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„*Sustainable finance – An analysis of its conceptual evolution and its impact on the European integration*“

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Abstract

The following thesis analyzes the impact of sustainable finance, which is relevant in the course of the European Green Deal, on the integration within the EU. The analysis is divided into three research questions. In a first step, the importance of sustainable financing in the EU is examined and explained in more detail. For this purpose, the development and the reactions to crises, in relation to this relatively new financial area for the EU, will be examined. In a second step, the concept of sustainable finance, which includes green bonds, will be analyzed in terms of its contribution to the achievement of the goals set out in the European Green Deal. The first two research questions will be analysed using the method of concept analysis. Finally, through the application of process analysis, in which the tenets of the neofunctionalism theory are applied in relation to the integration within the EU, an explanation for the decision to introduce the European Green Deal will be given. The results of this paper show that sustainable finance in the EU, especially due to the consequences of crises and new challenges, has become an important and increasingly present area of the financial market and plays a crucial role in achieving the goals of the European Green Deal. Increased integration and related spill-over effects are factors explaining the decision to introduce the common European Green Deal.

This master thesis extends the knowledge about the importance of sustainable financing in the EU and about the relation between sustainable goals and the integration within the EU.

Abstrakt

In der folgenden Masterarbeit wird der Einfluss von nachhaltiger Finanzierung, welche im Zuge des Europäischen Grünen Deals von Bedeutung ist, im Hinblick auf die Integration innerhalb der EU analysiert. Die Analyse teilt sich auf drei Forschungsfragen auf. In einem ersten Schritt wird die Bedeutung von nachhaltiger Finanzierung in der EU genauer untersucht und erklärt. Dazu werden die Entwicklungen und die Reaktionen auf Krisen, in Bezug auf diesen, für die EU relativ neuen Finanzbereich, genauer untersucht. In einem zweiten Schritt soll dann das Konzept der nachhaltigen Finanzierung, zu welchem auch die Green Bonds gehören, auf ihren Beitrag zur Erreichung der im Europäischen Grünen Deal festgelegten Ziele hin analysiert werden. Die ersten beiden Forschungsfragen werden mit Hilfe der Methode der Konzeptanalyse untersucht. Zuletzt soll dann, durch die Anwendung einer Prozessanalyse, in welcher die Grundsätze der Neofunktionalismus-Theorie in Bezug auf die Integration innerhalb der EU herangezogen werden, eine Erklärung für den Beschluss der Einführung des Europäischen Grünen Deals gegeben werden. Die Ergebnisse der vorliegenden Arbeit zeigen, dass sich nachhaltige Finanzierung in der EU, besonders durch die Folgen von Krisen und neuen Herausforderungen zu einem bedeutenden und immer präsenteren Bereich des Finanzmarktes entwickelt hat und auch eine entscheidende Rolle bei der Erreichung der Ziele der Europäischen Grünen Deals spielt. Gestärkte Integration und damit verbundene Übertragungseffekte sind Faktoren, welche den Beschluss zur Einführung des gemeinsamen Europäischen Grünen Deals erklären.

Diese Masterthesis erweitert das Wissen über den Stellenwert nachhaltiger Finanzierung in der EU und über den Zusammenhang nachhaltiger Zielsetzungen und der Integration innerhalb der EU.

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List of abbreviations

AMIF -	Asylum, Migration and Integration Fund
CSO -	Civil society organization
ECA -	European Court of Auditors
ECSC -	European Coal and Steal Community
EEC -	European Economic Community
EGD -	European Green Deal
EGDIP -	European Green Deal Investment
EIG -	European Investment Bank
EMU -	European Monetary Union
ESG -	Environmental, social and governance
ESM –	European Stability Mechanism
ESMA -	European Securities Markets Authority
EU -	European Union
EUGBS -	European green bond standard
EUROSIF -	European Sustainable Investment Forums
EUTF for Africa-	Emergency Trust Fund for Africa
GDP -	Gross domestic product
GHG -	Greenhouse gas
HLEG -	High Level Expert Group
ICMA -	International Capital Market Association
IPCC -	Intergovernmental Panel on Climate Change
IPSF -	International Platform on Sustainable Finance
JTF -	Just Transition Fund
JTM -	Just Transition Mechanism
MMF-	Multiannual Financial Framework
NGEU -	NextGenerationEU
NGO -	Non-governmental organization
NIU -	NGO investor union
OECD -	Organization for Economic Co-operation and Development
RRF-	Recovery and Resilience Facility
RRP -	Recovery and Resilience Plan
SEIP -	Sustainable Europe Investment Plan

SIF -	Sustainable Investment Forums
SRI-	Socially Responsible Investment
TEG -	Technical Expert Group on Sustainable Finance
UN-	United Nation

1 Introduction

1.1 Background

1.1.1 Sustainable Finance

Sustainability and the move to a low-carbon, resource-efficient, and circular economy are critical in preserving the EU economy's long-term competitiveness (European Commission, 2018a). The goal of sustainable finance is to reorientate investment toward sustainable technology and industries (European Commission, 2021b). It refers to the process of considering environmental, social, and governance (ESG) factors when making financial investment decisions, resulting in longer-term investments in sustainable economic activities and projects (European Commission, 2018a) on an intergovernmental level (Fabbrini, 2013). Climate change mitigation and adaptation, as well as associated hazards, are included in environmental concerns. Inequality, inclusion, labor rights, human capital and investment are all examples of social factors. The administration of public and private organizations is critical in ensuring that social and environmental factors are given consideration into decision-making (European Commission, 2018a).

Sustainable financing strategies include thematic investment, negative or positive screening and norm-based screening. Investors can choose the strategy that suits them best from various forms of engagement. While some may choose to distance themselves from ethically problematic issues, other investors may choose to invest in positive sustainable developments (Sandberg et al., 2009).
The financial sector, with particular attention to the European market, has continued to move toward a sustainable focus. This change has taken place primarily through reforms (Ahlström & Monciardini, 2021). The importance of sustainable financing is reflected in the fact that more than half of the world's investors include ESG bonds in their investment strategies (FTSE Russell, 2018). Investors choose to invest in ESG bonds driven by social preferences and social signaling (Riedl & Smeets, 2017).
Sustainable finance is a growing field that integrates environmental and social aims into the world of finance (Yan et al., 2019). It is a hybrid form of several institutional logics, including worth, value spheres, organizational structures, and identities (Smith & Besharov, 2019). Such hybrid forms of organizations are able to stimulate innovation and further development (Jay, 2013). However, they are also subject to the challenge of conflict (Pache & Santos, 2010). These insights can be used to divide the institutional logic into the end goals and

thereby achieve good cooperation between the sometimes competing goals by setting the right means and incentives (Ahlström & Monciardini, 2021).
Sustainable financing was described by the United Nation (UN) as part of the problem, but at the same time as a component of the solution process of a sustainable future (United Nations, 2015b).

Supporters argue that moving toward sustainable finance can provide the solution to all environmental and social problems (Zadek, 2019). They argue based on standard financial theories and extend them to sustainable aspects (Hoepner, Majoch, & Zhou, 2021). The assumption here is that investors have the power to shape the economy through their investment decisions which are selected based on sustainability decisions (Busch et al., 2016).
With this growing presence in the market, skepticism and fear of an entailing financialization have grown at the same time (Ahlström & Monciardini, 2021). Financialization describes the phenomenon of how financial markets and institutions and all associated actors are becoming increasingly important in the global economic marketplace (Epstein, 2005).

Skeptics argue that the growing importance of the financial sector creates environmental and social problems in the first place. The reason for this view is the focus on short-term gains, which continue regardless of the consequences in terms of social injustice and environmental damage (Fletcher, 2012). The financial crisis of 2007/08 in particular challenged the concepts of playing with systematic risk and speculative activities (Ahlström & Monciardini, 2021). Critics refuse to credit the financial sector with sufficient power to solve problems and influence the economy to the extent attributed by proponents (Busch et al., 2016).

Sustainable financing has to face the challenge of the conflict between financial logic and the associated profit maximization as the primary goal and, on the other hand, the goal of promoting sustainable activities and corporate governance (Dyllick & Muff, 2016). Yan et al. (2019) also conclude from their study that the financial sector's goals and sustainable development goals can be complementary and competing at the same time. Depending on the prevalence of the financial logic in society, sustainable goals may be promoted or prevented. It was found that the prevalence of financial logic determines how willing investors are to invest in socially responsible investments. The prevalence of financial logic determines how common forms of financing are, what resources investors have, how open they are to question everything, how open they are to new approaches and whether they can achieve cooperation with other institutional bodies (Yan et al., 2019).

Other factors that shape the status of sustainable financing within society are the actions of different stakeholders within the process and the active communication of the different actors within the hybrid construct of sustainable financing policy. A common language of the civil society organizations (CSOs), as the actors on the sustainable side of the finance strategy and the major financial actors has to be found. The active involvement of other alternative actors such as unions helps sustainability initiatives to operate in the market and to be taken seriously. Furthermore, the action of non- governmental organization (NGO) investor unions (NIU) have a positive impact on new reforms on sustainable finance (Monciardini & Conaldi, 2019).

1.1.2 Green Deal & NextGenerationEU

After the Intergovernmental Panel in Climate Change (IPCC) announced in 2018 that there would be a 1.5°C increase of global warming and presented the consequences of this impact (IPCC, 2018a), the increasingly urgent demands of change towards a sustainable and climate-neutral society within the EU were at the center of all political thinking. This is evident in the new climate movement, Fridays for future and in the high electoral success of green parties in the European Parliament election (Bloomfield & Steward, 2020).

The European Green Deal (EGD) was presented as a response to those new demands, which includes the most recent forms of sustainable finance. The EGD is designed to help solve environmental problems of the current generation by including all EU policies into the action plan (Dupont et al.,2020). For decades, the major goal of EU policy has been economic growth. EGD is now the future growth strategy (Krämer, 2020). It is a strategy which aims to transform the EU´s economy towards a sustainable future with green economic growth and turn the climate- and environmental problems into chances and thereby make Europe the first climate- neutral-continent (Skjærseth, 2021).

EGD is part of the United Nations 2030 Agenda strategy and the Sustainable Development Goals and was introduced in 2019 by the Commission President Ursula von deer Leyen (European Commission, 2019e) and represents the foundation of a transition to a sustainable society. It is a new alignment of environmental policy with the areas of economic and financial, industrial, environmental and social policy (Bloomfield & Steward, 2020).

NextGenerationEU (NGEU) is an instrument in which the EU acts as a borrower. The program supports in recovering, resilience building, and debt management (Laffan & De Feo, 2020). The main objective is to mitigate the effects of the COVID-19 crisis and minimize long-term consequences, but also to support the EGD while economic recovery and a more digital, sustainable and resilient future is pursued (de la Porte & Jensen, 2021; European Commission, 2021f).

1.2 Research questions and objectives

Global warming, the extinction of many animal species, and the pollution of forests and oceans are challenges which politicians have to face at the moment. In response to these problems, the EU, more precisely the European Commission, called Commission in the following, has concluded the EGD. That is a growth strategy, which is part of the United Nations' 2030 Agenda and the Sustainable Development Goals. The implementation of the deal and all actions should help transform the EU into a fair and wealthy society with a modern, resource-efficient, sustainable and competitive economy (European Commission, 2019e).
The implementation of the target achievement is to be attained through regulation and standardization, investment and innovation, national reforms, dialogues with social partners and international cooperation. All these strategies rely on the principles of sustainable financing. Sustainable finance policies' remarkable rise from irrelevance to importance has received inadequate scholarly attention (Ahlström & Monciardini, 2021).
The aim of this study is to examine the importance of sustainable financing in the EU and to investigate how the decision of the EGD has influenced integration within the EU and how the role of supranational bodies has changed in the context of the neofunctionalism theory.
The framing theme of the master's thesis is as follows:

„***Sustainable finance – An analysis of its conceptual evolution and its impact on the European integration***“

The topic will be examined in more detail with the help of three formulated research questions:

After introducing the concept of sustainable finance, the first step of this master's thesis is to analyze how sustainable finance is applied in the EU and what significance it has. The first research question goes as follows:

1) ***How is sustainable financing framed at the EU level?***

For this purpose, two sub steps are performed. In a first step, the development of the concept of sustainable financing in the EU since the beginning of the financial crisis in 2007/08 will be presented. In a second step, different crises which have taken place in the EU since

2007/08 will be presented and summarized. In the next step, the concept of sustainable financing will be analyzed in different contexts with the help of the concept analysis method. For this purpose, various crises that have taken place since the beginning of the financial crisis in 2007/2008 will be used. With the help of this approach, it should at the end be possible to give an evaluation of the relevance of sustainable financing within the EU.

In the second step, the relationship between the EGD and the concept of sustainable financing will be analyzed in more detail. It will be evaluated to what extent the concept of sustainable financing contributes to achieving the formulated goals of the EGD. Accordingly, the second research question will be:

2) ***How important are the sustainable financing tools in achieving the defined goals of the EGD?***

The concept analysis method will also be used for the analysis of the second research question. The existing literature will be examined in order to apply the potential of sustainable financing as a solution for achieving climate-related goals. To this end, the formulated goals of the EGD are brought into comparison with the possible actions of various sustainable financing instruments.

The final part of the paper will examine how the environmental crisis led to the EGD being adopted. It will analyze the steps that led to this decision, looking more closely at EU integration using neofunctionalism theory and examining the role of supranational institutions in the decision-making process and how they gained power. Therefore, the third research question to be answered is:

3) ***Given the significant contribution that the EGD and NGEU have for the European integration process, how can such agreements be explained?***

To answer the third research question, the method of process-tracing is applied, whereby the outcome explaining option is chosen. The EGD serves as a dependent outcome and the environmental crisis as an independent initial situation. With the help of the tenets of neofunctionalism integration theory, the mechanisms that led to the final decision will be identified.

1.3 Structure of the thesis

The following is the structure of this master's thesis:

Chapter 1 provides a comprehensive overview of the subject and describes the purpose of this master's thesis and the corresponding research questions.

Chapter 2 describes the methodology which will be used to answer the research questions. It also gives an overview about the theoretical framework of the neofunctionalism theory of the European integration.

Chapter 3 provides a literature review regarding the EGD and NGEU.

Chapter 4 analysis the relationship between sustainable finance and the EU and between sustainable finance and the fulfillment of the EGD goals by answering the first two research questions using the concept analysis method.

Chapter 5 analysis the EGD & NGEU from an integration process point of view by using the process tracing method.

The results are discussed in detail in *Chapter 6*.

Chapter 7 addresses the study's limitations as well as future research directions.

The literature used in this master's thesis is listed in *Chapter 8*.

The appendix with all supporting information is included in *Chapter 9*.

2 Methodology

2.1 Concept analysis method

A concept analysis may be characterized as an activity that clarifies concepts, their attributes, and their relationships to other concepts. More precisely, the method is understood as the goal-oriented solving of problems and the formation of concepts through analytical thinking using already existing concepts. The goal is to understand the meanings and definitions of concepts supplied in written, textual form in light of a theoretical perspective that has been adopted (Nuopponen, 2010a).

To answer the first two research questions, a systematic concept analysis will be conducted. In this particular form of a concept analysis, the focus of the method lies on establishing the relationship between different concepts, if multiple concepts are being analyzed, or embedding a concept in a larger system, when considering a selected single concept, as in the following case (Nuopponen, 2010b).

Figure 1 lists the steps that are performed when using systematic concept analysis as a research method.

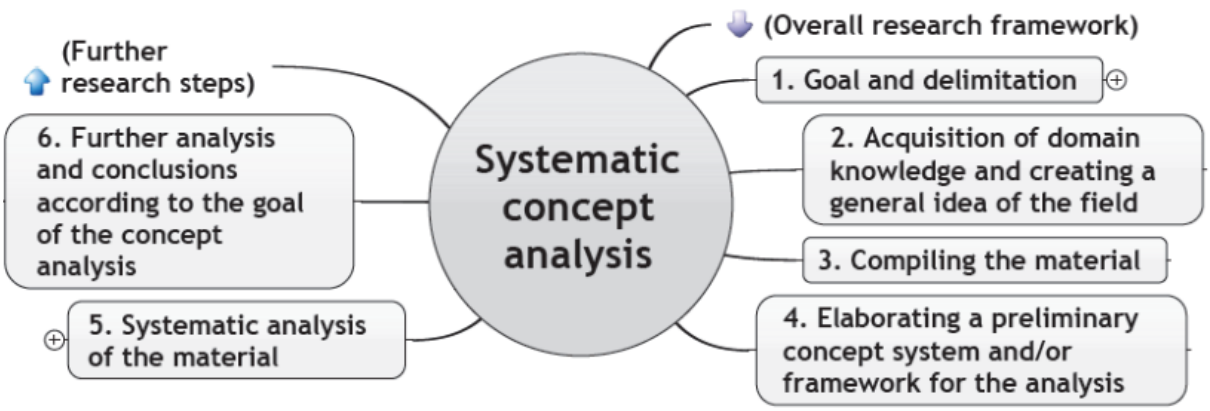

Figure 1: Steps of a systematic concept analysis, Nupponen (2010), p.2

The first step is to define the goals and purpose of the analysis (Nuopponen, 2010b). In this case, a single selected concept, the concept of sustainable financing will be applied as a research subject for different contexts, hereby, crises that have taken place within the EU since the financial crisis of 2007/08 will be the context. For the second research question different goals decided for the EGD will be examined. The aim is to answer the first two formulated research question with the help of this method. A contrastive analysis will be applied. This is used to show similarities and differences of a concept, in this case the concept of sustainable financing, in different areas, in this particular context crisis within the EU and the aims of the EGD (Nuopponen, 2010b).

The next step is to obtain necessary knowledge about the concept and the scenarios to be analyzed (Nuopponen, 2010b). This step is done by providing a literature review on the concept of sustainable finance, in order to explain the concept. Furthermore, the crises which should be investigated will be presented and explained in order to create the framework and the knowledge foundation for the following steps. For the second research question there will be a closer explanation and description of targets formulated in the course of the EGD. In the following step, the literature is compiled (Nuopponen, 2010b). The aim is to find literature that provides information on the application of sustainable financing in times of crisis and in a later step literature which gives insights on the effectiveness of sustainable financing instruments in the course of the EGD. Sources can have different forms. These can be official EU documents, journals or newspaper articles. It should be noted here that the concept can be named differently in different sources and is not always referred to as sustainable financing but is instead paraphrased.

In the next step, based on the literature collected in the previous step, a preliminary concept system is defined. Even if only one concept is considered and analyzed, it is important to consider it in a larger framework. For this, the whole conceptual framework must be considered. A concept can never be considered in isolation. Other concepts must also be taken into account (Nuopponen, 2010b).

In the fifth step the literature is analyzed, and characteristics of the concept are defined. Similarities and distinctive features of the concept are collected. Criteria that belong to the concept should be identified and classified (Nuopponen, 2010b).
In the last step, a summary of the analysis results and an evaluation of further research steps will be given. In doing so, a clear answer to the first two research questions will be provided (Nuopponen, 2010b).

