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The Netherlands

Bridging the sustainability information gap: an assessment of the European sustainable finance framework

Hartman-Ohnesorge, L.G.L.

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2 | The Normative Framework

1 INTRODUCTION

This thesis examines how successful the EU Sustainable Finance Framework (“EU SFF”) is from a Law & Economics (“L&E”) perspective. L&E is a legal school of thought that uses economic theory to analyse the law. The idea behind L&E is that the law should improve welfare through ensuring the efficient functioning of the market. On the one hand, relying on the market exhibits a fundamental respect for the autonomy of the market participants. On the other hand, there is a well-defined public goal: in an efficient market, resources are used in the most efficient manner, benefitting society as a whole. L&E thus encompasses a specific relationship between private and public law – one in which the market, made up of voluntary private transactions, may be regulated by public law if it does not produce the envisioned policy goal. This feature is mirrored in the EU SFF, which regulates how private parties transact in financial markets.

In this Chapter, I examine how L&E provides a compelling moral foundation for public regulation. To do this, I first examine the background of L&E, specifically focusing on three major legal movements that preceded it (para. 2). In the discussion of the historical background, I focus on how these movements perceive the relationship between law and the market. This helps to better understand the particular relationship between law and the market in L&E. Then I elaborate on the two central aspects of L&E: efficient markets as a tool for increasing welfare (para. 3), and welfare as a moral foundation for public regulation (para. 4). Within this latter paragraph, I argue that the term ‘welfare’ should be interpreted as “the value of everything in society” as this provides a robust justification for public regulation of private markets in general, and more specifically, for the EU SFF.

2 HISTORICAL BACKGROUND

2.1 Introduction

L&E uses economic ideas as the prism through which to analyse the law and is embedded in a rich legal historical background. It is one of the schools of thought that emerged out of legal realism, an intellectual movement that

gained popularity in the (early) twentieth century as the antithesis to positivism and formalism. L&E exhibits characteristics of both legal realism as well as positivism and formalism. For example, central to L&E is the formalist idea of the private market as a motor for societal progress, whilst at the same time, L&E is perceptive to public law intervention in that market. To understand the emergence and context of L&E, the intellectual movements from which it stems are discussed in this paragraph.

2.2 Legal Positivism and Legal Formalism

Legal positivism was explicitly developed by Bentham (1748-1832) and Austin (1790-1859), based on the foundations laid by Hume and Hobbes, and finds its origins in the rejection of English common law.¹ English common law is the body of law developed through precedents and based on general unwritten custom since Anglo-Saxon times.² From this, classical common law theory developed, which has two significant features on the relationship between law and state, described in Blackstone's four-volume Commentaries on the Laws of England (1765-1769).³ First, the authority of the law is based on common and immemorial custom.⁴ The authority of common law thus rests upon the usage and continued acceptance by the public, establishing a strong moral foundation for the authority of law, particularly when compared to law enacted by a non-democratic sovereign.⁵ The second feature is an explicit rejection of the *lex scripta*, the codification of rules of law, as such law merely

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- 1 Green L. & Adams T., "Legal Positivism", in: Zalta E.N. & Nodelman U. (eds.), *The Stanford Encyclopedia of Philosophy* (2022 edition), available at: <https://plato.stanford.edu/>, accessed on: 4 August 2022. Whereas the Bentham, Hume and Hobbes can be considered political philosophers in a more general sense, Austin's work is of a legal nature.
 - 2 English common law is an independent system of definitions, principles, and logic, reflecting a special type of abstracted reasoning. Postema G.J., *Bentham and the Common Law Tradition* (2nd edition), Oxford University Press 2019, p. 62; Sebok A.J., *Legal Positivism in American Jurisprudence*, Cambridge University Press 1998, p. 24-26.
 - 3 During the 16th and 17th century, law became a powerful tool to control and direct society to serve the ends of the sovereign. As a response, Classical common law theory emerged. See: Postema G.J., *Bentham and the Common Law Tradition* (2nd edition), Oxford University Press 2019, p. 3; MacMillan K., "English Law and its Expansion", in: Pihlajamäki H., e.a. (eds.), *The Oxford Handbook of European Legal History*, Oxford University Press 2018, p. 831; Blackstone W., *Commentaries on the Law of England*, Book 1, Clarendon Press 1768, p. 67-68.
 - 4 Blackstone W., *Commentaries on the Law of England*, Book 1, Clarendon Press 1768, p. 67: "[I]n our law the goodness of a custom depends upon it's having been used time out of mind, or, in the solemnity of our legal phrase, time whereof the memory of man runneth not to the contrary. This it is that gives it it's weight and authority."
 - 5 Postema G.J., *Bentham and the Common Law Tradition* (2nd edition), Oxford University Press 2019, p. 4-13.

contained the arbitrary will of the legislator and because codified rules were too rigid to be useful.⁶

In contrast, classical legal positivism strongly emphasises the importance of legislative institutions and the role of coercive force in law, based on three ideas.⁷ First, the separability principle, which contains the notion that there is no necessary connection between law and morality.⁸ Law is seen as a social phenomenon that may coincide with certain moral principles but morality in itself does not validate (or invalidate) laws and, *vice versa*, the existence of a law does not establish a moral principle.⁹ Therefore, the authority of the law has to be established without recourse to some moral or historical source. Second, classical legal positivism developed the command theory.¹⁰ In the command theory, laws are ‘commands’, applying to a general class of the public (as opposed to a specific individual), combined with the ability to enforce a sanction if the command is not complied with.¹¹ Third, the ‘source thesis’, which states that the validity of a law is directly dependent upon the source.¹² The only valid source in legal positivism is the sovereign, as opposed to immemorial and continued custom under classical common law theory.¹³

6 Blackstone W., *Commentaries on the Law of England*, Book 1, Clarendon Press 1768, p. 68: “all these [general rules of law] are doctrines that are not set down in any written statute or ordinance, but depend merely upon the immemorial usage, that is, upon common law, for their support.” See also Postema G.J., *Bentham and the Common Law Tradition* (2nd edition), Oxford University Press 2019, p.15-16; Sebok A.J., *Legal Positivism in American Jurisprudence*, Cambridge University Press 1998, p. 29.

7 Sebok A.J., *Legal Positivism in American Jurisprudence*, Cambridge University Press 1998, p. 30-32.

8 For example: Hart H.L.A., “Positivism and the Separation of Law and Morals”, *Harvard Law Review* 1958, vol. 71(4), p. 593.

9 The separability thesis in essence rejected Blackstone’s appeal to natural law in his construction of common law as an independent and rational system. See: Postema G.J., *Bentham and the Common Law Tradition* (2nd edition), Oxford University Press 2019, p. 62. On this point, Bentham has argued that the reliance on natural law equates standards of law with the personal opinion of the judge: “When a man disapproves of a mode of conduct considered independently of any actual System of Jurisprudence he says there is a Law of Nature against it... If he cannot tell why he disapproves of it he begins talking of a Rule of Right, a Fitness of Things, a Moral Sense or some other imaginary standard which howsoever varied in description, is from first to last nothing but his own private opinion in disguise.” Bentham Manuscripts in the University College, London Library, UC lxix. 102., quoted in: Postema G.J., *Bentham and the Common Law Tradition* (2nd edition), Oxford University Press 2019, p. 263.

10 Sebok A.J., *Legal Positivism in American Jurisprudence*, Cambridge University Press 1998, p. 31.

11 Austin J., *The Province of Jurisprudence Determined*, Cambridge University Press 2009, (first published in 1832), p. 21-25; Bix B., “John Austin”, in: Zalta E.N. & Nodelman U. (eds.), *The Stanford Encyclopedia of Philosophy* (2022 edition), available at: <https://plato.stanford.edu/>, accessed on: 4 august 2022.

12 Sebok A.J., *Legal Positivism in American Jurisprudence*, Cambridge University Press 1998, p. 31-32.

13 Austin J., *The Province of Jurisprudence Determined*, Cambridge University Press 2009, (first published in 1832), p. 18-20.

The ideas of legal positivism were not confined to English jurisprudence and also had a tremendous impact on American legal theory, albeit under the name of legal formalism, which in time became a distinct movement from the English classical legal positivism.¹⁴ Formalism perceived law as a system that contains internal and autonomous truths separate from political and social institutions.¹⁵ Formalism thus understands the law from a standpoint internal to the law itself, which contains its own moral order.¹⁶ Cohen accordingly described this development as “the fiction that the law is a complete and closed system, and that judges and jurists are mere automata to record its will or phonographs to pronounce its provisions.”¹⁷ Decision-making thus should take place exclusively on the basis of the law instead of other decision-making factors, such as for example the circumstances in which parties contracted.¹⁸ The law itself was conceived as a body of pre-existing rules either contained in legal materials or to be deduced from those materials by logical operation.¹⁹

2.3 Legal Realism

The formalistic approach was rejected by the legal realists, who advocated a broader approach to understanding the role of law.²⁰ Legal realism thus rejects the ‘deductivism’ that characterises legal formalism – the idea that logical deduction from existing rules of law is the only content of law – and the resulting doctrinal rigidity and legal conservatism that characterises legal formalism.²¹

14 Sebok A.J., *Legal Positivism in American Jurisprudence*, Cambridge University Press 1998, p. 42-45.

15 Weinrib E.J., *The Idea of Private Law*, Oxford University Press 2012, p. 22.

16 Unger R.M., “The Critical Legal Studies Movement”, *Harvard Law Review* 1983, vol. 96(3), p. 561, 565.

17 Cohen M.R., “Positivism and the limits of Idealism in the Law”, *Columbia Law Review* 1927, vol. 27(3), p. 237-238.

18 Schauer F., “Formalism”, *The Yale Law Journal* 1988, vol. 97(4), p. 509-510.

19 Posner R.A., *How Judges Think*, Harvard University Press 2010, p. 41. Leiter B., “Positivism, Formalism, Realism”, *Columbia Law Review* 1999, vol. 99(4), p. 1138, 1145-1146. A caricatural description would be that legal formalists perceive the judiciary as a giant syllogism machine, in which the law forms the objective truth and major premise and the facts of the case the minor premise, which logically applied to the major premise should result in the right outcome of a case; source: Neuborne B., “Of Sausage Factories and Syllogism Machines: Formalism, Realism, and Exclusionary Selection Techniques”, *New York University Law Review* 1991, vol. 67(2), p. 491, 421.

20 Freeman M.D.A., *Lloyd’s Introduction to Jurisprudence* (8th edition), Sweet & Maxwell 2008, p. 986-987. Also: Llewellyn K.N., “Some Realism About Realism: Responding to Dean Pound”, *Harvard Law Review* 1931, vol. 44(8), p. 1222.

21 Quevedo S.M., “Formalist and Instrumentalist Legal Reasoning and Legal Theory”, *California Law Review* 1985, vol. 73(1), p. 119. As the author puts it, formalism misconstrues how law actually operates in the broader context of the legal system and disregards the “law as both

The legal realists aimed to discern what influenced law, especially in its application by judges.²² For this, they studied the motivations behind cases and discerned that various factors influenced the law, including social, political, and historical circumstances, personalities, economic conditions, business interests, and ideologies.²³ By this, the realists concluded that a judge always reached within the reality of the specific circumstances of the case. Over time, three distinct features of legal realism emerged.²⁴

First, the law is not universal but is constantly changing, as is society itself.²⁵ In this changing society, law should be a means to a social end and not an end in itself. Second, the realists distrusted the belief that general legal rules and concepts could be a realistic representation of actual human behaviour.²⁶ Law is based on human experiences and politics, dependent on historical and geographical realities rather than a universal, hidden, system to uncover by deduction.²⁷ Moreover, the realists doubted that general rules and concepts were the most important factor in judging cases.²⁸ Realism, therefore, took a more prescriptive approach to adjudication: it could be observed that judges not only applied the facts of the case to the applicable legal principle but that decisions were influenced by other matters.²⁹ Third, legal realism advocated a novel manner to study the law.³⁰ Instead of searching for the internal logic of existing rules, realism emphasised that there is a difference between what the law is, and what the law ought to be. The movement thus created room for normative evaluations of the law. These evaluations can be based on a broad number of factors and methods, such as policy goals and empirical evidence. Singer sums up the three features of realism in a single quote: “(t)he legal realists wanted to replace formalism with a pragmatic attitude towards law generally.”³¹

a part of a larger social system and a tool for making that system more coherent, workable, and fair.”

