Green Bond Funds
Assets under management more than double in one year

The rising popularity and issuance activity of green bonds is leading to significant growth in green bond funds – both in terms of the number of funds and the assets under management.

Strong growth in green bond issuances

Bonds whose proceeds are used exclusively to finance environmental projects are gaining in popularity. In the first half of this year, USD 118bn of green bonds were issued worldwide, corresponding to growth of 48% since the first half of the previous year. Investor interest is unbroken, with new issues often heavily oversubscribed. Germany is the fifth largest bond issuer worldwide by issue volume. The German government also plans to launch a green bond next year.

Number of green bond funds grows to 29 – managed assets rise to EUR 5.8bn

Strong demand for sustainable investments, especially among institutional investors, has led to further issues of green bond funds this year. As of the end of October 2019, 29 green bond funds were approved for sale in Germany (compared to 24 in October 2018). New funds were launched by Franklin Templeton, Degroof Petercam AM, Lyxor and Colchester Global Investors.

The 29 funds have a total volume of just under EUR 5.8bn. That's an increase of about 150% compared to the figure in Scope's study from the previous year. The largest fund is NN (L) Euro Green Bond, with a volume of almost EUR 1.1bn and currently the only fund exceeding the billion mark. Over 85% of green bond funds are actively managed.

2019 returns range from 0.8% to 9.7%

All funds achieved positive returns of between 0.8% and 9.7% by the end of October 2019. In comparison, the 101 funds in Scope's 'Bond EUR Global' peer group achieved an average return of 5.5% in the current calendar year. Almost three-quarters of the 29 green bond funds performed better – in some cases significantly better.

Green bond funds and sustainability

All of the funds have minimum standards for ESG (environment, social and governance) that an issuer must meet to be eligible for investment. These include the application of exclusion criteria, positive environmental screening and impact reporting. Most frequently excluded from portfolios are weapons producers and other controversial sectors such as tobacco or coal production.

The majority of funds focus on environmental criteria when selecting bonds. Not content with the Green Bond Principles developed by the International Capital Markets Association, most asset managers have implemented their own green bond guidelines and ESG checks to monitor issuers. Almost all the funds' green bond checks include a positive opinion from a second party.

Outlook – dedicated bonds gaining in popularity

Growth in green bond issuance is set to continue. In addition to green bonds, Scope also expects more issues of social and sustainable bonds. With around 25 funds dedicated to green bonds, there seems to be little room for further growth. However, among conventional bond funds, the number of dedicated bonds added has risen sharply, i.e. sustainable, social and UN Sustainability Development Goal (SDG) bonds.

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Green bonds are a growth market

The annual growth rates of the green bond market are impressive and on a steep upward trend. In the past four years particularly, annual issue volumes have grown at high double-digit rates. Nevertheless, the supply of green/climate bonds cannot keep up with ever-increasing demand.

In addition to the issue of benchmark bonds, the implementation of Green Bond Principles (GBP) at the beginning of 2014 by a group of major banks acted as a catalyst for green bond issuance The GBP will provide investors with guidance to navigate the processes involved in selecting environmental/green projects based on their characteristics.

The market is bolstered by strong demand from institutional investors, such as pension funds and pension schemes, which are encouraged by regulatory requirements to invest more sustainably. But private investors are also placing increasing importance on measures to stop climate change. In addition, green bonds issuers provide transparent information on which projects or project categories the capital collected goes to.

Broad issuer base accelerates market growth

Issue volumes have been boosted by a considerable broadening of the issuer base and a sharp rise in the share of private issuers. Structural changes in the green bonds market are further demonstrated by the fact that issuers are no longer exclusively from the energy, financial and utility sectors. Green bonds are now used by many more sectors, with the arrival of those from the consumer goods, industrial and telecommunications sectors in recent years.

The first quarter of 2019 saw two successful issues of green telecom bonds. Spanish telecommunications company **Telefónica S.A.** issued its first green bond with a volume of EUR 1bn and a term of five years. This was the first green bond issuance in the telecommunications sector and also the first issued by a Spanish company in 2019. New York-based US telecommunications group **Verizon Communications Inc.** also issued one billion US dollars in green bonds with a 10-year term at the beginning of this year.

New issues tend to be heavily oversubscribed

As tends to be the case with new issues on the primary market, both transactions were oversubscribed, leading to a coupon below the price initially indicated. The chances of such bonds performing well on the secondary market are therefore very good.

The volume of green bond issues has risen over the past six years, by USD 4.8bn to USD 74.5bn annually. This is thanks to the issuance of benchmark bonds, the implementation of GBP, the steadily growing share of non-government issuers and greater environmental awareness among investors.

Issue volume increased from 2017 to 2018

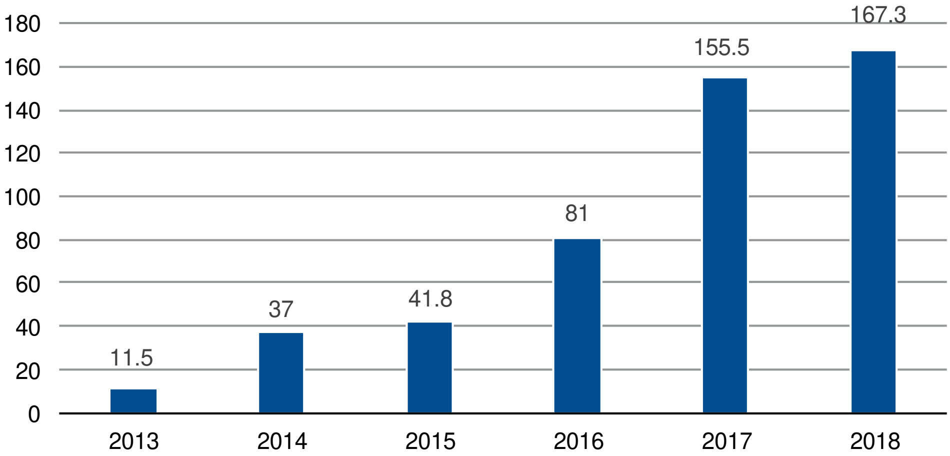
The largest nominal growth was from 2016 to 2017, when issue volume almost doubled, increasing by USD 74.5bn. Whereas issuance of green bonds in 2016 totalled USD 81bn, it was USD 155.5bn a year later, representing almost 92% growth since 2016.