2.2 Case Study process tracing method

The process tracing case study method is used to investigate the third research question. By conducting this method, it is possible to analyze within-causal relationships between independent variables and the outcome in a single-case research design. More specifically it analyses the workings of causal mechanism which stand behind an outcome (Beach &

Pedersen, 2013). The chronological ordering of the contributing events is emphasized in this research approach as a means of capturing the main aspects that explain the participation of different actors in generating policy and regulatory changes (Ahlström & Monciardini, 2021).

It is a form of an in-depth case study method. Process tracing may be conducted in case studies to learn more about the causal dynamics that led to a specific historical case's conclusion, as well as to focus the attention on generalizable causal processes that link causes and outcomes in a set of causally comparable situation. Process tracing has the advantage of allowing strong causal conclusions about how causal processes function in real-world situations based on evaluating within-case mechanistic data of a single case (Beach & Pedersen, 2013).

There are three different variations of the method.The ways this method could be conducted are theory-testing, theory-building and explaining-outcome process-tracing case-study method, which can either be done by deductive part of theory-testing or inductive part of theory building or by a combination of both of the methods (Beach, 2017).

They have in common that they work with deterministic theorization and a mechanic understanding with the aim to investigate a theorized causal mechanism with the help of a single case study. The method can either have a theory-centric or a case-centric focus. While the goal of theory-centric methods is to generalize beyond the single case, the case-centric method focuses on accounting for the outcome in this specific given case (Beach & Pedersen, 2013).

The focus of the following research work will be on the explaining-outcome process tracing method, with a theory-testing background as a case-centric analyses. A case-centric focus means that the goal is to explain a particular outcome by building a minimally sufficient case-specific mechanism explanation with a specific case study (Beach & Pedersen, 2013). Sufficient in this case means that explanations are given, which account for one outcome with no redundant parts (Gerring, 2006). The goal is not to construct or test more general theories, but rather to provide an adequate explanation of the case's results, with more case-centric goals than theory-oriented goals (Sil & Katzenstein, 2010). The goal is not to prove that a specific theory is true but instead to show that it has an influence in providing an explanation which is only true for a specific case (Jackson, 2016).

The focus of the explaining-outcome case-study method are causal mechanisms. Causal mechanisms are defined as complex systems which are producing an outcome by the interaction of entities which are undertaking actions (O'Shaughnessy, 2007).
Theorized causal mechanisms can be seen as a series of intervening variables which can be measured with regard to presence or absence and are the basis for hypothesis in the given method (Machamer, 2004). The goal is to open up the black box of causality between a cause as an independent variable and an outcome as an dependent variable by tracing mechanisms (Beach & Pedersen, 2013).

Figure 2 shows that there is an initial independent situation X and a dependent outcome Y. Entities, which can be persons, states, groups, and activities have to be conceptualized, resulting in the causal mechanism. In the case of explaining outcome process-tracing the aim is to produce a sufficient explanation of a particular outcome and the linkage between cause and outcome. It can confirm or disconfirm the minimal sufficiency of a mechanism in a case study but not for a generalization (Beach & Pedersen, 2013).

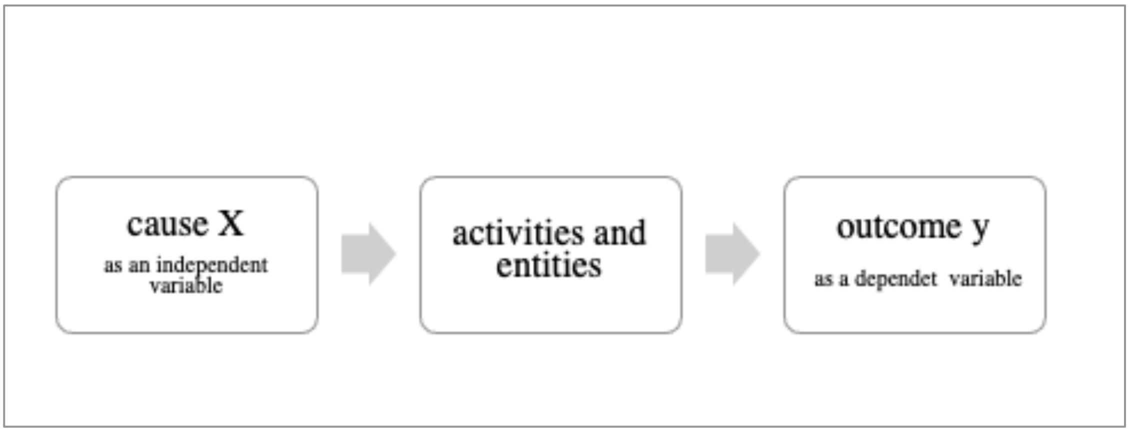

Figure 2: Causal mechanism, based on Beach & Pedersen, 2013, p. 35

In the next step the case-specific predictions about the observable events of each component of a causal mechanism should be checked by employing contextual knowledge about individual cases. In the best case, different scholarships are used to update and increases the validity of a theory. It has to be made sure that the chosen case studies for the analyzes prove within-case causal inference. This is done by using the Bayesian logic of inference (Beach & Pedersen, 2013).

The goal is to turn observations, raw empirical data prior to evaluation into evidence, with a certain level of inferential value, by evaluating it for substance, correctness, and probability.

This process allows the researcher to utilize them as confirmation to update the level of confidence in the presence of the hypothesized causal mechanism. The process needs to be transparent and open to scrutiny. Predicted evidence in the process-tracing method can be seen as “causal-process-tracing” or “process tracing observations” (Bennett, 2006).

The final evidence should fulfill two criteria: They should include a unique prediction, which means that there should not be an overlap with existing theories. The predictions should also be certain and unequivocal (Beach & Pedersen, 2013).

It is important to note that the goal is not to search for observations which are favoring the defined hypothesis but rather to collect empirical material that would predict whether the evidence is given. The risk of selection bias, which could occur as a consequence if non-random selection of observations could favor the defined hypothesis and has to be taken into account. It is crucial to gather diverse independent observations from multiple perspectives from the same kind or distinct sorts of evidence in order to obtain credible measurers and to avoid measurements leading to the same evidence. This process is referred to as triangulation, a mix of different observations from different viewpoints (Campbell et al., 2020).

In the next step, after the collection, it is crucial to assess the content of the observations using contextual knowledge and background information. The observations have to be interpreted within their historic, situational and communicational context, with regard to actors, intentions and interactions (Beach & Pedersen, 2013).

2.3 Neo-functionalist theory of the European integration

European integration theory is an area of methodical thought on the process of growing political cooperation in Europe, as well as the creation of shared political institutions and their outcomes. In the framework of this process, it also encompasses the theorization of shifting conceptions of identities and interests of social actors (Wiener et al., 2019). Neofunctionalism sees the transfer of state power to the EU as a way for transnationally organized élites and supranational bureaucrats to get over domestic opposition to the loss of national sovereignty required to open up national markets (Börzel & Risse, 2018).

The theory of neofunctionalism was formulated by Ernst Haas in the 1950/60s in the context of the establishment of the European Coal and Steal Community (ECSC) and the European Economic Community (EEC). The origin of the theory is based on the assumption that people solve problems by performing special functions, which require cooperation with other people. If the function is performed successfully, the cooperation can persist and, in the best case, become institutionalized. In the case of European integration, independent states and their supranationally motivated politicians cooperate with each other. A collaborative effort is motivated by their common realization that interdependence needs them to engage jointly in order to tackle some mutually acknowledged challenges. The central focus of the theory is the process of "spilling over" from one policy area to another and from a lower to a higher level of supranational authority. So, integration is seen as a process rather than an end result. The process is transformative and involves the expansion and establishment of regional institutions and the evolution of expectations, and actions of the participants involved (Wiener et al., 2019).

Differentiation between classical neofunctionalism and new, revised neofunctionalism

The classical neofunctionalism theory went through various phases of adaptation and criticism and was finally dismissed as obsolete by its founder Ernst Haas. The criticism comes mainly from the fact that it is a theory that has focused exclusively on European integration. Thus, it serves as a baseline for many other theories (Wiener et al., 2019).

The classical theory was not able to explain deficits outside the field of research. It underestimated the sense of sovereignty and nationalism as obstacles to the integration process. Moreover, its representatives rarely commented on the different national integration requirements. The role of the public was also underestimated for the most part (Wiener et al., 2019).

New neofunctionalism differs from early neofunctionalism in several aspects:

The two main research objects are dynamic long term relationships between crisis chains and integration and structural analysis of the results of a crisis (Nicoli, 2020). Integration is no longer seen as an automatic and solely dynamic process, but rather as a dialectic process that happens under particular conditions. As a result of both, driving and opposing forces, this implies as a product of both dynamics. More emphasis is placed on transnational exchanges and supranational institutes. It denies spillover's automaticity, refines the concept's functional and political components and conceptualizes various strategic reactions like spill-around and spill-backs (Wiener et al., 2019).

3 EGD, NGEU & neofunctionalism theory of the European integration

3.1 European Green Deal (EGD)

3.1.1 Aims

Although the EU was seen as a leader in climate change (Kilian & Elgström, 2010) by making great efforts over the years to adapt to the changes and mitigate its consequences by reducing greenhouse gas (GHG) emissions and increasing resilience, the EU is going a step further with the introduction of the EGD (Rivas et al, 2021).While previous decisions and agreements, such as the 2015 Paris Agreement, the Agenda 2030, the EU Emission Trading Scheme and the Covenant of Mayors (Bertoldi, 2018), later adapted to the Global Covenant of Mayors for Climate Action (Rivas et al., 2021) have already prepared the way for a sustainable and climate neutral Europe, by integrating UN Sustainable Development Goals into its work (European Commission, 2021f) the objectives have not been consistent enough (Dupont et al., 2020).

Under the EGD, more ambitious targets are formulated (European Commission, 2021g). The EU should become a fair and prosperous society with a modern, resource-efficient and competitive economy in which economic growth does not depend on resource use. Although the EU, until 2018 has already shown a positive development in terms of reducing GHG emissions while gross domestic product (GDP) was growing, these developments are not sufficient (European Commission, 2019e).
By introducing the first European climate law, there should be no more net GHG emissions and climate neutrality should be reached by 2050 (Krämer, 2020). While achieving these goals, the aim is to disconnect economic growth from resource use and make it independent of it (European Commission, 2020d). The focus is on the protection of Europe's natural capital and the well-being of its citizens. To facilitate the transition, a broad range of reinforcing policies is necessary to fulfill various purposes (Skjærseth, 2021).

Figure 3 shows that the goals and the associated areas of responsibility and activity were divided into eight categories (van Dijk et al., 2021). Five of them focus on sociotechnical systems which are responsible for the greatest carbon emission sources including energy, industry, buildings, mobility, and food. The other three areas represent ecological problems including climate, biodiversity, and pollution. Bringing together these areas of action, which until then had been isolated, represents the shift from a growth- to a sustainable macroeconomic orientation within the EU (Bloomfield & Steward, 2020).

Figure 3: Aims of the European Green Deal, European Commission 2019, p.4

The goals of the EGD are the following:

1) The climate goals for 2030 and 2050 specify that the EU should be climate-neutral by 2050 and that a 55% reduction in GHG emissions should be achieved by 2030 compared to the year 1990. To this end, the emissions trading system is to be revised and emissions trading extended to further sectors (Pietzcker, Osorio, & Rodrigues, 2021). An effective CO2 pricing should take place, which has the consequence that the consumption behavior changes, and a positive sustainable development is ensured. Energy taxation lines should be adjusted with a focus on energy efficiency (European Commission, 2021g). A revised climate law with a special focus on private and public investments, which offers nature-based solutions to climate problems, the exit from coal and the decarbonization of gas entered into power in July 2021 (European Commission, 2021f).

   In February 2021 the Commission announced an adapted and a more ambitious EU Adaption strategy building on the previously introduced Action Plan in line with the introduction of the EGD. The revised plan includes four main topics. A smarter adaption relying on more and better data, a faster adaption building on the climate change impacts that are being observed increasingly quick and strong. The adapted strategy focuses on creating and implementing solutions to help minimize climate-related risk, improve climate protection, and maintain fresh water supplies. A more systematic adaptation is urged. Climate resilience should be considered in all important policy domains, including macro-fiscal policy, adaption solutions based on the nature and environment and local adaption. And a more international action plan aiming towards climate resilience is demanded. This should be accomplished through the allocation of resources, the prioritization of action and increased efficacy, the up scaling of international funding, and enhanced global participation and adaption exchanges (European Commission, 2021c).

2) Another aim is to enable the supply of clean, affordable and secure energy (European Commission, 2020e). To this purpose, the European energy market is to be fully integrated, networked and digitalized (European Commission, 2019e).
3) The EU wants to mobilize the industry for a clean and circular economy. In doing so, the EU is facing the challenges of ecological and digital transformation. An action plan for a circulatory economy and the development of sustainable products has to be developed (European Commission, 2019e).
4) Energy- and resource-saving renovation is to be promoted (European Commission, 2019e). A renovation wave for public and private buildings should take place (Hainsch et al., 2022).
5) Zero-pollution targets are formulated. These include policies to prevent new and existing pollution. Pollution control from large industrial facilities will be reviewed and sustainability strategy for chemicals will be designed (European Commission, 2019e) so that the EU becomes a toxic free environment (van Dijk et al., 2021).
6) Ecosystems and biodiversity should be preserved and restored to protect the supply of food, drinking water and clean air (European Commission, 2019e). A biodiversity and a forestry strategy are formulated. In addition, a strategy for a bluer economy is defined to protect the oceans (European Commission, 2019e).
7) The "From farm to table"- Action Plan aims to provide a fair, healthy and environmentally friendly food system, sustainable food consumption and affordable healthy food for all EU citizens. Criteria of a global standard for sustainability are to be met for all the food products (European Commission, 2019e).

8) A rapid transition to sustainable and intelligent mobility is to be achieved. To this end, the multimodal transport is to be promoted and the transport system is to be made more efficient. Sustainable mobility services are to be created within the EU in order to expand the transport infrastructure. A price adjustment of transport services has to take place. The production and distribution of sustainable, productive fuels should also be developed (European Commission, 2019e). In this area rethinking within the society is needed to change the behavior and transportation-choice (Hainsch et al., 2022).

3.1.2 Realization

All strategies should be equitable and inclusive (Arsova et al.2021). The most vulnerable groups in particular should be the focus of all considerations and active public participation should be achieved (Dupont et al., 2020). All considerations should be guided by the pillars of social justice. The transition to a sustainable EU economy is leading to changes not only in the environment , but also in business models, quality requirements, relative prices in the economy and the governance (Krämer, 2020).
It is also important not to abandon citizens, but to involve them in the change process so that they are not disadvantaged (European Commission, 2019). Citizens should not be seen as an obstacle, but as part of the solution approach (Rivas et al., 2021). The EU will not be able to reach net-zero emissions without widespread popular commitment (Skjærseth, 2021). For example, retraining, employment opportunities in new industries and affordable, energy-efficient housing for citizens should be made possible. These considerations are summarized under the concept of the mechanism to a fair transition, the Just Transition Mechanism (JTM) (European Commission, 2020f).

Changes must be made in all sectors, and transparent information must always be used (European Commission, 2019e). New digital strategies should be developed as a basis for the realization of the above-mentioned goals (European Commission, 2019e). To encourage resource efficiency, technological development is required (Skjærseth, 2021).
The Sustainable Development Goals should be the main topic of policy making within the EU and a close cooperation among Member States is needed to achieve common goals. Coalitions and communities are required for that (Bloomfield & Steward, 2020). The Commission is to align macroeconomic coordination in such a way that goals for a development that puts sustainability and the welfare of citizens at the center of considerations can be achieved

(European Commission, 2019e). A mix of elements and synergies between technical advancement, policy effort, and social attitudes will drive the fulfillment of the EGD goals (Hainsch et al., 2022).

The achievement of the goals is to be realized through regulations and standards, investments and innovations, national reforms, dialogue with social partners and international cooperation (European Commission, 2019e). The EGD roadmap consists of 47 activities which comprise a combination of 'hard' legal and 'soft' legal acts, as well as specialized and general measures (Skjærseth, 2021). The EGD is not just concerned with the status of the European environment, it also supports the EU's commitment to the UN Sustainable Development Goals and the World Summit on Sustainable Development (van Dijk et al., 2021).
The EU should take a leading role in this process in order to mobilize other countries outside the EU and thus make sustainable environmental goals a global objective (European Commission, 2019e). In order to include other countries outside the EU, there must be unity within the EU; this will only be achieved if the Parliament, Commission and Council are in agreement and work together to achieve the common goals (Krämer, 2020).

All 'hard' initiatives that need legislative changes require agreement from the EU's 27 Member States and the European Parliament. The European Parliament has shown widespread support for the EGD, however Member States' opinions differ significantly. This causes a challenge in terms of implementation (Skjærseth, 2021).
The mobilization of research and the promotion of innovation, as well as the establishment of a suitable financial system to provide sustainable solutions, are at the core of all strategies. New innovative value chains are to be created. The EU-wide project "Horizon Europe" enables the mobilization of investments in cooperation with other EU programs and across sectors. Investment promotion is to take place through close cooperation with universities and research institutions, with a focus on the digital transformation (European Commission, 2020d).

The achievement of all the sustainable goals under EU-regulated measures should be carried out under the guiding principle "Do no harm". All implementations should be done in a fair and equal manner, without harm to any party. To this purpose, all legislation must be reviewed by the Commission (European Commission, 2019e).

An annual meeting will be organized by the Commission to update and evaluate the objectives and progress of the EGD (European Commission, 2020d).

3.1.2.1 European Green Deal Investment Plan

The European Green Deal Investment Plan (EGDIP) is also called Sustainable Europe Investment Plan (SEIP). This is an investment plan designed by the Commission, which should be implemented in order to achieve the objectives set out in the EGD in all the economic sectors (European Commission, 2020d). To this end, a total of 1 trillion euros is to be financed sustainably over the next decade (European Commission, 2020e). This is a particular challenge, as the investments cannot be financed by the EU budget alone. As it can be seen in figure 4, both the private and the public sector and the EU Member States must cooperate and participate in achieving these goals. In particular, the private sector must be mobilized to invest in green projects (European Commission, 2020a.). For this purpose, it should be made easier for the private and public sector to invest in sustainable goals. This should be made possible by simplifying the process of identifying, structuring and implementing sustainable projects (Krämer, 2020).

