Ten years of Green Finance in the European Union since the Paris accord: progress and limits

Note written by Jean-François Pons

"If you are not willing to hold a stock for 10 years, don't even think about holding it for 10 minutes."

Warren Buffett

Introduction: Treaty of Paris and the agenda of green finance in the Green Deal programme of the European Union

In December 2015 in Paris, 195 member countries of the United Nations agree an agenda to fight against climate change and set the goal of limiting warming "well below 2° and, if possible, to 1.5°". The Treaty includes a specific role for finance: Article 2.1.c of the Paris Agreement states that the parties aim to "make financial flows compatible with [...] low greenhouse gas emissions and climate-resilient development."

To implement this agreement, the European Union has set itself the target of reducing greenhouse gas (GHG) emissions by 55% by 2035 and achieving net zero by 2050. It has adopted numerous legislative measures under the Green Deal programme between 2020 and 2024 with climate and environmental objectives, including specific regulations for the energy sector, industry, transport, buildings etc[1].

As for the EU financial sector, already in March 2018, the European Commission published an Action plan "Financing sustainable growth"[2] with three objectives:

1. "Reorient capital flows towards sustainable investment in order to achieve sustainable and inclusive growth;
2. Manage financial risks stemming from climate change, resource depletion, environmental degradation and social issues;
3. And foster transparency and long-termism in financial and economic activity.

For the Commission, "the most important and urgent action of the Action Plan was to adopt a unified EU classification system – or taxonomy – to provide clarity on which activities can be considered sustainable". According to this orientation, a regulatory framework linked to sustainable transparency has been progressively set up: the Sustainable Financial Disclosure Regulation (SFDR) was implemented in 2021, the "green" EU taxonomy in 2022-2023, the Corporate Sustainable Reporting Directive (CSRD) and the European Sustainable Reporting Standards (ESRS) in 2025.

The explicit wish of the EU policymakers was that private green finance should cover a very large part of the financing needs because public finances were under constraint.

There was also a less explicit wish that financial institutions put pressure on non-financial companies to become greener.

Another consideration was liked to prudential surveillance of financial institutions: the supervisors of banks and insurance companies launched new measures of surveillance of the risks coming from climate change or environmental deterioration.

It is to be noted that the Action Plan was published two years before the launching of the Green Deal agenda and that the first legislation on sustainable transparency, SFDR, was directed at financial investors, four years before the sustainable transparency of listed companies, CSRD. These two elements show that the EU political institutions have made a priority focus on the financial actors, expecting them to induce or enhance the efforts of their clients, especially corporates, on the road of energy and environmental transition.

1. "Green Deal legislative programme: mission largely accomplished!", Jean-François Pons and Louise Madec for Eurofi, September 2024.
2. "Action plan "Financing sustainable growth"", European Commission, March 2018.

The transparency regulatory framework has raised criticism for its lack of clarity (especially SFDR), but more importantly for its complexity and its costs (especially the taxonomy and CSRD), notably by businesses and extreme right and right-wing parties during the campaign of the European Parliament elections, where these two groups increased their representation in the European Parliament.

Consequently, the second Von der Leyen Commission proposed in 2025 to simplify the taxonomy and the ESRS and to reduce drastically the scope of companies subject to CSRD. These proposals have been rapidly adopted, and the European Parliament even obtained a reduction of scope bigger than what was proposed.

It is to be also recalled that the EU and its Member States have supported green investment through fiscal and budgetary measures. This public financial support has been implemented through the EU budget and State aids at national level, but also through the NextGenerationEU programme (of which at least 35% of the funds had to be dedicated to the green transition), as well as by mobilising the European Investment Bank and national development banks. The amount of this public financial support is not sufficiently known although it compares favourably with the amount of the Biden Plan (or IRA) in the United States[3]. The carbon pricing through the ETS framework and its implementation to importers since the beginning of 2026 contribute also to the support of the decarbonisation.

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The first roundtable on green finance at a Eurofi meeting took place in Amsterdam in April 2016. Since then, there have been numerous roundtables, articles and policy notes on this subject, with a large part of them devoted to the sustainable transparency framework. One of the first policy notes published in April 2020 by the Secretariat was entitled "The financial and non-financial challenges of the Green deal[4]." At that time, green investment was disappointing: in 2018, the EU invested 1,2% of its GDP to fight climate change (€158 Bn), less than the USA (1,3%), though there seemed to be available private finance. Many financiers said that they were willing to finance more green investments, but complained there were not enough projects to be financed. The main recommendations of the article were for the development of a consistent regulatory framework of the key sectors for climate and a solid budgetary and fiscal support with the necessary political and popular consensus, of public-private partnership, of an improvement of data and experience sharing and of specific efforts for the energy efficiency of housing accompanied by an adequate effort of the banking sector.

The present article aims to take a long-term view and to assess the development of green finance in the EU since the Treaty of Paris. It relies on available data for green investments and green financial flows (data which are not easy to find, disparate and uncomplete) and on several interviews with EU policymakers, representatives of the financial sector and experts.

1. The growth of green investments has been significant but not completely sufficient to meet the estimated needs

1.1 Investment needs for 2021-2030

Substantial investment is needed in the EU to enable the green transition, reduce greenhouse gas (GHG) emissions by 55% from 1990 levels by 2030 and reach net-zero emissions by 2050.