Issue volumes provided in Scope studies are always preliminary figures. Adjustments by the Climate Bonds Initiative (CBI) were made after Scope prepared its research and therefore cannot be included in the current study. To avoid having to correct previous research papers, the adjusted figures are not included. As a result, there are minor differences in growth rates compared to current CBI publications.

According to preliminary annual figures from the CBI, the total volume of global green bonds outstanding in 2018 reached USD 167.3bn, exceeding the 2017 volume by 8%. In terms of annual growth, 2017 has therefore been a record year for green bonds.

Compared to the increase of 92% in 2017, the growth of the green bond market has slowed. A reason for this trend reversal – in addition to financial market volatility – is the almost 70% decline in issuance in some bond markets, especially by US municipal issuers.

Figure 1: Green bonds issue volume in USD bn since 2013



Source: Climate Bonds Initiative

At USD 115bn, green bonds from developed countries accounted for 69% of 2018 issuance – a slight decline from 71% in 2017.

USA, China and France are top three issuers

The USA, China and France were again the top green bond issuers in 2018, with a 47% share of issues worldwide. US issuers accounted for around USD 34bn, the Chinese for almost USD 31bn and the French for around USD 14bn.

Over half of the issue volume came from Europe, with the Republic of France, the Kingdom of Belgium and the Republic of Ireland launching major issues in 2018.

Increase in issue volume of sustainable/social and SDG bonds in 2018

In addition to the absolute increase in issue volume, 2018 brought further positive developments. There was a marked rise in issues of sustainable, social and SDG bonds, underlining the increasing importance of bonds as a tool for financing sustainable projects. Taking all 'labelled' issues into account, the market grew from USD 199.3bn in 2017 to USD 226.1bn in 2018, an increase of 13%.

The further increase in the geographical spread of green bond issuers is also positive. In 2018, eight countries issued green bonds for the first time: Iceland, Indonesia, Lebanon, Namibia, Portugal, the Seychelles, Thailand and Uruguay. This brings the number of countries with green bond issues to 45.

Over 1,540 green bond issues in 2018

According to the CBI, 2018 saw over 1,540 issues from 320 different issuers (including 204 new issuers) in 45 countries. By way of comparison: in 2017 there were over 1,500 issues from 239 different issuers in 37 countries.

Compared to 2017, however, the issue volume of the single largest green bond was significantly lower. In 2017, the largest bond had a volume of EUR 9.7bn, issued by the Republic of France; in 2018 it was EUR 4.5bn issued by the Kingdom of Belgium.

Issuance volume of USD 117.8bn in H1 2019

In the first half of 2019, the issuance volume of labelled green bonds amounted to USD 117.8bn (preliminary figures), representing growth of 48% since the first half of 2018. The USD 100bn threshold was thus already reached in the first half of the year, earlier than ever before.

A total of 625 green bonds were issued by 236 issuers from 40 countries. Around 58% of all bonds come from US issuers, followed by French and Dutch issuers. Emerging economies account for almost a fifth of issues, with China leading the way.

In total, 98 market participants from 32 countries issued green bonds for the first time. There was strong issuance in June with 137 transactions in 21 countries and 17 new issuers.

15% of issues in the first half of 2019 were by sovereigns, 19% by financial institutions, 26% by non-financial companies, 13% by ABS issuers like Fannie Mae and Freddie Mac, and 23% were green bonds issued by local authorities/municipalities and government-guaranteed bonds.

The total volume of labelled issues was USD 145.4bn, including

- USD 12.3bn in sustainability/SDG/ESG bonds and loans to finance green and social projects
- USD 5.7bn in bonds that finance social projects
- USD 11.9bn in additional bonds that fall short of the screening criteria of the CBI Green Bond database

Germany in fifth place worldwide, KfW is leading issuer

In an international comparison, Germany remains one of the largest markets for green bonds. From 2013 to the end of May 2019, EUR 33.6bn in green bonds were issued. Measured by issue volume in the first half of 2019, Germany ranks fifth globally.

More than 40% of issues in 2018 were from financial institutions, mainly mortgage banks. Berlin Hyp and Deutsche Hypo were ‘repeat offenders’, while debutants such as Commerzbank and DZ Bank placed bonds to finance renewable energies.

The Kreditanstalt für Wiederaufbau (KfW) remains Germany's largest issuer of green bonds and contributed a quarter of the issue volume last year. It made its green bond debut in July 2014, with the issue of a five-year bond with a volume of EUR 1.5bn, with which it simultaneously established a green refinancing programme. This first transaction made the German development bank a pioneer in integrating sustainability in the financial market.

KfW has issued 27 green bonds to date: EUR 19.2bn

Since then, the state-owned KfW Bank has continuously developed its green refinancing programme. To date, it has issued 27 green bonds at a volume totalling EUR 19.2bn. In May 2019 KfW issued green bonds to finance a second standardised loan programme. In addition to financing renewable energy projects, amounts equivalent to the net proceeds of the green bonds are now also being used for the ‘Energy-efficient Construction’ development programme.

All in all, the German market for green bonds has so far shown promise this year. Five transactions were finalised by the end of May 2019: EUR 500m from NRW.BANK; EUR 188.6m from Landwirtschaftliche Rentenbank; two EUR 750m issues from LBBW and EUR 3bn from KfW.

Nearly all German issues have external verification

99% of all green bond issues in Germany benefit from external verification (certification): 86% of the transactions, measured by issue volume, have a second party opinion; 12% are certified according to the Climate Bonds Standard; and 1% have a green bond rating. ISS-oekom is the largest approved auditor of certified climate bonds in Germany and, measured by issue volume and number, has the highest market share among providers of second party opinions at 34%.

Federal Republic of Germany has not yet issued green bonds

Unlike many European countries including Poland, France, the Netherlands, Sweden, Belgium and Ireland, Germany has not yet issued a climate protection bond. Public pressure on the German government to issue a green federal bond and increase investment in climate protection projects is growing. According to various media reports, the German government will soon give in to this pressure. It is exploring the possibility of issuing green bonds from 2020, with reports that the German Finance Agency has already presented concrete issuance plans.

In mid-November 2018, Deutsche Börse introduced a new segment for green bonds on the Frankfurt Stock Exchange. This segment bundles bonds that meet the GBP of the International Capital Markets Association. Over 155 bonds fulfil these criteria at present.

