Maritime Risk Management: Marine Insurance, General Average, Sea Loan

By *Phillip Hellwege* and *Guido Rossi*

A. Introduction

I. Insurance as a legal product

In 1991, the German legal scholar Meinrad Dreher described private insurance as a 'legal product' ('Die Versicherung als Rechtsprodukt').[1] Indeed, more so than other contracts and transactions, insurance is in many ways dependent on the law, its legal context and regulatory framework.

(1) It is, for instance, possible to identify a sale and to distinguish it from other transactions, by simply observing what the parties do: they exchange goods for money. In the case of a barter, they exchange goods for goods. And in the case of a donation, only one party will receive either goods or money, with the giving party acting solemnly and the recipient acting gratefully. By contrast, in the case of insurance, one party will give a sum of money, and later the same party may (or may not) receive back another sum of money. This other sum of money may (or may not) be greater than the sum that the recipient had previously given. Furthermore, there are other transactions where the parties seem to simply exchange money for money: loans and lotteries, to name just two. It is impossible to identify what kind of transaction the parties are carrying out and to distinguish insurance from, for example, lottery by simply observing what the two parties do. It

[1] *Meinrad Dreher*, Die Versicherung als Rechtsprodukt. Die Privatversicherung und ihre rechtliche Gestaltung (1991).

is only possible to identify what kind of transaction the parties execute by analysing the contract terms.

(2) However, a contract is not only necessary to assess whether the parties have entered into an insurance transaction. In fact, it is possible to envisage a sale without any refined contractual documentation. If the parties agree on the goods and the price, and if they perform their reciprocal obligations simultaneously, there is no need to put anything into writing. By contrast, it would be difficult to think of an insurance in practice without some sort of written documentation, even if literature stresses that no form needs to be observed in order to conclude an insurance contract.[2] The parties have to identify when and under what circumstances the insured has a right to an indemnity or the insured sum. As that event will occur in the future – if at all – the parties will define it explicitly in their contract in order to avoid problems of evidence.[3]

(3) Furthermore, a sale is not only conceivable without any written contract, it is also conceivable without any contract law providing default rules that apply if the parties have not agreed on specific terms. The potential buyer inspects the goods that he or she wants to buy in order to assess their quality and to identify any defects. The parties then agree on a price and simultaneously exchange the goods for money. If the buyer takes seriously the task to inspect the goods before buying them, there may be no need for a refined set of rules, solving the problem of what happens if the goods turn out to be defective. And if the parties exchange performance and counter-performance simultaneously, there may be no need for a refined regime of contract enforcement. By contrast, for a number of reasons, insurance is dependent on the existence of a legal framework: the parties, for example, do not exchange their performances simultaneously; insurance is therefore unthinkable without a legal regime of contract enforcement.

(4) More specifically, insurance is dependent on trust. On the one hand, the insurer must be certain that he or she will have the information necessary to assess the risk and, thus, to decide whether and on what terms he or she is willing to conclude the contract. Such information is usually in the hands of the insured. Furthermore, the insurer must be certain that the insured will not change his or her behaviour after the conclusion of the contract. Modern insurance literature speaks of the problems of information asymmetry, adverse selection, and moral hazard.[4] On the other hand, insurance is a long-term contract: the insured pays

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[2] Cf., e.g., *Jürgen Basedow et al.* (eds.), Principles of European Insurance Contract Law (2009), 103–106 (Art. 2:301).

[3] Cf., e.g., *Nicholas Legh-Jones et al.* (eds.), MacGillivray on Insurance Law (11th edn., 2008), para. 3-002.

[4] From the rich literature see, e.g., *Giesela Rühl*, Information Obligations (Insurance Contracts), in: Jürgen Basedow et al. (eds.), The Max Planck Encyclopedia of European

his or her premium, and he or she wants to be certain that the insurer is still able and willing to offer indemnity or to pay the insured sum once the covered risk eventuates in the future.[5] Of course, problems of information asymmetry, adverse selection and moral hazard are inherent in many, if not most, contractual relationships. Of course, the problem that one party may no longer be in the position or no longer willing to offer the counter-performance after having received the performance is inherent in all long-term contracts. Nevertheless, for insurance markets it is vital that these problems are solved, as insurance products cover risks. If there are no solutions to the problems of information asymmetry, adverse selection and moral hazard, we may observe not only a market failure, but also a market collapse. And as the insured seeks insurance especially against those risks that he or she is unable to shoulder himself or herself, we may observe a collapse on the side of the insured if it is not safeguarded that insurers are in the position to pay the insured sum once the covered risk eventuates. In principle, the measures taken to address these problems are legal measures.