There are different estimates of green investments and green investment needs. In a report published in 2025[5], the ECB has quoted three estimates coming from the European Commission, BloombergNEF and I4CE.

The comments of the ECB are the following:

"Compared with those of the European Commission, the figures for total green investment needs presented by other institutions are considerably smaller, mostly due to lower historical estimates (Chart 1a). The estimates of additional green investment needs – the amounts needed each year on top of continued investment of past amounts – range between €558 billion according to BloombergNEF (BNEF) and around €400 billion according to the Institute for Climate Economics (I4CE) until 2030. This implies that additional amounts of green investment between 2.7% and 3.7% of 2023 EU GDP will be needed each year until the end of this decade. As assessments of green investment needs involve a high degree of uncertainty, most studies rely on a variety of scenarios.

3. "Update of the Public Financing of the Green Deal", Aliénor Marchand and Jean-François Pons for Eurofi, March 2026.
4. "The financial and non-financial challenges of the Green Deal", Jean-François Pons for Eurofi, April 2020.
5. "Green investment needs and their financing", ECB Economic Bulletin 2025/1.

CHART 1.
Estimates of average annual green investments for 2021-2030 (compared to average annual investments for 2011-2020)

Chart 1a : Estimates of total annual green investment need in the EU (EUR billions, annual by 2030)

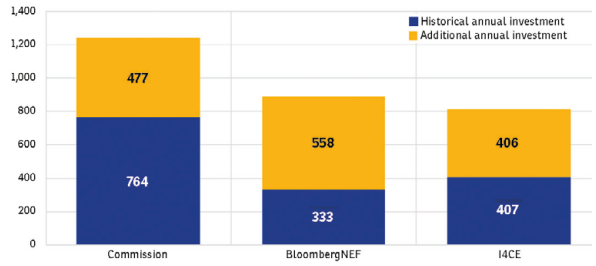
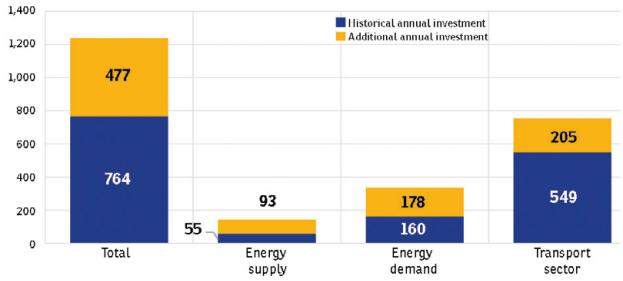


Chart 1b : European Commission estimates by category (EUR billions, annual average by 2030)



Sources: European Commission, Bloomberg NEF, Institute for Climate Economics and ECB

The estimates vary depending on whether the full costs of green investments are considered or only the additional costs compared with legacy technologies. For example, the estimates for the transport sector by the European Commission and I4CE include the full production cost of electric vehicles. Moreover, estimates depend on the coverage and definition of the sectors included. BNEF, for instance, includes investments in hydrogen, nuclear, carbon capture and shipping. Furthermore, the estimated investment needed to increase the energy efficiency of buildings varies widely across institutions, and some institutions do not capture the building sector in their estimates.

According to the European Commission, in absolute terms most investment is needed in the transport sector, with a total of €754 billion per year required for its transition towards carbon neutrality (Chart 1b). By far the largest share, amounting to around 80%, relates to investment in road transport, which includes passenger transport and the charging infrastructure for electric vehicles but also goods transport. In relative terms, by contrast, the largest increase in green investment will be needed in clean energy supply. Compared with historical averages, investment in this sector will need to increase by around 1.7 annually until 2030 to decarbonise energy supply.

The estimates for additional green investment needs can be seen as a lower bound in view of investment shortfalls and the only selective coverage of sectors. Despite recent progress, Europe's green investment activities have so far fallen short of what would have been needed annually until 2030 to achieve the decarbonisation target. Slippages were particularly noticeable during the pandemic. To compensate for the considerable shortfall compared with the target levels, more investment will be required in the remaining years to 2030. If this is not achieved, a delay in the green transition would imply additional costs for adaptation. Possible reasons for the shortfalls are poor access to, or high costs of, finance and a policy framework that fails to support, or even hinders, the green transition, as discussed below. Another reason why the estimates of annual investment may understate the actual needs relates to the sectoral coverage. As mentioned above, some estimates do not include the full spectrum of sectors that will be impacted by the green transition. Taken together, this all means that the estimates outlined here should be considered a lower bound.

1.2 The recent growth of climate investments is not completely sufficient even if there are encouraging signs

The most recent data on climate investments in the EU according to I4CE show a significant growth: €353 billion in 2020, €439 billion in 2021, €491 billion in 2022, €498 billion in 2023 (2,8% of the EU GDP). The amount of investment in 2023 is not far from the average energy transition needs in the period 2021-2030 but I4CE anticipates a decrease in 2024.