Global issuance volumes will continue to grow

The trend in global issue volumes is unlikely to reverse in the near future – indeed, volumes are even expected to increase further. This is especially likely as emerging markets have now recognised the bonds' potential to finance the transition to a climate-friendly economy, with countries such as China and India making greater use of them.

In the first half of 2019, China issued USD 21.8bn of green bonds, an increase of 62% over the previous year. This puts China in fourth place internationally. However, of the half-year volume from Chinese issuers, only just under 50% meets international definitions of green bonds. A further 49% did not meet the criteria under the CBI's Green Bond Database Methodology. Chinese issuers often lack adequate transparency over the use of the proceeds, or there are doubts as to whether the planned projects are climate-relevant.

29 green bond funds are currently approved for sale in Germany

German investors are now spoilt for choice: in addition to direct investments, numerous funds now invest in green bonds. As of the end of October 2019, 29 green bond funds were approved for sale in Germany. At the end of October 2018, the number of approved funds was 24.

This year, four new green bond funds were launched so far, by asset managers Franklin Templeton, Colchester Global Investors, Degroof Petercam and Lyxor. Of the four new funds, two are actively managed (Colchester and Degroof Petercam) and two are passive (Franklin Templeton and Lyxor).

In 2019, one bond fund with a long track record, an ODDO BHF product, was realigned to become a green bond fund.

2017 was the strongest ever year for new fund launches

Six green bond funds were either launched or aligned with the green bond concept in 2015, compared to only one fund in 2016. The strongest launch year for green bonds was 2017, when 11 funds were launched or repositioned. One of these funds no longer exists. Five new funds were launched in the previous year.

Since the first research paper on green bonds was published in the summer of 2017, many fund companies have responded to the rise in investor demand by offering more dedicated green bond products and expanding their in-house ESG research expertise. While only 14 green bond funds were approved for sale in Germany at the end of May 2017, this number is growing rapidly – with 29 products as of the end of October 2019.

Over 85% of green bond funds are actively managed

Of the total 29 funds, 24 are actively managed and five passively managed. The passive strategies comprise

- two index funds: iShares Green Bond Index Fund and CSIF (Lux) Bond Green Bond Global Blue as well as
- three ETFs: Lyxor Green Bond UCITS ETF, Franklin Liberty Euro Green Bond UCITS ETF and Lyxor Green Bond ESG Screened UCITS ETF

Figure 2: Funds approved for sale in Germany

Fund name	Asset management company	ISIN	Inception or concept implemented since	Vol. (EUR m)
Mirova Euro Green&Sustainable Corporate Bond Fund	Natixis Investment Managers	LU0552643842	11.05.2011	244.0
Mirova Euro Green&Sustainable Bond Fund	Natixis Investment Managers	LU0914734701	17.10.2013	382.3
SEB Green Bond Fund	SEB Investment Management	LU1116557585	20.04.2015	107.4
ERSTE RESPONSIBLE BOND GLOBAL IMPACT	ERSTE-SPARINVEST	AT0000A1EK48	01.06.2015	108.7
Raiffeisen-GreenBonds	Raiffeisen Kapitalanlage-Gesellschaft	AT0000A1FV77	15.09.2015	84.1
AXA WF Global Green Bonds	AXA Funds Management	LU1280195881	05.11.2015	185.1
CROWD Green Bond Impact Fund	von der Heydt Invest	LU1300281794	30.12.2015	2.3
BfS Nachhaltigkeitsfonds Green Bonds	Universal-Investment	DE0009799981	01.10.2016	19.9
Allianz Green Bond	Allianz Global Investors	LU1542252181	11.01.2017	278.8
Lyxor Green Bond (DR) UCITS ETF	Lyxor	LU1563454310	21.02.2017	147.2
Lombard Odier Funds – Global Climate Bond	Lombard Odier	LU1490631295	01.03.2017	274.7
iShares Green Bond Index Fund	BlackRock	IE00BD0DT578	16.03.2017	881.1
UniInstitutional Green Bonds	Union Investment	DE000A2AR3W0	28.04.2017	64.4
Mirova Global Green Bond Fund	Natixis Investment Managers	LU1472740767	01.06.2017	205.5
NN (L) Euro Green Bond	NN Investment Partners	LU1586216068	11.08.2017	1.086.6
Rivertree Bond – Euro Green Bonds	Kredietrust Luxembourg	LU1295558073	18.09.2017	45.0
Amundi Responsible Investing – Impact Green Bonds	Amundi Asset Management	FR0013275252	04.09.2017	312.9
BNP Paribas Green Bond	BNP Paribas	LU1620157021	27.09.2017	413.0
Eurizon Fund Absolute Green Bonds	Eurizon Capital	LU1693963701	10.01.2018	555.0
JSS Sustainable Green Bond - Global	J. Safra Sarasin	LU0288930356	17.01.2018	21.1
Amundi Responsible Investing–Green Bonds	Amundi Asset Management	FR0013295227	16.03.2018	75.7
NIKKO AM Global Green Bond Fund	Nikko Asset Management	LU0489503028	01.08.2018	19.6
DWS Invest Green Bonds	Deutsche Asset Management	LU1873225616	15.10.2018	35.8
CSIF (Lux) Bond Green Bond Global Blue	Credit Suisse	LU1871079973	16.04.2019	13.6
Franklin Liberty Euro Green Bond UCITS ETF	Franklin Templeton	IE00BHZRR253	29.04.2019	19.0
The Colchester Global Green Bond Fund	Colchester Global Investors	IE00BJ0LTR50	30.05.2019	1.7
DPAM L Bonds Climate Trends Sustainable	Degroof Petercam	LU1996436140	28.06.2019	50.1
Lyxor Green Bond ESG Screened (DR) UCITS ETF	Lyxor	LU1981859819	12.09.2019	4.0
ODDO BHF Green Bond	ODDO BHF	DE0008478082	01.10.2019	122.2

Source: Scope Analysis, as at 31.10.2019. Ordered according to inception/concept implementation date.