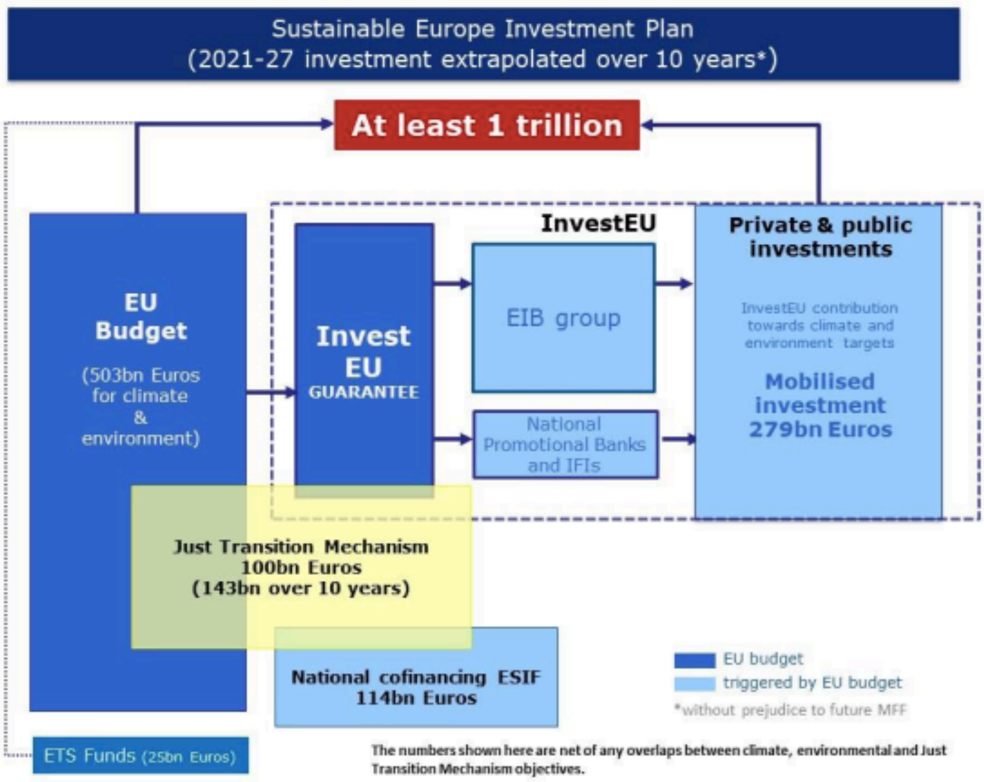

Figure 4: EGD Investment Plan, European Commission (2020), p. 6

The idea is to provide special purpose financing to support sustainable investments with the aim of supporting green projects. For this purpose, specific green projects are developed and presented within the framework of the EGD. The private sector will be particularly involved by developing an investment strategy. It will be made easier for companies and private investors to invest in green projects, as more projects will be created and their credibility in terms of sustainability will be openly communicated and verified. This will be made possible mainly through certification procedures, which will be consolidated as standards within the framework of the EGD. For this purpose, the Council and the European Parliament adopt a new taxonomy for the classification of sustainable activities which is to apply uniformly throughout the EU (European Commission, 2019e).

The EU, as an independent actor, is also expected to contribute part of the funding. 25% of the expenditures within the framework of all EU programs are to be contributed to the realization of the EGD goals. In addition, the EU is to raise revenue through its own resources and through auctions within the framework of the EU Emissions trading program. An agreement of the existing equity requirements for green assets in relation to environmental risks is also to be evaluated (European Commission, 2019e).

Projects to be financed and supported by EGD are those that contribute to the achievement of agreed climate targets. These can be large projects, such as the installation of charging stations for electric bicycles and efficient heating technologies in entire cities, or smaller projects, such as the installation of solar energy in a family home. Through the JTM, projects such as new jobs for people who have lost their old jobs in the renewal of the deal will be secured by offering retraining and assistance, but also affordable energy for all should be secured (European Commission, 2020e).

There are three funding approaches under the EGDIP (Krämer, 2020):

1) The EU budget is expected to mobilize up to one trillion euros for sustainable investments. Incentives are to be created for private investors and a fair and equitable transition is to take place. 25% of the EU budget is to be used for climate-related purposes. The Commission urges the Parliament and the Council to follow and maintain these plans. On the revenue side, the EU should support the EGD through its own resources by auctioning allowances in the context of the EU Emissions Trading Framework (European Commission, 2020d).
2) Suitable framework conditions for private investors and the public sector are to be created (European Commission, 2020d). A monitoring and reporting system within

the EU is intended to ensure that all projects under the EGD are actually sustainable and pursue the defined goals. There should also be an annual meeting between all shareholders and the Commission, at which all progress is reported.

The EU-wide taxonomy is to be used as a further measure in the assessment of sustainable projects. This should give private investors an insight into the sustainability development of the various projects and set a standard classification for sustainable environmental activities (European Commission, 2020e). The EU Taxonomy under the EGD was established in March 2018 and in July 2021 the Green Bond Standard was accepted under the EGD (European Commission, 2021g).

The taxonomy is intended to serve as a classification tool, which on the one hand should prevent greenwashing and on the other hand should be used to inform investors about sustainable activities, makes it easier for investors to decide in favor of sustainable investments and to be able to evaluate them (Krämer, 2020).

The European Green Bond Standard (EUGBS) should establish a standard for how businesses and governments may utilize green bonds to raise funds on capital markets to fund such large-scale expenditures while achieving demanding sustainability standards and safeguarding investors (European Commission, 2020b).

Part of this system is the Sustainable Finance Action Plan, to which Taxonomy Regulation, Climate Benchmark Regulation and the Sustainable Finance Disclosure Regulation belong. Other measures to move the financial sector further towards a sustainable market include the EU Taxonomy Climate Delegated Act, a tool to support companies and investors in making long-term investment decisions and the New Corporate Sustainability Reporting Directive, which aims to improve non-financial reporting. All of them ensure that firms provide shareholders with trustworthy and comparable sustainability data (Krämer, 2020).

On the one hand, private investors benefit from these measures, as they are enabled to invest in sustainable projects, and on the other hand, companies gain new investment opportunities through the capital market and the global financial sector (European Commission, 2021b).

3) In addition, the Commission has the task of classifying guidelines on disclosures of a non-financial nature. This is to guarantee that companies offer transparency with regard to environmental data and provide investors with an overview of the company's sustainability priorities. It should also be noted that sustainability is to be more strongly integrated into the corporate governance framework. In this way, companies

should direct the focus of their own activities toward long-term, sustainable goals (European Commission, 2019e).

3.1.2.2 Just Transition Mechanism (JTM)

Restructuring related to the sustainable change of the EGD results in some Member States and citizens being negatively affected (Dupont et al., 2020). Socio-economic difficulties caused by fundamental restructuring of the economy, structural changes in business models and new skill requirements are causing citizens to lose their jobs, especially in regions dependent on fossil fuel and GHG intensive work stronger than in other regions (Hainsch et al., 2022; Krämer, 2020).

While all Member States receive funding assistance, it is important to guarantee that no one is left behind (European Commission, 2020d). To guarantee this, the JTM will raise at least €100 billion from the EU budget, Member States' co-financing, and payments from InvestEU and the European Investment Bank (EIB) 2021 and 2027 (European Commission, 2020e). The focus will be on regions and sectors, but mostly on the people who are strongest affected by the changes (Arsova et al., 2021).

The JTM consists of three components:

1) <u>Just Transition Fund (JTF)</u>

This component represents the financial assistance of the mechanism and includes an allocation of 7.5 billion Euros (Commission, 2020). This funding is part of the EU's cohesion policy, which is intended to minimize regional disparities within the EU and promote structural change (Arsova et al., 2021). Social and economic costs of the transition to climate neutrality are to be compensated. The fund is managed in cooperation between national, regional and local authorities. All Member States are to receive support. The allocation of funds is dependent on decarbonization challenges of GHG intensive regions, social challenges due to job losses and the need for retraining. In order to ensure a fair transition, all Member States must be in close contact with the Commission in order to assess the most affected areas and develop area-specific plans (European Commission, 2020d).

2) <u>Transition scheme under the framework of InvestEU</u>

Up to 45 billion euros are to be invested by the InvestEU program. The main aim is to mobilize private investors to invest in projects in impacted regions (Commission, 2020). Here, previous economic activities are to be substituted by new industries and projects. Investments are made in a wide range of projects that meet investment eligibility criteria of InvestEU (European Commission, 2020d).

3) <u>The European Investment Bank has a public sector credit line guaranteed by the EU budget.</u>

Public funding is made available through the European Investment Bank, which provides EU institutions and bodies with measures to support the transition to climate neutrality (Commission, 2020).

In addition to financial support, an EU-wide platform will be created to provide technical support and a multilateral exchange of experience (Commission, 2020). Technical support is also to be provided by the platform. This will help to decide which projects should receive support (European Commission, 2020d).

Specifically, the support can take the following forms:

Citizens in particularly negatively affected regions are to be provided with retraining methods that will generate new job opportunities. New jobs are also to be made available. Investments will be made to improve energy-efficient housing and address energy poverty (European Commission, 2020f).

Companies should receive help within the transition to low carbon technologies. Providing attractive investment opportunities for investors, easier access to credits , support for start-ups and investment in research and development are forms of help at the corporate level (European Commission, 2020f).

The help for Member States should be in form of new, adapted transport options, technical support, investment in renewable energy resources, the advancement of the digitalization process and the expansion of energy infrastructure (European Commission, 2020f).

3.1.2.3 Next Generation EU (NGEU)

With a combined weight of over €1.8 trillion, EU leaders accepted the NGEU recovery package and the Multiannual Financial Framework (MMF) for 2021–2027 in July 2020. It was resolved to devote at least 30% of the budget to EGD-related spending, although actual spending would be determined by how well the Member States' Recovery and Resilience Plans are implemented (Skjærseth, 2021).

The Recovery and Resilience Facility (RRF), which will be dispersed as grants (€312.5 billion) and loans (€360 billion), will be made up of €672.5 billion of the €750 billion overall plan, according to the Council decisions. The remaining funds will be used to support flexible cohesion policy initiatives in response to the COVID-19 outbreak and the green transition to a climate-neutral economy (Alcidi & Gros, 2020).

The instrument is financed by bonds traded on the capital market and by the RRF. The Commission has the authority to trade bonds on the capital market and to lend money. The NGEU raises funds by temporarily raising the own resources limit to 2.00 percent of the EU GDP. This ensures that the EU as a borrower achieves a strong credit rating (Commission, 2021). It is specified that each year at least 37% of the RRF budget should be used for climate-related investments. This planned expenditure may be exceeded and must be reported to the Commission (European Commission, 2021e).

Expenditures under the NGEU fall into two categories:

1) RRF Spending under the National Recovery and Resilience Plan (RRP)

90% of RRF spending goes to RRP expenditures (Commission, 2021). To ensure that each Member State uses 37% of the RRF budget for climate-relevant investments, RRF plans must be submitted to the Commission each year and can exceed the planned minimum financing target (European Commission, 2021e).

The proposed projects and investments are divided into different categories in relation to different objectives. The cost of implementation and the likelihood of implementation of each project are calculated and estimated in advance by the Member States and verified by the Commission. The standards for European Green Bonds are in line with the Green Bond Principles established by the International Capital Market Association (ICMA). The taxonomy was accepted in July 2021 (Commission, 2021). Part of these standards obligates the Commission to appoint external, independent auditors (European Commission, 2021e). The estimation is based on eleven different criteria, which are structured in four different dimensions. These include relevance, efficiency, effectiveness, and coherence. The relevance dimension summarizes various aspects. The aim is to assess whether the proposed project contributes to the green transition and the digitalization process, whether it strengthens economic growth and whether it includes the "do no significant harm" criterion. The principle states that new reforms and project activities may not cause harm to other participants or the environment (European Commission, 2021e). This implies they will be encouraging one or more environmental goals while not causing considerable harm to another, allowing them to be classified as "green" (European Commission, 2021).

Plausibility and accountability for estimated costs and the introduction of an appropriate control system are further necessary standardized criteria to be met. The EU climate coefficient methodology, environmental coefficients and the EU taxonomy define whether a projecr is climate and environmental relevant. 100%, 40% or 0% climate and environmental relevance can be attributed to projects. Projects that pursue both environmental and climate goals can receive a 100% positive rating. Projects that pursue a climate goal, but no environmental goals achieve only a 40% rating. Based on this assessment, funding is allocated.

The evaluation takes place in close cooperation with the respective Member State. (European Commission, 2021g).

After the Commission has evaluated the plan, it submits it to the Council, which gives its final approval (European Commission, 2021e). The plan is approved only if all criteria are met. The Commission also provides feedback to the Member State and allows the plan to be readjusted to the criteria (European Commission, 2021g). Before entering into force, the Council and Parliament must also approve the conditions (European Commission, 2021e).

In order to provide future payments and not just one-time initial funding, certain milestones and goals must be met within specific time periods. Partial payments are also possible if the milestones are only fulfilled in part. In the course of the process, after the first funds have already been invested, a project can lose its eligibility and no longer be evaluated positively. A hearing in front of the European Court of Auditors (ECA), the Parliament and the Council is intended to ensure that the expenditure is justified and has been properly evaluated by the Commission. The concept is based on a reporting system that provides investors with certainty about the investments (European Commission, 2021g).

Allocation reporting:

The Member States are obligated to inform the Commission about the allocation of the subsidies. Milestones and targets are reported twice a year. RRP payment requests can be submitted and updated by Member States twice a year. The Commission will be supported in this process by independent and external consultants (European Commission, 2021).

Impact reporting:

The assessment of the impact on the green transition is carried out by a separate group within the Commission. Reporting and screening are based on the work of independent consultants, taxonomy delegated regulations, consistency of target parts, impact indicators, consistency with national climate targets and common indicators. The process depends on the trustworthiness of the data and information provided by the Member States to the Commission (Krämer, 2020). The reporting is based on collected reports of all projects of a Member State. No individual reports are evaluated (European Commission, 2021).

2) EU budget spending

NGEU is a temporary development instrument with a volume of just under 800 billion euros. While one half will be made available for RRP, the other half will be invested in loans and green bonds, the so-called NGEU bonds (European Commission, 2021).

3.1.2.4 NGEU Bond Framework

The Commission intends to utilize the revenues from the sale of NGEU green bonds to raise up to 30% of the money allocated to NGEU and to fund green programs. The EU will become the world's largest green bond issuer with the NGEU green bond initiative, which will be worth up to €250 billion. The Commission thus serves as a role model, which comes with a great deal of responsibility (Commission, 2021). The NGEU bond framework is intended to reflect the Commission's commitment to the use of sustainable financing in the process of achieving the goals of the EGD (European Commission, 2021f). By doing this the EU intends to achieve the following goals:

It should be easier for investors to invest in ESG projects and by this to address a higher number of investors (European Commission, 2021g).

In addition to green bonds, social bonds will also be classified in this category. Half of all ESG bonds issued worldwide belong to the EU and its associated institutions. The designation is intended to signal to investors that their investment supports projects with a significant environmental and/or social impact and gives them the chance to diversify their portfolios and to invest in riskier assets. The concept is to support environmental change on favorable terms and to promote the market for investments in green bonds (European Commission, 2021h) and act as a role model for other countries outside the EU (Bloomfield & Steward, 2020).

The system is composed on four major elements (European Commission, 2021g):

1) Use of proceeds

   Proceeds from the NGEU green bonds will be used to support climate-related expenditures of the RRF. These are divided into nine categories (European Commission, 2021e).

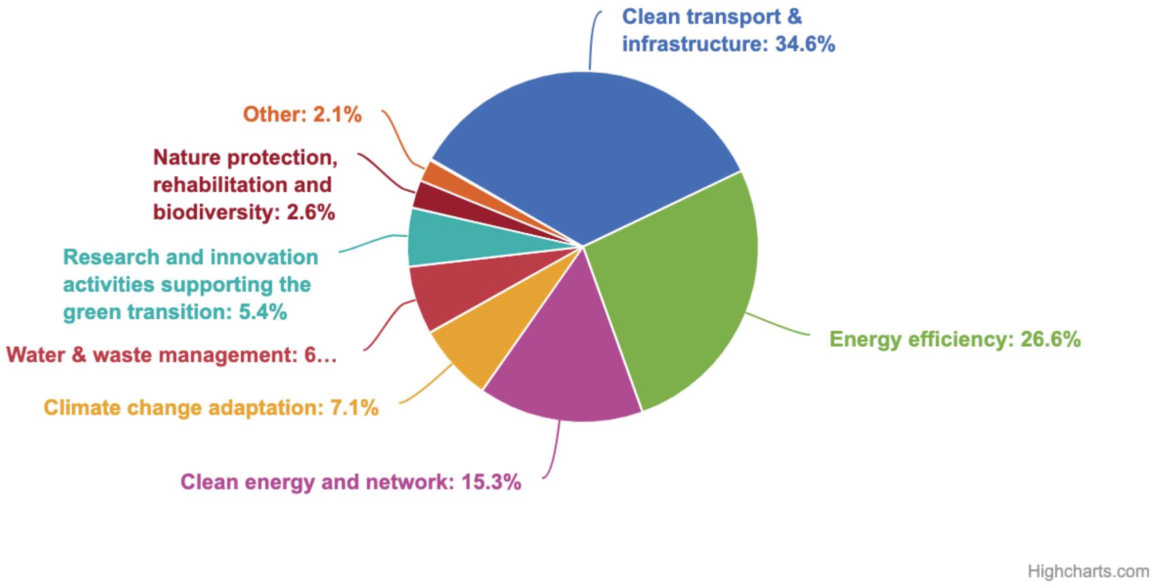

Figure 5: NGEU green bonds eligible amount per expenditure category, European Commission (2022)

Figure 5 shows the distribution of NGEU green bonds per expenditure category, whereby it can be seen that the highest amount is dedicated to clean transport and infrastructure, energy efficiency and clean energy and network (European Commission, 2022b).

2) Process for expenditure evaluation and selection

The investments will be determined using the RRP 37 % climate expenditure rule (European Commission, 2021f).

3) Management of proceeds by the Commission to identify the relevant spending (European Commission, 2021g).

4) Reporting

Allocation reporting and impact reporting will be used to analyze the spending (European Commission, 2021g).