CHART 2.
Climate Investments in the EU (in € bn)

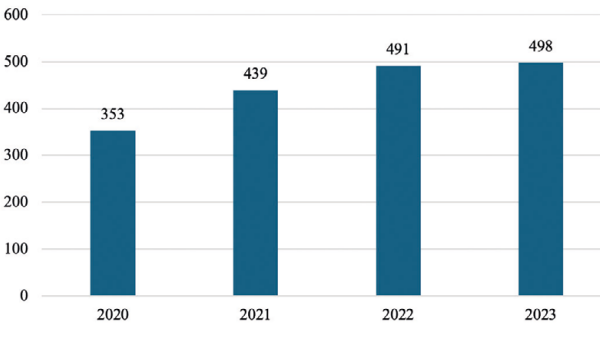
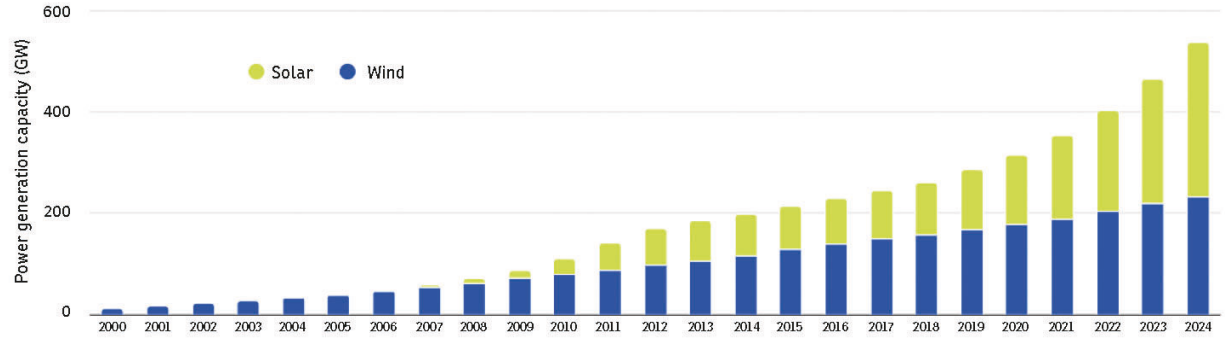


CHART 3.

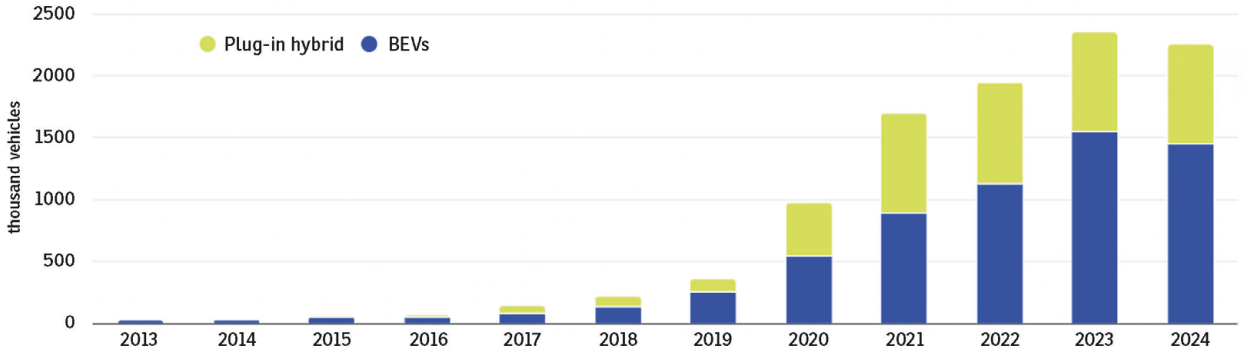
Wind and solar power generation capacity



Sources: Eurostat (IRENA for 2024)

CHART 4.

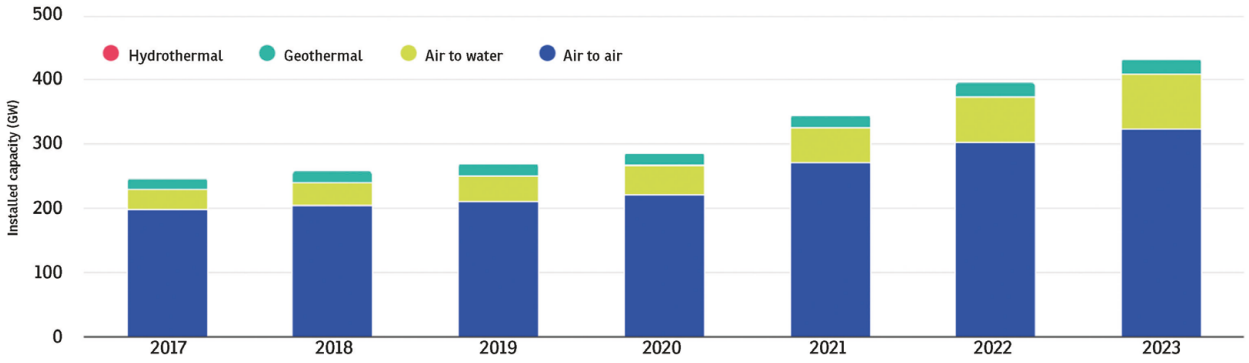
New car registrations (battery electric cars and plug-in hybrids)



Sources: Eurostat

CHART 5.

Heat pump installed capacity



Sources: Eurostat

Recent trends show encouraging signs that investment in the climate and energy transition is picking up[6]. The total installed capacity of wind and solar power generation increased by almost fivefold between 2010 and 2024 and by 70% between 2020 and 2024. The rapidly falling cost of solar panels has led to an annual increase in installed capacity in excess of 20% in 2022-2024, and a 15% annual increase in wind power over the same period. In 2024, the combined installed capacity of solar and wind power generation amounted to 535 gigawatt, around 47% of total installed capacity.

