

Investments, Risks and Accidents in Seaborne Trade: General Average as an instrument of mutual protection (17th-18th Centuries)

Abstract:

The paper focuses on the analysis of investments and risk management in maritime trade through the study of one of the oldest lived legal instrument, that is general average (GA). General average is a risk-spreading technique: it redistributes the expenses which can befall ships and cargoes from the time of loading until their unloading (due to accidents, jettison, capture and unexpected expenses) among all the parties involved in the business cycle. For this reason it can be considered a mutualistic form of protection. Thanks to the development of seaborne trade, Early Modern age is considered the first era of globalisation: in this period, GA procedures were governed by rules which were mostly acknowledged and accepted across all the European ports, even if in presence of substantive differences in their practice. GA played and still plays an essential role in the redistribution of transaction costs, and being a form of strictly mutual self-protection, never evolved into a speculative financial instrument as, for example, insurance did; therefore it represents an excellent case of long-term effectiveness of a non-market economic phenomenon.

Introduction

The very nature of shipping and the environment in which the industry operates, make seafaring one of the most dangerous profession in the world¹. With deep sea fishing being the most dangerous one, according to the most recent statistics regarding job industry in the US, we could affirm that the maritime world is far from being put under control. Maritime history and risk's sharing techniques lead into the debate the issues connected with the investigation of human agency in a fluid space -such as the seas- where the influence of states and empires was constantly confronted with the reality, at least until the nineteenth century, of the lack of fast and reliable communications. Early modern history is the most interesting stage for analysing these issues.

The new challenge for Maritime History is in relation to Global History, which engages with the evolution over time of global processes such as trade. A maritime topic can find its proper place because seafaring was and is an activity common to many civilizations around the globe. Maritime journey became the medium that allowed the emergence of

¹ <http://seafarersrights.org/seafarers-subjects/deaths-and-injuries-at-sea/>

networks of global communications and exchange. Frank Boeze has proposed six categories to sum up humans' relations with the sea². His second category, using the sea as a mean of communication for the carriage of people and goods, can be regarded as the most fundamental of all: it has been defined as the battle undertaken against time and space with vessels and instruments designed to conquer the unique dangers of both the sea and landfall.

General Average as a risk's sharing technique

Our focus will be on General Averages. They are strictly connected with risk's sharing techniques. It is one of the most important themes, but also one of the most complicated, in maritime law. It is rooted in the primordial moments of moving cargo around the world by sailing. It accompanied merchants and traders since the early days of what we would now call "international trade". Nevertheless, it is felt as an unexplored and unknown field, to the point that Mr. Yancey, former president of the US Average Adjusters Association, in his foreword to the second edition of the significant work of Leslie Buglass, found that the author was able to make "crystal clear even the more esoteric obscurities of General Average"³.

Such "obscurities" are evident when we try to retrace a history of this legal tool. Without the need for bothering ancient rites and mysteries, understanding the concepts and the nature of General Average looks indeed as a work for "enlightened": a job for professionals who dedicate a large part of their skills and time trying to "break the code" and penetrate the logic and practice of this institution. Even the most experienced practitioners from the claims departments of Cargo Underwriters, P&I Clubs and Marine Brokers, find themselves, at times, puzzled and lost in front of some General Average Adjustments⁴.

In fact, GA's practice and theory is still at the centre of economic and legal debates on a global scale. This has hindered a resurgence of the questioning about their nature and

² Frank Boeze, *From the periphery to the mainstream: the challenge of Australia's maritime history*, in «The Great Circle», vol. 11/1, 1989, pp. 6-7.