22 Dias R.W.M., *Jurisprudence* (5th edition), Buttersworth London 1985, p. 448-449.

23 Dias R.W.M., *Jurisprudence* (5th edition), Buttersworth London 1985, p. 448-449.

24 Llewellyn K.N., “Some Realism About Realism: Responding to Dean Pound”, *Harvard Law Review* 1931, vol. 44(8), p. 1222.

25 Llewellyn K.N., “Some Realism About Realism: Responding to Dean Pound”, *Harvard Law Review* 1931, vol. 44(8), p. 1222, 1236-1237.

26 Llewellyn K.N., “Some Realism About Realism: Responding to Dean Pound”, *Harvard Law Review* 1931, vol. 44(8), p. 1222, 1236-1237.

27 Singer J.W., “Legal Realism Now”, *California Law Review* 1988, vol. 77(2), p. 465, 474.

28 Llewellyn K.N., “Some Realism About Realism: Responding to Dean Pound”, *Harvard Law Review* 1931, vol. 44(8), p. 1222, 1236-1237.

29 Leiter B., “Positivism, Formalism, Realism”, *Columbia Law Review* 1999, vol. 99(4), p. 1138, 1148.

30 Llewellyn K.N., “Some Realism About Realism: Responding to Dean Pound”, *Harvard Law Review* 1931, vol. 44(8), p. 1222, 1236-1237.

31 Singer J.W., “Legal Realism Now”, *California Law Review* 1988, vol. 77(2), p. 465, 474.

Ultimately, the realists failed to formulate a functional normative legal framework. Instead, it led to the development of various schools of thought developed over the last century, including L&E.³²

2.4 Law & Economics

The field of modern L&E emerged in the early 1960s and is often pinpointed to the publications of Ronald Coase's *The Problem of Social Costs* and Guido Calabresi's *Some Thoughts on Risk Distribution and the Law of Torts*.³³ Coase's article discusses the problem of externalities and how, in the absence of transaction costs, arbitrage between parties is a more efficient way to advance welfare than the regulation of activities that cause externalities. Calabresi's article reflects on the theoretical justification of various manners of distributing risks and losses. Although L&E scholarship frequently involves empirical research, these two papers are of a doctrinal nature, demonstrating that L&E encompasses qualitative research as well. While L&E research spans a broad range of variations, it is unified by the characteristic that (micro-)economic concepts and theories are used to analyse and evaluate laws and institutions.³⁴

The normative foundation of L&E rests on the premise that efficient markets enhance social welfare. This premise reflects elements from both legal positivism and formalism and from legal realism. The central concept of the market as a self-regulating system that naturally gravitates toward an efficient equilibrium which in principle precludes public law intervention, is typically formalistic. Equally formalistic is the presumption that efficient markets benefit societal welfare.

At the same time, L&E questions these formalistic premises in its analysis and evaluation of legal rules in relation to the market. In L&E, the focus is

32 Other schools of thought that stem from legal realism, are, among others: Critical Legal Studies, Feminist legal Theory, Law & Society, Legal Process, Rights theory. See: Singer J.W., "Legal Realism Now", *California Law Review* 1988, vol. 77(2), p. 465, 504.

33 Coase R.H., "The Problem of Social Cost", *The Journal of Law & Economics* 1960, vol. 3, p. 1; Calabresi C., "Some Thoughts on Risk Distribution and the Law of Torts", *The Yale Law Journal* 1961, vol. 70(4), p. 499. See also: Posner R.A., *The Economics of Justice*, Harvard University Press 1981; Rowley C.K., "An intellectual history of law and economics: 1939-2003", in: Parisi F. & Rowley C.K. (eds.), *The Origins of Law and Economics*, Edward Elgar 2005, p. 3.

34 Parisi F., "Methodological debates in law and economics: the changing contours of a discipline," in: Parisi F. & Rowley C.K. (eds.), *The Origins of Law and Economics*, Edward Elgar 2005, p. 34 Coleman J.L., *Markets, Morals, and the Law*, Oxford University Press 1998, p. 67-68. Coleman discusses three common types of L&E research: (1) descriptive L&E research, which focusses on economic efficiency as an explanatory tool for rationalizing existing legal rules, (2) positive L&E research, which uses abstract market models to conceptualize traditional legal problems, (3) normative L&E research, which evaluates legal rules in terms of their economic efficiency.

on identifying and addressing impediments to optimal market function. This reflects the legal realism dimension of L&E: efficient markets may be the central premise of how resources are allocated but the concept of efficient markets is not seen as a realistic representation of reality. Moreover, L&E sees the law as a tool to improve efficient markets, and thus enhance welfare, which means that the law is seen as a means to an end and not as an internally coherent and closed system.

Two central concepts in L&E are efficient markets and welfare. These concepts serve as the analytical framework for evaluating whether public regulation of private markets is justified. The first concept, the 'efficient market' is how the market is supposed to function. A good understanding of this concept is important in order to understand not only how markets are supposed to work, but also to identify possible market failures that warrant regulatory intervention. In the next paragraph, I explore the concept of efficient markets, its relation to climate change, and specifically, its relation to the problem of a lack of sustainable finance and the EU SFF. The second concept, welfare, is the normative justification for public regulation of the market. This concept will be discussed in paragraph 4.

3 ON EFFICIENT MARKETS

3.1 Introduction

In L&E, efficient markets are the tool by which to achieve welfare. In this paragraph, I discuss two common notions of efficiency: Pareto efficiency and Kaldor-Hicks efficiency. When this efficiency cannot be realized due to so-called market failures, public intervention in the market may be justified according to L&E. I therefore discuss three market failures that play a central role in this research. First, climate change is the result of the market failure of externalities. Second, the two market failures that are central to the EU SFF are information asymmetries and the principal-agent problem.

3.2 On Efficiency

L&E is based on the premise that efficient markets enhance social welfare. Efficiency centres on the idea that resources are scarce and that an economy should be efficient in the manner that it allocates resources and produces output. In that way, the scarce resources will be optimally distributed and

thus be put to optimal use.³⁵ This is referred to as allocative and productive efficiency.³⁶

Table 1: Conditions for an efficient market. Source: Own image.

Category	Condition
Market structure	There is perfect competition
	Trading is cost-free
Market participants	Market participants have full information, which is symmetric for all
	Market participants are rational, act in their own interest and have fixed preferences
Relationship public & private domain	Private costs equal social costs
	Private goods

In principle, L&E presumes that markets allocate resources efficiently when circumstances are ideal, which are summarised in the table shown below.³⁷ Resources are allocated efficiently when prices equal marginal costs. The marginal cost is the lowest point at which a seller can put the good onto the market without incurring a loss. At this point, there should be no over-production on the supply side: any unsold goods would result in a loss since the sold goods generate no excess profits that compensate for the costs of the unsold goods. This is efficient as no rational producer would produce more than the demand. Vice versa, there should be no larger demand than supply for the good at that price – had there been a larger demand, this would have led to higher prices. The increase in price would have made it profitable to produce more of the good, which would have increased the availability, reduced the price, and so on. This was already described by Adam Smith, who explored the relationship between market price and supply and demand. He argued that the lowest price at which a good can be put on the market, is its natural price, the costs of producing the good.³⁸ According to Smith, in a competitive market, the actual market price will always converge toward the natural price: it is the lowest price for which the good can be sold without

35 Armour J., e.a., *Principles of Financial Regulation*, Oxford University Press 2016, p. 53; Kim A., “Decentralization and the Provision of Public Services: Framework and Implementation”, *The World Bank Policy Research Working Paper* 2008, WSP4503, p. 8.

36 Armour J., e.a., *Principles of Financial Regulation*, Oxford University Press 2016, p. 53.

37 Based on: Coyle D., *Markets, State, and People*, Princeton University Press 2020, p. 12, 16; Armour J., e.a., *Principles of Financial Regulation*, Oxford University Press 2016, p. 55-61; Krugman P. & Wells R., *Economics* (5th edition), Macmillan 2018.

38 Smith A., *An Inquiry into the Nature and Causes of the Wealth of Nations*, Book I, 1776, Chapter VII, p. 72-73.

the seller making a loss.³⁹ In a competitive market, supply and demand thus should settle at an equilibrium that is allocatively efficient. However, in any given market, there are many such equilibria where supply and demand meet. This raises the question of which equilibrium is to be preferred. There are two variations on efficiency to answer this question: Pareto-efficiency and Kaldor-Hicks efficiency.

3.2.1 Pareto Efficiency

In 1896, Pareto published his formula for a social optimum.⁴⁰ According to Pareto, a reallocation of resources is Pareto-superior if at least one person is better off, without anyone being worse off.⁴¹ A state of the market is considered to be Pareto-optimal if no further reallocation can increase the welfare of another person without anyone being worse off. Rational persons should all contract toward Pareto-optimal points, at which no one loses but some gains are to be realized.⁴² It follows from this concept that markets will gravitate toward Pareto-optimal outcomes, as parties should contract with each other until the point is reached where no further improvement for at least one person is possible without decreasing the position of another – a Pareto efficient equilibrium.⁴³ From this theory follows the first theorem of welfare economics: any equilibrium in a perfect market is Pareto efficient.⁴⁴ This is what is also colloquially known as the Invisible Hand – the idea that markets reach optimal outcomes in the absence of public regulation.⁴⁵

3.2.2 Kaldor-Hicks Efficiency

In 1939, both Kaldor and Hicks published their improvements of the Pareto optimum, which became collectively known as Kaldor-Hicks efficiency.⁴⁶ In essence, their argument is that if the gains made by those better off exceed the losses of those worse off, there is an increase in the aggregate wealth.⁴⁷

39 Aspromourgos T., “Adam Smith’s Treatment of Market Prices and Their Relation to Supply and Demand”, *History of Economic Ideas* 2007, vol. 15(3), p. 27, 29.

40 Pareto V., *Cours d’économie politique*, Volume 2, F. Rouge 1896; Coleman J.L., *Markets, Morals, and the Law*, Oxford University Press 2022, p. 81-86.

41 Pareto V., *Cours d’économie politique*, Volume 2, F. Rouge 1896; Coleman J.L., *Markets, Morals, and the Law*, Oxford University Press 2022, p. 81-86.

42 Coleman J.L., *Markets, Morals, and the Law*, Oxford University Press 2022, p. 81-86.

43 Coleman J.L., *Markets, Morals, and the Law*, Oxford University Press 2022, p. 81-86.

44 Discussed in, for example, Arrow K. J. & Debreu G., “Existence of an Equilibrium for a Competitive Economy”, *Econometrica* 1954, 22(3), p. 265, 266.

45 Coleman J.L., *Markets, Morals, and the Law*, Oxford University Press 2022, p. 81-86.

46 Hicks J.R., “The Foundations of Welfare Economics”, *The Economic Journal* 1939, vol. 49(196), p. 696.

47 Kaldor N., “Welfare Propositions of Economics and Interpersonal Comparisons of Utility”, *The Economic Journal* 1939, vol. 49(195), p. 549–52.