The growth of new battery electric cars has been strong until 2023 but has paused in 2024 before probably a small growth in 2025.

The growth of heat pumps has been slower but more regular since 2017.

6. https://climate.ec.europa.eu/eu-action/climate-strategies-targets/progress-climate-action/eu-climate-action-progress-report-2025/chapter-7-investments-climate-action_en?utm_source=chatgpt.com

2. The significant development of EU green finance up to recently

The most important private financial sources of green funding are loans from banks (which in the EU play the major role in financing the economy), bonds (the most important category being the Green bonds, dedicated to finance green projects), equity and self-financing.

It does not exist a measurement of the total of EU Green private finance. The best measured part of it is the Green bonds issued in the European Union, there are also some partial estimates for Green loans or Green equity.

However, what is sure is: 1) The rapid growth of these financial instruments since 2015, with probably a pause in the most recent years, 2) Its volume, which is significant compared to the green investments.

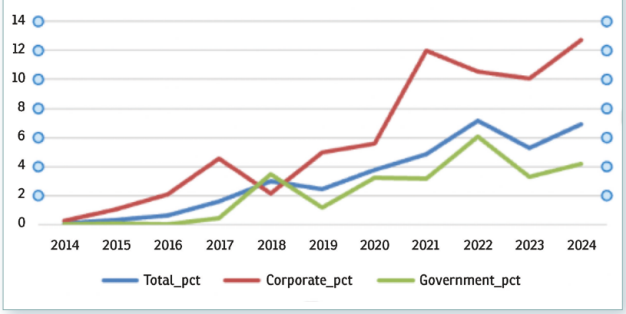
2.1 The Green bonds

The Green bonds are the part of green finance which is very well defined and accounted for: their proceeds finance green projects under a consistent framework established by ICMA.

There has been a strong increase of Green bonds in the EU between 2015 and 2021 followed by a step-up.

The peak of 2021 can be explained by the strong rebound of the general bond market following the year of the Covid pandemia. Since 2021, the amount issued has always been above € 250 Bn, i.e 1,4 % of EU GDP.

CHART 7.
Green bond issuance as a share of total bond issuance, EUR-27 (2014-2024)

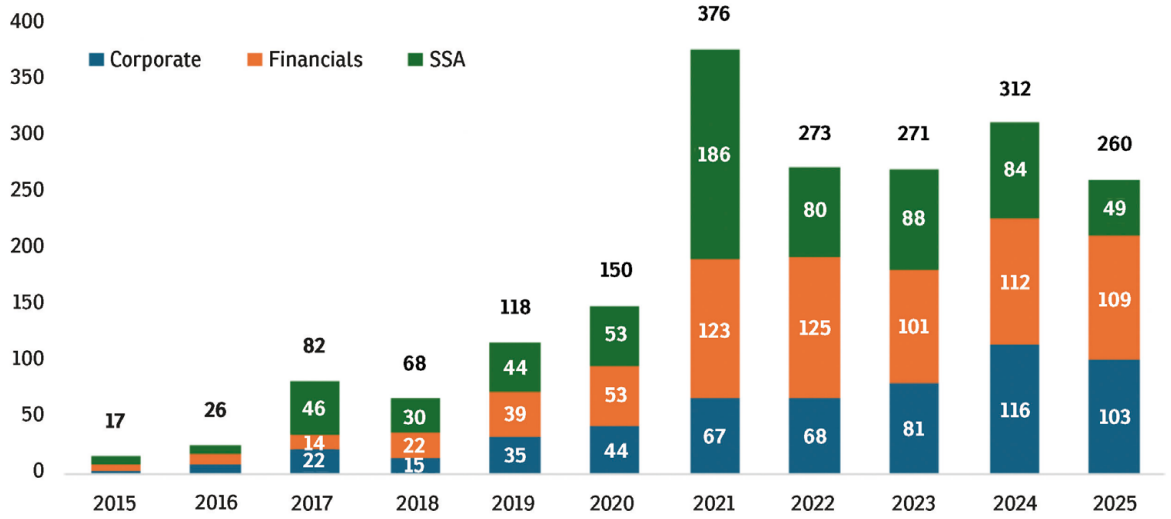


The percentage of EU Green bonds compared to the total of bonds issued in EU has greatly increased until 2022: 0,3 % in 2015, 0,6% in 2016, 1,6% in 2017, 3% in 2018, 2,4% in 2019, 3,8% in 2020, 4,9% in 2021, 7,15% in 2022, 5,3% in 2023, 6,9% in 2024[7] (source: European Environment Agency). The Green bonds issued by corporates, including financial firms, have increased more than the Green bonds issued by governments in recent years.

The EU is a global leader in the Green bonds market. Each year, between 2021 and 2024 it accounted for over 3% of all bond issuances (touching 2.7% in mid-2025), remarkably higher than the non-EU share of Green bonds at less than 0.5%.

To be complete with the bonds which specifically finance energy transition and environmental projects, it is worth mentioning Sustainable bonds and Sustainability-linked bonds.