Natixis is the only provider of three green bond funds

Natixis Investment Managers is the only provider currently offering – under the 'Mirova' brand – three green bond funds for German investors: Mirova Global Green Bond Fund, Mirova Euro Green&Sustainable Bond Fund and Mirova Euro Green&Sustainable Corporate Bond Fund. However, two of the products are not limited to green bonds but also invest in social bonds and other fixed-income instruments that meet ESG criteria. The three products differ with regard to their issuer structure and duration. Mirova was founded in 1984 and is an affiliate company of Natixis, which specialises in managing sustainable investments. Funds management looks for green bonds and performs ESG analyses via Mirova's research team, which comprises more than 10 analysts. Mirova is a pioneer in this field with almost 30 years in managing sustainable investments and has been active in the green bonds segment since 2012.

Amundi Asset Management offers two actively managed green bond funds: Amundi Responsible Investing – Impact Green Bonds and Amundi Responsible Investing – Green Bonds. The French fund provider is the largest asset manager in Europe by assets under management with over EUR 1,500trn. Amundi now manages more than EUR 275bn in responsible investment funds and can draw on 5,500 issuers evaluated according to ESG criteria for portfolio construction. In March 2018, Amundi, together with the International Finance Corporation, launched the first green bond strategy to focus exclusively on emerging-market green bonds: Amundi Planet Emerging Green One (EGO).

In September of this year, Amundi launched the Asia Climate Bond Portfolio, worth USD 500m, together with the Asian Infrastructure Investment Bank (AIIB). The joint project aims to accelerate climate protection measures among AIIB members and diversify the market for climate bonds. Issuers are selected based on three measures: the proportion of green business activities, climate protection, and resilience to climate change. Selection is thus based on an issuer's ability to deal with climate change.

Lyxor International Asset Management is also managing two green bond products. The subsidiary of major French bank Société Générale has spent over 11 years in sustainable ETFs and is continuously expanding its range of sustainable products. There are now products that contribute specifically to several of the United Nation's Sustainable Development Goals. As at the end of September 2019, Lyxor managed over EUR 1.6bn in ESG ETFs. In February 2017, it launched its first green bond ETF, the first available worldwide. In October this year, a second ETF was added, the Lyxor Green Bond ESG Screened ETF. The two funds differ in that the new one can exclude issuers based on ESG criteria obtained from data provider Sustainalytics.

Raiffeisen Kapitalanlage-Gesellschaft offers only one green bond fund but acts as fund advisor to BfS Nachhaltigkeitsfonds Green Bonds. The fund is therefore managed according to Raiffeisen's sustainability approach for green bonds and combines a thematic approach with exclusion criteria.

Overview of newly launched funds

US fund company Franklin Templeton has been involved in the rapidly growing area of exchange-traded ETFs since 2016 and has already launched several ETFs on the German market since 2017 via its global ETF platform Franklin Libertyshares®. The range includes passive ETFs, smart beta ETFs and active ETFs. All ETFs are physically replicated which means that the fund aims to replicate the Underlying Index by holding all of its securities in s similar proportion to their weighting in the Underlying Index.

Franklin Liberty Euro Green Bond UCITS ETF invests at least 70% in certified green bonds

The **Franklin Liberty Euro Green Bond UCITS ETF** was launched on 29 April 2019 and is semi-actively managed with the aim to outperform the index. It invests at least 70% of net asset value in certified green bonds and the rest in climate-friendly bonds. Most of the fund's bonds are denominated in European currencies that are hedged against the euro, so there is no foreign currency risk.

Non-certified, climate-friendly bonds are included to generate an additional return, as this segment has research gaps through which inefficiencies can be exploited via careful research. Bonds in this segment are generally not traded with such narrow spreads as certified green bonds are.

Climate-friendly bonds must meet three conditions to be eligible for investment by the ETF.

- Core business supporting the transition to a low-carbon future
- An appropriate governance structure
- A good internal environmental management system

With 44 cash bonds currently held, the Franklin Liberty ETF portfolio is one of the most concentrated of the 29 products on the German market. Franklin Templeton's management team values the bonds using a proprietary ESG model and the expertise of a specialist ESG analyst, among other methods.

The **DPAM L Bonds Climate Trends Sustainable** fund offered by Degroof Petercam Asset Management (DPAM) was launched on 28 June 2019. It invests in a global portfolio of government and corporate bonds. The bonds must have a minimum volume of EUR 250m (or the equivalent in local currency).

At least 75% of the portfolio is invested in investment grade bonds. A maximum of 25% of the portfolio is invested in bonds from emerging market issuers. Non-euro currencies are hedged to the extent that the non-euro net currency risk does not exceed 25%.

Investments are selected if they perform well under ESG criteria and have a good potential return in relation to their estimated risk. These investments comprise bonds that finance projects related to environmental change.

DPAM L Bonds Climate Trends Sustainable also invests in climate enablers and challengers

The investment universe of the DPAM L Bonds Climate Trends Sustainable fund includes green bonds, 'climate enablers' and 'climate challengers'.

- Green bonds: issuers (companies or governments) that allocate bond proceeds to projects with environmental benefits
- Climate enablers: companies with a significant share of business in environmentally friendly products or services such as recycling companies or makers of wind turbines
- Climate challengers: issuers (companies or governments) making significant progress in the transition to a low-carbon economy

While the green bonds category is based on the Green Bond Principles, bonds in the climate enabler and climate challenger categories are selected using an internal model.

Launched on the Frankfurt Stock Exchange on 1 October 2019, the **Lyxor Green Bond ESG Screened UCITS ETF** is Lyxor's newest ESG ETF, developed based on the first green bond ETF.

Lyxor Green Bond ESG Screened UCITS ETF issuers must meet ESG standards

Unlike the old product, the new fund only contains bonds from issuers that meet certain ESG standards. The application of exclusion criteria ensures issuers from controversial sectors such as fossil fuels, nuclear energy, alcohol, tobacco and weapons are ineligible for investment. Issuers that violate the principles of the UN Global Compact are also not permitted. ESG data or information is obtained from data provider Sustainalytics. About 25% of the bonds that were included in the previous green bond ETF are excluded in the new ETF. Most of the excluded companies are energy suppliers, i.e. issuers with a high CO2 profile. At country level, most issuers excluded were from the USA, France and the Netherlands.

The new ETF tracks the Solactive Green ESG Bond EUR USD IG TR Index as closely as possible. This index contains green bonds that are investment grade, denominated in euros or US dollars and meet CBI requirements. This ensures that at least 95% of bond proceeds can be proven to flow into environmentally relevant projects. Bonds from Western European issuers dominate the index with a good 60%. Index replication is via direct investment in the bonds that constitute the index.