Moreover, those who are better off can hypothetically compensate those who are worse off.⁴⁸ However, the question of compensation is primarily a political question, as it is impossible to model which particular distribution of wealth maximizes social welfare.⁴⁹ Importantly, the Kaldor-Hicks efficiency recognizes that enhancing welfare may coincide with individual losses.

Kaldor-Hicks efficiency embraces the notion that a market can be Pareto efficient but have an objectionable distribution of resources (for example, with a minority owning almost all resources). After all, a change in the allocation of resources is desirable if the total gains exceed the total losses of those worse off, resulting in an increase in the aggregate wealth.⁵⁰ Other than the Pareto efficiency, Kaldor-Hicks efficiency rejects the notion that efficiency is necessarily reached by market mechanics themselves: there is no incentive for those parties who lose out to negotiate themselves into a losing position. However, a policymaker can use the concept of Kaldor-Hicks efficiency to increase total welfare by redistributing resources, without risking to impair the market forever: according to the second theorem of welfare, the market will find a new equilibrium after the intervention through the price mechanism.⁵¹

3.3 Market Failures

The idea central to L&E that the market allocates resources efficiently, can be seen as a typically formalistic presumption. However, L&E departs from this formalistic notion by identifying impediments that hinder the market from achieving efficient outcomes. From an L&E perspective, public regulation may be justified when such impediments occur in order to ensure the efficient working of the market and the maximization of welfare. These impediments, although of endless variations, are often categorised into so-called types of market failures. The following table provides an overview of categories of market failures, in the last column, that are often cited in general literature on why markets fail to achieve efficient outcomes.⁵²

48 Kaldor N., "Welfare Propositions of Economics and Interpersonal Comparisons of Utility", *The Economic Journal* 1939, vol. 49(195), p. 549–52.

49 Kaldor N., "Welfare Propositions of Economics and Interpersonal Comparisons of Utility", *The Economic Journal* 1939, vol. 49(195), p. 549–52. Also: Calabresi G., "The Pointlessness of Pareto: Carrying Coase Further", *The Yale Law Journal* 1991, vol. 100(5), p. 1211.

50 Kaldor N., "Welfare Propositions of Economics and Interpersonal Comparisons of Utility", *The Economic Journal* 1939, vol. 49(195), p. 549–52.

51 Discussed in, for example Arrow K. J. & Debreu G., "Existence of an Equilibrium for a Competitive Economy", *Econometrica* 1954, 22(3), p. 265. Also: Coyle D., *Markets, State, and People*, Princeton University Press 2020, p. 11.

52 Based on inter alia: Coyle D., *Markets, State, and People*, Princeton University Press 2020, p. 12, 16; Armour J., e.a., *Principles of Financial Regulation*, Oxford University Press 2016, p. 55-61; Krugman P. & Wells R., *Economics* (5th edition), Macmillan 2018.

Table 2: Conditions for efficient markets and common categories of market failures. Source: Own image.

Category	Condition	Failure
Market structure	There is perfect competition	Imperfect competition
	Trading is cost-free	Transaction costs
Market participants	Market participants have full information, which is symmetric for all	Information asymmetries, principal-agent problem
	Market participants are rational, act in their own interest and have fixed preferences	Biases in individual decision-making, non-rational behavior
Relationship public & private domain	Private costs equal social costs	Externalities
	Private goods	Free riding & tragedy of the commons

In the context of this research, which focuses on evaluating whether the EU SFF enables investors to make better informed investment decisions that integrate sustainability considerations, two market failures are particularly relevant: information asymmetries and the principal-agent problem.⁵³ This is because the EU SFF specifically addresses these two market failures – explicitly in recital 10 to the SFDR and implicitly with its focus on the provision of information to *inter alia* investors in the recitals of the CSRD and Taxonomy.⁵⁴ However, the overarching problem that the EU SFF addresses, namely the systemic underfunding of sustainable economic activities, and on an even higher level the problem of anthropogenic climate change, are two interlinked problems that both are consequences of the market failing to deliver efficient outcomes. Climate change can be linked to all market failures listed above, but it is generally seen as an externalities problem. In the next paragraph, I therefore expand upon anthropogenic climate change as the result of externalities (para. 3.4). Thereafter, I discuss the two market failures that the EU SFF is specifically attempting to remedy (para. 3.5). I have chosen not to discuss the other market failures listed in the table above because it is not the central objective of the EU SFF to remedy these.

53 By addressing these two market failures, the EU SFF also addresses, at least in part, the market failure of transaction costs. See also: Colaert V., “The changing nature of financial regulation: Sustainable finance as a new policy goal”, *Common Market Law Review* 2022, vol. 59(6), p. 1669, 1671.

54 Recital 10 SFDR: “This Regulation aims to reduce information asymmetries in principal-agent relationships (...)”.

3.4 Climate Change as a Market Failure

The dominant manner of explaining the relationship between climate change and markets is that anthropogenic climate change is the result of the market failure to adequately price and internalise the costs of environmental externalities.⁵⁵ Externalities are uncompensated costs (or benefits) imposed on third parties, also referred to as social costs.⁵⁶ Anthropogenic climate change has been conceptualised as an externalities problem for many decades, for example in the 1969 paper of Ayres and Kneese *Production, Consumption, and Externalities*, mentioned in the previous Chapter.⁵⁷ Two more recent authoritative publications on the topic are Stern's *The Economics of Climate Change: The Stern Review* and Nordhaus' *Climate Change: The Ultimate Challenge for Economics*.⁵⁸

Externalities are uncompensated costs or benefits imposed on third parties.⁵⁹ In relation to environmental harm, the parties derive economic value from activities such as the production and consumption of goods but do not carry the costs of environmental degradation that are caused by their activities, as these are externalised. This causes a divergence between the benefits for the direct parties to the activity and the general costs that are borne by society. From a market efficiency perspective, the market thus has failed to accurately price the activity as the price that is incurred by the parties does not encompass the full costs. As a result, parties are incentivised to continue their harmful activities as they do not carry the costs, even though this is detrimental to public welfare. This misalignment is particularly evident in the context of anthropogenic climate change, as the parties to carbon-intensive activities reap the economic benefits of the activity whilst the environmental costs are externalised to society and future generations.

Environmental impact economic activities are justified when their societal benefits exceed the aggregate social costs, which requires a cost-benefit analysis that encompasses both private and societal costs and benefits. This raises the question of determining optimal emission levels that maximize social welfare.

55 Climate change as an externalities problem can be found in most introductory economics textbooks. See: Liu J.C.-E., Bauman Y. & Chuang Y., "Climate Change and Economics 101: Teaching the Greatest Market Failure", *Sustainability* 2019, vol.11(5), p. 1340. The authors analysed 27 commonly used introductory economics textbooks and found that most books touched on the subject, and all of those conceptualize climate change as a problem negative externalities.

56 See for an introductory economic discussion: Krugman P. & Wells R., *Economics* (5th edition), Macmillan 2018, chapter 8.

57 Ayres R. U. & Kneese A. V., "Production, Consumption, and Externalities" *The American Economic Review* 1969, vol. 59(3) p. 282.

58 Stern N., *Stern Review: The Economics of Climate Change*, Cambridge University Press 2006; Nordhaus W.D., "Climate Change: The Ultimate Challenge for Economics", *American Economic Review* 2019, vol. 109(6), p. 1991.

59 See for an introductory economic discussion: Krugman P. & Wells R., *Economics* (5th edition), Macmillan 2018, chapter 8.

In principle, such an optimum must balance the social benefits against their full social costs.⁶⁰ In a perfectly efficient market, the optimal level should be reached through market forces alone. Evidently, this is not the case. Moreover, the optimal level of emissions is subject to debate as the cost of carbon emissions is impossible to pinpoint. For example, Nordhaus estimated in 2017 that the social costs of one ton of carbon dioxide emitted in the year 2010 was USD 31, whereas Stern estimated the social cost of carbon emissions at USD 300 per ton in 2006.⁶¹ However, there is broad scholarly consensus that current emission levels substantially exceed socially optimal thresholds and that the market is thus failing to adequately price emissions.

In economics, two general solutions have been proposed for the market failure of externalities.⁶² The first solution is imposing a so-called Pigovian tax on the harmful activity.⁶³ As a result of the tax, harmful activities should become as expensive as when the social costs have been internalised.⁶⁴ This should restore the market equilibrium to that which would exist if all costs had been accounted for. The other solution is for private parties to resolve the problem of externalities between themselves without government intervention.⁶⁵ This can be either done through contract or through litigation.⁶⁶ After all, if the market is not yet at its social optimum, there must be room for improvement.⁶⁷

The problem with climate change is that it has a number of features that distinguish it from other externalities, which means that the solutions just mentioned are not adequate. Stern discusses how climate change as an externality differs from other externalities: the global scope of both emissions and their impacts transcends national boundaries, while the long-term effects create a lag between cause and effect.⁶⁸ Moreover, there is uncertainty about the environmental and economic consequences of climate change, and the potentially irreversible character of climate change impedes traditional cost-

60 Krugman P. & Wells R., *Economics* (5th edition), Macmillan 2018, p. 461.

61 Nordhaus W.D., "Revisiting the social costs of carbon", *Earth, Atmospheric, and Planetary Sciences* 2017, vol. 114(7), p. 1518 -1523; Stern N., *Stern Review: The Economics of Climate Change*, Cambridge University Press 2006.

62 Coyle D., *Markets, State, and People*, Princeton University Press 2020, p. 31.

63 Pigou A.C., *The Economics of Welfare* (4th edition), Macmillan and Co. 1932, p. 224.

64 In the context of climate change, carbon pricing can be seen as a Pigovian tax. See also: Nordhaus W.D., "Climate Change: The Ultimate Challenge for Economics", *American Economic Review* 2019, vol. 109(6), p. 1991.

65 Coase R.H., "The Problem of Social Cost", *The Journal of Law & Economics* 1960, vol. 3, p. 1.

66 Endres A., *Environmental Economics – Theory and Policy*, Cambridge University Press 2012, p. 50.

67 Regan D.H., "The Problem of Social Cost Revisited," *Journal of Law & Economics* 1972, vol. 15, p. 427, 428-429.

68 Stern N., *Stern Review: The Economics of Climate Change*, Cambridge University Press 2006, chapter 2.

benefit analysis.⁶⁹ Additionally, climate change is mainly an externalities problem but contains elements of all other market failures as well.⁷⁰ The complex nature of climate change as a market failure makes it particularly difficult to address through traditional policy solutions. No single policy tool can effectively tackle all these interconnected challenges at once. As a result, policy tends to focus on addressing specific parts of the problem, such as, in the context of this thesis, the reorientation of capital flows from unsustainable toward sustainable activities.

3.5 Underinvestment in Sustainable Activities as a Market Failure

The externality problem also distorts investment flows: businesses that generate positive environmental externalities do not get compensated for the value of their societal benefits, whilst businesses that create negative externalities profit by avoiding the true costs of environmental harm.⁷¹ Therefore, in a market that does not internalise the costs of environmental harm, carbon-intensive businesses that externalize environmental costs may categorically realize more financial profits than sustainable businesses that internalise them.⁷² This directly impacts investment decisions: as returns may be higher for carbon-intensive industries, investors who are seeking to maximize the return on their investment may be incentivised to invest in carbon-intensive industries instead of low-carbon alternatives. After all, carbon-intensive industries realize artificially high returns as they do not internalise the costs of pollution. The persistent failure of markets, in general, to adequately price carbon thus is

69 Stern N., *Stern Review: The Economics of Climate Change*, Cambridge University Press 2006, chapter 2.

70 For example, the problem of free-riding and the tragedy of the commons is extremely relevant, see: Hardin G., "The Tragedy of the Commons", *Science* 1968, vol. 162(3859), p. 1243, 1245; Fisher E., Lange B. & Scottford E., *Environmental Law Text, Cases, and Materials*, Oxford University Press 2013, p. 26-27.

