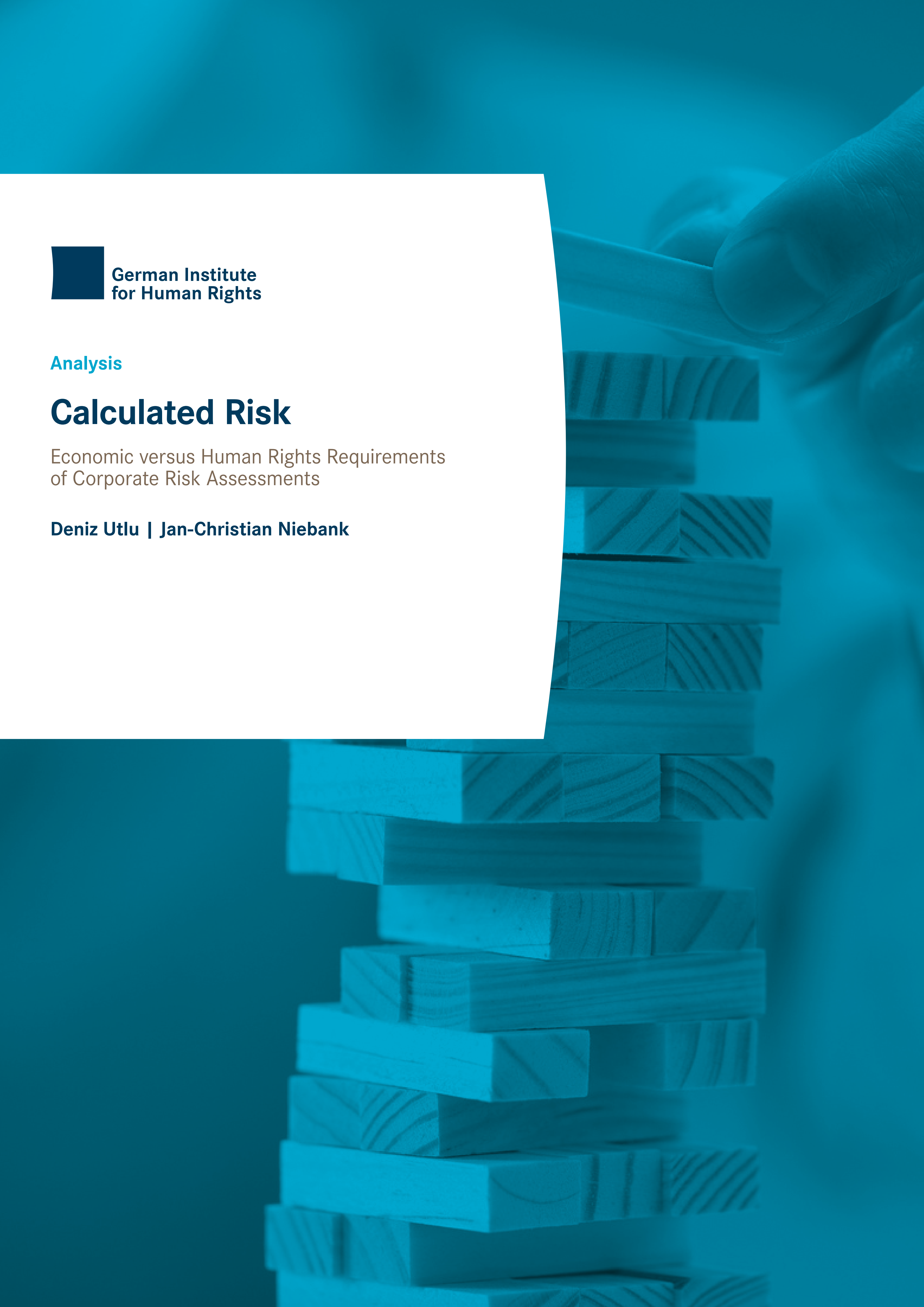

German Institute
for Human Rights

Analysis

Calculated Risk

Economic versus Human Rights Requirements of Corporate Risk Assessments

Deniz Utlu | Jan-Christian Niebank

The Institute

The **German Institute for Human Rights** is the independent national human rights institution in Germany. It is accredited according to the Paris Principles of the United Nations (A-status). The Institute's activities include the provision of advice on policy issues, human rights education, information and documentation, applied research on human rights issues and cooperation with international organizations. It is financed by the German parliament, the Bundestag. In addition, the Institute is charged with monitoring the implementation of the UN Convention on the Rights of Persons with Disabilities and the UN Convention on the Rights of the Child and has established monitoring mechanisms for this purpose.

The authors

Deniz Utlu is a Researcher and Policy Advisor at the German Institute for Human Rights in the field of business and human rights. His special areas of focus include trade in raw materials, supply chains, human rights impact assessment, corporate due diligence, foreign trade promotion, corporate cooperation and economic policy, especially austerity policy. He also examines the applicability of economic models to human rights and the epistemic limits of economic theories.

Jan-Christian Niebank is a Researcher and Policy Advisor at the German Institute for Human Rights in the field of business and human rights. His areas of work include the state's obligation to protect human rights in the context of transnational business activity, corporate human rights due diligence obligations along global supply and value chains, and effective mechanisms of redress for those affected by corporate human rights violations.

German Institute
for Human Rights

Analysis

Calculated Risk

Economic versus Human Rights Requirements
of Corporate Risk Assessments

Deniz Utlu | Jan-Christian Niebank

Contents

Summary

The UN Guiding Principles on Business and Human Rights from 2011 stipulate that corporations must carry out human rights due diligence. One element of this obligation is to conduct a human rights risk and impact assessment in order to identify potential adverse effects of their business activities on human rights. Once human rights risks have been identified, business enterprises must seek to avoid them, reduce them or compensate those affected.

Risk assessments are nothing new for business enterprises. However, their understanding of what constitutes "risk" is completely different: whereas a human rights risk assessment essentially aims to identify risks that pose a threat to people and their rights, corporate risk assessments are about identifying potentially adverse effects on returns on investments or operations. As a consequence, situations may arise in which according to the entrepreneur's risk calculation, the correct course of action may be *not* to avoid a risk, even though it has been recognized. This analysis by the German Institute for Human Rights outlines the different concepts of risk in a human rights and in a business context using a model taken from financial theory. The potential impact this discrepancy can have in practice is illustrated using the example of a corporate risk assessment in the Colombian coal sector. From this analysis the Institute derives criteria for possible self-regulatory action on the part of state and business, which can make a human rights risk assessment a mandatory requirement for enterprises. Only if such human rights risk assessments are made mandatory for corporations can these bring about an improvement in the situation of affected rights-holders in line with the UN Guiding Principles.

1 Introduction

At the opening of the Fifth UN Forum on Business and Human Rights in November 2016, the former UN Special Representative on Business and Human Rights, Professor John Ruggie, stressed how business enterprises misinterpret the concept of risk when it comes to human rights: risks are defined as financial risks for companies rather than as having potentially adverse effects on people.

The present analysis takes such an assessment as its starting point. It shows that the challenge is to make a genuine human rights risk assessment a corporate requirement – and not simply to arrive at a harmonized interpretation of the concept of risk in the sense of an "agreed language" or to sensitize business enterprises to the idea of assessing risks from a human rights point of view. Only if a human rights-based risk assessment is made mandatory for corporations can the situation of affected rights-holders improve.[1]

To elucidate this position, we present in Chapter 2 the concept of a human rights-based risk assessment and in Chapter 3 the risk assessment model used by business enterprises based on a concept of risk rooted in financial theory. Chapter 4 uses the example of the export-relevant coal sector in Colombia to illustrate the difference between these two approaches. This case demonstrates how the highly theoretical concept of risk behaviour derived from financial theory provides a suitable reflection of business practice. Finally, the analysis applies this financial theory model to human rights in order to establish criteria for the design of state regulation, which may also be useful for enterprises wishing to develop self-regulatory strategies to carry out human rights due diligence.