The **Colchester Global Green Bond Fund** was launched on 30 May 2019 and is aimed at institutional clients, with a minimum initial investment at USD 3m. The strategy is managed under the investment process used for all Colchester global bond strategies. Colchester Global Investors is an independent investment company that was established in London in 1999. It has been managing client portfolios since February 2000.

The firm builds on the extensive experience of its senior partners, all of whom have had long, successful careers in global bond management at renowned institutions. Colchester is majority-owned by its employees and specialises in managing government bonds.

The green bond fund aims to generate income by investing in currencies and a globally diversified portfolio of government bonds. It can invest in bonds issued by governments, government agencies and supranational bodies (such as the World Bank). Up to 20% of investments may below investment grade, e.g. investments in emerging markets.

The Colchester Global Green Bond Fund invests 25%-100% in green bonds

Between 25% and 100% of the net asset value is invested in green bonds, i.e. bonds that finance projects that benefit the environment.

Colchester's investment team looks at ESG issues and performs a macroeconomic analysis of a country to produce a Financial Stability Score. If two countries have the same real return, the country with the higher Financial Stability Score is preferred for portfolio construction.

Colchester's investment approach is based on the analysis of inflation, real interest rates and real exchange rates, supplemented by an assessment of government balance sheets. The portfolio is composed such that it can exploit opportunities to achieve the highest relative investment potential at a certain level of risk.

Overview of the redesigned funds

German-French asset manager ODDO BHF has converted a fund that has existed since 1984 into one with a green bond focus with effect from 1 October 2019. This restructuring involved the establishment of a minimum quota of green bonds together with a name change. The FT Accuzins fund was renamed **ODDO BHF Green Bond**.

ODDO BHF Green Bond invests at least 51% in green bonds

The fund is actively managed and invests at least 51% in green bonds from international issuers. The internal target is to invest at least 70% in green bonds. For diversification purposes, the fund also invests in issuers with very good ESG ratings (or high environmental scores). The internal investment target for strong ESG issuers with good environmental scores is 30%. Issuers involved in serious controversies are excluded.

The fund aims to outperform the Bloomberg Barclays MSCI Euro Green Bond TR Index and to finance projects with measurable positive effects on the environment or climate. The focus is on investment grade bonds denominated in euros, with non-euro exposures fully hedged.

The CS (Lux) Green Bond fund, which adopted a green bond concept in June 2017, converted to a passive management approach in April 2019 using an indexed method and was renamed.

The Credit Suisse fund is now passively managed

Under the new name **CSIF (Lux) Bond Green Bond Global Blue**, the fund now aims to track the performance of the Bloomberg Barclays MSCI Global Green Bond Index. Under normal market conditions a tracking error of less than 0.20% can be expected.

Instead of investing in all the securities in the index, the fund focuses on a representative selection of securities from the benchmark index (optimised sampling).

Green bond fonds currently manage just under EUR 5.8bn

The 29 funds together manage almost EUR 5.8bn as of 31 October 2019. This corresponds to a growth rate of around 152%, based on the figure in Scope's 2018 research paper of EUR 2.3bn of managed assets.

The five largest green bond funds alone manage assets totalling more than EUR 3.3bn, which is almost 58% of total assets under management.

NN (L) Euro Green Bond is currently the largest fund with over EUR 1bn

The **NN (L) Euro Green Bond** fund of NN Investment Partners remains the largest fund in absolute terms, as shown in Figure 3, with assets under management at almost EUR 1.1bn, the only fund that currently exceeds the billion mark. German customers have been able to purchase fund shares since August 2018, whereas the fund has already long been popular with institutional investors in the Benelux countries.

Figure 3: The five largest green bond funds

Fund name	ISIN	Volume (EUR m)
NN (L) Euro Green Bond	LU1586216068	1,087
iShares Green Bond Index	IE00BD0DT578	881
Eurizon Fund Absolute Green Bonds	LU1693963701	555
BNP Paribas Green Bond	LU1620157021	413
Mirova Euro Green and Sustainable Bond Fund	LU0914734701	382

Source: Scope Analysis, as at: 31.10.2019.

The second largest fund is the **iShares Green Bond Index** launched in March 2017, with a volume of EUR 881m. At 447%, its growth rate is the highest by far compared to the level in 31 August last year, when it managed EUR 161m. Due to its minimum initial investment of EUR 100m, the fund is aimed exclusively at institutional investors, who have splashed out on shares in the past 14 months.

Rounding out the top three largest funds is **Eurizon Fund Absolute Green Bonds**, whose current volume is EUR 555m. This represents a growth rate of almost 326% from the previous year's volume of EUR 130m. The fund is managed by Eurizon Capital, the asset management unit of the Intesa Sanpaolo Group, one of the largest Italian banks. On the distribution side, it may well benefit from its long track record in ethical funds: Eurizon was the first asset manager in Italy to manage ethical funds with clear and transparent asset selection criteria, as early as 1996. Eurizon was also involved in formulating the six principles for responsible investing (PRI).

Performance of green bond fonds

Five green bond funds generated positive returns ranging between 0.16% and 5.41% in the past calendar year, including two passive low-cost products.

All positive performers are in the Scope peer group 'Bond Global Currencies' because they invest in global bonds whose foreign currency risk against the euro is either unhedged or only partially hedged, which, given the high hedging costs, boosts performance.

The Nikko AM Global Green Bond has not suffered any performance disadvantage since it does not invest in corporate bonds but focuses in those issued by governments, supranational organisations and government agencies. The fund benefited from the highest average coupon of 3.65% and is the only one with an average rating of AAA.

Figure 4: Top five performers in 2018

Fund name	ISIN	Peer group	Returns 2018 (in euros)
CSIF (Lux) Bond Green Bond Global Blue)	LU1871079973	Bond Global Currencies	5.41%
Lombard Odier – Global Climate Bond	LU1490631295	Bond Global Currencies	1.63%
Lyxor Green Bond (DR) UCITS ETF	LU1563454310	Bond Global Currencies	1.57%
Nikko AM Global Green Bond	LU0489503028	Bond Global Currencies	0.72%
ERSTE RESPONSIBLE BOND GLOBAL IMPACT	AT0000A1EK48	Bond Global Currencies	0.16%

Source : Scope Analysis, as at 31.10.2019.