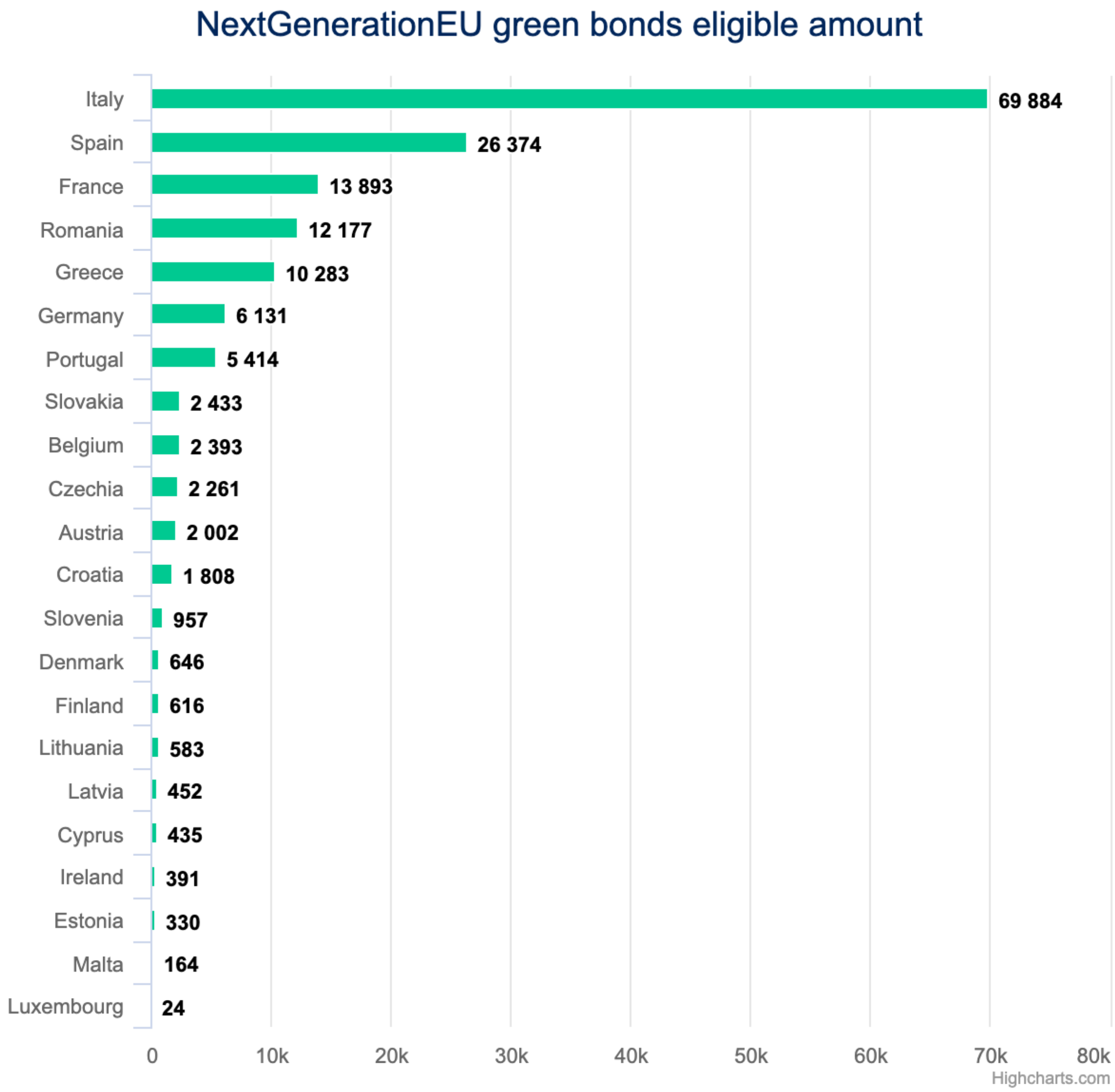

Figure 6: NGEU green bonds eligible amount per Member State, European Commission (2022)

Figure 6 shows the eligible of NGEU green bonds per Member State updated in June 2022 (European Commission, 2022b). Italy, Spain and France are at the top of the list.

4 Concept analysis on sustainable finance and the EU

4.1 The use of sustainable finance in the EU in the time between 2009 and today

The financial sector is at the center of the debate on sustainable change in the European Union (EU). It mobilizes capital that is necessary to achieve the sustainable goals that have been set. The first reflections on sustainable financing in the EU were triggered by the 2007/8 financial crisis (Ahlström, 2019). Since then, the concept has undergone a transformation from a niche product in the financial sector to one of the most important components of the market. This development has been favored by crucial developments in sustainability policy within the EU (Ahlström & Monciardini, 2021).

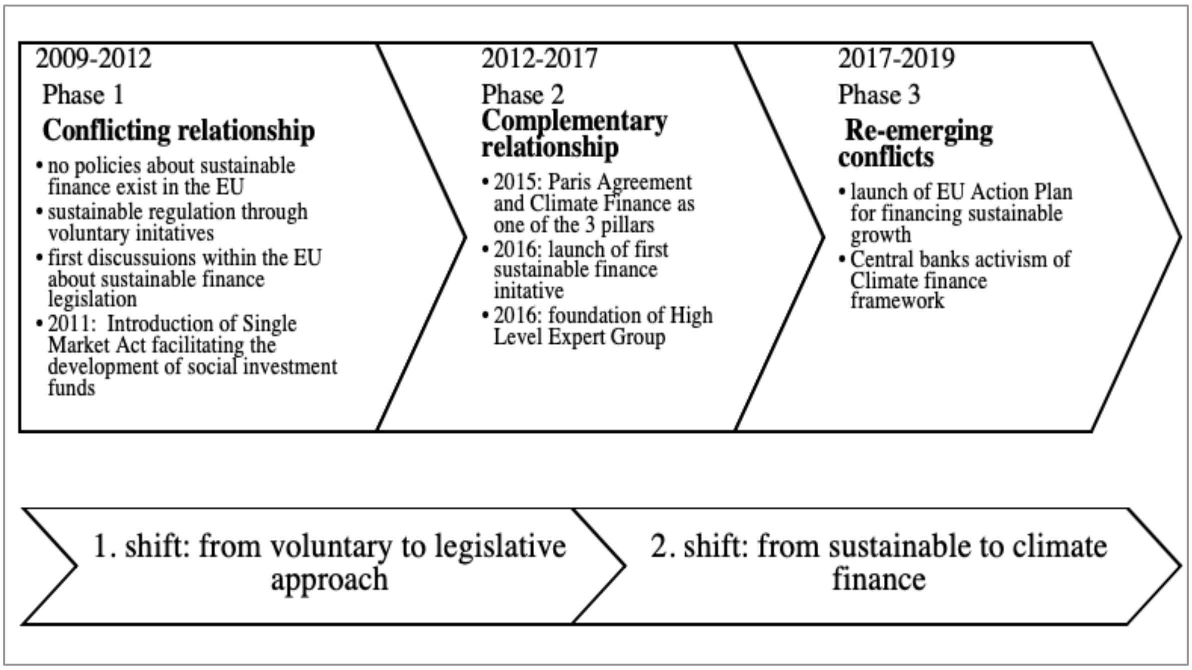

Figure 7: Sustainable finance development, based on Ahlström & Monciardini 2021,p.8-13

When examining the development of sustainable financing policy in the EU, three phases and two turning points in between can be identified in figure 7 which all are connected to the consequences of the Euro-crisis:

1) Phase: 2009-2012: Conflicting relationship: Sustainable finance framed as the "antidote" to financialization (Ahlström & Monciardini, 2021).

In 2011, the first discussions took place within the EU on the introduction of sustainable financing measures (Ahlström & Monciardini, 2021).

In the first period after the financial crisis, which started in the USA in 2007, and was present in EU from 2009/10 starting in Greece (Fabbrini, 2013), the EU did not yet have sustainability financing regulators. The crisis was largely addressed through fiscal consolidation and strict debt policy (Matthijs, 2016). What began as a sovereign debt crisis in Greece quickly spread to the financial system, resulting in dual crises. The crises in other euro area nations began in the banking institutions and spread to the sovereign debt market (Banerjee et al., 2021).

At that time, profit maximization was considered the only goal of importance. In this time financial logic was still prevalent in society. In 2008, only 3.4% of the global bond industry was represented by Socially Responsible Investment (SRI) bonds (Ahlström & Monciardini, 2021).

Thus, the sustainable financing policy had little opportunity to move into the foreground. Resistance to new forms of financing and regulation was dominant. At that time, the idea that such new measures of sustainable financing would do more harm than good to the financial sector was still dominant (Ahlström & Monciardini, 2021).

The majority assumed that no added value could be achieved through sustainable and social criteria. This was mainly due to insufficient information and skepticism. Sustainable finance was considered a niche market and at that time was mainly driven by the SRI community (Ahlström & Monciardini, 2021).

The SRI community was represented within the EU by the Association of European Sustainable Investment Forums (SIF's) (EUROSIF). They examined the regulations and laws and developed a fundamentally hybrid understanding of sustainable finance (Ahlström & Monciardini, 2021).

The financial crisis of 2007/8 and the subsequent euro crisis forced EU policy makers to reflect on how the financial sector should continue to be regulated. The spread of the euro crisis threatened the sustainability of the European single currency (Banerjee et al., 2021). Confidence in the sector was lost and it became clear that regulation was needed to monitor and control the market and to prevent short termism, poor risk management and lack of accountability in the future. The consequences of the financial crisis weakened the prevalence of financial logic within society (Ahlström & Monciardini, 2021), but also demanded a dramatic rethinking of the EU intergovernmental structure that had been built over the previous two decades (Fabbrini, 2013).

The financial crisis underlined the need for improved financial sector regulation and oversight. It is for this reason that the European Commission has proposed roughly 30 sets of regulations since 2010 in order to guarantee that all financial players, products, and markets are properly regulated and monitored. These regulations provide the foundation for a fully functioning Single Market for financial services in all of the EU's 28 Member States (European Commission, 2014). Banks should be better regulated and controlled as a result of these new rules, becoming stronger, more robust, and operating in the interest of the real economy as a whole. The structure also ensures that taxpayers are not liable for bank failures. It will also support European financial stability, which is necessary for a sustainable recovery (European Commission, 2014).

In reaction to the crisis, the euro area banking union was established. There are two key components that make up the financial union. The Single Supervisory Mechanism, which gives the ECB a key role in monitoring banks in the euro region, is the first pillar. The Single Resolution Mechanism is the second pillar, and its principal goal is to guarantee that failing banks are resolved efficiently (Banerjee et al., 2021). In addition to that the European Stability Mechanism (ESM) was established (Fabbrini, 2013). It is a multilateral financial agency established by euro area Member States to assist euro area nations in financial difficulties and offers emergency funding in exchange for governments' commitment to reform. It can lend a total of €700 billion alongside its predecessor, the European Financial Stability Facility (EFSF) (European Stability Mechanism, 2020).

During the European sovereign debt crisis several European nations suffered from the collapse of financial institutions, huge government debt, and fast growing bond yield spreads in government securities (Alessi & McBride, 2015).
This allowed the sustainable financing strategy to gain strength and reputation. The SRI community used the weakness of the prevalence of financial logic to highlight the benefits of sustainable financing strategies. Sustainable financing strategies, in the form of SRI bonds were described as the better alternative and antipole to the trend of financialization with all its disadvantages. It was explained that SRI bonds are considered the opposite of the excessive actions of conventional financial methods. Moreover, they were described as a more stable alternatives, which are not weakened by crises and were more resilient compared to conventional bonds. These developments led to a conflict between mainstream, conventional financial players and the SRI community (Ahlström & Monciardini, 2021).

I) Turning point: Change from voluntary to legislative approach of sustainable finance (Ahlström & Monciardini, 2021).

There was a shift away from continued growth toward a stable and sustainable financial system. Newly defined goals should be sustainable in the long term. This new way of thinking should help prevent further crises and also shift the focus away from maximizing profits exclusively (Fabbrini, 2013). The idea of slow, patient, long-term, social and sustainable financing is becoming more present. Especially supporters of conventional financing methods, who have been disappointed by the previous financing structure and have lost confidence in the system, are increasingly supporting the new concept. The EU wants to introduce legislative regulations that obligate institutional investors to adopt ESG engagement policy (Ahlström & Monciardini, 2021). Michael Barnier, EU Commissioner for internal markets and services recognizes the importance of sustainable financing and places it at the center of his work. Instead of a lack of responsibility, transparency, accountability, and ethical behavior should be the focus. Thus, he raises the debate with the conventional financial sector (Kastner, 2017, p.78).

In October 2011, the Commission, announces that regulation will be developed to require all investors to disclose their responsible investing criteria (European Commission, 2011).

2) Phase: 2012-2017: Complementary relationship: Finance as a means for social transformation (Ahlström & Monciardini, 2021).

The weakened prevalence of the financial logic within society due to the financial crisis allows the sustainable finance strategy to gain strength and reputation. There is an expansion of organizations specializing in SRI bonds. Both large financial companies, which until then have distanced themselves from the new concept, and small CSOs contribute to the development of sustainable finance within the EU. The cooperation and complementary relationship of these opposing actors has positively shaped the development of EU sustainability reforms (Ahlström & Monciardini, 2021). Central bankers joined this new movement. This allowed new financial strategies to be included in the sustainable movement (Campiglio et al., 2018).

This new development suggests that sustainable finance is a hybrid form, which is also familiar to conventional financial players. CSOs and large financial firms are looking at sustainable finance from different angles. The hybridity and ambiguity inherent in sustainable finance seems to be both a source of strength and weakness (Pache & Santos, 2010).

Strengths can arise from this partnership in the form of new innovative ideas (Jay, 2013). The message of this complementary relationship is that financial instruments can be used as a powerful tool to achieve positive social and sustainable transformation. It is also clear that new jobs are being created and helped to recover from financial crisis and its results (Ahlström & Monciardini, 2021).

In 2016, the High Level Expert Group (HLEG) was appointed by the Commission. This is an association of various stakeholders including large financial companies, organized CSOs, academia and European and international institutes that support sustainable financing reforms (European Commission, 2016).

In May 2018, the Action Plan for Financing Sustainable Growth was presented by the Commission under the recommendation of the High-level Expert Group on Sustainable Finance. The action plan included a comprehensive approach for strengthening the link between finance and sustainability. It consists of ten main actions that may be classified into three groups (European Commission, 2022e):

- Proposal for regulation on the establishment of an EU classification system = taxonomy to make sustainable investment easier and more accessible (European Commission, 2021f), including the creation of EU Green Bond standards. The focus should be on the promotion of investments sustainable initiatives, inclusion of sustainability considerations in the advisory process for financial instruments and benchmarks for sustainability development (European Commission, 2022e).
- The plan also includes a proposal for regulation on improving disclosure requirements on how institutional investors integrate ESG factors in their risk process (European Commission, 2018a). Better integrating sustainability in ratings and market research, clarifying asset managers' and institutional investors' responsibilities regarding sustainability, and introducing a 'green supporting factor' in EU prudential rules for banks and insurance companies are all important steps in this direction (European Commission, 2022e).
- And in addition a proposal to amend the benchmark regulation, creating a new category of benchmarks comprising low-carbon and positive carbon impact benchmarks (European Commission, 2018a) was introduced. It is critical to improve sustainability disclosure and accounting rule-making, as well as develop sustainable corporate

governance and reduce short-termism in capital markets (European Commission, 2022e).

In July 2018, the Technical Expert Group on Sustainable Finance (TEG) was established. Its purpose is to help achieve the goals set out in the Action Plan for Financing Sustainable Growth and to implement them properly with appropriate standards. TEG is responsible for the development of the EU Taxonomy, EUGBS, the methodology for EU climate benchmarks and disclosures for benchmarks, as well as guidance on improving corporate disclosure of climate-related information (European Commission, 2019d).

II) Turning point: From Sustainability to Climate Finance (Ahlström & Monciardini, 2021).

Now that the market has largely calmed from the financial crisis and regained a basis of confidence and legitimacy, new priorities have been set. More instrumental approaches were needed which also changed the transformative original target. The focus was set on climate-related goals (Ahlström & Monciardini, 2021). The Paris Climate Agreement states that sustainable finance should be used for low-carbon and climate-resilient development. Sustainable finance becomes green finance (United Nations, 2015a).

In order to achieve the primarily environmental goals set out in the Paris Agreement, international cooperation is needed, also outside the borders of the EU. Financial markets act together globally. In order to exploit the full potential of the markets with regard to private investors in the course of sustainable financing, countries should cooperate together in an integrated market. To this end, the International Platform on Sustainable Finance (IPSF) was established in October 2018. This is a multilateral forum that aims to strengthen the flow of information and communication within financial markets on a global level (European Commission, 2021d).

3) Phase: Re-emerging conflicts: Two alternative ideas of sustainable finance (Ahlström & Monciardini, 2021).

Two different directions emerged. One saw sustainability as an opportunity for finance, while the other saw finance as a means of social transformation. CSOs want radical reorientation of the financial sector. Financial players want new reforms and change, but without major changes in finance (Ahlström & Monciardini, 2021).

Rather than making finance more sustainable, EU sustainable financing has driven the financialization of sustainability (Bracking, 2019). As the predominance of financial logic began to grow again, skepticism about sustainable financing and the reforms formulated in the course of it also increased. Doubts about the EU action plan were raised. Sustainable financing was minimized to the area of green financing. Areas such as human rights and social sustainable integration were completely neglected (Cullen & Nilsen, 2020).

4.2 The concept of sustainable finance in times of crisis

After explaining in the first section how sustainable financing was framed in the EU in the period between 2009 and 2019 and what status it had in different phases resulting in the consequences of the Euro-crisis and the following sovereign debt crisis, it is necessary in the next step to analyze whether there are complementary or counteracting relationships in terms of the given circumstances with special regard to crises within the EU in the timeframe between 2010 and 2019, in which some other crisis hit the EU and some Member States refused to accept further integration in sustainable areas, such as environmental issues (Burns, Eckersley, & Tobin, 2020). By doing this it is possible to analyze the concept of sustainable finance in different context.

For this reason, two additional crises, the Migration- and Schengen-crisis and the COVID-19-crisis, listened in figure 8, that have taken place in the EU since 2009 will be presented and it will be examined what influence they have had on the development of sustainable financing, with special respect to environmental and social policies as an important part of the concept (Dupont et al., 2020). Crises are defined as "open moments" that question existing paradigms, policies, politics, institutional roles, and laws, affecting both rulers and ruled (Laffan, 2016). It's worth considering if the crisis might serve as a "critical juncture" for EU sustainable financing concept by weakening or strengthening/transforming EU sustainable financing. A critical juncture can be an event or a decision taken, especially in times of crisis, which has a causal effect and an important turning point in the development of policy or institutions and can influence the development away from decisions already taken (Dupont et al., 2020).

Figure 8: Crisis within the EU, own representation, 2022

4.1.1 Migration-crisis and Schengen-crisis

Civil war, protracted warfare, and worsening domestic security, particularly in the Middle East, Africa, and Southern Asia, have prompted significant population migration in recent years. In 2015, the number of migrants who entered the European Union reached a peak. Around 1.2 million migrants entered the EU's territory and applied for asylum (Slominski & Trauner, 2018). This was the largest number of refugees coming to the EU since World War II (Niemann & Zaun, 2018). By summer 2015, the refugee and migrant crisis had put the Schengen system, a key European institution, at risk (Laffan, 2016). Contrary to the view that the increase in asylum applications was the underlying cause of the subsequent crisis in the EU, it was only a trigger. In reality, the increase in applications only exposed the ongoing dysfunctionalities and shortcomings of the Common European Asylum System (CEAS) (Niemann & Zaun, 2018).