1 See also Shift (2015), p. 11. According to Shift, while enterprise risk management is potentially suitable for embedding a human rights risk assessment, the enterprise must bear in mind that the risks to be measured are not corporate but stakeholder risks.

2 Human Rights Risk Assessment

A human rights-based risk and impact assessment is part of corporate human rights due diligence. What this means in practice is described in the second section of the United Nations Guiding Principles on Business and Human Rights, "The Corporate Responsibility to Respect Human Rights".

The UN Guiding Principles were adopted unanimously by the Human Rights Council in 2011 and therefore enjoy a high degree of legitimacy. They introduce the concept of corporate human rights due diligence into the international system for the protection of human rights. In drawing up the Guiding Principles, the UN Secretary General's Special Representative on Business and Human Rights attached great importance to including the positions of the various stakeholders. To this end, he conducted talks with business enterprises, civil society organizations and national human rights institutions all over the world. In this way he was able to develop an "agreed language" between the various interest groups.

In particular the introduction of the concept of human rights due diligence represented a milestone, since due diligence is relevant in both a human rights and a business context. Business enterprises are familiar with the concept with respect to company mergers or initial public offerings, for example, where they must evaluate the risks associated with such steps in advance.[2] Human rights experts initially regarded due diligence as a benchmark by which to judge action by the state, in particular with respect to protecting women's rights from violation by private actors.[3] In the UN Guiding Principles human rights actors and business enterprises have found a common concept with which to address corporate human rights risks and impacts.

Since the adoption of the UN Guiding Principles, if not before, both business enterprises and human rights experts have been concerned with the question of how human rights due diligence can be translated into business practice. The UN Working Group on Business and Human Rights, which is charged with continuing the work of the Special Representative, has published a comprehensive handbook on this subject, which provides an interpretation of human rights risks:

"[…] an enterprise's human rights risks are the risks that its operations pose to human rights. This is separate from any risks that involvement in human rights impact may pose to the enterprise, although the two are increasingly related."[4]

Human rights risks are thus understood as the potentially adverse effects of business activities on human rights. The impact on human rights is adverse if as a consequence of corporate activity either the state is hampered in its implementation of human rights or rights-holders can no longer fully exercise their rights. Potentially adverse effects are those that have not yet occurred at the point when the assessment was conducted, but that could occur as a result of a business operation. The subject of a human rights risk

---

2 John Ruggie states: "[…] the concept of human rights due diligence brought the issue of identifying and addressing companies' adverse human rights impacts into a familiar risk-based framing for them [businesses]." [see Ruggie (2013)]; see also, for example, Patrick Sinewe: "The party commissioning such an investigation is usually the potential buyer, since it is one of his fundamental obligations to check an object before purchasing it. Only in this way can he find out what risks and opportunities the company is concealing." [see Sinewe (2010)].

3 Cf. Walling / Waltz (2011).

4 UN, Human Rights, Office of the High Commissioner (2012), p. 37.

assessment is always a specific human right, such as the “Right to Water”.[5] One element of human rights due diligence is to conduct a risk assessment that allows business enterprises to identify, to prevent and to remedy the adverse human rights effects of their actions or of their failure to act.[6]

Not only the UN working group itself, but business enterprises[7] as well as many human rights organizations are working on the issue of risk and impact assessment and seeking ways to apply the UN Guiding Principles in business practice. Here they are particularly concerned with two questions: How can companies identify their risks and impacts? What can, should or must companies do to avoid risks and mitigate the impact they have already had?

To find answers to these two questions, a risk assessment considers a planned business operation from a human rights point of view. It identifies potential human rights impacts that are either directly linked with business activity, directly caused by the enterprise or to which the enterprise contributes. “Directly linked” means that the (potential) impact must be connected with the company’s business relations; the word “cause” is used in cases where the activities of an enterprise causally encroach on a specific human right; “contribute” means that the adverse effect would not have occurred solely as a result of the enterprise’s activity but in combination with others has led to a situation where such an impact has occurred. An important point here is that these different types of relationships between business activity and impact on human rights cannot be strictly separated but in practice merge into one another.[8]

The UN Guiding Principles require of human rights due diligence that enterprises should “avoid causing or contributing to adverse human rights impacts through their own activities […]” (UN Guiding Principles 13a). The Danish Institute for Human Rights proposes ten quality criteria relating to both the process and content of human rights impact assessments. In accordance with Guiding Principle 13a, one of the criteria relating to content is that potential impacts on human rights should be addressed in line with the following hierarchy of action: *avoid – reduce – restore – remediate*.[9] One possible interpretation of human rights due diligence would therefore be that adverse effects should be reduced if it is not possible to avoid them entirely, but even in these instances the original state should be restored. If it is impossible to restore the original state, then those affected should be compensated. A compensation payment is not, however, a substitute for human rights due diligence, which must seek to avoid adverse effects on human rights.[10]

The present analysis examines the business calculation of risk and seeks options for human rights requirements to be integrated into a risk assessment. For this reason, we will initially leave aside the role of the state, even though in line with its obligation to protect human rights the state has

---

5 Ibid., Principle 11, commentary.

6 See UN, Human Rights Council (2011), Principle 17, commentary.

7 Cf. for example Deutsches Global Compact Netzwerk (2015).

8 See, in particular, Ruggie’s critique (2017) of the theses of Debevoise & Plimpton (2017) in a letter to the OECD. The Danish Institute for Human Rights categorizes cumulative effects fundamentally as “contributory” [see The Danish Institute for Human Rights (2016a), p. 7]. We define “cumulative effects” slightly differently and believe it is possible that a cumulative effect can also be caused (or partly caused): for example, if there are two different sources of an adverse effect that would not occur if one of the sources were eliminated, then both sources are deemed to have caused the negative effect.

9 See Danish Institute for Human Rights (2016b), p. 28. The Danish Institute for Human Rights formulates processual quality criteria for an impact assessment: participation, accountability, non-discrimination, empowerment and transparency. It also formulates quality criteria relating to content: international human rights as a benchmark, scope of impacts, taking account of interactions between different human rights or between effects, assessing impact severity, considering the scope, scale and irremediability of particular impacts, taking into account the views of rights-holders, addressing all impacts, giving priority primarily to the severity of human rights consequences; address effects according to the following hierarchy: avoid-reduce-restore-remediate, ensure access to remedy; cf. Deutsches Global Compact Netzwerk and German Institute for Human Rights (2015).

10 See UN Human Rights Council (2011), Principle 19, commentary; see also Deutsches Global Compact Netzwerk and German Institute for Human Rights (2015), p. 15.

the power to impose limitations on business enterprises and not to permit a project to go ahead if there is a risk of irreparable damage. Chapter 5 formulates criteria that must be observed by the state and by business enterprises wishing to engage in self-regulation if human rights are to be integrated into business risk calculations.

In the six years that have elapsed since the publication of the UN Guiding Principles, enterprises worldwide have taken steps towards carrying out human rights due diligence.[11] Human rights experts have worked with these enterprises to meet the challenge of integrating human rights requirements into corporate practice. However, there is still major disagreement between business and human rights experts about whether due diligence should become legally mandatory or whether it should be exercised on a voluntary basis.[12] From a human rights point of view it is argued that voluntary measures are not sufficient to ensure that enterprises exercise due diligence.[13]

Although business enterprises and human rights organizations have found a valuable common approach to the concept of due diligence, this has also led to more profound conceptual contradictions becoming masked. The continuing controversial discussion about mandatory versus voluntary human rights due diligence is an expression of such contradictions.

In order to shed light on these contradictions, in the following the human rights understanding of risk assessment will be contrasted with the business concept of risk. We will then examine which criteria need to be fulfilled in order for the potentially adverse effects of business activities to appear on enterprises' "risk radar".