CHART 6.
Green Bond Issuance in Europe (EUR bn)



7. https://www.eea.europa.eu/en/analysis/indicators/green-bonds-8th-eap/green-bonds-as-a-percentage-1

Sustainable bonds are bonds whose proceeds are used exclusively to finance or refinance a combination of environmental and social projects. The green part of Sustainable bonds is not precisely known but is estimated to represent at least half of the issuances in recent years. The Sustainability-linked bonds[8] are bonds which are linked to sustainable objectives of a firm (generally for energy transition or other environmental purposes) and the interest rates of which can vary depending on the firm reaching its objectives. The Sustainable bonds have decreased gradually since 2021 (where a large part of the issuance was linked to social projects post-pandemia) and the Sustainable-linked bonds, after having reached a peak in 2021 of €100 Bn, have continuously decreased because of fears of greenwashing. The total amount of issuances of these two categories of bonds reached only €25 Bn in 2025.

Finally, it appears from interviews made for the preparation of this article that there are **some bonds which do not have a green or sustainable or sustainable-linked bond label, but with proceeds which are -at least partially- devoted to this aim.** There are two reasons for this development: the US Administration campaign against sustainable finance which leads to "greenhushing" and the disappearance of the "greenium" (*ie.* when the rate of interest for a Green bond is inferior to the rate for other bonds) while the issuing of a Green bond is more costly given the procedure of disclosures and auditing.

2.2 The Green loans

The market for **Green loans for corporates** (defined as a club deal, a syndication or a bilateral transaction) is traditionally less well defined than the ESG bond market. According to available data, **Green loan issuances have steadily increased since 2016, reaching €71 billion in 2024 (0,6% of EU GDP), up from €53 billion in 2023**[9].

There are no precise statistics of the green loans to SMEs and households at the EU level. The French banking federation and the Association des sociétés financières publish each year their measurement of green loans to SMEs and households in France (notably for energy-efficiency investment of SMEs and in housing for households or for buying electric vehicles). Their statistics show a significant growth: outstanding green and sustainable loans increased by 27% in one year, from €372 billion to €471 billion in 2024 (*i.e.* 1,6% of French GDP). It would be very interesting to have the same kind of statistics in other EU countries.

2.3 The strong position of EU banks in the financing of the energy transition worldwide

is illustrated by the ranking of the banks financing renewables at the world level. 7 out of the first 10 banks are from the EU[10].

TABLE 1.
Infrastructures MLAs - Value

Rank FY 2024	FY 2023	Company	Value ($m) FY 2024	FY 2023
1	2	MUFG	11.016	9.849
2	1	Santander	9.640	10.659
3	3	SMBC	7.943	7.982
4	5	Natixis	7.600	6.945
5	7	Crédit Agricole	7.523	5.934
6	4	Société Générale	6.986	7.209
7	6	BNP Paribas	6.859	6.409
8	10	ING	6.481	5.324
9	11	Rabobank	5.673	3.940
10	8	Mizuho	5.230	5.543

2.4 Green private equity

There is a lack of precise and complete statistics of the investments of private equity in the energy and environmental transition. Partial measurement gives the feeling that the investment of private equity in green projects or assets have risen until the last years when the sources differ.

In December 2025, Invest Europe, the association representing Europe's private equity, venture capital and infrastructure sectors, as well as their investors, published its first pan-European infrastructure activity data report[11], according to which private infrastructure funds invested €167 bn in European companies or projects from 2020 to H1 2025, including €41 Bn in the first half of 2025. Since 2023, renewable energy has been the largest investment sector, followed by telecoms focused on Europe's digital transition, while transport is the third biggest sector. PitchBook's own industry classification of private equity points to strong developments in the European clean tech sector, boosted by industrial and manufacturing activities. The climate, clean and mobility tech sectors – the factories of green technologies – witnessed double digit expansion in 2020-2024 (respectively +37%,

8. https://climate.ec.europa.eu/eu-action/climate-strategies-targets/progress-climate-action/eu-climate-action-progress-report-2025/chapter-7-investments-climate-action_en?
9. *Ibid*.
10. IJ Global / Infrastructure and Project Finance League Table Report Full Year 2024.
11. "Building Europe's foundations: the role of capital in infrastructures", Invest Europe, December 2025.

+12% and +13% yearly). In absolute terms, EUR39 billion were invested annually in these sectors on average between 2021 and 2023. However, startups in the artificial intelligence space are now capturing a lot of investors' attention to the detriment of climate tech equity financing which decreased 40% in 2024 globally.

2.5 Green investment funds

Green investment funds play a crucial role by investing in green financial instruments like Green bonds or green private equity. There are a great number of funds on the market which are presented as sustainable or green. However, SFDR, which should have clarified the sustainable nature of a fund, did not reach its objective. **Since the beginning of the implementation of SFDR in 2021, the growth of funds known as "Article 8" (which have at least one sustainable objective) has been important and continuous.** According to Morningstar, as of November 2025, outstanding assets under Article 8 funds reached approximately €6.5 trillion, while Article 9 funds accounted for around €317 billion.

But, for most of the observers, the sustainable nature and the green nature of these funds is uncertain. For instance, the money-market funds represent ¾ of their amount, although the sustainable nature of a MMF is problematic. The "Article 9" funds, which are supposed to be greener, after a strong start in 2021 and 2022, have since continuously decreased notably because of fear of greenwashing. Finally, in 2024 and 2025, Green funds suffer from the craze for defense funds in the UE.

It should also be noted that other funds can finance or refinance green activities or projects without being labelled "Article 8". This is notably the case of the ETF, the quasi-totality of which are not "Article 8", for it would be too costly for this simple and low-cost financial product, but a part of these funds finance green enterprises or enterprises which are on a green transition path.