The remaining 15 funds with reported results in 2018 had negative returns ranging between -0.04% and -2.94%.

No earnings disadvantage for green bonds in 2018

Almost half of all funds with reported results in 2018 are in Scope peer group 'Bond EUR Global'. To compare, the 101 funds in this peer group averaged a return of -1.83% in the past calendar year. Thus, 65% of all green bond funds performed better overall – in some cases significantly better. This means green bond funds are not disadvantaged in terms of earnings – contrary to the persistent scepticism towards not only them but also sustainable funds in general.

Both equities and bonds have achieved respectable price gains since the beginning of 2019. Despite very low coupons, European government bonds, as measured by the FTSE Euroland Government Bond Index, have seen returns of almost 9% since the beginning of the year (calculated in euros). Their US counterparts, measured by the FTSE USA Government Bond Index, have gained almost 11% (calculated in euros).

Corporate bonds also performed very well. Since the beginning of the year, European corporate bonds with investment grade ratings have gained more than 7%, measured by the iBoxx EUR Liquid Corporates Total Return Index and calculated in euros.

US corporate bonds have gained more than 13% since the year began, measured by the iBoxx USD Corporates TR Index and calculated in euros.

>90% of the funds are invested in corporates

More than 90% of all green bond funds invest in corporate green bonds in addition to government/municipal bonds and those issued by supranational organisations. The proportion of corporate bonds in green bond portfolios ranges from 0% to 94.3%, with the median at just under 58%.

The highest corporate bond ratios as of the end of October 2019 were attributed to the Mirova Euro Green&Sustainable Corporate Bond Fund, with over 94%, and the UniInstitutional Green Bonds Fund with over 92%. However, the high ratio of corporate bonds did not push all funds to top spots this year, as seen in the following table.

Figure 5: The five funds with the highest share of corporates

Fund name	ISIN	Share of Corporates	Return YTD in euros	Rank
Mirova Euro Green&Sustainable Corporate Bond Fund	LU0552643842	94.3%	6.95%	12/23
UniInstitutional Green Bonds	DE000A2AR3W0	92.4%	3.98%	21/23
DWS Invest Green Bonds	LU1873225616	86.0%	5.41%	17/23
Amundi Responsible Investing – Green Bonds	FR0013295227	83.2%	7.49%	9/23
Lyxor Green Bond (DR) UCITS ETF	LU1563454310	68.4%	9.69%	1/23

Source: Scope Analysis and provider data, as at 31.10.2019.

All funds had positive returns at YTD

In the current year, the funds had positive returns of between 0.76% and 9.69% by the end of October. The Lyxor Green Bond ETF is the only fund that was a top five performer in both 2018 and YTD 2019.

Figure 6 shows the five funds with the best YTD return and their average coupon. However, returns are not driven by coupons – which range from 1.4% to 2.2% – but largely by price increases. Weaker economic data and the resumption of more expansive central bank policies in particular provided good support.

Figure 6: The five top performers in current year

Fund name	ISIN	Peer group	Ø Coupon	Return YTD in euros
Lyxor Green Bond (DR) UCITS ETF	LU1563454310	Bond Global Currencies	1.67%	9.69%
Mirova Euro Green& Sustainable Bond Fund	LU0914734701	Bond EUR	1.39%	9.11%
Lombard Odier – Global Climate Bond	LU1490631295	Bond Global Currencies	2.19%	9.09%
NN (L) Green Bond	LU1586216068	Bond EUR Global	1.29%	8.66%
Mirova Global Green Bond Fund	LU1472740767	Bond EUR Global	2.24%	8.05%

Source: Scope Analysis and provider data, as at 31.10.2019.

No earnings disadvantage for green bonds at YTD either

For comparison: the 101 funds in Scope peer group ‘Bond EUR Global’ averaged a 5.45% return in the current calendar year. Overall, almost 75% of all green bond funds performed better and in some cases significantly better.

Fees

Ongoing charges of the 29 funds range from 0.22% to 3.05% – the median is 0.86%.

As expected, the five products with the lowest costs were all passive funds: iShares Green Bond Index Fund with annual ongoing charges of 0.22%, the CSIF (Lux) Bond Green Bond Global Blue with 0.24% p.a., the two Lyxor Green Bond ETFs with 0.25% p.a. each and the Franklin Liberty Euro Green Bond UCITS ETF with 0.30%.

With ongoing charges equating to 0.48%, the SEB Green Bond fund is the lowest cost active product for retail investors in addition to having lower costs than 60% of institutional products.

Figure 7: The 10 funds with the lowest ongoing charges

Fund name	Ongoing charges (excluding performance fee)	Maximum management fee p.a.
iShares Green Bond Index Fund*	0.22%	0.15%
CSIF (Lux) Bond Green Bond Global Blue	0.24%	0.24%
Lyxor Green Bond (DR) UCITS ETF	0.25%	0.25%
Lyxor Green Bond ESG Screened (DR) UCITS ETF	0.25%	0.25%
Franklin Liberty Euro Green Bond UCITS ETF	0.30%	0.30%
Raiffeisen-GreenBonds*	0.41%	0.30%
SEB Green Bond Fund	0.48%	0.40%
UniInstitutional Green Bonds*	0.56%	0.40%
The Colchester Global Green Bond Fund*	0.60%	0.60%
NN (L) Euro Green Bond	0.60%	0.40%

* Institutional products

Sources: Scope Analysis, as at 31.10.2019, ordered by ongoing charges.

All five institutional funds are well below the median of 0.86%. The iShares Green Bond Index is the lowest cost product for institutional investors with total costs equating to 0.22%. Of the actively managed institutional funds, Raiffeisen Green Bonds has the lowest ongoing charges at 0.41%.

The annual maximum management fee of all 29 green bond funds ranges from 0.15% to 1.40% -- the median is 0.70%. The lowest maximum management fee of 0.15% is attributed to both iShares Green Bond Index Fund and CROWD Green Bond Impact Fund. The highest annual maximum management fee of 1.40% is charged by Eurizon Fund Absolute Green Bonds.

Green bond funds and sustainability

All green bond funds approved for sale in Germany have defined minimum ESG standards that an issuer must meet to be eligible for investment. However, the strictness of the definitions vary depending on the investment fund company. They range from the application of exclusion criteria to positive environmental screening and reporting on the project categories in which bond proceeds are invested.