11 Ibid, with five example cases from the following sectors: pharmaceuticals and chemicals, raw materials, tourism, automobiles and food.

12 France became the first European country to pass a law making human rights due diligence mandatory for enterprises [cf. Wesche (2017)].

13 Cf. Klinger / Krajewski / Krebs / Hartmann (2016).

3 Corporate Risk Assessment

Which risk concept enterprises follow can be described in two ways: with examples from business practice or in terms derived from economic theory.[14] The latter would seem most appropriate, because here we are interested in the contrast between the business and the human rights understanding of risk: a human rights concept of risk can be derived only from legal norms, and for this reason this analysis refers to the UN Guiding Principles. It follows then that the corporate definition of risk must also be defined in fundamental terms. This is why the analysis does not derive the corporate concept of risk from business practice – by conducting qualitative interviews for example – but instead relies on a general economic model taken from financial theory that seeks to explain the risk behaviour of enterprises. The theory in question is the Modern Portfolio Theory developed by mathematical economist Harry Markowitz. How economic decisions are made is one of the central questions of modern economics. The appeal of this high level of abstraction is precisely that economically expedient behaviour, irrespective of sector, needs to be understood in fundamental terms. In order to examine the conceptual compatibility of human rights requirements and economic decision-making, such an abstract approach would appear to be fruitful.[15] After all, an inductive approach based on the activities of one or more enterprises would tell us only whether the behaviour of a specific enterprise complies with human rights requirements. The present analysis is not concerned with individual cases, however, but with the conceptual contradictions that both states and business enterprises need to recognize and address in order for human rights to be factored into corporate calculations.

This analysis of corporate risk behaviour is based not on economic models from environmental theory or on theories of market failure from finance. Our aim is not to use an approach, which observes actors from outside in order to create a set of policy rules, but instead to deduce the social consequences from the corporate calculation itself. Thus we do not, for example, use the theory of externalities – the central concept of neoclassical environmental economics – even though for an analysis of adverse effects on human rights this might appear to be an obvious choice, just as it is for an analysis of environmental effects. Externalities exist, for example, if a factory pollutes a river and the

---

14 For a definition of risk from business practice, with a particular focus on Enterprise Risk Management, cf. Fasterling (2017), whose publication reached us only after the text of this analysis had been finalized. With respect to the discrepancy between corporate and human rights risk assessment, Fasterling comes to a similar conclusion as the present analysis: human rights due diligence as stipulated by the UNGP is scarcely compatible with the traditional management of “social risks”. The present analysis reaches this conclusion by considering the position of decision-makers from the perspective offered by theoretical models and derives from this the criteria that need to be fulfilled for business enterprises to take account of human rights risks. Fasterling notes in his conclusions that an approach to human rights as stipulated by the UNGP changes the purpose of the enterprise. Based on our application of Modern Portfolio Theory to human rights, we do not believe that the enterprise’s aims can be so easily modified; however, one of the conclusions reached by the present analysis is that the conceptual conflict between a human rights and a business risk confronts the purpose of the enterprise with two mutually exclusive aims. The question of whether this contradiction can be eliminated via change – including a change in the social significance of enterprises – would require further research.

15 However, one must distinguish here between two different levels of “normative analysis”: human rights normative analysis (section 2) derives its conclusions from legal norms (including soft law). Economic normative analysis bases its evaluation on fundamental mathematical assumptions. In human rights logic “must” refers to a legal requirement: for example, in accordance with the ILO’s key labour standards, an enterprise *must* allow a worker to take breaks if he or she works more than a certain number of hours, otherwise it violates binding legal regulations. According to business logic, “must” refers to assumptions about an actor’s rationality: if the production costs of an additional unit of a given product are below the average costs, the enterprise raise the production volume, otherwise it will not maximize its return.

fishermen's earnings are reduced either because the fish die or because the catch is of poorer quality. Here the factory has a negative external effect on the fish production. The causal link is obvious and the fishermen's losses can be precisely calculated. In such a case the externalities can be "internalized" if, say, the enterprise that operates the factory has to pay a tax to the state (Pigovian tax). Another option would be, in line with the Coase theorem, for the fishermen to appeal to the enterprise and for both parties to look for a joint solution to the problem. Sectoral initiatives like the German Textiles Partnership, are ultimately based on such Coase negotiations.

How the theories of market failure and the solutions they offer both in theory and in practice, especially in the environmental sphere, might also be applied to human rights is a central question that should be more broadly addressed in the field of business and human rights, for the central prerequisites posited by these theories often do not exist in a human rights context:

- One of these prerequisites is the ability to put a price on human rights effects, which cannot be fulfilled ad hoc. The losses suffered by the fishermen in the example above, on the other hand, can be measured in monetary terms; indeed, only for this reason can the level of the Pigovian tax be determined, and only for this reason can enterprises' externalities be internalized. But in the case of human rights effects, this prerequisite often does not exist. If, for example, the use of mercury in gold mining poisons a region's drinking water and causes children to suffer cognitive damage, then this constitutes a violation of their Right to Health (Art. 12.1, Social Covenant). Furthermore, many other rights are indirectly violated, such as the Right to Education if the state does not respond to this cognitive impairment by establishing inclusive schools. The violation of the Right to Health cannot, however, be expressed in monetary terms.

- The second prerequisite, namely, the ability to establish a precise causal relationship between an enterprise's activities and the impact on human rights, likewise often does not exist, especially in cases where an enterprise contributes to an adverse effect but has not caused it itself.

In Chapter 5, the present analysis touches on an environmental economics approach in order to derive criteria for the regulation or self-regulation of corporate risk behaviour. However, its central focus is the difference in what a risk arising from corporate decision-making means in a human rights and in a business context. In our methodology we therefore use a business-based approach from the sphere of finance which seeks to simulate the perspective of the enterprise in a theoretical model.

Let us start by developing a model with a general corporate definition of risk. Risk in a business context means potentially adverse effects on the return the enterprise can expect to gain from an investment or from a business operation.[16]
In order to understand the business considerations behind such an assessment, financial theory defines[17] decisions taken under conditions of uncertainty as "lotteries": a lottery links the possible result of a particular course of action with the probability that this result will occur.[18] In other words, there are various courses of action each of which will lead to different returns. Since, however, it is not possible to determine in advance which course of action will yield which return, various possible returns together with the probability

---

16 Cf. for example Raps (2015): "Risk describes the asset-reducing uncertain events that result from a development that is less favourable than planned (danger of loss or damage." Or Artur Woll's dictionary of economics (1991, p. 627): "A danger of loss or chance of profit associated with an (economic) act." Woll also mentioned the distinction between risk and uncertainty identified by Frank H. Knight, namely, that in the case of the former the probability distribution is known. Another point of interest in Woll's work is the neutrality of the definition, which sees an equal relationship between risk and profit and risk and loss: a risk of loss or chance of profit.

