late.
9. **Clearer definitions:** more consistent data needs to be backed up by clearer definitions. While we have provided our own definitions of what constitutes 'good' and 'bad' companies from a climate perspective, and shades of green when it comes to the impact of green finance, we recognise that these definitions are simplistic. A set of simple, clear, and consistent definitions would help accelerate the growth in genuinely green finance.
10. **Expectations versus reality:** ultimately no amount of green financing will solve the problem unless companies, governments, and financials are clear about what exactly they are doing to meet their public commitments to reduce their impact and reach net zero. This will require a clear plan based on common metrics, targets, and deadlines.

About New Financial

New Financial is a think tank that believes Europe needs bigger and better capital markets to help drive growth and prosperity.

We think this presents a huge opportunity for the industry and its customers to embrace change and rethink how capital markets work. We work with market participants and policymakers to help make a more positive and constructive case for capital markets around four main themes: unlocking capital markets; rebuilding trust; driving sustainability; and driving diversity.

We are a social enterprise funded by institutional membership from different sectors of the capital markets industry. For more information on our work, please contact us:

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Brexit & The City: The Impact So Far

The problem with European stock markets