In 2015, about a million refugees attempted to cross the Mediterranean into Europe, with over 3000 dying in the effort. Many refugees, according to humanitarian organizations, lack access to even basic primary health care, such as maternity and child health services, and those with noncommunicable illnesses lack the continuity of treatment that is essential to their health. Concerns have also been expressed regarding the possibility of sexual and gender-based violence, as well as the separation of children and young people from their families and their lack of safety. Up to 10,000 unaccompanied child migrants have disappeared in Europe as a result of the present situation (Roberts et al., 2016).

With a growing sense of urgency, the public and political attitudes in the EU started changing toward limiting the number of migrants and returning them to their home countries (Niemann & Zaun, 2018) and thereby not following the Dublin regulation, which states that border nations are liable for every asylum-seeker who enters the Schengen region via their jurisdiction (Slominski & Trauner, 2018). As a consequence to this, border controls were reintroduced. This migration wave brought structural flaws in EU asylum cooperation, triggering a crisis to light (Niemann & Zaun, 2018).

Because the Southern European nations are primarily responsible for external border control and evaluating asylum proceedings, the CEAS has demonstrated that it is not a burden-sharing system. It exposed a conflict in the European Union's (EU) migration policy between the Dublin Regulations' external border enforcement and the Schengen Agreement's internal free borders (Bauböck, 2018).

The EU's persistent inability to respond effectively and in a coordinated manner to the increased arrival of migrants has been a defining aspect of the Schengen crisis. The Schengen crisis led to a questioning of borders in the course of European integration and the myth of "Europe without borders” and the concept of free movement within the EU (Wassenberg, 2020).

Integration deficits, severe intergovernmental conflicts over the distribution of the burden of the crisis and a strong domestic political orientation were the result (Niemann & Zaun, 2018). For this reason, the migration crisis within the EU is also seen as a integration crisis (Bauböck, 2018).

The migration crisis has shown that within the EU there is no unity and no enforcement of asylum standards, the Dublin principle and open internal borders under the Schengen Agreement, which is necessary to work together on crisis (Bauböck, 2018).

4.1.1.1 Migration- and Schengen- crisis and sustainable finance

The EU and its Member States must develop a shared plan based on responsibility, solidarity, and trust to overcome this challenge. In such a crisis, solidarity is expected from citizens, but also from politicians. This also includes financial solidarity (Wallaschek, 2020).

Part of the sustainable finance concept includes social developments that are to be financed in order to promote projects in a sustainable, social and fair manner in a long term (European Commission, 2018a; Smith & Besharov, 2019). By looking closer at the social part of sustainable finance it can be analyzed that the lack of unity in the approach of the Member States to the refugee and migration crisis has led to a lack of unity in the development of sustainable financing instruments. In order to develop suitable sustainable measures that will protect against further crises in the long term, both cooperation and an unified goal of the Member States, but also of the EU institutions, are necessary. The refugee crises has proven that the EU has not made progress in developing further measures in the context of this situation first (Bauböck, 2018).

In order to deal with the enormous number of migrants, the EU modified its yearly budget multiple times in response to the situation. More than EUR 10 billion was raised in 2015 and 2016, more than twice as much as had been anticipated, to address migration concerns both inside and beyond the EU (Slominski & Trauner, 2018). Since 2015, the EU has raised financing available for EU Agencies and the Asylum, Migration, and Internal Security budgets (AMIF) by about 75%. The cost of supporting refugees should be shared fairly among all Member States, depending on capacities and capabilities (Bauböck, 2018).

It can be assumed that in the context of the present crisis, in the absence of EU integration and unity (Bauböck, 2018), priorities have evolved in the course of the crisis development away from sustainable goals to the solution of current integration problems, as it was the case in the previous EU history (Gravey & Jordan, 2020).
After the EU was unable to develop sustainable funding instruments to address refugee issues at the beginning of the refugee crisis due to a lack of unity and solidarity, it was possible from the starting of 2017 to also include sustainable considerations in the joint decision-making of the EU (Gravey & Jordan, 2020).

After Europe moved away from crisis management, it was necessary to get a settlement on a long-term EU migration and asylum strategy that would be stable, sustainable, and future-proof since it was recognized that the refugee problem would also continue to affect the EU in the long term. Climate change, security, and demographics in the EU and its neighboring countries all point to migration continuing to be a concern for decades. It was also recognized that the problem could not be solved either internally alone or externally alone, but with the collaboration of these two dimensions. The need to find a more effective and solidarity-based way to solve the refugee crisis in the long term and avoid further outbreaks was recognized and thereby connected to sustainable thoughts (Juncker, 2018).

By considering new and sustainable ways to address the refugee problem within the EU the Commission decided to adapt the Dublin regulation to new realties, and to ensure safe escape, but also return procedures. For this it is also crucial that the European Border and Coast Guard Agency should be able to guarantee more efficient boarder management (Juncker, 2018).
One of the most important aspects of the new agenda is a closer and strengthened cooperation with the third world countries. To this end, the EU-Turkey Statement has established closer cooperation with the UN and third world partners. Funds have been established in the EU to solve and support the problems at present in the refugee situation, including help to the countries from which the refugees have fled. This focuses on improving relationships with foreign nations, maintaining legal access to Europe, and ensuring appropriate finance in the future (Juncker, 2018). This should improve the conditions in the home countries and prevent further waves of refugees (Niemann & Zaun, 2018):

- The EU Regional Trust Fund for Syria intends to aid 1.5 million Syrian refugees by providing basic needs such health care, education, child protection, water infrastructure, and enhanced economic possibilities. By December 2016, 22 Member States, Turkey, and the EU budget have contributed 767 million Euro to related programs (European Commission, 2019a; Niemann & Zaun, 2018).
- The Emergency Trust Fund for Africa (EUTF for Africa) attempts to address the causes of instability, forced displacement, and irregular migration at their source. Economic and equitable opportunity, resilience, security, and development are among the program's top priorities (Niemann & Zaun, 2018).
- The Bêkou Trust Fund for the Central African Republic supports post-conflict and transition-related initiatives including employment, health, and refugee assistance. It was necessary to develop a fast and adaptable solution to fulfill the urgent requirements of the Central African Republic's citizens while also safeguarding the country's long-term rehabilitation (Niemann & Zaun, 2018)

The new focus in terms of sustainable operation ideas is also evident under the AMIF (2021-2027). In the past, measures under this program could only be implemented very slowly and with many setbacks. The newly established fund intends to strengthen national capacities and improve migration management processes, as well as increase solidarity and responsibility sharing across Member States, particularly through emergency assistance and the relocation mechanism (European Commission, 2021).

The newly established focus should lie on the sharing of responsibilities and solidarity. Co-operation with third countries is essential in order to ensure a common approach. The CEAS is to be strengthened and legal migration should be promoted and supported. Funds distributed through national programs under shared management will ensure initiatives to support and protect refugees in need, as well as improve infrastructure in the countries of refugees arrival (European Commission, 2021).

4.1.2 COVID-19-pandemic

"*We have to be honest and admit that before the pandemic hit, the world was set on an unsustainable economic path. Rising inequalities. A growing digital divide. A man-made climate crisis. The coronavirus is not only shining a light on these trends. It has made some of them even more dramatic. Countries all across the world have been hit hard by the virus.*" (von der Leyen, 2020).

This powerful message was the content of President von der Leyen's speech at the UN High-Level Event on Financing for Development in the Era of COVID-19 and Beyond in May 2020 (von der Leyen, 2020).

COVID-19 was declared a pandemic by the World Health Organization on March 11, 2020. The outbreak's intensity quickly became obvious across Europe (Bellia et al., 2020). Even at this stage, many long-term consequences of the pandemic on the population, nature and the political system within the EU can be seen. The epidemic has worsened health disparities inside and across nations. Also gender inequalities have been worsened. In the fight to control the virus, there are also significant restrictions on civil freedoms (van Barneveld et al., 2020).

The crisis exposed Europe's profound economic differences, particularly between the North and the South. They have become more acrimonious when the economically devastated South asked for the issuance of Eurobonds, which the North refused. The long-term consequences of this division are likely to result in increased European disintegration (van Barneveld et al., 2020).

The virus is a new cause of poverty, worsening existing problems and restricting vulnerable households' capacities to leave and remain out of poverty (van Barneveld et al., 2020).

In a global context, the lack of a coherent and coordinated effort will have significant economic, social, and humanitarian consequences, jeopardizing the already faltering Agenda 2030 for SDGs (van Barneveld et al., 2020).

Many conventional ideas and practices have been put into question as a result of the COVID-19 Pandemic, forcing new thinking. The pandemic is an indicator of the urgent need to reset economic, labor relations, health, and other policy areas. A pandemic like COVID-19 demands government interventions that address social circumstances and impose behavior change towards a more sustainable way of thinking (van Barneveld et al., 2020).

4.1.2.1 COVID 19-pandemic and sustainable finance

Past crises in the EU have shown that the focus was shifted away from climate-related issues and that these crises negatively influenced the development (Gravey & Jordan, 2020). Also, in the context of the COVID-19 crisis and the EGD measures presented at the beginning of the pandemic, it was assumed that these would have an effect on the success of the measures (Krämer, 2020).

Observations to this point on the relationship between the COVID-19 crisis and the development of climate-related policies as part of the sustainable finance concept within the EU indicate a positive relationship, contrary to assumptions. It can be observed that the COVID-19 crisis led the ministers of the EU Member States to set climate targets as one of the main concerns in combating the pandemic (Dupont et al., 2020).

The EU Technical Expert Group on Sustainable Finance (TEG), which was established to advise the Commission on decisions to pursue the Action Plan on Financing Sustainable Growth, highlighted the importance of a sustainable and resilient pathway out of the COVID-19 pandemic in a press statement in April 2020. It also declared that achieving the EGD's targets is crucial in this regard. The TEG thinks that the Sustainable Taxonomy, the EU Green Bond Standard, and the Paris-Aligned and Climate Transition Benchmarks will be the right sustainable financing tools which help lead public and private sector recovery efforts from the COVID-19 pandemic (TEG, 2020).

The Sustainable Taxonomy is especially important for new investments needed to transition the economy, since it demonstrates how and where to reduce carbon emissions, increase climate resilience, optimize supply chains for sustainability, and create employment. All bond issuers can use the Green Bond Standard (GBS) to describe how their funding contributes to the issuer's overall sustainability strategy and the consequent environmental and social implications. The GBS framework may also be used to improve the transparency of social impact and financial results. The Paris-Aligned and Climate Transition Benchmarks are methods to encourage a considerable amount of private capital to be invested in climate change. The three approaches are summarized as the Roadmap to Recovery (TEG, 2020).

Although some measures have been postponed, the Parliament, Commission and Council agree that EGD-measures should be the focus of the crisis response (Dupont et al., 2020). The Commission used the EU's response to the COVID-19 crisis to strengthen EGD (European Commission, 2020a; 2020d). The Technical Expert Group (TEG) emphasizes the need of the private sector in ensuring access to funding for a long-term recovery from the epidemic (European Commission, 2019d).

Corporate and investor strategies that just preserve current methods and environmental performance levels while failing to clearly link with environmental objectives accumulate financial risk and contribute to future climate-related social disturbance.
To improve the successful targeting of public recovery measures, private sector strategies must be transparent and unambiguous about their connection with environmental and social goals (TEG, 2020). A positive relationship between environmental degradation and health is emphasized, which confirms the importance of continuing and strengthening EGD measures (TEG, 2020).

The social aspects of sustainable finance are also adapted and expanded through the COVID-19 crisis. Many low- and middle-income countries are becoming increasingly indebted. The COVID-19 pandemic has made a huge impact on developed countries, but underdeveloped and emerging economies have even less budgetary flexibility to deal with the effects and far more difficult access to finance. To keep the gap between those who are ahead and those who are falling behind from widening, it is essential to guarantee that the future is green and inclusive, and that everyone may ride the digital wave. This is why the EU has asked for a long-term Global Recovery Initiative that ties debt relief to investment (Borrell, 2020) and is part of the sustainable finance concept (European Commission, 2018a).

The European Commission is adopting extraordinary actions at both the national and EU level to stop the spread of the coronavirus, support national health systems, and mitigate the pandemic's socioeconomic effect (European Commission, 2022). The measures also include financing strategies to support sustainability within the EU:
In response to the social and economic consequences of COVID-19, the EU has put a strong emphasis on sustainability and climate change. NGEU has been adapted to the new realities (Dupont et al., 2020). It is heavily influenced by the concept of long-term competitiveness. The EGD is at the heart of it. It makes a significant investment in digital transformation. It will also put more money into health-care systems. It is a package connecting recovery investments with the concept of sustainable development (von der Leyen, 2020).

This instrument allows the EU to acquire EUR 750 billion on financial markets and distribute the funds to Member States as grants and loans. Its major goals are to assist Member States with investments and reforms, as well as to help the most impacted private sector firms and to improve health care (Bellia et al., 2020). It should support the EU in becoming more sustainable, digitally connected, and resilient. To raise the money needed for NGEU, the Commission will lend on behalf of the EU on the financial markets up to €800 billion. The new long-term budget will have more flexibility measures to ensure that it can respond to unexpected demands. It's a budget that's prepared for both current realities and the unknowns of future (European Commission, 2021f). More than half of the money will go toward modernization, such as through Horizon Europe's research and innovation, the Just Transition Fund and the Digital Europe Programm’s fair climate and digital transitions, and preparedness, recovery, and resilience, through the RRF, rescEU, and a new health program, EU4Health (Commission, 2021a).

Furthermore, the package emphasizes modernizing traditional policies such as cohesion and the common agricultural policy in order to maximize their contribution to the Union's priorities; combating climate change, which will receive 30% of EU funds, the highest share of the EU budget ever; and biodiversity protection and gender equality (European Commission, 2022).
The RRF is a core part of NGEU's strategy, a large-scale financial assistance program for public investments and initiatives in fields like green and digital technology. It enables the Commission to generate money to assist Member States in implementing reforms and investments that are aligned with EU goals and solve issues identified in country-specific

recommendations made under the European Semester framework of economic and social policy coordination. It makes loans of €385.8 billion and grants of €338 billion available for that purpose, totaling €723.8 billion, in current prices (European Commission, 2021j).

In June 2021, the Commission proposed a new package that includes a more ambitious and expanded emissions trading system, effort sharing for non-ETS sectors, a carbon border tax, stricter accounting rules for forests and land use, more ambitious renewable energy and energy efficiency directives, and stricter emissions performance standards for cars (Skjærseth, 2021). Through this strengthening, the EGD is also gaining in importance (Dupont et al., 2020).

4.3 Sustainable financing as a tool to achieve the goals of the EGD

Instruments of sustainable financing, which in this case represent the concept of the method, are to be examined in different contexts. The different contexts are the defined goals of the EGD. With the help of appropriate literature sources, a comparison of the goals and the possible solutions within the concept of sustainable financing will take place. Thus, in the following step, an evaluation of the importance of sustainable financing, in achieving the goals of the EGD, will be the main focus. The following analysis is based primarily on information from official EU websites and press releases. Also here, the method of the content analysis is applied to analyze sustainable financing in different contexts in order to assess the impact in relation to the achievement of the environmental goals set in the EGD.

The adopted EGD is built up on the goals of the Paris Agreement and Agenda 2020 while setting even more ambitious targets (Commission, 2021b). The EGD's goal is to turn the EU into a modern, resource-efficient, and competitive economy by 2050, guaranteeing that there are no net GHG emissions, economic development is separated from resources, and no one is left behind (European Commission, 2019e).

A sustainable Europe demands significant investment across all economic sectors. By 2030, extra expenditures of EUR 260 billion per year would be required to meet the 2030 climate and energy targets (European Commission, 2020a). Energy-related initiatives, housing, and the transport sector are all part of the plan. Other sectors, particularly agricultural production, will need to make significant investments to address wider environmental difficulties, such as biodiversity loss and pollution, natural capital protection, and support for the circular and blue economies, as well as human capital and social investments related to the transition. Digitalization is also an effective instrument for the EGD (European Commission, 2020a).

To achieve the EU's climatic, environmental, and social sustainability goals, public and private investments are required (European Commission, 2018b). During the period of 2009 till 2019, sustainable finance has become increasingly important in mobilizing the capital required to meet critical EU sustainability policy goals (Ahlström & Monciardini, 2021). Attracting private and public finance, in order to be able to meet the set targets, has a special importance in this process (Johnston, 2016).
"*…Yet, public money will not be enough. This is why the EU has proposed hard law to incentivize private capital to flow to green projects. We hope that Europe's leadership will inspire others to walk next to us. We are at two minutes to midnight. It is our last chance to join forces.*" (European Commission, 2018b).
This statement was made in 2018 by the Vice-President in charge of Financial Stability, Financial Services and Capital Markets Union, Valdis Dombrovskis.
In doing so, he emphasized the necessity of intervening in the achievement of sustainable goals, but also highlighted the importance of sustainable financing and, in this sense, the involvement of public, but most importantly private investors (European Commission,2018b).
The Commission has recognized that the financial market has a crucial role in the implementation of EGD objectives (European Commission, 2018a). It is a chain of actions, as shown in figure 9, that are necessary to achieve the goals of the EGD. To achieve the goals, investments in sustainable projects are developed and carried out. This requires capital, which comes from private and public investors (European Commission, 2018b). The EGD emphasized the importance of better directing financial and capital flows to environmentally sustainable initiatives (European Commission, 2019b). It especially requires the mobilization of private resources for sustainable developments. The development of appropriate structures to promote private investment alongside public funds is thus important (European Commission, 2018a).

Investment decisions are normally based on several criteria, but environmental and social aspects are frequently overlooked, despite the fact that such risks are more likely to materialize over a longer time horizon. It is critical to recognize that considering long-term sustainability concerns makes economic sense and does not always imply reduced investment returns (European Commission, 2018a). Evidence shows that private investor interest in green bonds has increased in recent years. Even though the green bond market is growing and gaining importance, it made up only 1% of total global bonds outstanding as of 2018, before the EGD was launched. The financial imbalance is attributed to lack of understanding among investors about what makes an investment sustainable (European Commission, 2018a).

In the following, it will be evaluated whether measures in the course of the EGD Investment Plan also contribute to using this interest positively for the fulfillment of the EGD goals by offering the investment in green bonds as an attractive alternative to conventional investments, including securities and positive contributions (European Commission, 2020a).

The EGDIP intends to use EU funding, national budgets and, above all, investments from private and public investors to achieve the EGD goals. Green bonds enable companies to borrow money from investors to fund or refinance "green" projects, assets, or commercial operations (European Commission, 2018a). In this section, this source of funding will be examined in more detail (European Commission, 2020a).

Selected instruments and platforms that have been developed in the course of the further development of sustainable financing to achieve the EGD in the Action Plan for Sustainable Growth will be presented. In the next step, they will be analyzed and evaluated in terms of their potential contribution to achieving the goals of the EGD. A more detailed account of all the actions and measures listed in the Action Plan for Sustainable Growth can be found in the appendix.