17 Here the analysis refers primarily to Kruschwitz (2004).

18 A lottery is defined as follows: $A_i = [x_{i1}, \dots, x_{is}: q_1, \dots, q_s]$; where A = possible course of action, x = result of the action, q = probability of the result's occurrence.

that they will occur are attributed to each of the possible courses of action. The ultimate decision always favours the lottery for which the expected benefit to the decision-maker is greatest.[19]

How the decision-maker deals with the risk that the return may not materialize or may be lower than expected depends on the intensity of the decision-maker's attitude to risk. Financial theory measures the intensity of risk aversion in terms of a so-called risk premium. The risk premium is a subjective discount from the enterprise's expected assets in cases of uncertain future payments – it may be understood as a kind of insurance premium that the enterprise is prepared to pay in order to insure itself against the risk.[20] The more risk-averse a decision-maker is, the higher the risk premium. The economist Harry Markowitz, who received the Nobel Prize for his Modern Portfolio Theory in 1990,[21] defines the risk premium as the difference between the expected final return and the certainty equivalent. The certainty equivalent denotes the (hypothetical) payment that the decision-maker would have to receive in order to maintain the same level of monetary value without the lottery as he would have done if he had achieved it. For the enterprise the certainty equivalent corresponds with the sum that it would have to receive in order to make up for its investment.[22]

If we consider differing degrees of risk aversion, we see that an enterprise does not necessarily have to choose the course of action with the smallest risk.[23] Rather the risk-averse decision-maker faces a so-called optimization problem: he can maximize his utility from courses of action with uncertain outcomes depending on his attitude to risk, the probability that the various possible returns will materialize and the expected return. The decision-maker will permit precisely the risk that brings him the maximum return.[24] Human rights-associated risks for enterprises may include such things as reparation payments, court and bureaucracy costs or damage to company reputation. A business operation that may have potentially adverse effects on human rights and may thus entail costs can therefore be defined as participation in a lottery with various possible outcomes. One possible outcome is that the enterprise will incur no costs because those affected do not defend themselves. This might be either because their access to justice is restricted or because, contrary to expectations, they do not suffer adverse effects after all. For the enterprise this would be the best possible outcome, because it would achieve a maximum

---

19 According to the expected value principle, under certain conditions the maximum utility will concur with the highest expected value of a lottery [see Kruschwitz (2004), p. 123].

20 $E[U(W + x)] = U(W + E[x] - \pi)$, whereby E = expectation, U = utility, W = secure returns, x = lottery outcome, π = risk premium [cf. Kruschwitz (2010)].

21 Cf. Markowitz (1990).

22 Since the utility function U as an independent variable x determines the lottery outcome, it is plausible to understand the certainty equivalent as the inverse of the utility function: $U^{-1}(E\ [U(W + x)]$. The risk premium can be calculated as $\pi = W + E[x] - U^{-1}(E\ [U(W + x)])$. [cf. Kruschwitz (2004)].

23 Financial theory draws a distinction not only between different degrees of risk aversion, but also between risk types: risk-averse, risk-neutral and risk-loving decision-makers. The risk-neutral decision-maker is indifferent to risk. In other words, he or she does not expect a reduction in expected return, and the risk premium is therefore eliminated. In the case of the risk-loving decision-maker, the risk premium is negative; not only does he not expect a reduction in the expected return but rather a bonus, since for him the risk brings an additional benefit and he is prepared to pay a higher price for it. For the present analysis the risk-loving decision-maker is not relevant, since a scenario where an entrepreneur loves risks so much that he is prepared to pay an additional price for this is far from business reality. Here it is sufficient to work with the risk intensity of the risk-averse decision-maker. He may have a very low risk aversion, so that he is virtually indifferent to the risks associated with a business operation, in other words, the risk premium may be almost zero or else very high, so that even a small risk is sufficient for him to decide not to proceed with the operation.

24 It may be assumed that the maximum utility equals the maximum return, which for the business context is a justified assumption, especially since the maximization problem can be formulated under secondary conditions which we will not go into further here. The financial theory also derives the attitude to risk from the individual utility but does so in a generalizing way so that the results apply not only to private households but more generally as well. In addition, in line with the π–σ-principle, the expected utility depends exclusively on the expectation value and the variance in the return on an investment. Insofar as the possible returns are normally distributed, this applies to every utility function [see Kruschwitz (2004), p.130].

return on its investment. Another result might be that the enterprise achieves a return but has to deduct compensation costs. As long as the return exceeds the compensation payments, the outcome will remain positive. A third possibility is that fines will need to be deducted from the return, and a fourth, that the enterprise achieves a smaller return because of the damage to its reputation, which has a negative impact on demand.[25] The price of the lottery can be calculated as the expected value of the outcome minus the risk premium. Since the expected value is determined by the sum of the factors, probability of occurrence and outcome, anticipated fines, compensation payments or reputation costs will not necessarily mean that the enterprise will decide against the planned operation.[26] Even if the payments exceed the expected return, i. e. the possible return is negative, the investment can still be rational in business terms, since the enterprise's decision depends on the probability of occurrence and the level of the expected negative and other returns as well as the risk premium. If the probability of a return is very high or – with an equal probability of a loss occurring – the expected return is very high, then the enterprise will take the risk, unless of course the decision-maker is so risk-averse[27] that he demands a risk premium, which makes him unable to act.[28] Modern Portfolio Theory assumes that an "efficient frontier" exists among the possible portfolios between which an investor can choose and in which, given certain assumptions, the expected returns increase as the risk becomes higher. If a portfolio is composed of both secure and risky securities, then the relationship even becomes linear. The further development of Modern Portfolio Theory, the Capital Asset Pricing Model, which departs from the perspective of the investor to look at the situation from a more generalized point of view, concludes that there is a positive correlation between market risk and level of return.[29]

In the next section we translate the theoretical insights we have gained here into practice by means of a case example. The different effects of business and human rights concepts of risk can be illustrated using the example of a planned diversion of the Rio Bruno for a mining project in Colombia. We note here that Markowitz developed his Modern Portfolio Theory with respect to financial securities and was explicitly not interested in manufacturing but rather in the decisions of financial investors. Nevertheless, he couched the problem, which was partly based on micro-economic utility theory, in such general terms that it became abstract and independent of the content of the decision-making criteria.

---

25 $A_i = [x_{01}, x_{E1}, x_{S1}, x_{R1}: q_0, q_E, q_S, q_R]$ with x_{01} = no-risk return; x_{E1} = return after compensation payments; x_{S1} = return after paying fines; x_{R1} = reduced return because of damage to reputation; $q_{E,S,R}$ = the respective probabilities of an outcome occurring; I = the chosen course of action or business operation.

26 $E[\tilde{x}] - \pi$; with $E[\tilde{x}] = \sum_{s=1}^{S} x_s q_s$.

27 Fundamentally one must assume that decision-makers in an enterprise are risk-averse, but to assume an extremely high level of risk aversion would be unrealistic. Otherwise an enterprise would always choose a risk-free savings interest and strongly reduce its operations or cease operating altogether.

28 For example: if we take the lottery from footnote 25 and insert numbers by way of illustration. With $x_{01} = 15$: no-risk return; $x_{E1} = -5$: return after compensation payments; $x_{s1} = 8$: return after paying fines; $x_{R1} = 6$: reduced return because of damage to reputation; $q_0 = 0{,}6$: the probability of a return without compensation payments, fines or reputation costs is relatively high depending on the context, in this example it is relatively moderate at 60 percent; $q_E = 0{,}1$: the probability that the enterprise will have to make high compensation payments is assumed here to be 10 percent; $q_s = 0{,}2$: the probability, that it will have to pay a fine is assumed to be 20 percent; $q_R = 0{,}1$: the probability of damage to its reputation. $A = [15, -5, 8, 6: 0.6, 0.1, 0.2, 0.1]$. The expected value of the lottery outcome is then: $E[\tilde{x}] = \sum_{s=1}^{S} x_s q_s = 11{,}7$. Different decisions for the respective risk types follow from this. A risk-neutral decision-maker ($\pi = 0$) must make the investment if he wishes to maximize the enterprise's return, otherwise he gambles away 11.7 monetary units. Incidentally, this still applies even though the compensation payment here is rather high, namely, 20 monetary units and if it occurs it would mean a loss for the enterprise of 5 monetary units. If the decision-maker is risk-averse, then the decision depends on how intense his risk-aversion is – i. e., the level of the risk premium. A risk-averse decision-maker could have a utility function $U(x) = \sqrt{x}$, since the second order condition is negative – a condition for those who strictly shy off risks [cf. Kruschwitz (2004), Table 3.9, p. 109]. The expected utility is then: $E[U(x)] = \sqrt{15} \times 0{,}6 - \sqrt{5} \times 0{,}1 + \sqrt{8} \times 0{,}2 + \sqrt{6} \times 0{,}1 \approx 2{,}91$. The certainly equivalent must obtain the identical level of utility: $U(SA) = \sqrt{SA} \approx 2{,}91$, from this it follows that the certainty equivalent is $2{,}91^2 \approx 8{,}47$. The decision-maker would hence decide against this lottery, if he were offered a price for it of at least 8.47 (assuming that no additional risk-free income is associated with the operation).