71 See also: Schoenmaker D. & Schramade W., *Corporate Finance for Long-Term Value*, Springer International Publishing 2023, p. 162-164.

72 Bolton P. & Kacperczyk M., "Do investors care about carbon risk?", *Journal of Financial Economics* 2021, vol. 142(2), p. 517: "We find that stocks of firms with higher total carbon dioxide emissions (and changes in emissions) earn higher returns, controlling for size, book-to-market, and other return predictors." Note that other research suggest that in fact there is a negative relationship between high carbon emissions and profitability; businesses with high emissions tend to be less profitable than businesses with low emissions. See for example: Oestereich A.M. & Tsiakas I., "Carbon emissions and firm profitability", *Journal of Sustainable Finance & Investment* 2024, vol. 14(4), p. 766; Chava S., "Environmental externalities and cost of capital", *Management Science* 2014, vol. 60(9), p. 2223. The observed lower profitability does not contradict the fact that businesses profit from externalising their environmental costs. The difference in profitability that is shown in these papers, might stem from various other factors, including industry-specific characteristics, regulatory pressures, or operational inefficiencies that are unrelated to environmental externalities.

mirrored in financial markets, which creates a self-reinforcing circle of unsustainable economic activities as these may attract capital that would have been invested in sustainable alternatives if the market had better priced environmental impacts. The market for sustainable financing thus, is facing similar problems as the economy in general as both fail to adequately price environmental costs and benefits. It follows that the market for sustainable financing is failing to realize an optimal allocation of resources too as it is equally struggling with the market failure of externalities, which results in the underinvestment in sustainable activities.

As with climate change, the problem of underinvestment in sustainable activities is more complex than merely the externalities paradigm and combines multiple market failures. Whereas the internalization of environmental costs theoretically should restore the market equilibrium, there are multiple and complex obstacles.⁷³ In addition to the problems listed in the paragraph above that prevent adequate resolution of the climate crisis, externality analysis is difficult due to varying time horizons of environmental impacts and other uncertainties, rendering it time-consuming and costly, which limits its relevance to investors.⁷⁴ It is therefore not surprising that the policy responses to the problem of underinvestment in sustainable activities, including the EU SFF, address not the problem of externalities in the real economy or in financial markets, but focus on more specific impediments to sustainable investing.

The EU SFF rests on the assumption that inadequate information is a significant barrier for sustainability-oriented investors. This follows, for example, from the Action Plan: “[a] lack of clarity among investors regarding what constitutes a sustainable investment is a contributing factor behind this investment gap (...).”⁷⁵ The EU SFF thus aims to facilitate sustainable investment by improving the flow of sustainability information. Whether and why investors want to invest sustainably, has been extensively examined in academic literature.⁷⁶ These studies show that there is a great variety in investor

73 See also: Schoenmaker D. & Schramade W., *Principle of Sustainable Finance*, Oxford University Press 2019, chapter 2.

74 Schoenmaker D. & Schramade W., *Principle of Sustainable Finance*, Oxford University Press 2019, p. 198-199.

75 Communication from the Commission to the European Parliament, the European Council, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions: Action Plan: Financing Sustainable Growth COM/2018/097 final, para. 1.1.

76 For example: Heeb F, e.a., “Do Investors Care about Impact?”, *The Review of Financial Studies* 2023, vol. 36(5), p. 1737. The authors conducted a study to examine how much extra investors would pay for sustainable investments based on their social impact. The key findings were that (1) investors showed significant willingness to pay more for sustainable investments in general, but (2) they didn’t pay significantly more for investments with higher social impact. Investors felt positive emotions when choosing sustainable investments, regardless of the actual impact level. The researchers concluded that investors’ willingness to pay extra for sustainable investments seems to be driven more by emotional factors rather than a careful calculation of the actual social impact achieved. Jansson M. & Biel A.,

preferences on sustainability. When investors incorporate sustainability considerations into their investment decisions, this is for various reasons, including expectations about long-term returns of sustainable investing, efforts to reduce financial risks, and non-pecuniary motivations.⁷⁷ The EU SFF aims to address the varied needs of these investors by addressing two market failures: information asymmetries and the principal-agent problem.

3.5.1 Information asymmetries

3.5.1.1 General Law & Economics Theory

The primary market failure that is addressed in the EU SFF, is information asymmetries. Information asymmetries refer to those situations where one party, usually the buyer, is less well-informed about a financial product than the seller.⁷⁸ As the buyer depends on the information released by the seller,

“Motives to engage in sustainable investment: a comparison between institutional and private investors”, *Sustainable Development* 2011, vol. 19(2), p. 135. This study compared sustainable investing motivations across 60 fund managers, 453 private investors, 71 institutional investors. Private and institutional investors were primarily motivated by environmental and social values (self-transcendent values). Fund managers were mainly motivated by expected long-term financial returns. Different secondary motivations emerged: private investors also considered long-term returns, whilst institutional investors focused on risk reduction. Additionally, a significant misalignment was found: investment institutions misunderstood their clients’ preferences by overemphasizing the importance of financial returns and underestimating how much their clients valued ethical, environmental, and social factors. Hartzmark S.M. & Sussman A.B., “Do Investors Value Sustainability? A Natural Experiment Examining Ranking and Fund Flows”, *The Journal of Finance* 2019, vol. 74(6), p. 2789. This study examines how investors react to sustainability ratings in U.S. mutual funds. The researchers found that investors believed sustainable funds would perform better in the future. However, the actual data showed no evidence that high-sustainability funds outperformed low-sustainability ones. The researchers conclude that investors’ preferences for sustainable funds were driven by two factors (1) emotional positive associations with sustainability that led to optimistic performance expectations and (2) non-financial motivations for choosing sustainable investments. Bauer R., Ruof T. & Smeets P., “Get Real! Individuals Prefer More Sustainable Investments”, *The Review of Financial Studies* 2021, vol. 34(8), p. 3976. This research examines how pension fund members view sustainable investing through two large field surveys. Around 66% of members supported increased company engagement on UN Sustainable Development Goals (SDGs). The main driver for this support was members’ social preferences – meaning they valued societal benefits beyond pure financial returns.

77 For example: Heeb F., e.a., “Do Investors Care about Impact?”, *The Review of Financial Studies* 2023, vol. 36(5), p. 1737; . Jansson M. & Biel A., “Motives to engage in sustainable investment: a comparison between institutional and private investors”, *Sustainable Development* 2011, vol. 19(2), p. 135; Hartzmark S.M. & Sussman A.B., “Do Investors Value Sustainability? A Natural Experiment Examining Ranking and Fund Flows”, *The Journal of Finance* 2019, vol. 74(6), p. 2789; Bauer R., Ruof T. & Smeets P., “Get Real! Individuals Prefer More Sustainable Investments”, *The Review of Financial Studies* 2021, vol. 34(8), p. 3976.

78 Armour J., e.a., *Principles of Financial Regulation*, Oxford University Press 2016, p. 55.

this places him in a vulnerable position.⁷⁹ Buyers, aware of this, are incentivised to mediate the effects of this vulnerability, leading to what is known as the adverse selection problem.⁸⁰ This was famously described by George Akerlof in *The Market for "Lemons"*, in which he gave the example of used cars to show how information asymmetries inhibit the price mechanism from functioning properly.⁸¹ As buyers of used cars are aware of the fact that sellers will not properly inform them of the defects of the specific car, they are unable to properly price the value of a specific car.⁸² They thus will want to pay at most the average price of a used car. This incentivises the sellers to put on the market only cars that are less valuable than an average used car – the information asymmetry thus is to the detriment of those players who offer higher quality products, who will be driven out of the market.⁸³ Buyers, aware of this, will in turn be incentivised to pay even less as the average quality of products is decreasing. The market thus gets captured in a negative price-quality spiral, which ultimately undermines the entire market.⁸⁴

3.5.1.2 Sustainable Investing

This mechanism obviously applies to financial markets as well and is one of the main motivations for information regulation in the first place.⁸⁵ As buyers of financial products depend on information provided by the sellers of those products, a large part of financial regulation is concerned with imposing a duty to disclose relevant information on the sellers – in this context issuers and intermediaries. Minimizing the obligation to investigate in financial markets is classically supported by the argument that the information asymmetry between issuers and investors is so large and the incentives for issuers to manipulate information so strong that a voluntary disclosure system would lead to disclosures based on the private interests of the issuers, which would undermine an efficient market.⁸⁶

79 Armour J., e.a., *Principles of Financial Regulation*, Oxford University Press 2016, p. 55.

80 Veil R. (ed.), *European Capital Markets Law* (2nd edition), Hart Publishing 2017, p. 266.

81 Akerlof G.A., "The Market for "Lemons": Qualitative Uncertainty and the Market Mechanism", *The Quarterly Journal of Economics* 1970, vol. 84(3), p. 488.

82 Akerlof G.A., "The Market for "Lemons": Qualitative Uncertainty and the Market Mechanism", *The Quarterly Journal of Economics* 1970, vol. 84(3), p. 488, 489-490.

83 Akerlof G.A., "The Market for "Lemons": Qualitative Uncertainty and the Market Mechanism", *The Quarterly Journal of Economics* 1970, vol. 84(3), p. 488, 489-490.

84 Summaries are contained in: Veil R. (ed.), *European Capital Markets Law* (2nd edition), Hart Publishing 2017, p. 266 and Armour J., e.a., *Principles of Financial Regulation*, Oxford University Press 2016, p. 55-56.

85 See also: Partnoy F., "Financial Systems, Crises, and Regulation", in: Moloney N., e.a. (ed.), *The Oxford Handbook of Financial Regulation*, Oxford University Press 2015, p. 68-94.

86 Coffee J.C., "Market Failure and the Economic Case for a Mandatory Disclosure System", *Virginia Law Review* 1984, vol. 70(4), p. 717-753; Fox M.B., "Retaining Mandatory Securities Disclosure: Why Issuer Choice Is Not Investor Empowerment", *Virginia Law Review* 1999, vol. 85(7), p. 1335-1420. The seminal work on the balance between the duty to disclose and

With the overarching aim of aligning financial flows to a climate neutral future and with increasing interest in sustainable financial products, the flow of information from issuers to investors must contain relevant sustainability information.⁸⁷ Otherwise, in line with L&E theory, investors are not equipped to adequately assess the (value of) a sustainable investment, which may deter them from allocating capital to sustainable economic activities. Moreover, in the context of environmental information, investors are aware that there is a risk that sellers are withholding information on the negative sustainability performance of an investment, which may be an extra deterrence from allocating capital toward sustainable activities.⁸⁸ Without a standardised framework for sustainability information, investors face multiple information asymmetry issues that impede the efficient allocation of capital to sustainable economic activities. These, *inter alia*, include:

1. The challenge of identifying what information is material to investment decisions;
2. The lack of a standard understanding of what can be considered sustainable;⁸⁹
3. The multitude of methodologies and frameworks for labelling an investment as sustainable;⁹⁰
4. The 'downstream' challenge – how does sustainability information reach end-investors in a market where investment takes place via intermediaries?⁹¹

These are just a few challenges that impede investors' ability to accurately assess and compare both the financial value and the sustainability profile of investments, thereby distorting the pricing mechanism of the market. The resulting inadequate price for sustainable and other investments undermines the efficient allocation of capital toward sustainable economic activities, leading to the current investment gap.