3. Sustainable transparency, a priority of EU regulation: results below ambitions

According to the Action plan "Financing sustainable growth", the transparency regulatory framework had two general objectives and a specific objective for banks and insurance:

- to have information on the amount and evolution of green assets (by actor, sectors, countries etc);
- to encourage financial and non-financial actors to become greener, notably by the reputational risk and potential pressure from financial markets because some financial investors have adopted a green investment strategy or because markets may fear insufficient greening leading to stranded assets;
- for banks and insurance, to have useful information for risk monitoring and supervision.

The ambition was to have enough reliable and comparable data to monitor the progress of the green transition sector by sector and firm by firm and to induce the financial and non-financial enterprises to fully engage in this transition.

In fact, this framework introduced a new dimension in the transparency of companies, notably through the double materiality approach, and brought forward more transparency, more useful data and less greenwashing. But it fell short of the initial ambitions at the price of a heavy workload.

The Taxonomy became very complicated, notably because the rule "do not sufficient harm" introduced too much uncertainty, and produced very low, but non-significant figures of green assets ratios. For instance many EU banks are so cautious about the implementation of the taxonomy that they do not report the vast majority of loans to households for energy efficiency investments, but only those to buy a new house or apartment with the highest energy savings standards.

The implementation of SFDR led to insufficient progress in terms of transparency due to the lack of precision of the sustainable criteria to be used. The first year of implementation of CSRD by the first corporates concerned (the large, listed enterprises) gave interesting results, but the workload was so heavy, partly because of the pressures of accountants and experts, that there was a strong movement of businesses against it. This movement, with the support of the right and extreme right political parties, led the European Commission to propose a simplification of the standards to be used and more importantly a drastic reduction of the scope of the enterprises subject to it, including rather large unlisted companies which are often in energy-intensive activities. The results will be a lack of reliable and comparable data and a map for the green transition too full of holes and "terras incognitas".

The focus of this framework was on delivering green assets (renewable energies for instance), and not on the transition of energy-intensive activities into low-carbon ones, which is the other major challenge to reach the objectives of the Green Deal. The only disclosure linked to the green transition

was the publication of transition plans, but this requirement, resulting from the Corporate Sustainability Due Diligence Directive (CSDDD) has just been repealed.

Fortunately, there have been also two recent improvements of the transparency framework:

- a set of voluntary reporting standards for SMEs has been published in July 2025, which will help these enterprises, which are a crucial part of the economy for the green transition, to publish green data;
- the proposal of the Commission on the reform of SFDR goes rightly in two directions: a more precise definition of criteria for the two categories of sustainable funds and the creation of a category for transition finance.

4. Why green investments are not growing more quickly: the financial factors

4.1 The needs expressed by the firms

Different studies based on questionnaires of firms[12] tried to explain their needs for the financing of the green transition and their assessment of the fulfillment of these needs.

According to the ECB, the most important financial sources for firms (large corporates and SMEs) are in the following order: retained earnings, loans with fiscal support (which underlines the importance of public finance), bank loans, equity and debt security. Large corporates plan more retained earnings and less loans with fiscal support than the SMEs.

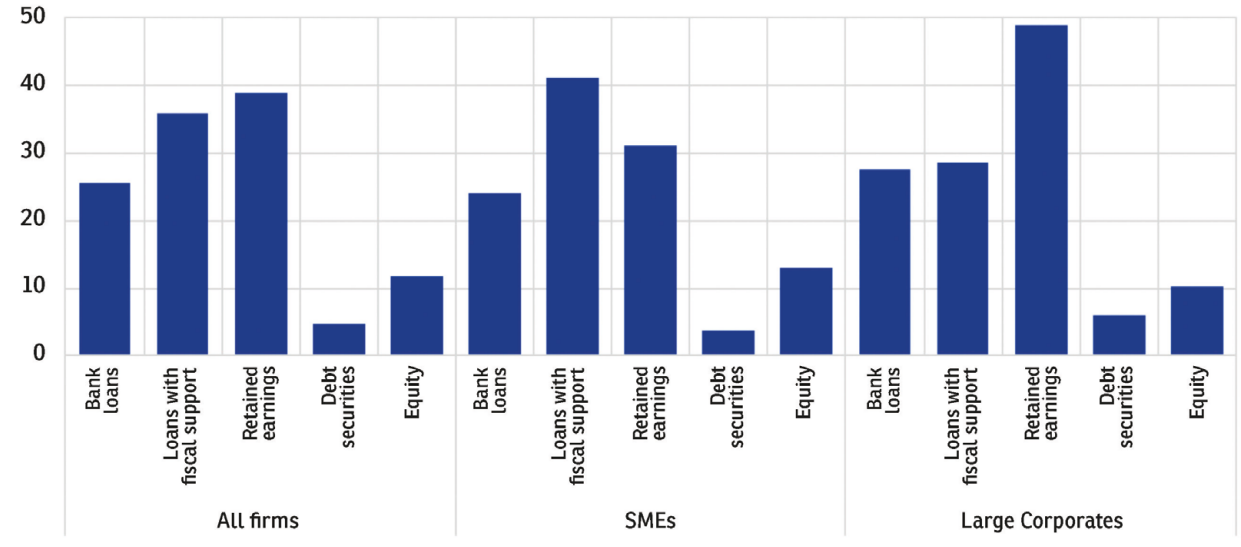
A recent survey by the European Patent Office (EPO) and the EIB[13] revealed major structural barriers to green investment in innovative projects, with for instance the availability of finance being more problematic here than for investing firms in general. Around 30% of cleantech firms stated that issues with the availability of finance acted as a major obstacle to investment. This is twice the share reported by the broader range of non-financial firms surveyed in the wider EIB Investment Survey. It confirms the difficulties of financing innovation in the green transition.