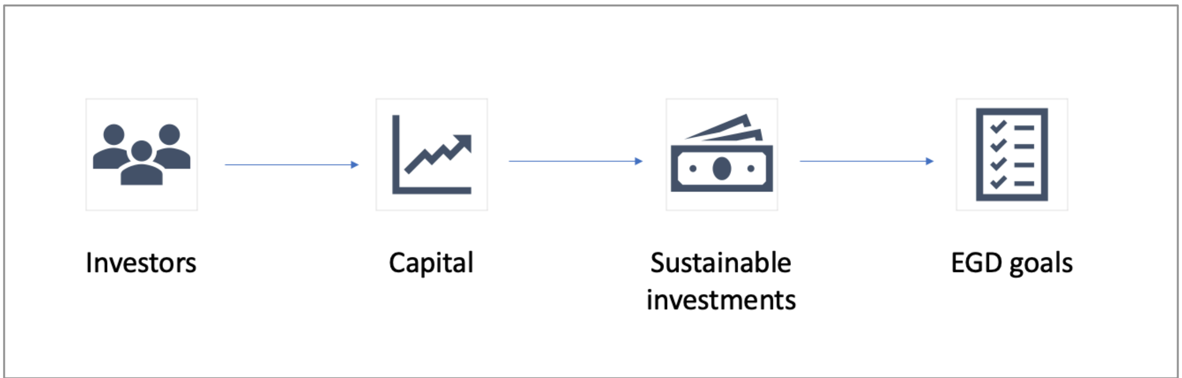

Figure 9: The relationship between Investors contribution and the achievement of EGD Goals, own representation based on European Commission, 2018, p.1

4.3.1 Action Plan on Financing Sustainable Growth

The Action Plan on Financing Sustainable Growth helps in the reorientation of capital flows toward sustainable investment in order to achieve sustainable and inclusive growth; it controls financial risks associated with climate change, environmental degradation and social issues; and it promotes financial and economic transparency (EU Technical Expert Group on Sustainable Finance, 2018). Part of it are the EU taxonomy, financial sector sustainability reports, and climate standards (European Commission, 2020a).

➔ **<u>The contribution of the Action Plan on Financing Sustainable Growth to the achievement of the targets of the EGD</u>**

The Action Plan contributes to the creation of a Capital Market Union and lays the groundwork for enabling frameworks to mobilize capital for sustainable, long-term investments (European Commission, 2020a).

The following is an analysis of individual platforms and measures in the course of the Action Plan on Financing Sustainable Growth:

4.3.2 Technical Expert Group on Sustainable Finance (TEG)

The TEG was appointed by the Commission in July 2018 to assist in the implementation and development of the EU taxonomy, the EU Green Bond Standards, the EU climate benchmarks and the development of the guidelines for corporate disclosure of climate related information and by thus assist the Commission by the implementation of the Action Plan for Financing Sustainable Growth (EU Technical Expert Group on Sustainable Finance, 2020a). It has 35 members, including representatives from CSOs, universities, research institutions, industry, and finance, as well as extra members and observers from EU and international public entities (European Commission, 2019d).

➔ **<u>The contribution of the Technical Expert Group on Sustainable Finance (TEG) to the achievement of the targets of the EGD</u>**

The TEG has been working on the creation of an EU taxonomy for climate change mitigation and adaptation. Also, it has been developing suggestions for the establishment of an EU Green Bond Standard, with the objective of promoting the green bond market's transparency and comparability, as well as providing clarity to issuers on the measures to take in order to scale up sustainable finance. The TEG has been preparing proposals for the European Commission on the creation of basic requirements for the methodology of the "EU Climate Transition" and "EU Paris-aligned"- benchmarks, which are in line with the Paris Agreement's goals and address the danger of greenwashing (European Commission, 2019d).

The reports and standards produced by the TEG provide instructions and guidance, as well as guidance for the further development and use of the Taxonomy and the EUGBS, enabling the widespread and consistent use and application of green bonds. Thus, investments in green bonds become easier and more uniform to realize (European Commission,2019e).

4.3.3 Platform on Sustainable Finance

The Platform on Sustainable Finance is a consulting entity, a permanent expert group governed by the Commission's horizontal expert group guidelines. The Platform consists of 57 appointed members of a range of sectors and 11 observers (European Commission, 2021i). Its main goal is to assist the Commission in creating new sustainable financing policies and also in the development of the taxonomy regulations and report on sustainable capital flow and screening criteria, which are crucial for the fulfillment of the investment needs for the EGD aims (European Commission, 2021i).

➔ **The contribution of the Platform on Sustainable Finance to the achievement of the targets of the EGD**

The platform establishes and promotes dialog and communication between private and public stakeholders. Experts from different industries come together and share their expertise and practical experience in the field of sustainability. Especially in critical times, when the EGD targets need to be further adjusted or when unexpected events such as the COVID-19 pandemic occur, the Commission can rely on the advice and support of the Platform on Sustainable Finance. In this way, it provides the Commission with security and support, which should help to ensure that the goals can be achieved in a focused manner and even in spite of any detours. Through the diverse expert knowledge and expertise, the commission can be informed and advised in all possible matters, so that suitable solutions can be found. The main concern is thus to pursue the objectives of the EGD (European Commission, 2021i).

4.3.4 International Platform on Sustainable Finance (IPSF)

The IPSF is an international platform which was founded in October 2019 and consists of the EU and 18 other countries and their legally represented authorities and policymakers in the field of environment-related issues and additionally twelve observers of the financial market, which also include the Organization for Economic Cooperation and Development (OECD) and the World Bank Group. The IPSF's members collectively account for 55% of global GHG emissions, 50% of global population, and 55% of global GDP (European Commission, 2021d).

The aim of the IPSF is to enable efficient communication between financial institutions worldwide in order to achieve the best possible cooperation in the field of sustainable financing on an international level and to mobilize capital, which will be used for green investments. This also includes identifying existing limits as well as differences and opportunities in the mode of operation and approach of the different financial markets in the course of finance regulatory measures as quickly as possible, in order to be able to develop and improve them and to find the best practice together. In doing so, the boundaries and national contexts are also taken into account and respected at all times (European Commission, 2021d). The idea is also to create economies of scale through the use of synergies (European Commission, 2018b).

➔ **The contribution of the International Platform on Sustainable Finance to the achievement of the targets of the EGD**

The private and public sectors, as well as EU Member States, must work together to achieve the set EGD goals. The private sector in particular, must be attracted to invest in green projects (European Commission, 2020a.). Internationally strengthened cooperation means that various sources of finance can be used to fund sustainable environmental projects under the EGD. The cooperation of international financial markets achieved through the IPSF supports the consistency of sustainable financial instruments, enables investors to evaluate and find sustainable and above all green investments and opportunities. This leads to an increase in the share of private investors, which is particularly crucial in achieving the EGD goals (European Commission, 2021d).

When it comes to solving the environmental and climate crisis, the work of the EU alone is not enough. It is necessary to act together globally in order to achieve climate goals. Close cooperation at the international level is also useful and beneficial in achieving the goals of the EGD (European Commission, 2021a). The contribution of the private sector therefore plays a crucial role in the successful achievement of the goals of the EGD. By integrating international financial markets, previously untapped potential can expand and develop the synergies of cooperation between different financial markets and enable further capital flows also towards the EU (European Commission, 2021d).

Next, different measures, presented in the Action Plan on Financing Sustainable Growth should be presented and analyzed according to their contribution to the fulfillment of the EGD targets:

4.3.5 Taxonomy Regulation

The EU's HLEG recommended that the EU should establish a taxonomy that can assess financial flows toward sustainable development priorities at the EU and Member State levels, as well as recognize investments that meet the criteria for financing through sustainable EU- and Member State- financing mechanisms (TEG, 2020). The goal is to give policymakers, different industries and investors relevant advice on how to effectively promote and participate in economic activities that help to achieve a climate-neutral economy (European Commission, 2018b). Climate change mitigation, adaptation, and biodiversity are among the six core European environmental goals reflected in the EU Taxonomy (EU Technical Expert Group on Sustainable Finance, 2020a).

➔ **The contribution of the Taxonomy Regulation to the achievement of the targets of the EGD**

The EU Taxonomy was created to assist in the allocation of funds and to promote a facilitated sustainable investment system (EU Technical Expert Group on Sustainable Finance, 2018). It has been identified as an important part of the EGD. The EU Taxonomy enables a common understanding of the term "sustainability" in the cooperation of Member States and EU institutions by building up an unified classification system. It has been specifically designed to identify investments that can help the EU achieve its environmental and climatic goals set up in the EGD, as well as actions that could jeopardize progress toward those goals. This is an important element in assisting the flow of money into financially sustainable sectors (European Commission, 2018a).

The EU Taxonomy has the ability to guide the financing to the transition. It establishes a maximum acceptable level, also called a substantial contribution and a minimum acceptable level, the so called Do-No-Significant-Harm-rule to guide and motivate investments to make significant contributions. The regulation can help with a well-managed and fair transition away from harmful activities while also maximizing the beneficial impact of taxonomy-aligned activities (EU Technical Expert Group on Sustainable Finance, 2020a).

4.3.6 European green bond standard (EUGBS)

One of the goals of the EUGBS is to create a more united market inside the EU (EU Technical Expert Group on Sustainable Finance, 2018). As part of the EGD, the EUGBS is a voluntary standard, recommended by the TEG, designed to assist the green bond market expand and enhance its environmental goals. The regulation will establish a framework for how businesses and governments may use green bonds to generate financing on capital markets to support substantial investments while complying to high sustainability principles and securing investors (European Commission, 2021k).

The standard is based on the given components, taxonomy; alignment with the EU taxonomy; transparency and reporting; external reviews and verifications and the supervision by the European Securities Markets Authority (ESMA) that must be complied with and observed when trading green bonds (European Commission, 2021k). It is also necessary to publish a Green Bond Framework which certifies the volunteer alignment of green bonds issued with the EUGBS, describes how the issuer's plan matches with environmental goals and gives details on all essential areas of the proposed green bond use-of-proceeds, processes, and reporting (EU Technical Expert Group on Sustainable Finance, 2019).

➔ **<u>The contribution of the EUGBS to the achievement of the targets of the EGD</u>**

Through the EUGBS, the investment but also the lending of green bonds is more reliable and thus becoming a more attractive option for investors but also for lenders. EUGBS for sustainable financial markets secure the market's integrity and trust, as well as making sustainable financial products more accessible for investors (European Commission, 2018a). For issuers it will be a useful tool to show that they are supporting credible environmental initiatives that follow the EU Taxonomy. Greenwashing risks will be reduced since investors buying the bonds will be able to more effectively evaluate, compare, and trust that their investments are sustainable (European Commission, 2021k).

The standard enables green bonds to become a reliable and easy to use instrument on the financial market, offering a good alternative for investors and thus making them more concrete and often more applicable. Accordingly, more capital is invested in green projects and it is possible to support the goals of the EGD. As a result, the EUGBS might be seen as assisting the green bond market in expanding and increasing its environmental goals (European Commission, 2019b) by making the market more effective, transparent, comparable and credible (European Commission, 2019b).

4.3.7 Benchmarks

Previous benchmarks were not adapted to the climate goals of the EU. Therefore, it was necessary to develop new benchmarks that are in line with the goals of the EGD. Thereby the problems of limited comparability and dependability should be faced and the scene for a future low-carbon world should be set (EU Technical Expert Group on Sustainable Finance, 2018). For this reason, the Commission intends to introduce two additional, new categories of benchmarks including low-carbon benchmarks and positive impact benchmarks. A positive carbon impact index will have a positive net carbon effect, whereas the assets held in a low-carbon benchmark should be chosen with the goal of lowering carbon emissions. When it comes to the investing area, the positive carbon impact index is far more ambitious (EU Technical Expert Group on Sustainable Finance, 2018).

➔ **<u>The contribution of Benchmarks to the achievement of the targets of the EGD</u>**

Benchmarks, which investors use to allocate their portfolios and analyze their financial success, only have an indirect, but important influence on investments and thus on the achievement of the set goals of the EGD. Investors should be able to use the newly updated benchmark categories to choose a tool that fits their investment plan. This measure will also improve investor transparency on their influence on climate change and the energy transition (EU Technical Expert Group on Sustainable Finance, 2018).

4.3.8 Disclosure

Participants in the financial markets will be required to inform their clients on the influence of sustainability on financial results, as well as the impact of their investment decisions on sustainability and in this way create more transparency on the market (European Commission, 2018b). For this reason, the guidelines on reporting climate-related information were published (European Commission, 2018a).

➔ **<u>The contribution of disclosure to the achievement of the targets of the EGD</u>**

The disclosure requirements are assisting in the greater integration of sustainability into ratings and market research, as well as the integrating of sustainability, in the form of ESG factors, into financial planning and risk management by creating more needed transparency. Only with transparency is it possible for investors to evaluate the long-term effects and risks, but also the advantages of an investment in sustainable projects and thus to carry out a suitable analysis for the required evaluation. Corporate sustainability transparency will not only inform market investors but will also assist firms in directing them in a more sustainable and long-term path. It is by this intended to make the obligations and opportunities of the investors more evident. Disclosure, which provides easily accessible information on financial sustainability, is encouraged by the Commission as it allows investors to compare the sustainability and efficiency of different projects and choose the most appropriate and beneficial one. This step leads to sustainable investments being more accessible and thus seen as a more realistic alternative (European Commission, 2018a).

5 Analysis of the EGD & NGEU from an integration process point of view

It is known that the crises that have hit the EU in recent years have put the integration in the EU to the test. A crisis can present both harm and possibility. They have always been a component of the European integration process (Laffan, 2016). When faced with a crisis, the expectations are extremely high for political leaders, since they are presented with situations that demand action in a setting of increased unpredictability and contingency (Boin et al., 2016).

The financial crisis and the related euro crisis are events that have influenced and changed the EU integration. There were doubts about whether the EU could come out of the crisis stronger, with increased integration. But that is in fact, what has happened (Ioannou et al., 2015). The financial crisis has led to the adaptation and modification of the roles of the EU institutions (Bauer & Becker, 2014). EU institutions have worked closely together in the Euro crisis and strengthened integration in the framework of monetary policy, consisting of fiscal and budgetary measures. The EU was tested in its strength and proved its resilience and maturity. Common agreements were found and it was proven that policy integration was necessary and desirable. The crisis compelled the EU and the eurozone to create new policy tools, mostly outside the formal treaty framework, as well as new regulatory requirements in the area of economic regulation and increased central authorities, especially in the financial sector (Laffan, 2016). The solution was a new policy structure that provides financial stability for particularly affected Member States and stronger regulation of the financial sector (Bauer & Becker, 2014). Adjustments to the European Monetary Union (EMU) in the form of an integrated budgetary framework and the European Stability Mechanism (ESM) are part of the integrated solution to the financial crisis in the EU (Ioannou et al., 2015).

The Member States have moved closer together, as new processes and regulations are needed for joint engagement and problem solving. The EU institutions are also being brought into closer cooperation through monitoring and reporting requirements (Laffan, 2016).

In the integration that emerged in the wake of the financial crisis, there was a debate about the distribution of power and the gain of power by supranational and intergovernmental organizations (da Conceição-Heldt, 2016).

It it is argued that the Commission has gained power and that a power shift away from the intergovernmental to the supranational level has taken place (Bauer & Becker, 2014) and that the Commission was able to strengthen integration within the EU (da Conceição-Heldt, 2016). The Commission's role as a key player in economic governance has changed from policy entrepreneur to policy manager as a result of the crises. As a consequence, the Commission's responsibilities have changed from agenda setting as an indirect way to participate in leadership functions (Müller, 2017), to stronger implementation power (Bauer & Becker, 2014). The Commission is thus responsible for the initiation of EU decisions and is expected to include public policy issues in this regard (Müller, 2017). Through this political role, the Commission is able to exercise more power and influence on integration developments and decisions (Nugent & Rhinard, 2019).

The role of the Commission President also plays a role in the development of integration in the course of crises in the EU. Commission presidents, as individual persons, exercise political leadership at the supranational level in the process of European integration (Müller, 2017). Political leadership is by this understood as acting in the direction of European integration (Nugent & Rhinard, 2019). This is possible in that they are responsible for agenda settings and policy making and can shape these in such a way that they correspond to individual goals and create and promote a positive picture of further integration (Müller, 2017).

Other scholars argue that further integration was not strengthened in all the cases by supranational powers, but through intergovernmentalism (Bickerton, Hodson, & Puetter, 2015). In response to the financial crisis, decisions such as the introduction of the ESM and the redefined role of the ECB as protector of the euro were agreed (Laffan, 2016). The supervision of the financial sector, which is otherwise the task of the Commission, is now largely the responsibility of the ECB (Bauer & Becker, 2014).
The role of the Commission as an important supranational body driving integration is also controversial (da Conceição-Heldt, 2016). Although the Commission has gained power as a supranational body, this has not been the case in all areas. Although the Commission has the task to provide financial assistance and to borrow and lend money on the capital market, the Council always had to agree. They are also responsible for evaluating the financial situation and making an initial assessment, but this too was only done in cooperation with the Troika (Bauer & Becker, 2014).

The integration in the EU is also threatened by not fully resolved crises of recent years, unmanageable rapid growth of the EU and the associated disunity of Member States which is connected to growing eurosceptism among Member States. This trend has made national governments hesitant to take any further integration initiatives. Also, multiple other crises, like the migration crisis and the COVID-19 pandemic have affected the EU. The attempts to resolve these problems have worsened the disparities among the Member States (Tömmel, 2020)

These disagreements also affect decisions on how to proceed with environmental issues. Complexity, interconnection, and politicization are increasingly present in the climate crisis and tend to operate as focal areas for institutional, policy, and political change that leaves major legacies, generating uncertainty, threat, and discontinuity (Laffan, 2016). In some Member States such as Poland, there is a skeptical attitude towards the introduction of new environmental policies, and other southern Member States do not have the resources or priorities to focus on environmental issues. Because of this, the EU's growing diversity has resulted in more flexible laws to accommodate rising variety, including a large increase in the number of poorer and more environmentally skeptic states. In the past, it was expected that member states would establish their own environmental policies. This explains the decreasing integration of environmental issues within the EU and the EU environmental policy implementation problem. To solve this problem, it is the task of the EU to create a common, integrated environmental goal (Burns et al., 2020). The EU's solution to the environmental integration problem is the EGD (European Commission, 2019e).

When applying the process tracing method to the climate crisis-formation of EGD scenario, it can be seen in figure 10 that in the following case the cause is the actual climate- and COVID-19-crisis connected to environmental and climate problems. The introduction of the EGD, which is in the following considered as the outcome of the climate crisis, has strengthened the integration within the EU (European Commission, 2019e). The goal is to explain this outcome. The causal chain that led to the formation of the EGD may be investigated using a process tracing approach. In the following, integrative steps will be specified and analyzed, which have contributed to the fact that the EU integration has become stronger due to the occurrence of the climate crisis and the associated solution in the course of the introduction of the EGD. More precisely, the distribution of power and the role of the Commission as a supranational organization in the achievement of the EGD and NGEU will be discussed. It is to be examined whether the trend of the last crisis-integration relations occurs on the role of the Commission, in which it has gained power.