Issuers have a large advantage over investors in accessing their own business-specific sustainability information, which is why sustainability information should be disclosed on a mandatory instead of voluntary basis.

the obligation to investigate in contract theory is: Kronman A.T., "Mistake, Disclosure, Information, and the Law of Contracts", *Journal of Legal Studies* 1978, vol. 7(1), p. 1-34.

87 Rogge E. & Ohnesorge L., "The Role of ESG Rating Agencies and Market Efficiency in Europe's Climate Policy", *Hastings Environmental Law Journal* 2022, vol. 28(2), p. 113, 120-121.

88 Sellhorn T. & Wagner V., "Chapter 12: The forces that shape mandatory ESG reporting", in: Kuntz T. (ed.), *Research Handbook on Environmental, Social and Corporate Governance*, Edgar Elgar 2024, p. 283.

89 Rhodes M.J. & Teerooven S., "Information Asymmetry and Socially Responsible Investment", *Journal of Business Ethics* 2010, vol. 95(1) p. 145, 147-148.

90 Berg F., Kölbel J.F. & Rigobon R., "Aggregate Confusion: The Divergence of ESG Ratings", *Review of Finance* 2022, vol. 26(6), p. 1315.

91 Rhodes M.J. & Teerooven S., "Information Asymmetry and Socially Responsible Investment", *Journal of Business Ethics* 2010, vol. 95(1) p. 145, 147-148.

While some investors may have strong incentives to investigate the sustainability position of issuers, for example in order to diminish climate risks, accessing this information without mandatory disclosures remains exceptionally difficult.⁹² Moreover, sustainability information differs from purely financial information in an important way: it has a public dimension, as sustainability impacts extend beyond the private relationship between contracting parties. These two arguments support applying the same mandatory approach to disclosures for sustainability information as is used for financial information. Additionally, the information asymmetries give rise to another market failure: the principal-agent problem.

3.5.2 The Principal-Agent Problem

3.5.2.1 General Law & Economics Theory

The EU SFF also addresses the principal-agent problem. In the principal-agent theory, the principal, here the investor, delegates some of its decision-making power to the agent, a financial intermediary.⁹³ While this delegation makes sense in complex financial markets, it also creates the inherent risk that the agent does not (fully) act in the interest of the principal.⁹⁴ This is called the principal-agent problem, which has two prerequisites: that the principal and the agent have different interests and that there is information asymmetry between them.⁹⁵

The principal-agent problem stands in the way of an efficient allocation of resources in financial markets. First, prior to concluding a contract, it can lead to the adverse selection problem described in the previous section as investors are aware of the fact that intermediaries may exploit the information asymmetry between them.⁹⁶ The investor may attempt to overcome this vulnerability either by withdrawing from the market or by screening the intermediary, which increases costs.⁹⁷ Second, after the conclusion of the contract,

92 For example: Krueger P., Sautner Z., Starks L.T., "The Importance of Climate Risks for Institutional Investors", *The Review of Financial Studies* 2020, Vol. 33(3), p. 1067-1111.

93 Ross S.A., "The Economic Theory of Agency: The Principal's Problem" *The American Economic Review* 1973, vol. 63(2), p. 134-39; Jensen M. C. & Meckling W.H., "Theory of the firm: Managerial behavior, agency costs and ownership structure", *Journal of Financial Economics* 1976, vol. 3(4), p. 305, 308.

94 See: E Fama E.F. & Jensen M.C., "Separation of Ownership and Control", *The Journal of Law & Economics* 1983, vol. 26(2), p. 301; Shavell S., "Risk Sharing and Incentives in the Principal and Agent Relationship", *The Bell Journal of Economics* 1979, vol. 10(1), p. 55.

95 For example, Shah S.N., *The Principal-Agent Problem in Finance*, CFA Institute Research Foundation 2014, p. 2-5.

96 Veil R. (ed.), *European Capital Markets Law* (2nd edition), Hart Publishing 2017, p. 266; Akerlof G.A., "The Market for "Lemons": Qualitative Uncertainty and the Market Mechanism", *The Quarterly Journal of Economics* 1970, vol. 84(3), p. 488.

97 Dahlman C.J., "The Problem of Externality", *Journal of Law & Economics* 1979, vol. 22(1), p. 141, 147-148.

the investor is exposed to the principal-agent problem and may incur monitoring costs to ensure the intermediary acts in accordance with his interests.⁹⁸ Both types of costs distort the market price of financial products, hindering the efficient working of the market.

3.5.2.2 Sustainable Investing

The principal-agent problem plays an important role in hindering sustainable investing.⁹⁹ As I already pointed out, the principal-agent problem has two prerequisites: information asymmetries and diverging interests between the principal and the agent. Consider the following two issues that can arise in sustainable finance.

First, the investors and intermediaries may have different time-horizons for risk management. For an investor, sustainable investments may serve as a tool for risk mitigation, as incorporating sustainability considerations can help identify and mitigate long-term risks that can affect the financial performance of the investment.¹⁰⁰ However, intermediaries frequently are predisposed toward short-termism, which can lead to the undervaluation of long-term risks, particularly those related to sustainability.¹⁰¹ A possible driver of this short-termism may be the short-term asset evaluations and incentives that financial intermediaries are exposed to, such as (bi-)annual or even quarterly reported earnings, which may pressure managers to boost short-term stock prices

98 Holmström B., "Moral Hazard and Observability" *The Bell Journal of Economics* 1979, vol. 10(1), p. 74; Jensen M. C. & Meckling W.H., "Theory of the firm: Managerial behavior, agency costs and ownership structure", *Journal of Financial Economics* 1976, vol. 3(4), p. 305, 308; Dahlman C.J., "The Problem of Externality", *Journal of Law & Economics* 1979, vol. 22(1), p. 141, 147-148.

99 Sellhorn T. & Wagner V., "Chapter 12: The forces that shape mandatory ESG reporting", in: Kuntz T. (ed.), *Research Handbook on Environmental, Social and Corporate Governance*, Edgar Elgar 2024, p. 284.

100 Jansson M. & Biel A., "Motives to engage in sustainable investment: a comparison between institutional and private investors", *Sustainable Development* 2011, vol. 19(2), p. 135. See also: Krueger P., Sautner Z. & Starks L.T., "The Importance of Climate Risks for Institutional Investors", *The Review of Financial Studies* 2020, vol. 33(3) p. 1067.

101 Bianchini G., e.a., "Short-termism pressures from financial markets", ESMA Report on Trends, Risks and Vulnerabilities, ESMA 2020, No. 1., p. 60, available at: https://www.esma.europa.eu/sites/default/files/trv_2020_1-short_termism_pressures_from_financial_markets.pdf, accessed on 14 April 2025; Fried J.M. & Wang C.C.Y., "Short-Termism and Capital Flows", *The Review of Corporate Finance Studies* 2019, vol. 8(1), p. 207; Ofir M. & Elmakiess T., "The Eco-Agency Problem and Sustainable Investment", *LSE Legal Studies Working Paper* 2023, no. 26, available at: <https://ssrn.com/abstract=4652981>, accessed on: 30 October 2024; Lydenberg S., "System-Level Considerations and the Long-Term Investor: Definitions, Examples, and Actions", *The Investment Integration Project* 2017, available at: https://www.tiiproject.com/wp-content/uploads/2017/03/Systems_Level_Considerations_Long_Term_Investor.pdf, accessed on: 31 October 2024.

instead of considering longer-term horizons.¹⁰² The different time horizons of investors and intermediaries can be seen as an example of diverging interests. The undervaluation of long-term risks by the intermediary constitutes a direct cost resulting from this principal-agent problem, while the intermediaries' short-termism may also stand in the way of research and development necessary to transition to a climate-neutral society, which requires long-term vision and investment, which can be considered an implicit cost of the principal-agent problem.¹⁰³

Second, greenwashing is another clear example of the principal-agent problem in sustainable finance. Greenwashing is defined by the ESAs as "a practice where sustainability-related statements, declarations, actions, or communications do not clearly and fairly reflect the underlying sustainability profile of an entity, a financial product, or financial services. This practice may be misleading to consumers, investors, or other market participants."¹⁰⁴ Greenwashing at its core is a classical principal-agent problem: there is both a misalignment of interest and information asymmetries between investor and intermediary.¹⁰⁵ Whilst investors have an interest in investing sustainably, intermediaries are primarily interested in acquiring and keeping the investor as a client. The preference to invest sustainably may be driven by many motivations, as noted above, however, there is clear empirical evidence that some investors are even willing to forego returns for sustainability impact.¹⁰⁶

102 Bianchini G., e.a., "Short-termism pressures from financial markets", ESMA Report on Trends, Risks and Vulnerabilities, ESMA 2020, No. 1., p. 60-61, available at: https://www.esma.europa.eu/sites/default/files/trv_2020_1-short_termism_pressures_from_financial_markets.pdf, accessed on 14 April 2025; Fried J.M. & Wang C.C.Y., "Short-Termism and Capital Flows", *The Review of Corporate Finance Studies* 2019, vol. 8(1), p. 208.

103 Roe M.J., "What is Stock Market Short-Termism?", *European Corporate Governance Institute – Law Working Paper* 2022, no. 658, available at: <https://ssrn.com/abstract=4194910>, accessed: 31 October 2024.

104 ESMA, Progress Report on Greenwashing, Response to the European Commission's request for input on "greenwashing risks and the supervision of sustainable finance policies", 31 May 2023, ESMA30-1668416927-2498, p. 11. A comprehensive overview of definitions can be found in: Freitas Netto S.V. de, e.a., "Concepts and forms of greenwashing: a systematic review", *Environmental Sciences Europe* 2020, vol. 32(19), available at: <https://doi.org/10.1186/s12302-020-0300-3>. See also: Marquis C., e.a., "Scrutiny, Norms, and Selective Disclosure: A Global Study of Greenwashing", *Organization Science* 2016, vol. 27(2), p. 483; Delmas, M. A. & Burbano V. C., "The Drivers of Greenwashing", *California Management Review* 2011, vol. 54(1), p. 64.

105 Sellhorn T. & Wagner V., "Chapter 12: The forces that shape mandatory ESG reporting", in: Kuntz T. (ed.), *Research Handbook on Environmental, Social and Corporate Governance*, Edgar Elgar 2024, p. 284.

106 For example: Heeb F., e.a., "Do Investors Care about Impact?", *The Review of Financial Studies* 2023, vol. 36(5), p. 1737: authors showed significant willingness to pay more for sustainable investments in general. Cambridge Institute for Sustainability Leadership, *Walking the talk: Understanding consumer demand for sustainable investing*, October 2019, available at: <https://www.cisl.cam.ac.uk/system/files/documents/cisl-vie-report-single-pages.pdf>: investors are willing to sacrifice up to 2,5% on the returns of their investment if that investment is

At the same time, intermediaries may possess more information on the sustainability risks, impacts and opportunities of the investment than investors.

The information asymmetries combined with the diverging interests of investors and intermediaries create the risk that the intermediary exploits the vulnerability of the investor by presenting investment opportunities as more sustainable than they are in order to win or keep more investors as clients. Aware of the risk of greenwashing, investors are consequently faced with the choice of either withdrawing from sustainable investing or incurring extra costs to select and monitor intermediaries that act in their interests. Both options distort the market price of financial products and form a serious hindrance to sustainable investing.

3.6 Conclusion

According to Adam Smith, the natural price equals the cost of producing the good. Moreover, in a competitive market, the market price will converge toward the natural price. However, this equilibrium only enhances welfare if the natural price encompasses all production costs, including the externalities that are not accounted for in market economies.

However, the current economic system fails to fulfil the presumption of classical economic theory that the market price equals the natural price, increasing welfare. The widespread externalization of environmental impacts leads to artificially high profits for environmentally harmful economic activities, which distorts the market price = natural price premise. This also affects sustainable finance, as the market for capital mirrors the pricing inefficiency in the real economy: investing in carbon-intensive industries may be artificially advantageous compared to investing sustainably. From an L&E perspective, this externalities-driven market failure prevents optimal resource allocation, undermining welfare maximization.