4.2 The role of public finance: a volume relatively satisfactory[14] but with the jolts of national fiscal policies and uncertainty for the coming years

While the European Green Deal has successfully triggered a massive theoretical mobilization of public funds, an analysis of the data as of early 2026 reveals a significant gap between political commitments and the actual flow of money into the economy. This "satisfactory volume" remains

CHART 8.

Estimated financing needs of firms for the green transition



12. Platform on sustainable finance, March 2025.
13. https://www.eib.org/attachments/lucalli/20240003_financing_and_commercialisation_of_cleantech_innovation_en.pdf
14. Référence de la dernière mise à jour « Public financing of the green deal »

subject to the administrative capacity and fiscal constraints of Member States.

The Recovery and Resilience Facility (RRF) is the primary engine of this transition. By January 2026, out of a total envelope of €648 bn, cumulative payments to Member States reached €394 bn (approximately 60.6%). While national plans were revised to increase the green spending share to an average of 42% (well above the 37% legal requirement), the actual investment tracked under the "green transition" pillar stands at €77.33 bn in effective disbursements. This discrepancy highlights that while funds are available, their transformation into tangible projects depends heavily on national implementation speeds.

The 2021-2027 Multiannual Financial Framework (MFF) has earmarked €503 bn for climate objectives. The pace of commitments has accelerated sharply, rising from €32.5 bn in 2021 to a record €160 bn in 2023. However, the transition from "budgetary commitment" to "actual payment" is often hindered by complex co-financing rules and national administrative bottlenecks. Furthermore, the reliance on NextGenerationEU – a temporary instrument set to expire in 2026 – creates a looming "fiscal cliff" that national budgets are not yet prepared to fill.

The "jolts" of national fiscal policies are visible in the management of the Emissions Trading System (ETS) revenues. Despite a 2023 directive requiring Member States to allocate 100% of these revenues to climate action, data from 2025 shows that only 67% of the revenues generated in 2024 were actually spent by the following year. The remainder is often held in multi-year reserves or absorbed by general budgetary smoothing. Moreover, national public financial support has been too erratic from one year to another, especially in measures targeted to support the households in energy-efficiency investments in their homes or for the buying of electric cars.

In contrast, **the European Investment Bank (EIB) has acted continuously as an importan player,** reaching a record €51 bn in actual green financing in 2024. This includes €31 bn specifically disbursed for energy security (renewable energy and grids), accounting for nearly 40% of all EU investment in that sector for the year.

In summary, while the volume of public finance is substantial, the efficiency of its disbursement remains uneven. The negotiations of the next Multi-annual Financial Framework for 2028-2034 will be crucial for the public financial support of the green transition, especially because of the end of the NextGenerationEU.

4.3 The role of private finance

Since 2015, the explicit wish of the policies has been that private green finance should cover a very large part of the financing needs because of the existing constraints on public finances. But there was also the implicit wish that financial institutions put pressure on non-financial companies to become greener and thus re-orient the economy.

This second wish collided with **the reality of the relationship between financial actors, notably banks, and their clients: they cannot force their clients to invest in projects or to buy an electric car. Nevertheless, it is today well known that most EU banks and financial investors (insurers, asset-managers) have favored green investments by engaging with their clients or investees** and providing useful information, advice and technical assistance to SMEs and households – sometimes through dedicated subsidiaries –, and adequate financing, sometimes even with favorable market rates.

To give another positive example, most of the EU largest banks have set targets – focused on the most GHG emitting sectors – to decarbonise their portfolios and they publish year after year where they stand vis-à-vis these targets[15].

But the financial actors must also assess the risk and the return of each green project, which leads them to be cautious especially when the project concerned is based on new technologies. For this kind of project, the association of public funding or public guarantees with private finance has proved to be very useful and, based on the interviews carried out, should continue to be used and, if possible, increased.

5. Why green investments have not grown more quickly: the non-financial factors

5.1 The economic background: external shocks and slow growth in the EU

Since 2020, the EU has suffered from two major external shocks, the Covid pandemia in 2020 and the Russian war against Ukraine which has triggered an energy crisis for Europe. The profitability of enterprises and the incomes of households have suffered and investments, including green investments, have stalled. Meanwhile **the interest of investing in energy efficiency and in green energy has become greater for the EU to be less dependent**

15. "Transition plans of the EU banking sector: a progress towards transparency but a need of going further", Jean-François Pons for Eurofi.

on oil and gas imports, but also to drive down the costs of energy. After a long dispute about the nuclear industry in the EU, it is now largely accepted for the same reasons that it is useful to prolong existing nuclear plants and invest in new ones, the nuclear industry being also a good complement to renewables subject of their intermittency.

Fortunately, there has been also a welcome EU political reaction to the Covid-19 pandemia with the launching of the NextGenerationEU initiative which has very significantly increased the public financial support to green investment and a new substantial effort on energy with the RepowerEU programme. But the investment needs are very high, as they include also the strong development of new productive capacities (including nuclear ones) and of adequate infrastructures (electricity grid, storage capacities etc.).