(5) Finally, in the case of sale, the product is not dependent on any regulatory or legislative framework. If a seller offers to sell grain, the product will remain the same regardless of the market where he or she sells the grain and regardless of the regulatory framework of that market. Of course, in today's world producers must observe national product safety regulations and thus they have to modify their products to comply with the regulatory framework of each market. Nevertheless, in essence, these products remain the same. By contrast, insurance products are simply dependent on the regulatory framework of each national legal system. The regulatory framework will have an immediate effect on the design of the insurance product.[6]

In summary, insurance is unthinkable without a refined regulatory framework. And it is impossible to analyse insurance products without understanding this legal setting.

II. Insurance as an actuarial product

However, despite the fact that modern insurance law scholars stress that insurance is a legal product, it is evident that insurance is, at the same time, an actuarial product.

Private Law, vol. 1 (2012), 876–880; *David Rowell* and *Luke B. Connelly*, A History of the Term 'Moral Hazard', (2012) 79 The Journal of Risk and Insurance 1051–1075.

[5] These problems are, e.g., addressed by the law of insurance regulation, see *Anton K. Schnyder* and *Christian Heierli*, Insurance Regulation, in: Basedow (n. 4), 921–926.

[6] Cf., e.g., *Helmut Heiss*, Introduction, in: Basedow (n. 2), xlix–lii.

If someone intends to sell his or her used car, he or she will take the car's age, mileage and general condition into account. He or she will then research for how much similar cars are being sold. The seller will then search for a buyer who is willing to pay the expected price. If the seller is offered a lower price, he or she may decide not to sell the car after all, or to search for another potential buyer. Finding the right price may be more complex for a car producer. However, the single most important factor influencing the price are the costs of producing and marketing the car, and these costs are a factor that is, to a large extent, under the control of the producer.

Depending on the insurance product that an insurer wants to offer, the process of finding the right price is much more complex. Even though an observer may be led to believe that the parties to an insurance contract simply exchange money, the insurer in essence covers a risk. In order to calculate the premiums, the insurer must assess the risk that he or she is promising to cover. With some insurance products it may be enough to assess the risk based on the experience of past losses. However, the mere observation of how long it took to produce reliable mortality tables, which could be used to design a solid and reliable life insurance product, is proof enough that with insurance it is more difficult to set the right price.[7]

Furthermore, if a car producer notices that he or she is selling at too cheap a price, he or she may discover that he or she is generating a loss. The producer may then increase the price if such an increased price is realisable on the market. If it is not, the car producer may have to file for insolvency. Of course, such an insolvency will cause hardship to numerous people (e.g., the producer's employees). However, past customers will be able to keep the cars that they have already purchased. If an insurer has miscalculated the premiums, he or she is stuck with bad risks from existing contracts. If the insurer then has to file insolvency, this will cause hardship not only to the insurer's employees, but also to customers – customers may have paid their premiums for many years and will then find themselves without coverage. They may then also find it impossible to seek coverage with another insurer because they are, for example, too old to get life insurance in order to provide for dependants.

In summary, insurance is unthinkable without a refined actuarial knowledge.

III. Insurance as a financial product

Non-insurance scholars may have a simplistic understanding of insurance products. The insured pays the premium, and in return he or she will receive

[7] See the account in *Peter Koch*; Geschichte der Versicherungswissenschaft in Deutschland (1998), 25–40.

indemnity or the insured sum once the insured risk eventuates. If put in these terms, it looks like a simple contract of exchange just like a sale: the buyer pays the price and receives the goods as counter-performance from the seller. From this perspective, the only difference between a sale and insurance seems to be the subject matter of the contract. However, the design of insurance products is more complex. Any lawyer who is trying to regulate insurance or who argues an insurance case has to understand the financial structure of the product at his or her hand. In summary, insurance is unthinkable without a clear understanding of the financial basis of its products.