The problem of externalities and climate change cannot be resolved by traditional methods such as a tax on polluting activities or arbitrage between parties due to its complex and transnational nature. Consequently, the EU SFF focuses on more specific obstacles to sustainable investing: the lack of

sustainable. Note that while this may not seem like a significant sacrifice from the perspective of investors, the difference may be substantial from the perspective of the issuer. The difference in required returns can, for example, significantly impact an issuer's cost of capital, potentially affecting their competitiveness in the market and their ability to finance long-term sustainable projects.

Puylaert G. & Zijlstra W., "Rapport: Consument accepteert meer risico en lager rendement voor duurzame belegging", AFM 2020, available at: <https://www.afm.nl/nl-nl/sector/actueel/2020/september/consument-accepteert-meer-bij-duurzame-belegging>, p. 4-5: investors are willing to forego returns on sustainable investments.

adequate sustainability information, which results in information asymmetries and the principal-agent problem. Both market failures distort the adequate pricing of investments, undermining the efficient allocation of capital to sustainable economic activities via the market.

Although the EU SFF does not directly address the core problem of the discrepancy between the market price (formed by supply and demand) and the natural price (which accounts for all costs of the economic activity), the framework is a crucial component for the market price to better approximate the natural price. As a framework, the EU SFF ensures that parties to a transaction become better informed about the external costs of their economic transactions. This information enables participants to more effectively consider these costs in their decision-making processes.

A fundamental challenge is that the approximation of the natural price via enhanced transparency depends on the parties' willingness to account for the external costs of their economic transactions. However, compared to a situation in which parties lack any relevant sustainability information about their transactions, the EU SFF increases the likelihood of market prices approaching natural prices, as participants are no longer entirely blind to the environmental consequences of their transactions. From an L&E perspective, which sees markets as the tool for achieving an efficient allocation of resources, it is thus important to address these two market failures of information asymmetries and the principal-agent problem. I therefore assess in Chapters 3–5 whether the legal framework indeed overcomes the current deficiencies in sustainability information for investments, in line with my research question: *To what extent does the European Sustainable Finance Framework enable investors to make better informed investment decisions that integrate sustainability considerations, and how can this framework be improved to facilitate the reorientation of capital flows toward sustainable economic activities?*

4 ON WELFARE

4.1 Introduction

The theory of efficient markets explains how markets achieve optimal outcomes and why intervention in certain cases is necessary to eliminate obstacles to reaching that optimum. Whereas efficiency can be seen as instrumental to achieving welfare, the theory of efficient markets does not address the underlying normative justification for public regulation: what is the moral foundation of enabling market efficiency through public regulation?

The normative argument of L&E is that public regulation promotes welfare, which justifies intervening in markets. This raises the question of what is meant by the promotion of welfare. And why is it a desirable legal value? There are two major interpretations of the promotion of welfare: a) the promotion of

subjective utility or happiness, and b) the promotion of objective economic wealth. In this section, I first describe both interpretations of welfare (para 4.2.1 and 4.2.2). Subsequently, I analyse three points of criticism in order to explore the limitations of both interpretations of welfare. I conclude by adopting and defending the wealth-based interpretation of welfare as the justification for the EU SFF in the context of this research (para. 4.3).

The interpretation of welfare in L&E has been the subject of more academic deliberation than I can capture within the confined space of this paragraph. Therefore, I have chosen to primarily draw on four articles that approach the debate from distinct angles:

- Posner’s ‘Utilitarianism, Economics, and Legal Theory’ (1979) presents a defence of a wealth-based interpretation of welfare.¹⁰⁷
- Coleman’s ‘Efficiency, Utility, and Wealth Maximization’ (1980) focuses on Posner’s economic argumentation regarding efficiency.¹⁰⁸
- Dworkin’s ‘Is Wealth a Value?’ (1980) approaches the matter from a rights-based perspective.¹⁰⁹
- Weinrib’s ‘Utilitarianism, Economics, and Legal Theory’ (1980) analyses the logical and theoretical soundness of Posner’s essay.¹¹⁰

Together, these four articles form a comprehensive framework for analysing the meaning of welfare in L&E. All have been written by influential academics and have been cited many times since their publication, demonstrating their role in shaping the academic debate on the interpretation of welfare in L&E. They represent a variety of perspectives and have greatly influenced my own view on the various interpretations of a wealth-based approach, as well as its benefits and drawbacks.

4.2 What is Welfare?

4.2.1 *The Maximalization of Happiness*

Utilitarianism focuses on the maximization of the “surplus of pleasure over pain”.¹¹¹ Two aspects of this are the promotion of happiness and its aggrega-

107 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103.

108 Coleman J.L., “Efficiency, Utility, and Wealth Maximization”, *Hofstra Law Review* 1980, vol. 8(3), p. 509.

109 Dworkin R.K., “Is Wealth a Value?”, *The Journal of Legal Studies* 1980, vol. 9(2) p.191.

110 Weinrib E.J., “Utilitarianism, Economics, and Legal Theory”, *University of Toronto Law Journal* 1980, vol. 30(3), p. 307.

111 Sidgwick H., *Methods of Ethics* (7th edition), Macmillan and Co. 1907, p. 413.

tion across society.¹¹² The first element, the promotion of happiness, depends on the individual utility that an action has for a person – on an individual level, utilitarianism thus is a subjective approach to welfare. Utility, according to Bentham, is “that property in any object whereby it tends to produce benefit, advantage, pleasure, good, or happiness” or “to prevent the happening of mischief, pain, evil, or unhappiness to the party whose interest is considered”.¹¹³ It is intimately connected with the individual preferences of a specific (group of) person(s).¹¹⁴ Utilitarianism does not judge these individual preferences according to some moral standard.¹¹⁵ This means that there is strict impartiality on the righteousness of the action.¹¹⁶ The absence of judgement signifies that utilitarianism promotes equality and neutrality: the lack of judgement between individual preferences implies that there is no preference for a particular type of person.¹¹⁷ For example, the preferences of a scholar are no better than the preferences of a gambler; accordingly, a scholar is no better than a gambler.

The drawback of equality and neutrality is that they provide no guidance as to what a person should do, except to increase happiness. Aware of this, Bentham wrote about how to measure pain and pleasure, formulating indicators such as the intensity, duration, certainty, and proximity of pleasure or pain,¹¹⁸ and rules such as “[e]ach portion of wealth has a corresponding portion of happiness”.¹¹⁹ One obvious problem with these types of ‘rules’ is that they negate the neutrality and equality that make utilitarianism an attractive philosophy in the first place. Another problem is that these rules are incongruent with reality. Nonetheless, Bentham’s attempts to formulate a methodology paved the way for introducing utility into the discussion on law, economics, and ethics.¹²⁰ Utilitarianism has been highly influential,

112 Weinrib E.J., “Utilitarianism, Economics, and Legal Theory”, *University of Toronto Law Journal* 1980, vol. 30(3), p. 307, 309.

113 Bentham J., *An Introduction to the Principles of Morals and Legislation*, Volume 1, 1823, p. 3, 4.

114 Bentham J., *An Introduction to the Principles of Morals and Legislation*, Volume 1, 1823, p. 4.

115 Weinrib E.J., “Utilitarianism, Economics, and Legal Theory”, *University of Toronto Law Journal* 1980, vol. 30(3), p. 307, 309.

116 Mill J.S., *Utilitarianism*, Parker, Son, and Bourn, West Strand 1863, chapter II, paragraph 18.

117 Weinrib E.J., “Utilitarianism, Economics, and Legal Theory”, *University of Toronto Law Journal* 1980, vol. 30(3), p. 307, 309.

118 Bentham J., *An Introduction to the Principles of Morals and Legislation*, Volume 1, 1823, p. 49-51

119 Bentham J., *Theory of Legislation*, Trübner & Co 1864, p. 103

120 Mitchell W.C., “Bentham’s Felicific Calculus”, *Political Science Quarterly* 1918, vol. 33(2), p. 161, 163-164. An overview of the most important developments on economic utility theory following Bentham can be found in: Stigler G.J., “The Development of Utility Theory I”, *Journal of Political Economy* 1950, vol. 58(4), p. 307. As the lack of a method to measure individual utility in a way that was congruent with reality remained, utility thence developed into a preference theory, explaining the shifting preferences of individuals when faced with sets of alternatives. This approach is dominant in modern day microeconomics in which consumer choice is analysed.

which is unsurprising in the light of the *prima facie* appeal of “surplus of pleasure over pain”, equality, and neutrality that utilitarianism embodies.¹²¹ As a matter of fact, economic approaches to law have regularly been equated with utilitarianism.¹²² And even though the lack of a method of measuring happiness remains a practical difficulty, this shortcoming also represents an argument for the liberalisation and democratisation of markets: if governments cannot know the preferences of their subjects, it is most ethical to let citizens bargain for their own preferences in a free market.

4.2.2 Wealth Maximization

Welfare can also be approached in a more objective sense.¹²³ In his famous essay *Utilitarianism, Economics, and Legal Theory*, Posner defines ‘wealth’ as the “value of everything in society in dollars”.¹²⁴ Posner stresses that the maximization of wealth is not merely a proxy for expressing the maximization of happiness. He gives the following example: if A is happier with money than B, then from a utilitarian perspective it would make sense to give B’s money to A, increasing the total happiness. From a wealth maximizing principle, redistribution would not make sense as it does not increase wealth.¹²⁵

Posner’s definition has two components: (1) value and (2) everything in society. One commonly used method of determining the value of something is by its price; what people are willing to buy or sell it for. This limits the calculation of total wealth to real markets.¹²⁶ It is a method that for example is reflected in metrics such as the gross domestic product.¹²⁷ However, calculating total value through real market prices conflicts with the second part of Posner’s definition of wealth: “everything in society”. An exclusive

121 Sidgwick H., *Methods of Ethics* (7th edition), Macmillan and Co. 1907, p. 413; Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 104. The utilitarian objective of promoting welfare and has for example influenced (theory of) criminal punishment, tort and contract law.

122 For example: Hart H.L.A., “American Jurisprudence Through English Eyes: The Nightmare and the Noble Dream”, *Georgia Law Review* 1977, vol. 11(5), p. 969, 987-988; Epstein R.A., “Review: The Next Generation of Legal Scholarship?”, *Stanford Law Review* 1978, vol. 30(3), p. 635, 645.

123 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 119.

124 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 119.

125 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 131.

126 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 119.

127 GDP is calculated by adding up the value added at basic prices of all industries. See: Eurostat, “How is GDP calculated?”, available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Beginners:GDP_-_Calculating_GDP#How_is_GDP_calculated.3F, accessed on: 16 January 2025.

reliance on explicit market prices – and thus only goods that are actually traded – fails to capture substantial parts of value and thus is no accurate method of determining wealth. Posner therefore proposes that for valuing everything in society, real market prices should only be the starting point. For goods that are not traded (or even tradeable), a hypothetical market price should be determined.¹²⁸

Posner argues that replacing the maximization of happiness with the maximization of wealth is more closely aligned to our intuitive moral value system and provides a firmer foundation for rights than utilitarianism.¹²⁹ Posner comes to this conclusion by addressing three fundamental limitations of the happiness-based interpretation of welfare – however, these three limitations apply to the wealth-based interpretation as well. In the next paragraph, I discuss these three limitations in relation to both interpretations in order to deeper explore the meaning of welfare.