Some industries have also been hit by sectoral shocks, like the steel industry and the chemical industry, which did not help them to invest in new greener facilities. The automotive sector has also been confronted with difficulties in its re-orientation to the production of electric vehicles.

5.2 The existence of non-financial bottlenecks

There are several examples of non-financial bottlenecks in the green transition. Amongst them, the first bottleneck frequently quoted is the **insufficient qualified manpower,** from the craftsmen involved in the energy-efficiency activities in housing to the public servants inserted in the administrative process (one of the reasons in the delay of the implementation of the NextgenerationEU programme) and to the engineers in high technology sectors. The second bottleneck is **the length of the permitting procedures** for the investments in infrastructures or in renewable energy; it can take 10 years to have the authorization to build an offshore wind capacity! An example of sectoral bottlenecks has been the insufficient disposal of charging installations for electric vehicles, which has discouraged potential buyers; this specific bottleneck has been progressively suppressed.

5.3 The fluctuations of the demand-side and the risks linked to the anti-Green Deal political trend

The green transition depends of course on the demand for green investments and green products. This demand responds to multiple factors: the considerations of cost, expected returns and risks, the availability of financial resources but also the engagement towards green transition in balance for other motivations of the consumers.

The Green Deal program was aimed at influencing both the supply side and the demand side by the regulation of the most carbon-intensive sectors: energy, industry, transport and real estate. For instance, the regulation related to transport (like the ban on sales of gasoline vehicles in 2035) or the carbon pricing aimed at fixing the expectations of firms and consumers and induce them to re-orient the production of firms and the behavior of consumers. **The legislative program was also accompanied by substantial public financial support.**

The legislative reforms (some of which being only at the beginning) **and significant public financial support** have certainly helped to orient demand-side and supply-side and **triggered a growth of green investments but not at the level which was hoped for.** This is specifically the case for electric cars, where the demand has fluctuated in the EU countries, or for wind turbines which have raised oppositions from some part of the public opinion and of the political spectrum.

The popular and political background at the launching of the Green Deal was very much influenced by green activism, especially amongst the young generation. This background has since then changed in the European Union. The anti-Green Deal movement, which has developed recently and was translated into votes for the right and extreme right parties in the last European elections, could lead the EU policy makers to come back on some green regulations. This has already started with the transparency framework and the car regulation. There is then the risk of reducing the impact of this legislative agenda on the firms' expectations and planning on the one hand and on the consumer demand on the other hand.

Conclusion: the EU is a leader in the world for the green transition and for green finance, but it should increase its efforts in the new world contex.

It is worth reminding that GHG emissions in the European Union at the end of 2024 have decreased by 18% since 2015 against 8% in the USA while China increased its GHG by 21% and the rest of the world by 11%. The target of -55 % in 2030

(compared to 1990) is within reach, as the reduction of GHG reached 38% in 2024. **The EU is recognized as a leader in the world for the green transition, with a real influence abroad** and should continue to play this role despite the brutal change of policy in the United States.

Since the launching of the Green deal, the context of the EU energy transition has changed due to the external shocks, the geopolitical changes ("a world of brutes" in the words of Enrico Letta) and the new EU priorities of strategic autonomy and competitiveness notably vis-à-vis the USA and China. This new context leads the European Union to pursue the road of the energy transition while building new strengths in the green sector and related activities as China has succeeded to do. Beyond the fight against climate change, the EU has now a specific interest in this transition, which should help reduce its dependency on oil and gas imports, decrease the energy costs for enterprises and households and strengthen EU competitiveness.

Fortunately, many studies show, and according to experts, **most of EU corporates and of the financial sector are really engaged in green transition,** even if they generally recognize that is is not an easy pathway for the economic agents which are the most concerned.

The growth of green investments has slowed these last years which risks threatening the green transition. Moreover, the necessity of adaptation to climate change will lead to more investments.

Several obstacles on the road of green transition have been recalled in the article which need to be addressed. Some are on a positive trend, like the education and professional formation for the green qualifications which are needed, or like the network for charging electric vehicles.

The availability of private finance does not seem to be the main obstacle, except for some innovative projects, for which it would be useful to increase blended finance, or for long-term investments in infrastructures for which it would be useful to develop pan-EU financial instruments (possibly ELTIF). It is also necessary to develop transition finance to accompany energy-intensive firms in their decarbonation trajectory. The progress of the Savings and Investment Union would fully benefit to the financing of the green transition, including securitisation for instance.

The policymakers should also ensure throughout the European Union as much clarity, consistency and stability in the regulatory framework and in the conditions of budget and fiscal support as possible. This would help firms and consumers to have better expectations for their projects and to make safer choices. The priority of the transparency framework after the backward step of the so-called Omnibus package consisting in the reduction of the scope of companies concerned, should be to induce medium-large unlisted companies and help SMEs to disclose a restricted number of key sustainable data. **The budget and fiscal support should be at least maintained at the same level, which raises the question of the follow-up of the NextGenerationEU package** in the negotiations of the next Multiannual Financial Framework.

Finally, an evident recommendation to present to the public authorities and the financial sector is **to improve the measurement of climate and environmental investments and green finance, including green bank loans to SMEs and consumers**. "We only know well what we measure" (Alfred Sauvy) and "everything what we measure improves" (Peter Drucker).