IV. Insurance as a risk management strategy

Finally, insurance is a risk management strategy. However, it is only one out of many such strategies, and the interdependence of these different risk management strategies may explain the (un-)importance of insurance in a given market. If risk prevention measures are non-existent in a market, then risks may be too high to be insurable; by contrast, if risk-prevention measures are very effective in a market, then there may be no need for insurance and insurance products will not develop. Furthermore, if there are alternative risk management strategies in a market, this will have an effect on the dispersion of insurance. Such alternative risk management may be diverse: there may be other private contracts fulfilling similar ends as private insurance does; the state may introduce forms of welfare, social insurance or poor relief; for certain risks different social groupings may offer different forms of mutual help and support to their members. Finally, it is evident that insurance will only thrive in markets where people have enough resources to buy insurance coverage. Ultimately, insurance can be understood only when its socio-economic context is taken into consideration.

V. An interdisciplinary approach to studying insurance

In conclusion, insurance law cannot be studied in isolation, nor can it be studied by any single discipline in isolation. Indeed, according to German literature, insurance law is a sub-discipline of the *Sammelwissenschaft* of *Versicherungswissenschaft*.[8] *Sammelwissenschaft* translates as 'accumulative field of scholarship', while *Versicherungswissenschaft* means 'insurance scholarship'. Other sub-disciplines of the broader discipline of insurance scholarship are insurance economics or actuarial science. The classification of insurance law as being part

[8] Cf. *Koch* (n. 7), 4–10. On what follows, see *Phillip Hellwege*, Introduction, in: idem (ed.), A Comparative History of Insurance Law in Europe. A Research Agenda (2018), 9–26, 23 f.

of the greater discipline of insurance scholarship points to the importance of interdisciplinary research in the field of insurance.

B. Histories of insurance

The importance of an interdisciplinary approach to studying insurance (law) is not limited to the study of modern insurance (law). Such an interdisciplinary approach is of similar importance for the study of the history of insurance (law). By contrast, a scholar studying, for example, the legal history of sale may adopt a purely doctrinal approach, focusing exclusively on the development of legal rules as expressed in legislation, case law and legal literature. It will often prove to be of no importance whether the object of sale was in antiquity a 'defective slave', in the early modern era a defective horse, or whether the object of sale is today a defective car – the legal problems remain the same. A purely doctrinal approach to legal history is, in that example, feasible. By contrast, a legal historian studying the history of insurance law cannot limit himself or herself to a doctrinal history of insurance law. An economic historian studying the history of insurance as an institution cannot ignore the legal aspects of the history insurance. Even though each discipline may define its research questions independently, developing answers to these question calls for an interdisciplinary approach or for interdisciplinary cooperation. Indeed, scholars of economic history have in the past always studied the legal and regulatory framework of the different insurance markets as much as legal historians studying the history of insurance law have always taken the socio-economic context into consideration.

However, there are further challenges to working in insurance (legal) history compared to other fields of study. Peter Koch observed:[9] 'Die Versicherungsgeschichte ist somit im Wesentlichen die Summe der Entwicklung zahlreicher einzelner Gesellschaften […]' ('The history of insurance is basically the sum of the development of the individual insurance companies […]'). A legal historian could add that the history of insurance contract law is basically the sum of the development of all individual insurance contracts. Indeed, insurance as we know it today is the product of a long history marked by trial and error. It is only possible to understand the history of insurance by studying the development of the numerous and diverse insurance products offered by the different market actors. What is needed are detailed micro studies which focus on clearly defined time frames and on certain localities in order to be able to cope with the mass of materials. However, at the same time macro studies are needed which contextualise these findings. Furthermore, since Roman law times there has been a body of law that a legal historian could call a 'law of sales'. The same is not true for insurance

[9] *Peter Koch*, Geschichte der Versicherungswirtschaft in Deutschland (2012), 7.

law. At first, there was nothing but numerous and diverse insurance contracts. Again, what is needed are detailed micro studies focusing on the study of such insurance contracts in a clearly defined time frame and focusing on specific markets. Again, at the same time, there is a need for macro studies which contextualise these findings.