³ Leslie J. Buglass, *General Average and the York/Antwerp rules, 1974*, American Law and Practice, Cornell Maritime Press, 1974, p. ix. Cfr. N. Geoffrey Hudson, *The York-Antwerp Rules: Background to the Changes of 1994*, «Journal of Maritime Law & Commerce», n. 27, 1996, p. 469. The York Antwerp rules of 2016 are available for consultation on the website of the Comité Maritime, cfr. URL:

[http://www.comitemaritime.org/Uploads/Work%20Product/York-Antwerp%20Rules%202016%20\(Final\).pdf](http://www.comitemaritime.org/Uploads/Work%20Product/York-Antwerp%20Rules%202016%20(Final).pdf)

⁴ <https://maritime-mea.com/blog/2015/01/12/underwriters-pi-clubs-vetting-ship/>

connection with the long-term historical development of maritime law⁵. The issues posed by the use and development of GA on international scale can be observed especially in Early Modern Age, a period often referred to as “the first age of globalization”⁶.

In his pivotal work, Knut S. Selmer wrote: “few legal institutions have been so ardently attacked and so faithfully defended as the equitable distribution of common salvage expenses at sea”⁷. Questions are frequent about its survival: “why do we still have to deal with General Average? Is it still necessary? Could it be replaced by something more modern and apt to our times? Or at least could it be adapted and shaped to fit the needs of nowadays markets?”.

In the expression “General Average”, the word *average* should be read as *loss*. The principle relates to the common proportionate liability of all to contribute to the loss of one or a few, incurred to save the vessel otherwise in distress (such as throwing cargo overboard to keep a boat afloat until rescued). It is a sharing risk technique: it redistributes unforeseen expenses that can occur to the ship or to the cargo from the loading to the unloading unto every participant in the economic activity. For this reason, we could refer to GA as a form of “mutual” protection. The merchant and financial operators involved in the voyage wanted to prevent any unforeseeable damage by subscribing an agreement to share the risks.

It is possible to retrace the origin of this institution back in the Antiquity with the Roman *Lex Rhodia de jactu*. There are little doubts that the core of what developed into the Law of General Average was firstly codified, or at least organically organized and applied, by the Rhodians, around 800 B.C.⁸. However, it is thought that the principle at its inception dates

⁵ Cfr. Jolien Kruit, *General Average – general principle plus varying practical application equals uniformity?*, in «The Journal of International Maritime Law», n. 21, 2015, pp. 190-202.

⁶ Cfr. Jan De Vries, *The limits of globalization in the early modern world*, in «The Economic History Review», n. 63, 2010; Dennis O. Flynn, Arturo Giraldez, *Path Dependence, Time Lags and the Birth of Globalisation. A critique of O'Rourke and Williamson*, in «European Review of Economic History», n. 8, 2004, pp. 81-108; Daron Acemoglu, Simon Johnson, and James Robinson, *The rise of Europe: Atlantic trade, institutional change, and economic growth*, in «American Economic Review», n. 95, 2005, pp. 546-579; Ronald Findlay, *Globalization and the European economy: medieval origins to the industrial revolution*, in Henryk Kierzkowski (ed.), *Europe and globalization*, Palgrave Macmillan, London, 2002, pp. 32-63; Dennis O. Flynn, Arturo Giraldez, *Born again: globalization's sixteenth-century origins (Asian/Global versus European Dynamics)*, in «Pacific Economic Review», n. 13, 2008, pp. 359-87; Michael Lang, *Globalization and its history*, in «Journal of Modern History», n. 78, 2006, pp. 899-931; Jan de Vries, *Limits of globalization in the early modern world*, in «The economic history review», n. 63/3, 2010, pp. 710-733.

⁷ Knut S. Selmer, *The survival of General Average*, Pitman and Sons, London 1958, p. 3.