29 See Kruschwitz (2004), p. 220.

4 The Case of Rio Bruno

The contradiction between the human rights and business concepts of risk may be illustrated by a specific case example in which stretches of a river in Colombia were to be diverted for a mining project. We first give some brief background information about the company that sought to have the river diverted and the region through which the river flows. We then describe the company's approach to the risks associated with the diversion. The company's course of action is explained in terms of financial theory in order then to fittingly contrast the human rights requirements with the company's human rights due diligence.

Cerrejón mining company is the largest coal-mining company in Latin America and the tenth largest in the world. It mines coal for export, and importers include companies from the European energy sector such as E.ON and Vattenfall.[30] BHP Billiton, Anglo American und Glencore each own a third of the company.[31] In large-scale open-cast mining, the company first removes the overlying rock and then opens a pit into the earth, which it closes again once the coal has been extracted. Then the next pit is opened. The process can be repeated until all the coal reserves in the mine have been exhausted. This procedure means that over the years spent working in the region the company opens and then closes many different pits and the local community[32] affected is a different one each time.

The Cerrejón mine is located in the province of La Guajira, a drought-affected region in which restricted access to water and poor water quality present a special threat.[33] Afro-Colombian and indigenous communities complain of great poverty, poor infrastructure and – especially in La Guajira – of poor access to clean drinking water. The risk is particularly high for children, and the child mortality rate is rising among La Guajira's indigenous population. According to the United Nations Development Programme, water and food shortages have led to a humanitarian crisis in the region. The aid organization Misereor estimates that more than 4,700 children have died in the last eight years owing to drought and water shortages. The Wayuu indigenous group is particularly affected by the drought, which Misereor believes is aggravated by extensive coal mining.[34] The Inter-American Human Rights Commission concurs with this view. In 2015, it demanded that the Colombian government take measures to protect Wayuu children and youths suffering from malnutrition.[35]

Cerrejón would now like to divert the Bruno River in La Guajira in order to expand its mining activities.[36]

---

30 Cf. Mining-technology.com (2013).

31 See Centro Regional de Empresas y Emprendimientos Responsables (2016), p. 36.

32 Often Afro-Colombian or indigenous communities.

33 Both the local communities in Cesar, who are still to be resettled, and those in La Guajira, who have already been resettled, complain of poor water quality and in some instances of contaminated soil. They also report damage to their health and poor availability of and access to medical care, making it necessary to leave the areas over which the enterprise has influence in order to receive treatment. The communities attribute their illnesses to the mining activities and accuse the company of making access to medical care more difficult by preventing doctors from treating members of the affected communities within its area of influence. Irrespective of whether these accusations are founded, these statements show a high level of mistrust between the local communities and the company. This was shown by a qualitative study conducted by the German Institute for Human Rights (cf. "Protokoll der Fokusgruppengespräche mit Gemeinschaften in Cesar"; cf. "Protokoll der Fokusgruppengespräche mit Gemeinschaften in La Guajira").

34 Cf. Misereor (2016).

35 See People's World (2017); see also Resolution 60/2015 of the Inter-American Human Rights Commission [Comision Interamericana de Derechos (2015): Resolution 60/2015].

36 Cf. Alarcón (2016).

The river acts as a “sponge”, storing water during the rainy season and releasing it again during the dry season, meaning in the dry season it not only supplies the nearby communities with water but also influences the ground water level in areas much further away. When asked by the Colombian National Human Rights Institution (Defensoría del Pueblo), Cerrejón confirmed in an interview in May 2016 that the reservoir function of the river would disappear and therefore access to water would deteriorate for many communities.[37] In August 2016, some local communities started a petition against the diversion of the river and in the meantime have collected almost 39.000 signatures.[38] The enterprise declared that it was aware of the impact the river’s diversion would have on the Right to Water but that it still intended to go ahead with the project as it would be able to deal with the impact “adequately”.[39]

Here we see clearly the differences between business and human rights reasoning when it comes to dealing with risk: the enterprise simply factors in the adverse human rights consequences of its operation. Resulting costs for the enterprise as a result of this impact, such as compensation payments, are part of the “lottery” identified by Modern Portfolio Theory (see above). The enterprise is prepared to leapfrog the “avoidance level” and proceed directly to the “mitigation level”. This corresponds with an argument from financial theory which states that a risk must not be avoided per se, but rather should reflect the attitude to risk of the decision-maker who can factor a discount from the expected return into the equation.

From a human rights points of view (see section 2 on human rights due diligence), on the other hand, negative effects on human rights should be avoided. Only in instances where this is impossible must the enterprise use its leverage to reduce the effects. If it does not entirely succeed, then the enterprise must try to restore the previous state of affairs for those affected. In the human rights concept of risk, the risk attitude of the decision-maker is irrelevant. The potential threat to those affected is already a criterion for choosing a particular course of action,[40] and the company’s attitude to risks depends on their “severity” as well as the enterprise’s ability to exert leverage.[41] According to a business-rationality, as described in financial theory terms (explained in Chapter 3), the company would only remain at the avoidance level (not diverting the river) if doing so yielded maximum utility even while taking into account the risks involved. That might be the case under a variety of circumstances:

- The company could receive a certainty equivalent, which would entail the state buying back its mining license for the river region. The price would have to be the same or higher than the certainty equivalent, in other words, a sum that would put the enterprise in just as good a position without conducting its operation as if it had carried out the operation and received the expected return minus risk costs.

- The enterprise would remain on the avoidance level if the expected utility were to diminish, in other words, if the human rights impact resulted in very high financial costs, so that the enterprise would calculate a much higher risk premium and therefore decide against the operation. This monetarization of the human rights risk is achieved via an enhancement of the probability of a sanction being imposed in the event that damage is done. Cerrejón’s decision

---

37 For a technical explanation of Cerrejón’s planned river diversion cf. Universidad de La Guajira (n.y); cf. also the minutes of the interview with Cerrejón in La Guajira.

38 Cf. Change.org (2017); cf. also Forum SYD (2016), pp. 19–22.

39 Cf. Protocol of the interview with Cerrejón in La Guajira.

40 The business approach to risk also contradicts that of environmental law. The “precautionary principle”, a central component of German and European environmental policy, requires the avoidance of environmental damage and goes beyond existing risks to include anticipation of possible future developments. The declaration of the UN Conference on Environment and Development (UNCED) of 1992 already describes the precautionary principle in Agenda 21 as taking measures to prevent concrete effects even if it is uncertain that these effects will occur, meaning environmental risks must be taken seriously even if there is a lack of scientific evidence; cf. Technische Universität Berlin (2009).

41 Cf. The Danish Institute for Human Rights (2016a).

not to step back from the project despite being aware of the human rights risk confirms that risk is understood differently in a business context than in a human rights context.

The state, however, has the option of not approving a project if it is associated with irremediable risks. If, for example, it is known that the river's ability to absorb water will be irreparably destroyed if it is diverted and that this will have consequences for the rights-holders who are dependent on the river, then it is the state's responsibility to prevent the damage. Even if the enterprise guarantees that it will compensate inhabitants for the water shortage and thus deal with the violation of the Right to Water, the state's obligation to protect demands that it should ensure that the Right to Water is protected in the long-term for later generations. What will happen in twenty-five years when the mine is closed? What will happen in fifty years?[42] Risks can also change in the course of a project. Those which were deemed to be mitigatable at the beginning of the project may become aggravated and imply potentially irreparable damage. Thus both the state and enterprises as well as human rights experts must understand how human rights risks can be translated into business calculations in a way that enables the enterprise to avoid doing irreparable damage.