However, with insurance legal history, further complexity is added by the fact that there were further actors shaping insurance law other than insurers and the insured concluding their contracts: courts, legislatures and legal academia. It was only through a complex interplay between these different actors that a distinct body of insurance law emerged over the centuries. To disentangle their lasting input on the genesis of insurance law, is again an overly complex endeavour.

C. The objective and structure of the present volume

In conclusion, insurance (legal) history is an interdisciplinary field of study which has to adopt a variety of methodological approaches and which must find the right balance between micro and macro studies. The contributions to the present volume exhibit this breadth of methodological approaches. The theme of the present volume is maritime risk management. However, before the authors discuss the history of such strategies in the marine sector, Grietjie Verhoef will paint, in broad brushstrokes, a general history of insurance with a special focus on the development of the different functions that insurance serves.[10] Verhoef will thereby offer the general framework in which the other contributions may be set. The remaining ten contributions will then examine different risk management strategies in the maritime sector. The focus is not exclusively on insurance.[11] As pointed out, research into the history of marine insurance (law) has to take other related risk management strategies into account. In the maritime sector the most important such related strategies were sea loan,[12] bottomry,[13] and general average.[14] Some contributions focus on normative provisions,[15] others contrast practice with legal scholarship,[16] or focus on the emergence of insurance

[10] *Grietfie Verhoef*, pp. 17 ff., below.

[11] With a focus on marine insurance *Ana María Rivera Medina*, pp. 61 ff., below; *Luisa Piccinno* and *Antonio Iodice*, pp. 83 ff., below; *Andrea Addobbati*, pp. 161 ff., below; *Jerònia Pons Pons*, pp. 189 ff., below; *Mallory Hope*, pp. 209 ff., below; *Stephanie Plasschaert*, pp. 265 ff., below.

[12] *Nikol Žiha*, pp. 35 ff., below.

[13] *Ana María Rivera Medina*, pp. 61 ff., below.

[14] *Luisa Piccinno* and *Antonio Iodice*, pp. 83 ff., below; *John Ford*, pp. 111 ff., below; *David Deroussin*, pp. 139 ff., below; *Sabine Go*, pp. 247 ff., below.

[15] *Ana María Rivera Medina*, pp. 61 ff., below; *David Deroussin*, pp. 139 ff., below.

[16] *John Ford*, pp. 111 ff., below.

companies as opposed to individual insurers.[17] Again, other contributions give valuable insights in marine insurance practice in specific cities,[18] analyse the networks of the different market actors,[19] or analyse insurance practice through the lens of specific insurance litigation.[20] As to the time frame, the different contributions span from antiquity to the nineteenth century.

As editors, we have decided to present these contributions in chronological order. We have discussed other possible arrangements: the contributions could have been grouped together by the sort of transaction that they discuss: sea loan, bottomry, general average, insurance. However, with such an arrangement the connections between these different risk management strategies would have been lost. Or the contributions could have been grouped together by region, proceeding roughly from south to north. However, in an international setting as in the maritime sector, such an arrangement would have been nonsensical. It is only chronological order that is apt to reveal the progressive development of the different risk management strategies in the maritime sector. However, even when following a chronological order, we faced the problem that most contributions overlapped in the time period that they cover. The contribution by Luisa Piccinno and Antonio Iodice,[21] for example, starts in the sixteenth century and reaches into the seventeenth century, whereas John Ford's contribution is restricted to the sixteenth century.[22] Nevertheless, we have decided to place Ford's paper after that authored by Piccinno and Iodice, as this order allows the reader to better appreciate the peculiarities of the Scottish materials.

[17] *Jerònia Pons Pons*, pp. 189 ff., below.

[18] *Luisa Piccinno* and *Antonio Iodice*, pp. 83 ff., below; *Andrea Addobbati*, pp. 161 ff., below.

[19] *Stephanie Plasschaert*, pp. 265 ff., below.

[20] *Mallory Hope*, pp. 209 ff., below.

[21] *Luisa Piccinno* and *Antonio Iodice*, pp. 83 ff., below.

[22] *John Ford*, pp. 111 ff., below.