⁸ Walter Ashburner, *The rhodian sea-law, edited from the manuscripts*, Clarendon Press, Oxford, 1909. The manuscripts have also be edited in Jean-Marie Pardessus, *Collection de lois maritimes antérieures au XVIIIe siècle*, vol. I, Imprimerie Royale, Paris, 1828. Among all the sources that make this reference see Edda Frankot, *Of Laws of Ships and Shipmen*, op.cit., p. 185; Francis D. Rose, *General Average – Law and Practice*, Lloyd's

back to even an earlier age. As said by Selmer, the General Average described in the Digest of the emperor Justinian is grounded on the idea that the loss of property that has been wilfully caused to ensure the common safety of the ship and the cargo should be borne by all who have received a benefit from the sacrifice, in proportion of the economic interest held by each of them⁹. In this perspective, a consistent application of this principle unavoidably led to an expansion of the scope of General Average. This progressively included other costs and expenses to be shared. According to the oldest rules, a GA was every form of sacrifice occurred for common safety. Then it progressively included any expense connected or related with the sacrifice itself. Of course, the evolution and development of General Average has been far from linear and logic, since several legal systems and approaches tried to deal with it throughout the centuries after the fall of the Roman law system. The Romans had a comprehensive and logical, although somehow limited, way to deal with the matter.

The jettison of cargo is what has always been typically considered a General Average act¹⁰. The list of the damages and expenses that could be included in General Average rules varied thus according with the geographical areas and with trade's tradition of those areas. This led to a multitude of usages and customs that made necessary the drafting of "codes" or compendia of laws and jurisprudence that could provide some practical guidance to the merchants, when not being express rules of law recognized by sovereign States¹¹.

For many centuries, the rules governing this branch of maritime law were essentially based on the sacrifices made by the cargo through its jettison and the cutting away of the mast. As trade and sea enterprises grew larger and articulated, different ways of dealing with General Average were applied. Rather disorderly through adoptions and acquisitions from Country to Country, the law concerning General Average grew until the *Ordonnance* of Louis XIV systematically defined it in 1683. On almost the same terms, the concept was

shipping Law Library, London, 1997, p. 1; Richard Lowndes, George Rupert Rudolf, *The Law of General Average and the York-Antwerp Rules* (David John Wilson, Julian Humphrey Spencer Cooke, eds.), 12th Ed., Sweet & Maxwell Ltd., London, 1997.

⁹ Knut S. Selmer, *The survival of General Average*, op. cit., p. 42.

¹⁰ All Medieval sources refer at least to this as a valid General Average act. The Norse sea-laws actually considered only this as General Average while the *Rolls of Oléron* included also the cutting of the mast and the cutting of anchor cables, see Knut S. Selmer, *The survival of General Average*, op. cit., p. 43.

¹¹ One of the recurring themes in today's quest for uniformity in maritime law is that historically uniform rules were applied. The scholars' discussions regarding a hypothetical *lex mercatoria* are partially stimulated by this kind of "international rules". Cfr. Vito Piergiovanni (ed.), *From lex mercatoria to commercial law*, Duncker & Humblot, Berlin, 2005. For a comparison with contemporary debates, cfr. Orsolya Toth, *The Lex Mercatoria in Theory and Practice*, Oxford University Press, Oxford, 2017.

absorbed by the legal system of the raising United Kingdom, a Country that still in our days has a preponderant role in the application and evolution of maritime law.

A progressive call for uniformity and general standards was raising from the various parties involved in maritime trade business. The General Average's system, while developing in several different branches, fragmentary and disharmonious throughout the Medieval and Modern times, was not matching anymore the needs of markets that were becoming (or keeping to become but in a magnitude never seen before) global and transnational. The differences in the way adjusters drafted General Average Adjustments, in the way Courts in different jurisdictions decided what was allowable or not in General Average and even the differences in drafting the documents necessary to comply with the so called General Average formalities were all contributing to a rising movement calling for a uniform and common system that could regulate General Average. What was common was not the set of rules but the interests and claims of the merchants, such as speedy trials, a more rational law of evidence, freedom of trade, a similar treatment of all groups of merchants, an established and reliable practice as regards the drawing up of contracts.