42 See UN, Committee on Economic, Social and Cultural Rights (2002): “General Comment No.15.”, section II, clause 11.

5 Conclusion: Criteria for Integrating Human Rights Risks into Business Calculations

From Modern Portfolio Theory, which we presented in Chapter 3, criteria can be derived which the state must fulfil in order to make human rights relevant for corporate risk assessments. Differing concepts of risk and the differing interests of enterprises, human rights organizations and local communities have led to a divergent human rights practice. These differing concepts cannot be harmonized simply by arriving at an “agreed language”, as the UN Guiding Principles, for instance, offer to various stakeholders, in particular states, civil society and enterprises. This is because businesses’ introducing human rights policies does not automatically result in improvements for those affected. Some enterprises have already come a long way in using and implementing “human rights language”, especially the UN Guiding Principles. They formulate fundamental obligations, know their risks and communicate them. This lends their activities legitimacy[43] but does not in itself change the impact on affected parties. Cerrejón, for example, has issued a human rights policy committment focusing on the UN Guiding Principles; it knows what the potential human rights impact of its activities are and communicates these to the public.

Linguistic harmonization of the two concepts is simply not sufficient. Rather the corporate sector’s intention is to capture the potential impact on human rights from the point of view of a corporate risk calculation: in order to take effective account of business logic in dealing with human rights, the state – or the enterprise – must translate human rights risks into business risks. Current developments in the direction of more state regulation are primarily aimed at integrating human rights due diligence into business processes by introducing mandatory reporting.

More effective human rights due diligence requires a profound paradigm shift that would make human rights risk assessments a necessity for enterprises. For example, the state could introduce sanctions[44] that create a negative incentive for behaviour that leapfrogs the “avoidance level” and starts from the “mitigation level”. The concept of a sanction as used here could also be conceived as self-regulatory sanctioning of an enterprise. After all, the aim of the present analysis is not to propose state measures but to try to understand under what conditions a business risk calculation will result in the implementation of human rights due diligence. The sanctions[45] would need to satisfy particular criteria so that human rights risks are included in corporate risk calculation in such a way that an enterprise tries to avoid such risks. If complete avoidance were unnecessary and instead, as in the case of social and environmental effects, a certain threshold would have to be reached, then the calculation would be different. But a trade-off is not possible with respect to

43 Cf. Morrison (2014), who describes this as “the social licence”.

44 The term “sanctions” should be understood broadly and includes more than simply the payment of fines. A possible approach might also be indirect sanctions that offer positive incentives in the form of tax breaks.

45 A preventive regulation could set fees for enterprises that exceed the certainty equivalent. The enterprise would thus avoid engaging in an operation involving human rights risks. For the moment, however, this possible course of action must remain a theoretical scenario, because from a human rights point of view it is not permissible for an enterprise to be able to buy itself out of human rights obligations simply by paying a fee. For the design of a Pigovian tax, i.e., a tax intended to internalize external effects, the certainty equivalent could be used. The theoretical challenge is to forge a link between a general tax and a subjective order or preference, which reflects the certainty equivalent as an inversion of the utility function.

human rights, and there is therefore no threshold value for adverse human rights effects that would vary depending on their severity and irreparability. This should not be confused with other kinds of interference in individual rights: a resettlement, for example, does not per se constitute a violation of human rights and can be planned in a way that conforms with them. Similarly, a river diversion does not necessarily have adverse effects that cannot be compensated for. The following deductions assume violations of human rights that are so severe and so irreparable that they must be avoided. If cases are assumed in which the risk need not be avoided but where it is sufficient to deal with the risk in an appropriate fashion, this does not alter the fundamental insights obtained by this analysis from financial theory; the calculation of the level and certainty of sanctions is, however, then less rigid.

The criteria can be derived from the structure of the lottery as described in Chapter 3 and in the case example given in Chapter 4: the enterprise is faced with various courses of action and will choose the alternative which promises the biggest return. In line with Modern Portfolio Theory the expected return depends on three factors: the probability of occurrence of the various lottery outcomes, the level of the outcome and the decision-maker's attitude to risk. Any regulation, whether by the state or from within the enterprise, must then influence at least one of these factors.

It must be possible to formulate human rights risks in financial terms if they are to be factored into an enterprise's risk calculation. For this purpose there are primarily three variables: the expected value of the lottery outcome, the probability of it occurring and the risk premium that the decision-maker demands for a risky undertaking. From this there follow three possibilities for influencing the enterprise's risk calculation:

1. **Influencing the lottery results: probability of sanctions**
   A possible sanction adds a further lottery outcome to the enterprise's lottery: under certain conditions the company must pay a fine if it causes damage. The level of this fine must be such that, according to the probability of the sanction occurring, the lottery is shifted to a point where it exceeds the expected return minus the risk premium. If the level of the risk premium is unknown but a low risk intensity is assumed, the level of the fine should be equivalent to the expected return (from the operation in question).[46] If the risk is to be avoided entirely, the sanction must be so high that the expected value of the outcome is less or equal to zero. According to this scenario, the state would have given permission for the project to go ahead but would nonetheless ensure that the enterprise only went through with it if it were certain that human rights would not be violated.

2. **Influencing the probability of occurrence: sanction certainty**
   The probability that a fine will have to be paid must be high – at least high enough that in calculating the expected value, the lottery result that involves paying a fine receives a greater weighting (we should remember here that the expected value of the lottery is the sum of the factors probability of occurrence and result). It is conceivable that payment of a fine is stipulated but that the probability of occurrence is low: for example, the diversion of the river in the example given in Chapter 4 might lead to a water shortage only in an area far away, so that it would be difficult or impossible to prove

---

46 Cf. footnotes 21 to 23. Since we can assume that $\pi \geq 0$, a state sanction S must be at least as high as the expected value of the lottery outcome minus the risk premium: $S \geq E[\tilde{x}] - \pi$. If we assume that the decision-maker's risk-aversion is minimal, in other words, that he demands only a very small risk premium or none at all, the fine to be paid must be approximately equivalent to the level of the expected return. The Modern Portfolio Theory argument is based on a utility which is at a higher level of abstraction than enterprise returns. In Chapter 2 we saw that under certain conditions we can assume that the maximum utility coincides with the maximum return. Here it is important to remember that the observations made in this analysis are restricted to actors in the private sector. It would also be conceivable to apply them to the activities of the state, which in carrying out an infrastructure project, for example, is not aiming to obtain a return; in this case the utility might even deviate from the return. Nor does this analysis assume that human rights risks undertaken by private actors must be exclusively associated with business operations aimed at realizing a return, for it simply notes that the link between risk and return, as it can be described using Modern Portfolio Theory, also applies to human rights risks.

that the enterprise bears responsibility. In this case it is highly likely that the enterprise would not have to pay a fine. If, however, the probability of having to pay a fine is very low, then even a potentially very high fine does not carry enough weight in the business calculation of the expectancy value of the results. In this respect, the certainty and level of sanctions cannot be considered completely separately. If the probability of having to pay a fine is zero, then a fine can be as high as one likes, but it still will not influence an enterprise's decision.