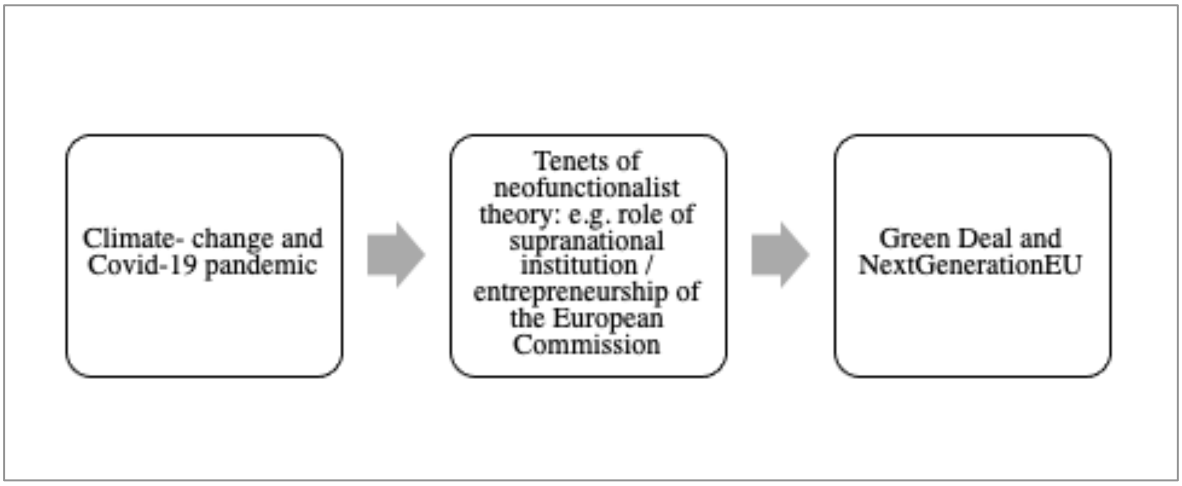

Figure 10: Process tracing design, own representation

For this purpose, the neofunctionalism theory of the European integration and its tenets as mechanisms that contribute to the outcome, must be analyzed. The goal is to explain the different spillovers, this means process steps during the decisions for a greener EU which were decided by the Commission and to analyze how the integration in the EU was influenced by those steps.

The spillovers will be examined and explained with help of the tenets of the neofunctionalism theory. Neofunctionalism is the preferred option to apply for conducting the explaining outcome-process-tracing-method because of its unique focus on understanding policy-making results and core competency in the dynamics of European integration by focusing on the role of supranational organizations and community bodies (Bickerton et al., 2015; Niemann & Ioannou, 2015).

Furthermore, it is a transformative process, which means that integration is seen as a dynamic process of changes in goals and actors (Wiener et al., 2019). This dynamic perspective with regard to integration processes allows unintended consequences and endogenous preference changes to be included in the analysis (Nicoli, 2020). Although the theory has been subjected to a great deal of criticism over time, the neofunctionalism approach has retained a stable theoretical core (Schimmelfennig, 2018). It has also proven that the theory is able to maintain its basic statements in terms of mechanisms, concepts and hypotheses and yet adapt through critique and further development (Wiener et al., 2019). The theory is able to respond directly to current EU studies and comparative regionalism (Rosamond, 2005).

According to Wiener et al. (2019), the following reasons support the use of neofunctionalism tenets to study integration within the EU:

1) The theory denies that institutions of regional integration can be considered equal to transnational and intergovernmental organizations of the contemporary world system.
2) It is the only theory that attributes a high value to NGOs in the integration process and refuses to assume that only sovereign national states influence the integration process. This makes it possible to extend the analysis to a wide range of actors and, most importantly, to include the Commission.
3) Learning and socialization, as two human behaviors that are left out of other theories, are included.
4) Adapted and extended principles of the theory can meanwhile also be used for global consideration of integration processes. Thus, results of the analysis can be compared in a broader spectrum
5) Globalization is becoming increasingly important. This becomes also becomes clear by the fact that it is made clear that measures of the EGD alone are not sufficient to be able to act sustainably in the long term. It is appealed repeatedly that it is a worldwide common goal to solve the climate and environmental problems (European Commission, 2019a). Neofunctionalism is based on the fact that the interdependencies between national economies, societies and states can no longer be denied and prevented. Only a theory that recognizes and internalizes this phenomenon has a chance to explain the current relations between national states.

5.1 Tenets of the Neofunctionalism theory

The Theory is subject to certain tenets:

1) Pluralistic view

Integration occurs through the cooperation of different actors, who can form coalitions (Schimmelfennig, 2018). The propensity for integration is greater in societies characterized by pluralistic complexity (Rosamond, 2005). It is assumed that not only governmental actors can represent national interests, but that a number of private actors, including interest groups, social movements and administrators of supranational agencies (= Eurocrats) play an important role in the process of integration at national and supranational level (Wiener et al., 2019). While classical neofunctionalism saw the role of national governments as complementary to the actions of supranational actors and cross-national coalitions of interests, new neofunctionalism believes that national governments have a greater role in integration in high-political compared to low-political areas (Kuhn & Nicoli, 2020).

Precisely the cooperation of various EU bodies, governmental and non-governmental institutes and independent experts was given during the introduction of the EGD (European Commission, 2019e; Rivas et al., 2021). The Commission works closely with experts from various fields, with other supranational bodies, but also with the national governments, in order to introduce the EGD. Also, in the implementation of the goals, a cooperation of the different groups is necessary. It is emphasized that the citizens, as public investors, also contribute to the achievement of the goals and thus advance the integration (Skjærseth, 2021)

2) Imperfect rationality

Self-interested and imperfectly rational actors are assumed (Wiener et al., 2019). They act under the assumption of imperfect information, can change preferences depending on interests and strategies (Nicoli, 2020) and learn through experience (Niemann & Ioannou, 2015). Preferences can be exogenous, but also endogenous and change through feedback, socialization and evolution of identities (Christiansen et al., 1999).

In the process of EGD implementation, the Commission, through cooperation with expert groups and national bodies, relies on knowledge exchange in the form of international platforms, expert panels and meetings between all participants involved (EU Technical Expert Group on Sustainable Finance, 2018; European Commission, 2021d). The decision-making institutions are aware of their limited knowledge capacity and are able to involve others in the decision-making process. They learn from the experience of previous crises and the associated integration processes (Laffan, 2016), but also from the development of current circumstances. This is reflected in the fact that existing regulations, such as the taxonomy regulation, are adapted to the changed objectives and new knowledge and experience (TEG, 2020).

3) Autonomy of regional institutions

Regional institutes can gain a certain degree of policy-making autonomy and maintain it in the process of integration. This enables them to identify further projects that can drive the integration process forward, as they can better identify national interests and urgencies of the Member States (Wiener et al., 2019).

The autonomy of the regional institutes in the process of introducing the EGD is made clear by the fact that the member states have the opportunity to decide for themselves in which sustainable and green projects to invest in the respective member state. After submitting the plan, they receive a budget that is freely available to them and must provide reports and proof of progress afterwards. However, this approach shows that the national governments are trusted and communicated to the extent that it is up to the countries to assess how the money can be used most efficiently (European Commission, 2021j).

4) Positive sum

A positive sum game is assumed, in which all actors involved in the integration process can benefit (Wiener et al., 2019). The approach emphasizes a supranational decision-making style in which participants aim to reach an agreement through compromises that advance shared interests (Niemann & Ioannou, 2015).
Shared interests lead to the fact that all participants are also involved in achieving a common goal, in this case the achievement of the defined climate targets. This can only happen if all participants can be promised a positive and desirable outcome. This primarily creates the motivation to work towards achieving the goal. On the one hand, this is promised by the do-no-significant-harm criterion. This is to guarantee that no participant is negatively affected by the change towards achieving the goals (European Commission, 2021). On the other hand, it is also crucial to present to investors the advantages of sustainable financing in green projects as a positive end result and to make them understand that green bonds are investments in the sustainable future, but also suitable sources of profit, which offer a realistic and good alternative to conventional investment opportunities (European Commission, 2020a).

5) Synergies

National, subnational and supranational actors become more dependent from each other through the integration process. In many cases, problems that arise can only be solved if there are no borders between states, as it is the case in the EU (Wiener et al., 2019). There are functional synergies between policies, which means that some policies are more effective when they are combined with other policies at the multi governance level (Nicoli, 2019).
The EU's objective is to create a unified, integrated environmental goal to overcome the EU's diminishing integration of environmental concerns and the EU's environmental policy implementation challenge (Burns et al., 2020). The EGD is the EU's approach to the challenge of environmental integration, in which supranational institutions collaborate closely with national governments to achieve a shared goal (European Commission, 2019a).

5.2 The role of the crises in the process of integration

Representatives of neofunctionalism assume that integration is the result of crises and that these crises constitute an integral part of integration dynamics and positively influence them (Nicoli, 2020). (Dis)integration can be defined as a decrease or increase in the degree of centralization or affiliation with EU policy regimes (Schimmelfennig, 2018).

In the past it could be seen that national actors' collective responses to crises have resulted in the EU and its predecessors' institutions gaining more authority and/or expanding their responsibilities. The relationship between crises and integration can be explained by the model of crisis-induced decision making cycle introduced by Schmitter (1970). It shows which steps occur during the decision phase of an integration process. This is a sequential logic of decision making cycles, which is triggered by crises and can lead to further spill-overs (Wiener et al., 2019).

The basic idea is that it is assumed that states are in a "zone of indifference" in which they pursue their original tasks and goals without exerting any influence on other states. Only the occurrence of a crisis leads to a change of one's own behavior (Lefkofridi & Schmitter, 2015).

In times of crisis, actors, which in this case can be states, supranational officials, cross-national parties, interest groups and social movements, can carry out various actions in response to a crisis. These different action options are summarized in figure 11.

Integrating sovereign national states into a regional organization, characterized in the picture as spillover, involves some hurdles:

It is difficult for the actors involved to act rationally because it is so difficult to assess the costs and benefits of possible courses of action. Because the range of alternatives is so different from previous choices to be made during their respective processes of national integration and because their policies, however well thought out and however well-intentioned, are bound to have unexpected and often undesirable consequences (Lefkofridi & Schmitter, 2015). The open decision-making settings characterize crises. They are seen as a serious risk of disintegration in the context of integration, but they may also drive reform initiatives that lead to further integration (Schimmelfennig, 2018).

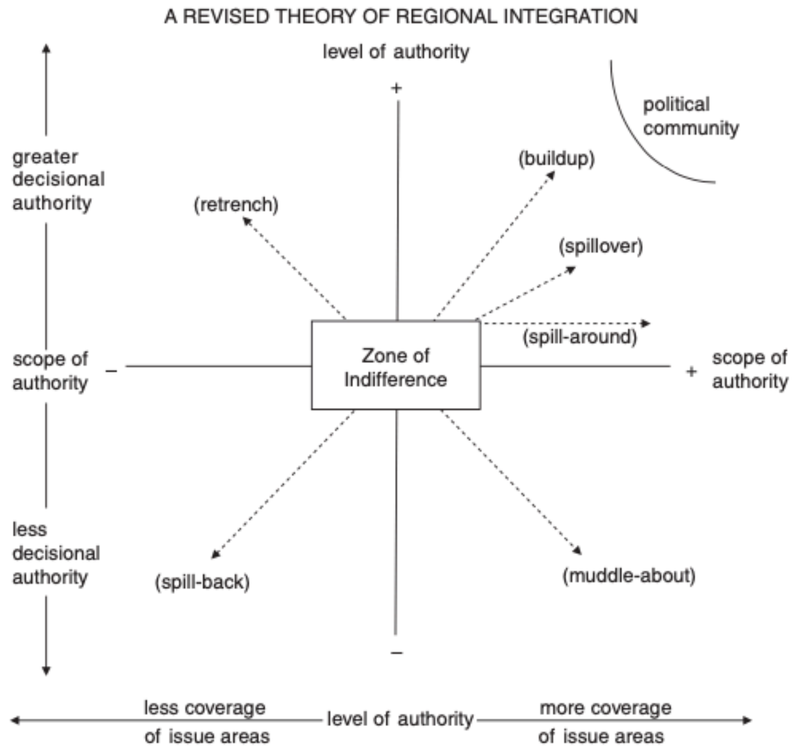

Figure 11: Different outcomes of a crisis, Lefkofridi & Schmitter, 2015, p.5

The integration process is divided into different stages, with different actors, who always depend on the previous decisions and influence further decisions (Lefkofridi & Schmitter, 2015).

In a first step, the strategy of the national actors, which include governmental organizations and NGOs, changes. In the next step, they put pressure on the regional institutions. These then lead to changed expectations and strategies at the national level (Wiener et al., 2019). It is also possible to reformulate the goals in the course of time and adapt them to the circumstances.

So, it is the case that in the course of integration, the Commission has adapted its objectives to the current crisis, such as regional security, economic regulations and the protection of the environment. The stakes in the game have been higher as the EU's competences have grown, including increasingly complex portfolios of policies with more difficult-to-predict interacting consequences and emergent features. This dynamic adaptability to new crisis conditions strengthens the EU and makes it special (Lefkofridi & Schmitter, 2015).

Such dynamic processes, which characterize spillover, are also present in the case of integration in the course of EGD. It is recognized that the Commission, at different stages of the implementation process, draws new insights from the development and is also willing to involve experts in the further development and adaptation of the measures. The taxonomy regulation, as a part of the EGD action plan, is constantly being adapted to the new conditions and the expert knowledge of the TEG is being consulted in this process.

Neofunctionalism explains the different integration outcomes of crises by differences in transnational interdependence and supranational capacity (Schimmelfennig, 2018). Neofunctionalism assumes progressive integration dynamics driven by spillover effects and path dependencies. In the following, these two approaches will be explained:

The term spillover describes the dynamics and the need for further actions in the integration process (Wiener et al., 2019). It explains the simultaneous increase in the size and scope of the collaborative institutions (Nicoli, 2020). As a result of this integration process, social actors' expectations evolved in favor of supporting more integration (Rosamond, 2005). There are three different forms of spillovers which can occur during an integration process:

1) <u>Technocratic spillover or functional spillover:</u>

Functional spillovers occur when the interconnectedness of governance and sectors is high and they cannot be isolated from each other (Nicoli, 2020). In this case, goals and problems can no longer be addressed by further integration alone. The various endogenous interdependencies, are thus referred to as functional pressures (Niemann & Ioannou, 2015). These conditions imply an expansion of the independent monitoring and control powers of supranational actors (Nicoli, 2020). The Union's systemic aspects, like its treaty structure, institutions, and policy spectrum, are encapsulated by functional integration (Laffan, 2016)

2) <u>Cultivated spillover:</u>

This approach is rooted in the already existing autonomy of supranational actors (Nicoli, 2020), who seek to expand their power with the expansion of integration (Niemann & Ioannou, 2015). If policy interdependence is high and the policy area in question is "low-policy," a cultivated spillover is likely (Nicoli, 2020).

3) <u>Political spillover:</u>

If policy interdependence is high, the policy area in question is "high policy. There is some degree of shared identity and a problem, which involves multiple states cannot be resolved on national level, then a political spillover is likely to take place (Nicoli, 2020). This is the case with the introduction of EGD as a solution to climate problems. Because Member States were not able to agree on how to act on environmental issues and there was an implementation problem, a solution at supranational level was needed. The decision to introduce the

EGD was taken by the Commission as a supranational organization. But the political spillover process involves a large group of stakeholders and not only politicians at the highest level. Political integration is concerned with political processes and elite and citizen political behavior (Laffan, 2016). These different interest groups should demonstrate the interdependencies and organize themselves increasingly on an European level (Niemann & Ioannou, 2015). The introduction of the EGD was a collaboration of various entities, to which non-governmental as well as governmental NGOs, experts from different fields, banks and also the public, in the form of private investors, developed a shared identity.(European Commission, 2019e).

Learning processes are taking place, whereby the political elite is willing to transfer experiences, political activities or even loyalties to a common European center in order to tackle problems together. This behavior is also evident in the introduction of the EGD. The Commission, as the leading authority in the introduction of the deal, relies on the opinion of various experts (TEG, 2020; European Commission, 2021c) but also on the assessment of the member states (European Commission, 2020).

While classical neofunctionalism considers integration outcomes only in terms of the three spillovers, the renewed neofunctionalism goes a step further. While classical neofunctionalism can explain whether a crisis leads to more, less or no integration, the new neofunctionalism can also explain variations in the forms of integration (Nicoli, 2019).

Forms of variation in integration outcomes include:

1) Spill-around

A Spill-around describes the creation of specialized but solely intergovernmental institutions. These represent the standard solution when integration into a new domain is required to address a particular crisis and a particular jurisdiction was largely controlled by national authorities prior to the crisis and governance interdependence is low (Nicoli, 2020).

2) Spill-back

In this case, the level of integration is reduced, but the supranational character of the common institutions is strengthened to deal with the remaining common competences (Nicoli, 2020).

3) Disintegrative spill-back

This form represents the simultaneous limitation of the autonomy and scope of the common institutions (Nicoli, 2020).

4) <u>Encapsulation</u>

If the end result of a major crisis is an encapsulation, no significant changes in governance mechanisms or the scope of political integration will occur, ending the dynamics of crisis integration (Nicoli, 2020).

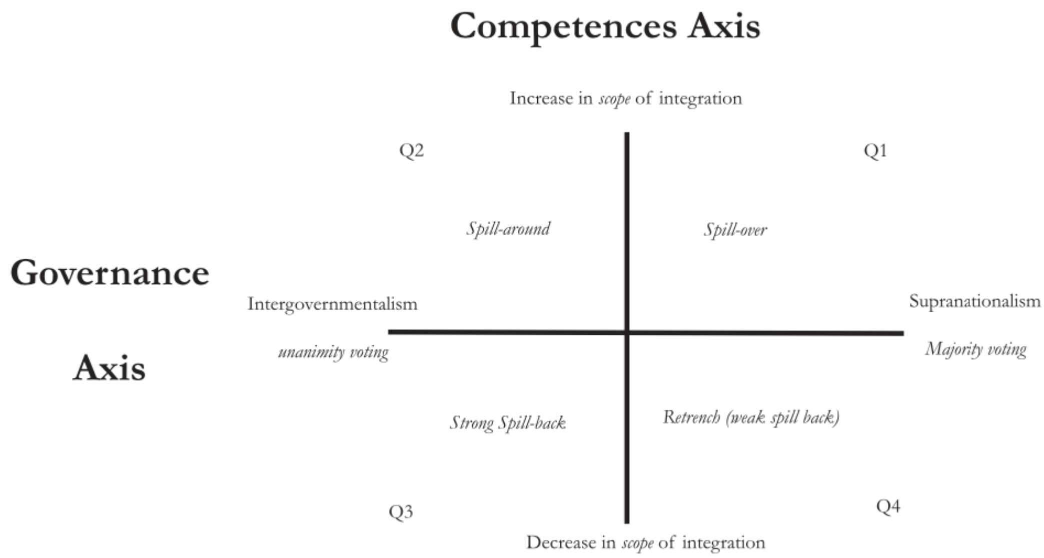

Figure 12: Different integration outcomes of a crisis, Nicoli, 2020, p.902

The different end results of a crisis can be illustrated by a graph originally developed by Schmitter (1970) which can be seen in figure 12. The y-axis represents the increasing/decreasing development of integration. While the x-axis illustrates the increase/decrease of supranational decisions.