4.2.3 Criticism and Limitations

Both utilitarianism and the wealth-maximization paradigm face fundamental limitations as a normative foundation for public regulation of markets. In this section, I discuss three challenges that apply to both interpretations of welfare: (1) the boundary problem, (2) the immeasurability problem, and (3) the problem of ‘moral monstrosity’. The basis for this section stems from Posner’s *Utilitarianism, Economics, and Legal Theory* (1979), who defends a wealth-based interpretation of welfare over a happiness-based interpretation. However, I demonstrate that these three limitations apply to both interpretations of welfare.

4.2.3.1 The Boundary Problem

The boundary problem concerns the question of what is to be included in the maximization of welfare.¹³⁰ Two constraints that any policymaker will want to set, are the subjects to be included in determining welfare and the time frame to be used. Who should a government consider for the maximization of welfare – its own population only or should all humans be included? And should future generations be encompassed in the maximization of welfare – a question particularly relevant in light of the long-term effects of anthropogenic climate change?¹³¹ For example, how to deal with the

128 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 119-120.

129 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 121-127.

130 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 112-113, 128.

131 Weisbach D & Sunstein C.R., “Climate Change and Discounting the Future: A Guide for the Perplexed”, *Yale Law & Policy Review* 2008, vol. 27(2), p. 433.

(scientific) uncertainty of the fate of future generations?¹³² And what about the fact that governments may rely on democratic legitimacy as a normative foundation, which would be undermined if the welfare of persons not being current citizens were considered?¹³³ These kinds of questions demonstrate that there are both practical and philosophical problems concerning welfare maximization.

Both a utilitarian and a wealth-based approach to welfare seem to provide an answer to the boundary problem. On utilitarianism, Posner notes that if maximizing welfare is taken seriously, the broadest possible relevant population should be considered.¹³⁴ Excluding certain groups simply is counter-productive to maximizing happiness. Posner also admits that a wealth-based approach does not lead to a different or more practical solution.¹³⁵ After all, he defined the wealth-based approach as pertaining to “everything is society”, consequently defying notions of political boundaries.¹³⁶ Since both the happiness and the wealth-approach struggle to resolve questions of national boundaries and temporal limitations, the boundary problem fails to establish the superiority of either welfare interpretation.

4.2.3.2 *The Immeasurability Problem*

A second problem is the lack of a method for calculating either happiness or wealth. This measurement problem appears less significant for happiness in a liberal market system, as individuals can pursue their subjective heterogeneous preferences through voluntary transactions, negating the need to know or measure levels of individual satisfaction.¹³⁷ The problem with this market-based solution is that it is confined to the bilateral relationship between the transacting parties. It does not consider the effects of the transaction on outsiders, whilst reality demonstrates that voluntary transactions impact the utility

132 See for a passionate plea on including uncertain futures in utilitarianism: Mulgan T., *Utilitarianism*, Cambridge University Press 2020.

133 Song S., “The boundary problem in democratic theory: why the demos should be bounded by the state”, *International Theory* 2012, vol. 4(1), p. 39; Goodin R.E., “Enfranchising All Affected Interests, and Its Alternatives.” *Philosophy & Public Affairs* 2007, vol. 35(1), p. 40. The author argues that democratic decision making should include all interests that are affected by the decision.

134 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 113.

135 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 128.

136 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 128.

137 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 113-114. Also: Coleman J.L., “Efficiency, Utility, and Wealth Maximization”, *Hofstra Law Review* 1980, vol. 8(3), p. 509, 512-515.

of others.¹³⁸ However, to establish whether a transaction increases total happiness, including the external effects on third parties, it is necessary to establish an objective method to measure and compare individual utility.¹³⁹ This objectivation however is incompatible with the subjective nature of happiness as a measure of welfare.

Posner therefore argues that a wealth-based system should be used to determine welfare as policymakers can more easily estimate monetary value than the subjective happiness of citizens.¹⁴⁰ One problem with this is that policymakers may face many practical and philosophical challenges when determining 'the value of everything', including discounting the future and distributional issues.¹⁴¹ Second, as Weinrib points out, Posner's idea that governments should estimate prices when transaction costs hinder the working of real markets can easily be reversed.¹⁴² If governments are so good at establishing the accurate price of goods, then should not the government-coordinated pricing and allocation of resources be prioritized over actual markets in which price formation is both subject to transaction costs and fraught with personal preferences?¹⁴³

Nonetheless, there are practical reasons to prefer a wealth-based interpretation of welfare, especially in the context of environmental policymaking. First of all, monetary metrics provide a framework for cost-benefit analysis and thus for decision-making.¹⁴⁴ This is particularly important for environmental externalities that remain unpriced in a classical market system. By expressing environmental impacts in monetary terms, a better comparison between the economic benefits of certain activities and their environmental impact is enabled. And while determining hypothetical values of environmental impacts

138 Posner R.A., "Utilitarianism, Economics, and Legal Theory", *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 114. In general: Coase R.H., "The Problem of Social Cost", *The Journal of Law & Economics* 1960, vol. 3, p. 1.

139 Coleman J.L., "Efficiency, Utility, and Wealth Maximization", *Hofstra Law Review* 1980, vol. 8(3), p. 509, 512-515.

140 Posner R.A., "Utilitarianism, Economics, and Legal Theory", *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 130.

141 Frank R.H. "Why Is Cost-Benefit Analysis so Controversial?" *The Journal of Legal Studies* 2000, vol. 29(S2), p. 913.

142 Posner writes: "But, to repeat, the imposition of duties is appropriate in an economic view only in the exceptional case where market transaction costs are prohibitive." Posner R.A., "Utilitarianism, Economics, and Legal Theory", *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 130.

143 Weinrib E.J., "Utilitarianism, Economics, and Legal Theory", *University of Toronto Law Journal* 1980, vol. 30(3), p. 307, 323-325.

144 Atkinson G. & Mourato S., "Environmental Cost-Benefit Analysis", *Annual Review of Environment and Resources* 2008, vol. 33, p. 317; Pearce D., "Cost benefit analysis and environmental policy", *Oxford Review of Economic Policy* 1998, vol. 14(4), p. 84.

presents methodological challenges, the alternative of balancing economic benefits against unquantified environmental costs is more problematic.¹⁴⁵

Moreover, framing environmental impacts in monetary terms enables a neutral pathway forward in the increasingly polarised political landscape in which ideological considerations appear to be an important obstacle to climate action.¹⁴⁶ Whereas a subjective happiness-based approach to welfare reinforces these politicized responses to the climate crisis, a wealth-based approach to welfare creates space for a more objective approach to environmental problems by approaching climate policy through cost-benefit analysis instead of as a political value question.

4.2.3.3 Moral Monstrousness

The pursuit of total rather than average welfare – whether defined through happiness or wealth – raises fundamental ethical concerns about sacrificing individual rights for collective benefit.¹⁴⁷ Nonetheless, Posner argues that wealth maximization is preferable to happiness maximization as the pursuit of wealth would be more aligned to our intuitive value system.¹⁴⁸ According to Posner, those who pursue wealth exhibit behaviour such as hard work, honesty, and altruism, whereas those who pursue happiness exhibit traits such as laziness, cruelty, and hedonistic self-indulgence.¹⁴⁹ However, Posner’s association between the pursuit of wealth and ‘protestant values’ appears to be based on his personal value system; there is no empirical evidence for the correlation between the pursuit of wealth and ethical behaviour. Weinrib therefore criticises Posner’s assessment, writing that the “converse relationship between the market and morality is also at least possible.”¹⁵⁰ The question thus is: does the pursuit of wealth cause ethical behaviour which is subsequently reflected in (the regulation of) the market, or are our ethical intuitions reflected in the law, which shapes the market and regulates the pursuit of wealth? The fact that there are many areas of law that regulate the

145 Examples of papers that attempt to quantify the costs of carbon: Tol R.S.J., “Social cost of carbon estimates have increased over time”, *Nature Climate Change* 2023, vol. 13(6), p. 532; Dietz S. & Frank V., “Cumulative carbon emissions and economic policy: In search of general principles”, *Journal of Environmental Economics and Management* 2019, vol. 96, p. 108.

146 For example: Kulin J., Johansson Sevä I. & Dunlap R. E., “Nationalist ideology, rightwing populism, and public views about climate change in Europe”, *Environmental Politics* 2021, vol. 30(7), p. 1111.

147 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 116.

148 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 121-124.

149 Posner R.A., “Utilitarianism, Economics, and Legal Theory”, *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 121-124.

150 Weinrib E.J., “Utilitarianism, Economics, and Legal Theory”, *University of Toronto Law Journal* 1980, vol. 30(3), p. 307, 308. Also: Pistor K., *The Code of Capital: How the Law Creates Wealth and Inequality*, Princeton University Press 2019, p. 158-187.

market but that do not reflect a wealth-maximizing attitude, indicates that the latter relationship is closer to the truth.¹⁵¹

Maximizing welfare requires trade-offs: rights of an 'innocent person' may be limited to increase overall welfare. This can more easily be justified in a utilitarian society than in a wealth-based society. After all, there is some argument to be made that an individual may be sacrificed to increase overall happiness.¹⁵² For example, an individual's polluting property may be eradicated to increase the happiness of those suffering from the pollution, rendering them happier. It is, however, more difficult to justify infringing someone's personal rights to make other people richer.¹⁵³ It is simply unjustifiable to trade off the rights of one person against the wealth of another. The only way in which wealth can be a justifiable policy goal is if it is instrumental to pursuing another goal. As Dworkin writes, it is necessary to "specify the independent goal or value that it supposes is advanced instrumentally by maximizing social wealth."¹⁵⁴ This would, however, be contrary to Posner's proposal, who explicates that monetary value is not a substitute or proxy for something else. At the same time, Posner's proposal to define wealth as the "value of everything in society in dollars" somewhat conflicts with the idea that monetary value is not just a proxy.¹⁵⁵ Moreover, by arguing that the pursuit of wealth stimulates ethical behaviour, Posner seems to agree that it is not the money in itself that is righteous, but the behaviour that the pursuit of money is inducing. Thus, even in Posner's view, the role of wealth maximization seems to be an instrumental one.

4.3 Welfare and Efficiency in this Thesis

4.3.1 Introduction

In L&E, public regulation of markets is justified when markets fail to achieve efficient allocation of resources. The normative justification for this is that inefficient markets do not optimally increase welfare. In the previous paragraph, I discussed two interpretations of welfare – the subjective happiness approach and the objective wealth approach. I have discussed the various limitations that both interpretations of welfare face as a justification for public regulation and have come to the conclusion that the wealth-based interpretation

151 Examples include rules on protecting weaker parties, rules on workers rights, or against pollution. All of these are not (primarily) based on the collective maximization of wealth but on other moral foundations such as human dignity and respect for nature.

152 Dworkin R.K., "Is Wealth a Value?", *The Journal of Legal Studies* 1980, vol. 9(2) p.191, 202.

153 Dworkin R.K., "Is Wealth a Value?", *The Journal of Legal Studies* 1980, vol. 9(2) p.191, 202.

154 Dworkin R.K., "Is Wealth a Value?", *The Journal of Legal Studies* 1980, vol. 9(2) p.191, 206.

155 Posner R.A., "Utilitarianism, Economics, and Legal Theory", *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 119.

is a better justification for public regulation of markets than the pursuit of subjective utility from an L&E perspective, in particular in the context of the issue at stake in this thesis: anthropogenic climate change and the underinvestment in environmentally sustainable economic activities.

In this thesis, I follow Posner's definition of welfare: "the value of everything", which I also refer to as an integrated approach to welfare because it extends beyond transactional relationships.¹⁵⁶ Because this definition of welfare extends beyond the binary relationship of parties to a transaction, efficiency must necessarily be understood in the Kaldor-Hicks sense.¹⁵⁷ In the next pages, I outline four reasons for this choice.