Producers of controversial weapons most frequently excluded

Among the most frequent to be excluded are producers of controversial weapons. Some asset managers even apply stricter standards, banning from their portfolios not only producers of controversial weapons but also makers of weapons in general as well as of other types of military equipment. Among managers that apply this approach are Erste Asset Management in Vienna, Degroof Petercam in Brussels and Affirmative Investment Management in London. The latter manage Lombard Odier Global Climate Bond.

Also often excluded along with controversial weapons are other controversial sectors such as tobacco or coal mining.

Among providers that work with numerous exclusions is Erste Asset Management in Vienna. Its **ERSTE RESPONSIBLE BOND GLOBAL IMPACT** implements 16 negative criteria for companies and 12 negative criteria for countries. Issuers that fall short of these predefined exclusion criteria are ineligible for investment by the fund. On the corporate side, examples of exclusions include banks and financial service providers that grossly disregard legal regulations or generally accepted rules of conduct. Other examples include energy providers that generate more than 20% from coal and those with 20% of unconventional reserves (fracking, tar and oil sands). Criteria also exclude countries that, according to Amnesty International, have not abolished the death penalty in full or direct 3% or more of their GDP towards military budgets.

Union Investment also applies a comprehensive sustainability filter for **UniInstitutional Green Bonds** that both public and private issuers must meet to be eligible for investment. For example, excluded are issuers involved in grave violations of the UN Global Compact or countries that are not signatories to the Paris Climate Change Convention or the UN Convention on Biodiversity. Issuers whose sales stem from tobacco products and spirits/alcohol are also excluded. The exclusion criteria means around 25% of the investable universe, the ICE BofAML Green Bond Index, cannot be acquired by the fund.

As a pure government bond manager, **Colchester, for its Colchester Global Green Bond** fund**,** applies ESG screening in the investment process. The managers believe that a government with a sound ESG background and a corresponding approach will have a more stable debt and currency markets and thus a better risk/return profile than countries with poor ESG practices. Governance strength is especially key to determining Colchester's Financial Stability Score, an essential part of its investment decision.

All bonds purchased by **Nikko AM Global Green Bond**, which like Colchester does not invest in corporate bonds, must align with a United Nations Sustainability Development Goal (SDG). Each issuer in the portfolio undergoes a form of ESG analysis. In addition, asset management looks at where bond proceeds flow and which individual projects will be financed in the context of the UN SDGs. The fund invests in supranational issuers with clear sustainability goals, such as the African and Asian Development Banks, which aim to reduce poverty and promote sustainable growth in their respective countries.

Many funds focus on environmental criteria above all

All active fund providers have indicated the use of ESG criteria in their investment processes to identify ‘greenwashing’ as well as companies that attempt to misuse a ‘green connotation’. Nonetheless, many funds focus intently on environmental criteria or ‘green screening’ when selecting their bonds. This seems plausible and consistent, as green bonds serve an environmental objective such as the transition to low-CO2 economies.

The investment experts at **Raiffeisen-Green Bonds** have defined their own policies that must be fulfilled for investments in energy production and infrastructure sectors. The analysis of green bond issuers from the infrastructure sector focuses on the impact that financed projects have on climate protection. However, this alone is not enough – the climate impact of the company's entire activities is also considered.

If a financed project has a positive impact on the climate (e.g. energy efficiency measures in airport buildings), but the issuer’s activities as a whole have a clear negative impact on the climate (e.g. the number of flights increases), Raiffeisen's managers will refrain from investing in the issuers concerned.

The fund managers of **Eurizon Absolute Green Bonds**, for example, apply a strict due diligence process in which all bonds are scored for ‘greenness’ on a scale from ‘deep green’ to ‘brown’. ‘Brown’ bonds are excluded from investment, while ‘yellow’ bonds can be included in the portfolio with restrictions. Eurizon's managers exclude 20% of the investable universe for sustainability reasons (exclusions, ESG integration) and upon a review of Green Bond Principles. Internal rankings are used to identify projects with the best environmental balance. Excluded, for example, are sectors that extend the life of fossil fuels and those that have an impact on communities located near the project (e.g. the construction of large dams). On the other hand, positive sectors preferred are those engaged in environmentally friendly transport (like railways, underground trains, buses with little or no environmental impact), renewable energy, and green construction.

DWS has adopted an even more comprehensive ESG approach. For the **DWS Invest Green Bonds** fund, only issuers that meet the DWS’s minimum ESG standards qualify. ESG ratings are used to identify issuers considered to be true ‘ESG leaders’ or true ‘ESG laggards’ in their reference class. As such, the issuers were consistently identified by leading ESG data providers via a 360-degree analysis and classified accordingly. The fund excludes all issuers with a DWS SynRating (ESG best-in-class rating) of E (ESG laggards) or F (true ESG laggards). The latter comprises the worst 25% of the peer group. At the heart of the process is the DWS ESG Engine, a proprietary software that brings together the various methods of eight leading external data providers.

LO Funds – Global Climate Bond goes a step further and follows a positive screening approach with the proprietary verification process, SPECTRUM, which is based on a proven positive impact of the invested bonds. The SPECTRUM bond analysis integrates not only ESG factors into the credit rating analysis, but also social and environmental factors when analysing how proceeds are used. A separate ‘impact board’ sets and monitors the fund's impact targets and provides the annual impact report.

SPECTRUM, a rigorous analytical process that actively seeks high-impact bonds from responsibly minded issuers, was developed under the aegis of Affirmative Investment Management. It is firmly anchored in the fact that all issuers must operate responsibly in addition to having good creditworthiness and an average return. Under this process, Affirmative Investment Management excludes approximately 20% of the market for impact bonds (green, social and sustainable bonds). The strategy places great emphasis on ensuring that the entire proceeds of bonds in this universe have a demonstrable environmental and/or social impact. The proprietary verification process is based on a) a positive selection of issuers and b) a review in terms of the meaningful and measurable impacts of the bonds. This means issuers must demonstrate high integrity and a clear commitment to a sustainable business model, while their bonds' features must support UN Sustainable Development Goals and Paris Climate Change Convention targets. In addition, the issues must have clear positive externalities regarding environmental and/or social aspects, for which any material impacts are to be reported.