3 Influencing risk intensity: state risk premium
The risk premium is subjective and thus the state has little leverage in this instance.[47] Nevertheless, it would be conceivable to leave the structure of the lottery itself untouched and instead to tax the enterprise's expected return with a kind of "state risk premium". This would represent a sanction whose probability of occurrence is 100 percent, or, in other words, certain. In conceptual terms, then, "the state risk premium" would thus be roughly equivalent to, say, the Pigouvian tax of environmental economics, with the difference that here the goal is not to return the damage that an enterprise has caused to third parties (external costs) back into the enterprise. In cases of irreparable damage, this is simply not possible. So this would not be a case of internalizing external costs but of a mechanism that would lead to avoidance – the basis for measurement cannot then be the damage caused alone, rather the "state risk premium" must orient itself towards the expected return. The expected return is then calculated from the expected value of the lottery results minus the subjective risk premium and minus the state risk premium. If the state risk premium is high enough – with a very low subjective risk premium roughly as high as the expected return – then the enterprise will not carry out the operation.[48] This third possibility of influencing the enterprise's calculation of risk does not make sense at first: for the state could just as well decide simply not to approve the project, i.e., in the case described in Chapter 4, not to approve the diversion of the river. However, it is conceivable that the "state risk premium" will change in the course of the project: the state could grant the license because studies have initially shown that the risk of endangering human rights is low and that compensation is certainly possible. Then the state would demand a low "state risk premium" and announce that the "state risk premium" would grow in line with a growing risk. For example, the sponge function of the river might have been overlooked at the start of the project. In a later phase of the project, when this issue becomes apparent and the function cannot be replaced, the "state risk premium" could be raised until it exceeds the enterprise's expected return.

All three leverage factors, all of which would have to take account of state regulations, can also be steered in a self-regulatory fashion by individual enterprises or sectoral initiatives: the level of sanctions, the probability of occurrence and the risk intensity. A precise portrayal of the possibilities of such an internal regulation of the human rights risk by an enterprise can be derived from Markowitz's Modern Portfolio Theory taking account of the UN Guiding Principles, but this would exceed the framework of this analysis: for each leverage factor a more thorough analysis which takes into consideration the sector and the type of enterprise would be necessary. In conclusion, we would briefly like to formulate a few ideas on this point: for example, the enterprise could make an insurance payment equivalent to the level of the expected lottery outcome minus the risk premium to an escrow account and in the case of damage forfeit this sum. If it is forced to make such a high insurance payment, then the enterprise would refrain from making the investment

---

47 Without a doubt, measures to sensitize businesses to human rights requirements in risk assessment can however contribute to influencing the subjective level.

48 The state risk premium can be conceived as a tax or as a certain sanction. A certain sanction would not mean a further possible result x of the lottery with the probability q, but rather a kind of second risk premium, in this instance a state issued one: utility without sanction $U(W_0 + E[\tilde{x}] - \pi)$ should be changed into a utility function with sanction: $U(W_0 + E[\tilde{x}] - \pi - S)$, with U = benefit, W = certain return, π = risk premium, S = sanction.

if there is a corresponding human rights risk. The leverage factor of the probability of occurrence would be tantamount to a guarantee, and this would result in paying out the above-mentioned insurance sum in the case of damage. Risk intensity is the leverage factor that can be regulated better internally within the enterprise rather than by the state since this is unknown to the state and it must therefore resort to a risk premium of its own, i. e. a form of tax. Internally the enterprise could decouple the human rights decision-making process from the financial one: in this way every investment decision would be countered with a human rights decision from an independent body, whereby here the decision-maker's risk aversity would have to be maximized and the decision-making competence should not be challenged by other decision-makers in the enterprise. The design of such an inspection body could also have a multi-stakeholder dimension. Redress mechanisms that include this dimension in fact already exist, for example the „Independent Expert Panel" that is part of the complaints management division of the development funders DEG und FMO.

We should point out that such high expectations of self-regulatory processes, which diverge from market logic or in some cases even run counter to it, raise far-reaching questions about the theory of the firm. If business enterprises as a matter of principle systematically take decisions of their own beyond the business case, i. e. to some extent act in a way that runs counter to incentive mechanisms and efficiency conditions, this would imply that the purpose and significance of enterprises is undergoing a shift. This, too, would have to be the subject of a separate analysis.

The present analysis has revealed the conceptual contradictions between the human rights and the business approaches to risk. In Chapter 2 human rights due diligence as stipulated by the UN Guiding Principles was presented. In Chapter 3 the corporate calculation of risk was differentiated from the human rights one using Markowitz's Modern Portfolio Theory. This was illustrated using a case example in Chapter 4. The concluding Chapter 5 used the Modern Portfolio Theory as a basis for deriving criteria for the state to act in such a way that human rights are factored into companies' calculations.

These criteria are suggestions for how business calculations may be taken into account in drawing up political demands and designing human rights due diligence concepts. Enterprises that wish to integrate human rights into their business processes can operationalize these criteria internally. Here both enterprises and researchers should examine the systemic relationship between internal decision-makers and the enterprise. From a business point of view, this is a situation with far-reaching implications, for it calls into question the fundamental understanding of the purpose of enterprise: if human rights risk management is decoupled from the business case, a "management paradox" emerges – for example, if the enterprise appoints decision-makers who may act in a way that runs counter to the (financial and image) interests of the enterprise. These are social and epistemological questions that will leave their mark on our understanding of the concepts of "enterprise" and "competition", and these too must also be considered from a human rights point of view.

6 References

Alarcón, Laura Betancur (2016): “El milenario arroyo que cambiará de rumbo por una mina de carbón. Recorrido por Bruno, el afluente que tiene en jaque la expansión de Cerrejón en La Guajira”. In: *El Tiempo* 20.05.2016. http://www.eltiempo.com/estilo-de-vida/ciencia/desviacion-del-arroyo-bruno-por-cerrejon/16598724 (accessed 16.02.2017)

Cerrejón (n. d.): “Community Outreach and the Strengthening of Social Capital”. http://www.cerrejon.com/site/english/sustainable-development-%E2%80%A2-social-responsibility/resettlements/roche/phase-i.aspx (accessed 16.02.2017)

Cerrejón (n. d.): “Our Company”. http://www.cerrejon.com/site/english/our-company.aspx (accessed 16.02.2017)

Cerrejón (n. d.): “Responsabilidad Social RSE Reasentamientos”. http://www.cerrejon.com/site/desarrollo-sostenible-%E2%80%A2-responsabilidad-social-rse/reasentamientos.aspx (accessed 16.02.2017)

Cerrejón (n. d.): “Seguridad Industrial y Salud Ocupacional”. http://www.cerrejon.com/site/desarrollo-sostenible-%E2%80%A2-responsabilidad-social-rse/seguridad-y-salud/seguridad-y-salud-ii.aspx (accessed 17.02.2017)

Change.org (2017): “Paremos La Desviación Del Arroyo Bruno En La Guajira Colombia”. https://www.change.org/p/juanmansantos-gabriel-vallejol-minambienteco-pgn-col-detengan-la-desviaci%C3%B3n-del-arroyo-bruno-en-la-guajira (accessed 16.11.2017)

Centro Regional de Empresas y Emprendimientos Responsables (CREER) (2016): “Evaluación Integral Sectorial De Impactos En Derechos Humanos. La Minería Que No Se Ve”. http://creer-ihrb.org/wp-content/uploads/2016/06/Evaluaci%C3%B3n-Integral-de-Impactos-de-la-mineria-en-Colombia.pdf (accessed 17.02.2017)

CorA – Netzwerk für Unternehmensverantwortung / Forum Menschenrechte / PowerShift e.V. (2014): “Steinkohleimporte aus Kolumbien – Billige Energie auf Kosten Anderer”. Berlin (Serie UN Guiding Principles konkret). http://www.cora-netz.de/cora/wp-content/uploads/2015/03/CorA-ForumMR_Steckbrief-Kohle.pdf (accessed 16.02.2017)

Comision Interamericana de Derechos (2015): “Resolution 60/2015. Medidas Cautelares No.51/15”. 14.12.2015. http://www.oas.org/es/cidh/decisiones/pdf/2015/MC51-15-Es.pdf (accessed 17.03.2017)

Danish Institute for Human Rights (2016a): “Analysing Impacts Practitioner Supplement. Human Rights Impact Assessment Guidance and Toolbox.” https://www.humanrights.dk/sites/humanrights.dk/files/media/dokumenter/business/hria_toolbox/phase_3/phase_3_analysing_impacts_prac_sup_final_jan2016.pdf (accessed 17.02.2017)