Before presenting my arguments, I would like to point out the fundamental difference between my and Posner's views. In Posner's essay, the pursuit of wealth via free markets seems to be an ethical goal in and by itself. I do not share this conviction: I believe that the pursuit of wealth via the market is a 'mere' tool for other goals. As pointed out by Weinrib, money has no moral value in itself – the pursuit of wealth is merely a proxy for the pursuit of well-being.¹⁵⁸ Neither do I share Posner's conviction that his theory has the capacity to solve (almost) all societal problems. For example, Posner argues that his welfare definition does not only deal with how to distribute resources equitably but also solves problems pertaining to matters such as fundamental rights. As pointed out above, the relationship between markets and ethical values is a fraught one. Some ethical questions, especially those that are only remotely related to resource allocation, may demand different philosophical frameworks. I believe that these frameworks should not only coexist but have a rightful place within an integrated wealth approach to welfare, as I explain in para. 4.3.4.

4.3.2 *Anthropogenic Climate Change and Underinvestment Necessitate an Integrated Approach to Welfare*

The improvement of welfare via free markets converges around the idea that voluntary transactions enable individuals to improve their position. These individual improvements increase total welfare, but only as long as the effects

156 Following Posner's proposal. Posner R.A., "Utilitarianism, Economics, and Legal Theory", *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 119.

157 If the gains made by those better off, exceed the losses of those worse off, there is an increase in the aggregate wealth; Hicks J.R., "The Foundations of Welfare Economics", *The Economic Journal* 1939, vol. 49(196), p. 696.

158 Weinrib explains that, if anything, wealth is a neutral value. Conversely, it could be argued that happiness is an inherently good quality – pleasure over pain – and maximizing it has at least some moral claim. The same cannot be said for money – more of it is not morally superior to less, just as a rich person is not morally superior to a poor one. Weinrib E.J., "Utilitarianism, Economics, and Legal Theory", *University of Toronto Law Journal* 1980, vol. 30(3), p. 307, 311.

of the transaction are confined to the persons who are party to it. As soon as the transaction creates negative externalities, a divergence emerges between the welfare gains of participants and the welfare losses of non-participants.¹⁵⁹

If we take welfare seriously, it must necessarily extend beyond the relationship between parties and encompass all possible externalities. After all, a transaction that increases the wealth of the parties but creates negative externalities exceeding that increase, decreases total welfare. Posner acknowledges this through his comprehensive definition of welfare as “everything in society,” elevating our understanding from a bilateral perspective to an all-encompassing view. This broader conception of welfare provides both a framework for understanding anthropogenic climate change and the underinvestment in environmentally sustainable economic activities and suggests potential solutions.

First, the aspect of understanding anthropogenic climate change and the underinvestment in environmentally sustainable economic activities through the lens of welfare. Anthropogenic climate change exemplifies the disconnection between transaction participants and society at large. While parties engaging in climate-affecting economic activities profit from externalising costs, society suffers by bearing the negative externalities. This dynamic is repeated in investing, where investors in climate-affecting economic activities profit from externalising costs too, whilst sustainable economic activities are underfunded as investors may not realize the same benefit of externalising part of the costs. An integrated definition of welfare that extends beyond the transactional dimension helps to oversee this problem. This can be opposed to the utilitarian definition of welfare, which is unsuitable to grasp this problem as it inherently rejects the valuation of the externalities and is restricted to the pricing-process between the parties.

Second, the integrated approach to welfare also advances a solution: markets generating net societal disadvantage must be regulated, as welfare-decreasing market outcomes fundamentally contradict the core economic objective of maximizing social well-being. Thus, this framework necessitates the Kaldor-Hicks interpretation of efficiency, where actions producing externalities are permissible solely when their aggregate benefits demonstrably exceed their social costs.

The second element of Posner’s definition – measuring welfare “in dollars” rather than utilitarian happiness – is crucial for addressing externalities. First, there is no metric for happiness. This is not a problem as long as the effects on happiness are exclusively viewed through the bilateral, internal perspective: as people can voluntarily negotiate their positions, there is no need to know what makes them happy. However, as soon as externalities enter the equation, a reliable metric becomes indispensable, both to value the effects outside the

159 See paragraph 3.2 of this chapter on efficiency. Also: Coase R.H., “The Problem of Social Cost”, *The Journal of Law & Economics* 1960, vol. 3, p. 1.

bilateral relationship and to compare external gains or losses to those made within the transaction; the effects inside of the relationship will have to be defined as well. A counterargument could be that it is impossible to determine the value of things that are not subject to real market transactions. This argument, however, does not stand for two reasons. First, there are increasingly precise estimations for the costs of climate change and the underinvestment in sustainable economic activities. Examples include early articles such as *Production, Consumption, and Externalities*¹⁶⁰ from 1969 on the necessity to take into account the environmental costs of production, the 2006 *Stern Review*,¹⁶¹ and recent studies.¹⁶² Second, even approximate monetary valuations provide a firmer foundation for policy-making than no metric at all.

4.3.3 Free Markets Respect Individual Freedom

One of the inconsistencies in Posner's plea for the pursuit of wealth pointed out by Weinrib, is that if efficient resource allocation is paramount, then governments should allocate resources whenever they can do so more efficiently than markets, which essentially entails a move away from market-based efficiency.¹⁶³ Nonetheless, this thesis maintains Posner's position that actual markets should serve as the foundation for price determination and resource allocation.

To rely on private markets as the primary pricing mechanisms respects the fundamental value of economic freedom. As stated in paragraph 4.1, I do not assume L&E is able to provide an answer to all societal problems. Certain values, including the freedom to shape one's private life, should be preserved even if a state-controlled allocation of resources would be more efficient.¹⁶⁴ After all, as Weinrib puts it, actual markets respect individuals, whereas hypothetical markets sacrifice individuals.¹⁶⁵ Thus, market-based pricing mechanisms remain justified for traded goods as long as they achieve reasonable accuracy in valuation. While this presents a clear challenge in the case of externalities, particularly regarding climate change, it aligns with a wealth-

160 Ayres R. U. & Kneese A. V., "Production, Consumption, and Externalities" *The American Economic Review* 1969, vol. 59(3) p. 282.

161 Stern N., *Stern Review: The Economics of Climate Change*, Cambridge University Press 2006.

162 Newman R. & Noy I., "The global costs of extreme weather that are attributable to climate change", *Nature Communications* 2023, vol. 14(6103), available at: <https://doi.org/10.1038/s41467-023-41888-1>.

163 Posner writes: "But, to repeat, the imposition of duties is appropriate in an economic view only in the exceptional case where market transaction costs are prohibitive." Posner R.A., "Utilitarianism, Economics, and Legal Theory", *The Journal of Legal Studies* 1979, vol. 8(1), p. 103, 130.

164 See for example: Friedman M., *Capitalism and Freedom*, The University of Chicago Press 1962, chapter 1-2.

165 Weinrib E.J., "Utilitarianism, Economics, and Legal Theory", *University of Toronto Law Journal* 1980, vol. 30(3), p. 307, 323.

based welfare approach to employ public regulation as a corrective mechanism for such market failures.

4.3.4 *Balancing Interests*

A wealth-based approach to ‘the value of everything’ creates room for public discourse on the inherent and economic value of non-tradeable goods such as a stable climate and other sustainability matters. That is because when governments attempt to quantify the value of non-tradeable goods, they must develop processes and frameworks for doing so. These frameworks can – and should – involve multiple stakeholders and perspectives, and thus create the opportunity for deep reflection on these matters beyond a market perspective.

Conversely, the utilitarian approach of maximizing happiness has as the central cornerstone the subjective and heterogeneous valuation of individuals. While this approach at face value appears to be more democratic than publicly imposed valuations of non-tradeable goods, this subjective approach excludes the possibility of having a meaningful public discourse on the inherent value of non-tradeable goods.

4.3.5 *De-polarization of the Debate*

Anthropogenic climate change is sometimes referred to as a “super wicked problem” – time is running out, the solution has to be found by those who cause it, the central authority needed to address the problem is deficient, and the problem is irrationally pushed into the future.¹⁶⁶ Moreover, the solution depends on how the problem is framed whilst different stakeholders have radically different views of how to approach the problem. This latter is unequivocally the case when it comes to climate change: the topic is both political and polarized.¹⁶⁷ This is not surprising, given the many ethical questions that are involved in the matter.

Evaluating the EU SFF through the L&E lens creates the opportunity to have a more value-neutral discussion about the topic. By choosing the wealth-based approach to welfare instead of the happiness approach, the justification for public regulation lies in the fact that a regulatory intervention measurably increases welfare in an economic sense. In other words, regulatory intervention

166 Levin K., e.a., “Overcoming the tragedy of super wicked problems: constraining our future selves to ameliorate global climate change”, *Policy Science* 2012, vol. 45, p. 123. See also: Lazarus R.J., “Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future”, *Cornel Law Review* 2009, vol. 94(5), p. 1153; Coyne R., “Wicked problems revisited”, *Design Studies* 2005, vol. 26(1), p. 5.

167 McCright A.M. & Dunlap D.E., “The Politicization of Climate Change and Polarization in the American Public’s Views of Global Warming, 2001–2010”, *The Sociological Quarterly* 2011, vol. 52(2), p. 155; Falkenberg M., e.a., “Growing polarization around climate change on social media”, *Nature Climate Change* 2022, vol. 12, p. 1114.

is justified by the positive outcome of a cost-benefit analysis. While cost-benefit analysis is no value-neutral foundation for public regulation, it offers a more objective basis for policy decisions than purely utilitarian considerations.

5 CONCLUSION

To answer the research question *To what extent does the European Sustainable Finance Framework enable investors to make better informed investment decisions that integrate sustainability considerations, and how can this framework be improved to facilitate the reorientation of capital flows toward sustainable economic activities?* I rely on L&E. In this Chapter, I explore to fundamental dimensions of L&E: how does it perceive the market mechanism as a tool for increasing welfare and how does it justify public regulation of markets? The answers to these two questions signify both how I evaluate to what extent the EU SFF enables informed investment decisions that integrate sustainability considerations, and how the EU SFF and my suggested improvements are justified public interventions in financial markets.

In L&E, the market is perceived as a tool for the efficient allocation of resources, whereas market failures fulfil the role of indicating and explaining inefficiencies in the functioning of the market. For anthropogenic climate change, the predominant market failure is the systematic externalisation of the costs of GHG emissions. This also affects private investments: as businesses who externalise GHG emissions profit from not having to compensate those costs, while investors who invest in those businesses inadvertently profit from this externalisation too. L&E thus provides a lens through which to understand the problem of underinvestment in sustainable economic activities. At the same time, the problem of anthropogenic climate change and underinvestment transcends the market failure of externalities. This is why the EU SFF focuses on two different, more solvable market failures: information asymmetries and principal-agent problem. This approach aligns with L&E theory, especially in its understanding of how markets function and why investors may be deterred from investing sustainably.

The justification to resolve the market failures of information asymmetries and principal-agent problem in sustainable investing – and by extension, the justification for the state intervention in private economic relationships – lies in the core objective of L&E to increase welfare. I argue that welfare must necessarily encompass an integrated approach to welfare that extends beyond transactional binary relationships since the core of the problem of anthropogenic climate change and underinvestment in sustainable economic activities, the problem of externalities, also transcends transactional relationships. Welfare therefore must be understood as ‘the value of everything’ – a holistic concept that encompasses broader societal and environmental considerations.

Therefore, I conclude that the EU SFF finds its theoretical justification in its aim to increase welfare through an all-encompassing lens. The regulatory framework and the improvements that I propose on the basis of this research thus are strategic interventions in private markets for realigning economic incentives with overall societal well-being.