All fund providers check whether it is truly a green bond

As the term 'green bond' is not legally defined or protected, all fund providers check whether individual issues are actually green bonds. In this regard, all asset managers are guided by the four Green Bond Principles (GBP) developed by the International Capital Markets Association. Not content with the GBP, many asset managers have created their own guidelines that a green bond must meet before it can be purchased.

All fund companies have stated that their green bonds analyses include all four GBP principles: 1. use of issue proceeds, 2. process of project evaluation and selection, 3. management of proceeds and 4. reporting. However, it has become evident that many providers focus on the first principle, the use of issue proceeds – at least BEFORE an issue. The managers of Erste Asset Management, for example, expect that 'reporting' will become much more important and extensive in the future.

The manager of the **CROWD-Green Bond Impact Fund** argues that the individual test components cannot be weighted one-dimensionally. While, for example, the quality of a green bond that finances sustainable building refurbishment is highly dependent on the process, reporting is much more important for a green bond that finances a specific project.

Among other things, the review process for the **Amundi** fund goes beyond the four GBP principles. In-house ESG specialists analyse the issuer's ESG profile in addition to the overall framework conditions, the scope of reporting and the environmental relevance of the assets.

The managers of **Sarasin Sustainable Green Bond Global** can also only invest in green bonds if the issuer has assessed itself to have an adequate ESG profile. The Swiss managers possess above-average ESG expertise and are therefore distinguished by a very rigorous policy regarding issuer selection. Issuers such as electricity producers or countries that attempt to conceal unsustainable corporate policies via green bonds are not considered for the portfolio. Issuers from emerging markets are also sometimes regarded critically as they fall short of Sarasin's sustainability criteria, with Chinese issuers particularly affected. Therefore, Sarasin ascertains an issuer's sustainability before checking whether a bond is green. A very good sustainability profile also reduces the issuance risk.

Second party opinions are 'strongly preferred' by most of the funds

For the vast majority of funds, the green bonds check includes a positive second party opinion from independent agencies such as ISS ESG, Vigeo Eiris, Sustainalytics, or Cicero. Almost all providers prefer to have an independent second party opinion, but do not consider this opinion to be mandatory for a bond to be eligible for purchase. Even though firms like **DWS** do not include the requirement of an second party opinion in their green bond fund guidelines, almost all bonds held in their portfolios have a positive second party opinion, as these are now a) available for many (new) issues and b) market standard for issuers with a credible climate strategy.

Fund companies Eurizon, Nikko AM, Raiffeisen and Union Investment have opted for a stricter approach regarding second party opinions: to qualify for their funds, the bonds not only must be in line with GBP but are **also required** to have a positive second party opinion.

Dutch asset manager NN Investment Partners recommends not only the use of a second party opinion but also a CBI certification, but stresses that a separate assessment is still carried out in each case and it is checked whether the green bonds and their issuers comply with their green bond criteria. Thus, **NN (L) Euro Green Bond** does not invest in companies with serious and structural environmental problems. To assess whether investments are really ‘green’, the managers call upon their own green bond database when assessing issues and perform an independent internal assessment based on their own green bond framework. In addition to the four GBP, the complete CBI taxonomy is also used.

Belgian asset manager Degroof Petercam (DPAM) also carries out its own analyses, whose results may well differ from a second party opinion. For a bond to be eligible for the **DPAM L Bonds Climate Trends Sustainable**, an external review of the bond's alignment with GBP principles is required in addition to a positive opinion. This can be done via a second party opinion, a CBI certification or a green bond rating from S&P or Moody's. DPAM prefers bonds with a CBI certification that is oriented towards the GBP but applies a stricter approach regarding the use of issue proceeds.

ETF provider **Lyxor** has a similar approach. Lyxor is an official partner of and works closely with CBI, a non-profit organisation that promotes standards for a low-carbon and climate-friendly economy. The CBI has the largest research team that focuses exclusively on green bonds. For both Lyxor ETFs, CBI experts select green bonds that meet their rigorous selection criteria for inclusion in the index.

Summary/Outlook – dedicated bonds gain in popularity

As explained in our two publications to date, green bonds constitute a fast-growing bond segment, thanks in particular to institutional investors and political tailwinds.

A draft Green Finance Taxonomy has already been adopted in the EU and organisations such as the ICMA have published corresponding guidelines. The CBI has also further developed its guidelines and included new sectors and definitions.

Demand for green bond funds still driven strongly by institutional investors

Although private investors are increasingly concerned with ESG issues and the impact of their actions on climate change, demand for green bond funds continues to be driven primarily by institutions. This is impressively underscored by the strong inflows into institutional share classes of green bond funds such as NN (L) Euro Green Bond and iShares Green Bond Index.

Fund providers such as iShares, Natixis and Mirova, Eurizon and BNP Paribas are benefiting from their strong sales and have collected a large amount of client money over the past 12 months, whereas firms with weaker distribution have not been nearly as successful. This is a clear indication that green bond funds are ‘not bought, but sold’.

All green bond funds approved for sale in Germany incorporate ESG minimum standards. The spectrum ranges from exclusions, positive environmental screening and internal ESG scores, to impact reporting. For many firms, the analysis and selection of green bond issuers focuses on the use of proceeds as opposed to an ESG assessment of the issuer, also for reasons of diversification. However, there are also asset managers that apply much stricter standards to potential issuers to reduce issuer risk and avoid 'greenwashing'.

In terms of returns in both 2018 and the current year, Scope was unable to identify any disadvantage for green bonds – contrary to the scepticism that still exists.

With around 25 dedicated green bond funds, the limit is slowly being reached. Most of the firms offering (sustainable) thematic funds have now launched green bond funds or have converted existing bond portfolios to focus on green bonds.

Dedicated bonds (green, social and blue) are increasingly popular

Scope observes that conventional fixed income funds are also adding dedicated bonds – i.e. sustainable, social and SDG bonds – to portfolios, with a strong upward trend. Asset managers are now increasingly focusing on so-called blue bonds. Like social and green bonds, the capital collected on these bonds is used for specific environmental and sustainable purposes. The first blue bonds (Seychelles Blue Bond, Nordic Sea Blue Bond) were issued in 2018 for impact-fund investors to finance marine and ocean-based projects that benefit the environment, the economy and the climate.

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