According to Nicoli (2020) the form that the result of an outcome will take depends on various factors:

1) The degree of common identity:

The stronger the sense of common identification or belonging to a common entity is among the population, the more likely supranational institutions will acquire competencies in high politics (Nicoli, 2020). In the implementation and achievement of the EGD, various entities work together to achieve a common goal, in this case, the solution of the climate and environmental problem. This common goal promotes a common identity and the strengthening of unity, which results in further integration (Rivas et al., 2021).

2) Degree of pre-existing integration and path-dependency:

As has been shown in the course of the EU's history, the EU has worked as a common unit, on further and deeper integration and has not been distracted from this path even by crises

(Laffan, 2016). Path dependency makes it more likely that new policies and institutions will be introduced in areas where integration is already developed (Schimmelfennig, 2018). The intensity of the path-dependency process determines the outcome of any particular crisis (Kuhn & Nicoli, 2020).

In order for the path-dependency to be a reliable source of stability in the integration process, disintegration must continue to be undesirable. Endogenous interdependencies, meaning-deepening of interdependence through previous integration steps influence the path dependency. This can be explained by the fact that the costs for actors who are broadly involved in the integration and profit from it will be higher in case of an exit. In the EGD it was a concern to make it clear to all participants involved, member states or even private investors, that a positive outcome from the EGD is also desirable for them and that no one is harmed by it (European Commission, 2020a; 2021).

Thus, it is to be expected that these actors will use their autonomy and resources to prevent a negative outcome and exit strategy from the action plan. Only when transnational interconnectedness and supranational competence transcend crucial limits, path dependency can emerge. Critical supranational capacity involves both supranational institutions' independent decision-making abilities and resources to reduce intergovernmental distributional tensions and transnational pressures (Schimmelfennig, 2018).

3) Autonomy of actors:

Integration is more extensive the more autonomous supranational actors are involved in decision-making in a given area (Nicoli, 2020). Through the introduction of the EGD at the Commission as a supranational organization of the EU gained autonomy and was able to borrow and lend money independently on the capital market in the course of the EGDIP (European Commission, 2020a).

4) Distribution of the cost of non-integration:

The higher the number of countries not affected by the crisis, the less likely it is that integration will occur (Nicoli, 2020). Governments agree to greater integration only, if the costs of stagnation or disintegration appear prohibitive (Schimmelfennig, 2018). It should also be noted that when costs increase, the participants involved are more reluctant to take a new direction (Schimmelfennig, 2018). The introduction of the EGD is about a solution approach that should help to solve environmental problems and the climate crisis in the EU but also worldwide (European Commission, 2019e) . It is an issue that can affect all member states positively, but also negatively and whose solution is desirable for all participants. None of the member states can suffer damage from the integration involved in the solution of the

EGD. This is guaranteed by the do-no-significant-harm criterion (European Commission, 2019a). The cost of not integrating some participants would become clear in the form of further environmental and climate problems. The consequences of this are pointed out by the IPCC and are not desirable for any of the participants (IPCC, 2018a).

It should be emphasized that neofunctionalism focuses particularly on positive feedback processes of spillover and path dependence that lead to more integration (Schimmelfennig, 2018). Positive spillovers as integration steps have occurred in the process of achieving climate goals and solving the environmental crisis through the introduction of the EGD.

The role of the Commission as a supranational institution in the integration process

The financial crisis and the associated integration process have strengthened the power of the Commission as a supranational body and widened the associated scope for political action. The Commission has developed new implementation power, moving away from agenda setting to policy initiation right and is able to initiate socio-economic changes and is thus responsible for legislation acts in numerous sectors. On the other hand, action plans are a non-legislative way to promote policy ideas and thus to promote integration in a further step (Nugent & Rhinard, 2019).

With the introduction of the EGD, the Commission, as a supranational body, has gained further power. Although the RRF plans, which are to be used for climate-related issues and are submitted by the Member States to the Commission, have to be approved by the Council and the Parliament in a second, step after the Commission has submitted its assessment (European Commission, 2021j), the Commission has gained more power by managing the EU budget which is necessary for the achievement of the EGD targets by implementing and adding new measures and regulations to the EGDIP. They negotiate how much of the MFF budget should be used for climate-related goals; they develop together with experts monitoring and reporting systems, as well as their own standards to ensure that the funds are distributed and used efficiently; together with InvestEU partners, they develop their own financial products to promote sustainable goals and develop their own sustainable financing strategy. The commission is working with the co-legislators and the EIB Group to expedite the approval of the Just Transition Fund rule and related Common Provisions Regulation modifications., It provides technical help and advising support to Member States and regions in the formulation of territorial transition plans (European Commission, 2020a).

The Commission is also able to borrow money on its own, in the form of Green Bonds on the capital market, and then use them to achieve the EGD goals. The Commission intends to raise 30% of the needed budget by issuing NGEU green bonds and using the revenues to fund green projects (European Commission, 2020c). To fund NGEU, the Commission will borrow on the financial markets on behalf of the EU for up to €800 billion at current prices (European Commission, 2021d). The possibility of borrowing money on behalf of the EU shows how the Commission has gained power as a supranational body in the ongoing integration process. While in the aftermath of the financial crisis such steps were only possible in consultation with the financial intermediary, the ECB, a new trend has developed in which the Commission is given more room for action and is able to have more power over the development of the EGD plan.

6 Discussion of the results

6.1 Answer to the first research question:

How is sustainable financing framed at the EU level?

Over time, sustainable finance has undergone a transformation from a niche product to a serious area of the financial market. This transformation took place through decisive regulatory decisions within the EU and was thereby facilitated (Ahlström & Monciardini, 2021). The development of sustainable financing within the EU has passed through various turning points and phases, all of which have brought new results and trends and thus influenced the investment behavior of market participants but also the status of sustainable financing instruments on the financial market.

It becomes obvious that crises have not only become a major descriptor of individual occurrences. The term does not simply describe a set of circumstances; it is also understood in this context to function as a powerful narrative device that, when invoked, generates a set of meanings that structure knowledge of social phenomena and, more importantly, shape policy decisions and governance structures but also continue to function as a strong narrative device that impacts policy and governance structures, including decisions concerning the development of sustainable financing tools within the EU (Dines et al., 2018).
A direct comparison of three crises that have taken place in the EU since 2009 shows different relationships between crisis situations and sustainable financing.

The financial and euro crisis made sustainable financing an important issue in the EU in the first place. Due to the decreasing confidence in the measures taken by the financial market until then and the emerging desire of citizens but also of politicians for sustainable, stable, and socially fair financing options, the model of sustainable financing gained importance in the EU and established itself as one of the most powerful financing components. The importance of sustainable financing as a prevention of future crises was recognized (Ahlström & Monciardini, 2021).
It should be pointed out, however, that the focus shifted away from environmentally sustainable financing to economic sustainable financing at that time and that environmental issues were pushed into the background by the economic crisis and only became a primary goal again with the recovery of the financial markets (Burns et al., 2020).

The refugee crisis of 2015 was not able to use this positive influence of sustainable financing to solve the circumstances in the first place. While some funds have been established to support Member States, no sustainable financing option could be established in cooperation between Member States and EU institutions first. The reason for this is the lack of cooperation and unity regarding the solution and handling of the crisis. In the case of the refugee crisis, the EU had to struggle primarily with solidarity and unity problems. Only in the aftermath, after the most urgent problems had been solved and the situation with regard to the refugee crisis had calmed down, the sustainable and long-term goals addressed could be addressed.

It is different, however, when considering the COVID-19 crisis. Contrary to expectations, the pandemic has brought the importance of sustainable financing to the front. Measures regarding the EGD were not neglected but strengthened. In addition, new sustainable financing instruments were developed and presented in the course of the NGEU (Dupont et al., 2020).

A critical juncture is an occurrence or a choice made, particularly during times of crisis, that has a causal effect and is a significant turning point in the evolution of policy or institutions, and can influence the development away from previously made decisions (Dupont et al., 2020).
By this definition, the euro crisis can be seen as a critical juncture in the development of sustainable financing policies. Due to the outbreak of the financial and subsequent sovereign debt crisis, sustainable financing has gained in importance and significance in the financial market. The developments have led to the fact that sustainable considerations are taken into account in the course of financing but also problem solving in the long term. The concept has evolved from a niche product in the financial sector to one of the most essential components of the market as a result of the financial crisis (Ahlström & Monciardini, 2021).
It cannot be denied that the other two crises analyzed also had a major impact on the development of sustainable finance. When considering the analysis of critical junctures, it is important to keep in mind that a critical juncture can only be identified over time, as developments emerge and it can be observed whether decisions and events evolve away from the pathway established before the crisis (Dupont et al., 2020). The future development with regard to decisions in the course of sustainable financing development as a consequence of

the analyzed crises will show whether these events in the past can be classified as critical junctures.

6.2 Answer to the second research question:

How important are the sustainable financing tools in achieving the defined goals of the EGD?

A closer analysis of the instruments and platforms listed in the Action Plan on Sustainable Financing was conducted to determine their contribution to achieving the goals of EGD. The aim of this analysis was to examine in more detail, how the instruments presented can motivate private and public investors to invest in green bonds, as these investments are a crucial part of the financing and realization of the EGD.

It is known that investors are willing to invest in green bonds, but that often too little information, lack of transparency or lack of trust in such green bonds, lead investors not to invest in green projects, but to put their money in conventional funds, which are already established in the financial market (European Commission, 2018a).

Table 1 provides an overview of the instruments and platforms analyzed and their contribution as a promotional tool to increase the attractiveness of green financing for investors in order to achieve the EGD goals.

Table 1: Measures of the Action Plan on Financing Sustainable Growth, own representation

Measure/ Platform	**Contribution to the fulfillment of the EGD targets**
Action Plan on Financing Sustainable Growth	Leads to the reorientation and mainstreaming of capital flows toward sustainable investments
Technical Expert Group on Sustainable Finance	Sets clear guidelines for investing in green bonds
Platform on Sustainable Finance	Advises and supports the Commission in decisions concerning sustainable financial management, also in times of crisis
International Platform on Sustainable Finance	Mobilizes international green investments and creates synergies by creating communication on a global level
Taxonomy Regulation	Assists in the allocation of funds to promote a sustainable investment system

European Green Bond Standard	Gives investors an useful tool to show that they are supporting credible environmental initiatives that follow the EU taxonomy and EGD goals
Benchmarks	Are used by investors to allocate their portfolios and analyze their financial success
Disclosure	Contributes to the deeper integration of sustainability into ratings and market research, as well as the integration of sustainability, into financial planning and risk management

It can be summarized that all measures contribute to present green bonds and sustainable financing on the financial market as a realistic, measurable, and attractive alternative compared to conventional investment opportunities. Through transparency, EU-wide standards and procedures, sustainable financing should be easier for investors to evaluate and thus to assess. The advantages of such investments are to be brought closer to them.
Through this approach, in which sustainable financing is to be established as an integral and suitable part of the financial market, the EU comes closer to achieving the EGD goals by revising an important source of financing and realization and adapting it to the new circumstances.
By adapting the financial market to the new circumstances and needs of investors, it is possible to attract new private and public investors for sustainable projects. This leads to the result that more capital can be invested in sustainable, green environmental projects in order to achieve the established goals of the EGD.

6.3 Answer to the third research question:

Given the significant contribution that the EGD and NGEU have for the European integration process, how can such agreements be explained?

As in previous crises, the environmental and climate crisis has influenced and changed the development of EU integration and the power distribution between intergovernmental and supranational institutions (Laffan, 2016).

Although the integration of the EU has been relatively stable overall, current challenges have caused integration to weaken, especially with regard to environmental issues. Disagreement on environmental issues among member states has led to policy implementation problems

(Burns et al., 2020). The introduction of the EGD and the increased importance of sustainable financing in the context of this development through the issuance of green bonds has strengthened integration in the EU and formulated a common goal with an action plan for all involved participants.

When analyzing these developments from the neofunctionalism point of view and the associated tenets of the theory, positive political spillovers and dependence in the form of pathways of previous crises and the related development of integration are explanatory factors of this increased integration.
This positive development of integration is attributable above all to the Commission as a supranational EU body. Through the development towards the introduction of the EGD, it has gained in power. This can be justified by the fact that the Commission now has the possibility to borrow and lend money on the capital market for the EU for the first time in the course of the EGD and to manage it in a further step therefore using it for the successful implementation of the goals of the EGD (European Commission, 2021d).

7 Limitations and further research

Crises have been identified in this thesis as an important factor influencing the development of the concept of sustainable financing and the related impact on the achievement of the defined objectives of the EGD, but also on the integration of the EU. Crises can change previously defined priorities and objectives, and concepts have to be adapted to new challenges. It can happen that a crisis overshadows the current goals of the EU and brings new challenges to the center of attention.
The Ukraine war represents a crisis and challenge for the EU (European Council, 2022). Help packages with money from the EU are needed to help the people in Ukraine, but also those who have fled (European Commission, 2022a). The development is still too current and not sufficiently documented to be included in the presented thesis. It is therefore necessary in future research on crises and integration, as well as on the relationship between crises and the status and success of sustainable financing in the EU, to include the Ukraine crisis and to discuss how this crisis has influenced priorities in relation to the achievement of climate and environmental goals.

It could be said that natural catastrophes, as well as environmental and social sustainability challenges that might influence the economy and financial markets, will be mitigated by including sustainability principles (European Commission, 2018b). According to this conclusion, not all but some crises can be avoided in the future if people invest in sustainable ways of thinking and acting today. Given the present high needed levels of investment in sustainable projects, it would make sense to focus subsequent research on the success of sustainable actions not only on damage limitation in the sense of minimizing the climate crisis, but also on damage prevention towards the avoidance of future catastrophes. In this way, it could be made clear to the public what a significant value sustainable action has and thus also motivate private, as well as public investors to continue to invest in such sustainable projects.

In order to track the actual contribution and not only, as in the present work, the potential chance of sustainable financing on the achievement of the EGD goal, it is necessary to use recent reports. This would make it possible to compare the costs, in terms of investments in sustainable projects through green bonds, with the successes and fulfillments of the goals achieved through the investments. Since the impact reports are submitted only once a year and the EGD is a relatively new set of measures adopted by the EU, it is not yet possible to

make and analyze such a comparison. Only in this way is it possible to find out the actual impact of sustainable financing instruments such as the green bond.
For future research in this area, it is necessary to have enough annual reports available, which make the success of the sustainable investment evaluation possible. This allows to adjust the plan, re-evaluate it and adapt it to new results and conditions.

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9 Appendix

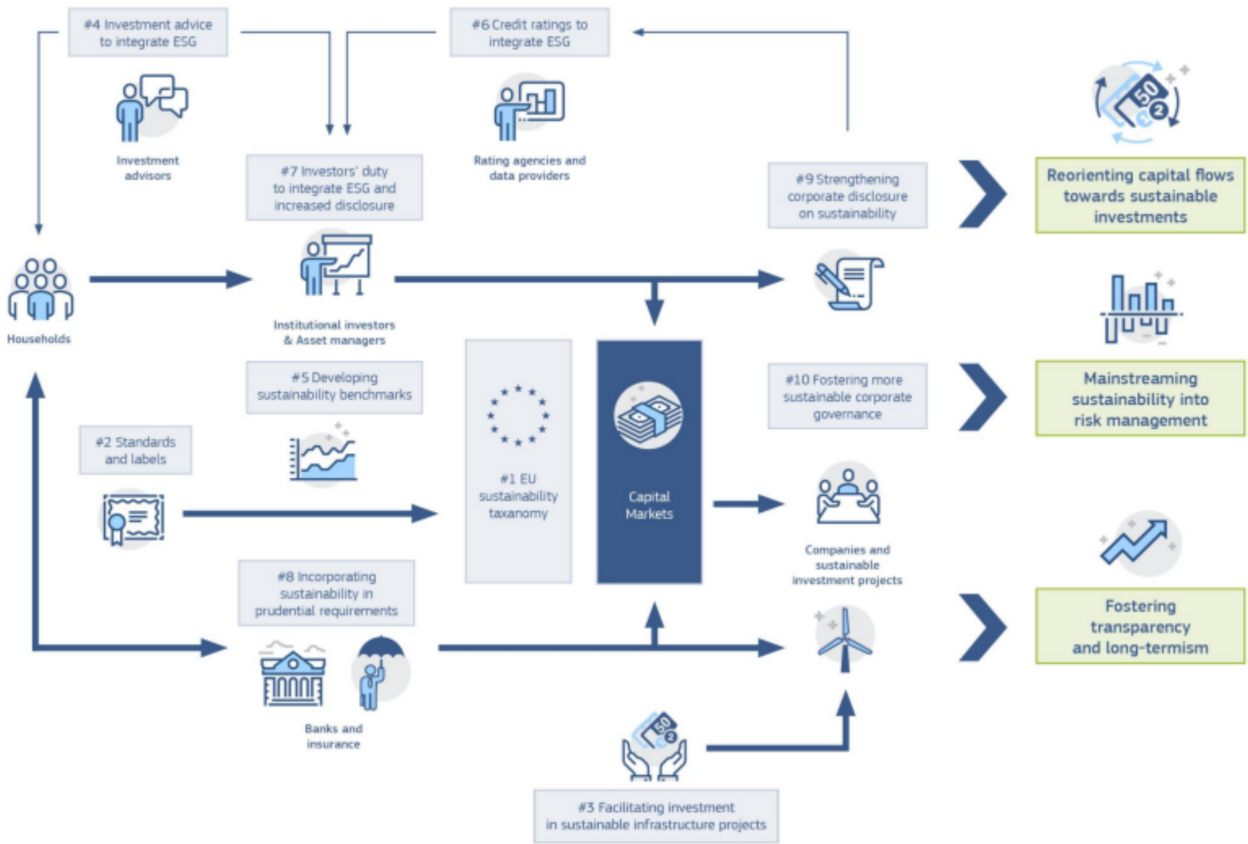

Figure 13: Action Plan on Financing Sustainable Growth, European Commission, 2018a, p.19