Danish Institute for Human Rights (2016b): “Human Rights Impact Assessment Guidance and Toolbox.” https://www.humanrights.dk/sites/humanrights.dk/files/media/dokumenter/business/hria_toolbox/phase_3/phase_3_analysing_impacts_prac_sup_final_jan2016.pdf (accessed 17.02.2017)

Debevoise & Plimpton (2017): "Discussion of key terms in UN Guiding Principles and OECD Guidelines: "cause", "contribute", "directly linked"". https://business-humanrights.org/sites/default/files/documents/Debevoise-Enodo-Practical-Meaning-of-Involvement-Draft-2017-02-09.pdf (accessed 06.10.2017)

Deutsches Global Compact Netzwerk (2015): "5 Schritte zum Management der menschenrechtlichen Auswirkungen Ihres Unternehmens". https://www.globalcompact.de/wAssets/docs/Menschenrechte/Publikationen/5_schritte_zum_management_der_menschenrechtlichen_auswirkungen_ihres_unternehmens.pdf (accessed 09.10.2017)

Deutsches Global Compact Netzwerk und Deutsches Institut für Menschenrechte (2015): "Menschenrechtliche Risiken und Auswirkungen ermitteln. Perspektiven aus der Unternehmenspraxis". http://www.institut-fuer-menschenrechte.de/fileadmin/user_upload/Publikationen/Weitere_Publikationen/HRIA_Menschenrechtliche_Risiken_und_Auswirkungen_ermitteln_Perspektiven_aus_der_Unternehmenspraxis.pdf (accessed 09.10.2017)

Fasterling, Björn (2017): "Human Rights Due Diligence as Risk Management: Social Risk Versus human rights Risk." In: *Business and human rights Journal 2* (2), pp. 225–247.

Forum SYD (2016): "As Black As Coal. Business and human rights with focus on coal mining in Colombia". http://www.forumsyd.org/PageFiles/7127/Kol_rapport_FS_web.pdf (accessed 16.02.2017)

Klinger, Remo / Krajewski, Markus / Krebs, David / Hartmann, Constantin (2016): "Verankerung menschenrechtlicher Sorgfaltspflichten von Unternehmen im deutschen Recht". https://germanwatch.org/de/download/14745.pdf (accessed 15.03.2017)

Kruschwitz, Lutz / Husmann, Sven (2010): *Finanzierung und Investition*. 6., revised edition, Munich: Oldenbourg, Internationale Standardlehrbücher der Wirtschafts- und Sozialwissenschaften

Markowitz, Harry (1990): "Foundations of Portfolio Theory". http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1990/markowitz-lecture.pdf (accessed 16.02.2017)

Mining-technology.com (2013): "The 10 biggest coal mines in the world". http://www.mining-technology.com/features/feature-the-10-biggest-coal-mines-in-the-world/ (accessed 16.02.2017)

Misereor (2016): "Hungertod am Rande des Kohlebergbaus. Mehr als 4.700 Kinder sterben im kolumbianischen La Guajira infolge von Dürre und Wassermangel. MISEREOR fordert Einhaltung von Menschenrechten". https://www.misereor.de/presse/pressemeldungen/hungertod-am-rande-des-kohlebergbaus/ (accessed 17.02.2017)

Morrison, John (2014): *The Social License. How to Keep Your Organization Legitimate.* New York

People's World (2017): "Colombian coal mine expansion imposes suffering on rural indigenous". http://www.peoplesworld.org/article/colombian-coal-mine-expansion-imposes-suffering-on-rural-indigenous/ (accessed 17.03.2017)

Raps, Andreas (2015): "Risiko-Controlling". https://www.controlling-wiki.com/de/index.php/Risiko-Controlling (accessed 10.02.2017)

Ruggie, John Gerard (2013): *Just Business. Multinational Corporations and human rights*. New York: W.W. Norton & Company

Ruggie, John Gerard (2017): "Brief an Prof. Dr. Roel Nieuwenkamp, Chair, Working Party on RBC", OECD: https://business-humanrights.org/sites/default/files/documents/OECD%20Workshop%20Ruggie%20letter%20-%20Mar%202017%20v2.pdf (accessed 09.03.2017)

Shift (2015): "Human Rights Diligence in High Risk Circumstances: Practical Strategies for Businesses". https://www.shiftproject.org/media/resources/docs/Shift_HRDDinhighriskcircumstances_Mar2015.pdf (accessed 16.02.2017)

Sinewe, Patrick (ed.): *Tax due diligence. Tax Audit beim Unternehmenskauf – Ablauf, Beratung, Muster*. Gabler, 1st edition 2010. https://download.e-bookshelf.de/download/0000/0190/51/L-G-0000019051-0002373798.pdf (accessed 09.03.2017)

Technische Universität Berlin (2009): "Die Prinzipien der Umweltpolitik in der Bundesrepublik Deutschland". https://www.tu-berlin.de/fileadmin/f12/Downloads/koop/oeko-audit/kapitel1/L12_3.html (accessed 16.02.2017)

UN, Committee on Economic, Social and Cultural Rights (2002): "General Comment No.15 on the right to water in the context of arts". 11 and 12 of the International Covenant on Economic, Social and Cultural Rights, UN Doc. E/C.12/2002/11

UN, Human Rights Council (2011): "UN Guiding Principles on Business and human rights". Resolution 17/4. 16.06.2011, UN Doc. A/HRC/17/31

UN, Office of the High Commissioner of Human Rights (2012): "The Corporate Responsibility to Respect Human Rights. An Interpretive Guide". http://www.ohchr.org/Documents/Issues/Business/RtRInterpretativeGuide.pdf (accessed 17.03.2017)

Universidad de La Guajira (n. d.): "Análisis sobre el Proyecto Cerrejón de Desviación del Arroyo Bruno para seguir con el plan de extracción de carbon". https://business-humanrights.org/sites/default/files/documents/analisis_arroyo_bruno.pdf (accessed 16.02.2017)

Walling, Carrie Booth / Waltz, Susan (2011): "Human Rights: From Practice to Policy". Proceedings of a Research Workshop Gerald R. Ford School of Public Policy University of Michigan October 2010. http://humanrightshistory.umich.edu/files/2012/10/Farrior.pdf (accessed 15.03.2017)

Wesche, Philipp (2017): "Globalisierung und Menschenrechte: Frankreich wird zum Vorreiter". Stiftung Wissenschaft und Politik. https://www.swp-berlin.org/kurz-gesagt/globalisierung-und-menschenrechte-frankreich-wird-zum-vorreiter/ (accessed 09.03.2017)

Woll, Artur (1991): *Wirtschaftslexikon*, 5th ed. Munich/ Vienna: R. Oldenbourg Verlag

Appendix

List of minutes

Date	Talks
18 May 2016	Minutes of the focus groups talks with communities in Cesar
21 May 2016	Minutes of the focus groups talks with communities in La Guajira
22 May 2016	Minutes of the talks with Cerrejón in La Guajira

Imprint

PUBLISHED BY
German Institute for Human Rights
Zimmerstrasse 26/27 | 10969 Berlin, Germany
Tel.: +49 30 259 359-0 | Fax: +49 30 259 359-59
info@institut-fuer-menschenrechte.de
www.institut-fuer-menschenrechte.de

Analysis | October 2017
ISBN 978-3-946499-17-6 (print)
ISBN 978-3-946499-18-3 (online)

TYPESETTING
Da-TeX, Leipzig

TITLE IMAGE
Bryan Jackson, fotolia.com

PRINTED BY
bud Potsdam

RECYCLED
Papier aus Recyclingmaterial
FSC® C081629
Print compensated
Id-No. 1768575
www.bvdm-online.de

German Institute for Human Rights

Zimmerstrasse 26/27
10969 Berlin, Germany

www.institut-fuer-menschenrechte.de