The whole process for a global convention on General Average started with the Glasgow resolutions in 1860. It continued with the drafting of the York rules in 1864 and culminated with the York/Antwerp Rules in 1877¹². A paper presented at the International Union of Marine Insurance Conference in 1996 reported that “the system of General Average is one which, to prevent confusion and injustice, pre-eminently requires that the same principles should be acknowledged amongst chief maritime nations”¹³. The 1877 Rules began to receive widespread acceptance and were progressively introduced in charter parties and bills of lading, obtaining at least the result of moving towards uniformity. It was in Stockholm in 1924 that the general principles were codified and the York-Antwerp Rules were created (YAR). They still survive in their latest formulations. More than twenty years later, at the meeting held in 1950, the Comité Maritime International (CMI) became the official “custodian” of the Rules and since then every revision of them has been undertaken under the coordination and supervision of the CMI. It was in 1950 that the so-called “Rule of Interpretation” has been introduced, thus providing a guideline in the correct use of the Rules.

¹² Cfr. William Tetley, *General Average now and in the future*, in Roger Roland (ed.), *Liber Amicorum*, Larcier, Brussels, 2003, pp. 419-50.

¹³ N. Geoffrey Hudson, Michael Harvey, *The York-Antwerp Rules*, third ed., Informa Law, London, 2010, p. 9.

In the following period, debates on GA were heated with several studies and papers produced before any conference. Their aim was to provide the necessary scientific ground for the adoption of the new version of the rules. To approach the insurance market with the goal of verifying whether some new specific insurance tools could have allowed the abolition of General Average was considered relevant. The main issues were about whether to maintain the major principles of General Average concerning the sacrifices and expenditures made for the preservation of the property against the risks run in the common maritime adventure and the expenditures incurred and measures undertaken to preserve the voyage and the cargo¹⁴. The answers were in large part favourable. As usual, the discussion was lively and animated: the parties tried their best to support their positions. The CMI then scheduled a conference in Vancouver in 2004, in order to tackle all the issues and proceed, if a consensus would have been attained, with a further revision of the rules.

The new rules, entitled York-Antwerp Rules 2016, are the culmination of a drafting process that began in 2012. Since it had been approved by the ship-owners' association, BIMCO, these rules stand a good prospect of being adopted in place of York-Antwerp Rules 1994. They are, at present, most commonly incorporated by reference into charter parties and bills of lading.

GAs in Early modern Genoa

The files concerning a General Average record, like reports, calculus, crew rolls, etc., are extremely rich from a quantitative and qualitative point of view. Many of them survived from the Middle Ages, all across Europe. An in-depth analysis of these still unexploited sources could provide information about the flows of trade and international shipping on a European level. Genoa was a maritime republic and one of the main port cities in the Mediterranean. During the Early Modern age, it was a leading centre of international finance and a great hub of maritime trade. Genoese bankers, for example, financed many of the Spanish crown's foreign endeavours from their counting houses in Seville¹⁵. Fernand Braudel

¹⁴ Howard M. McCormack, *The impetus for change*, op. cit., p. 9.

¹⁵ Cfr. Céline Dauverd, *Imperial ambition in the early modern Mediterranean. Genoese Merchants and the Spanish Crown*, Cambridge University Press, 2015; Catia Brillì, *Genoese Trade and Migration in the Spanish Atlantic, 1700–1830*, Cambridge University Press, Cambridge, 2016.

has called the period from 1557 to 1627 the “age of the Genoese [...] a rule that was so discreet and sophisticated that historians for a long time failed to notice it”¹⁶.

The importance of Genoa, of its port and its trade in these centuries were the reasons why many General Averages were declared here. Luckily, a large part of this documentation survived. With these data, we have a privileged observation point regarding the modern maritime flux of trade. With our research, it will be possible to shed light on the economic and financial structures that ruled maritime trade and international networks between European (but not only) seaports in Early Modern Age. According to a first survey, we have more than 3000 cases recorded in Genoa’s State Archive, from 1590 to the end of the XVIII century.

One of the first historians to highlight the potential of this source was professor Giuseppe Felloni, of the University of Genoa, during the 80s. The main concern of Felloni was the money moved and cited in a GA transaction, in order to reconstruct the flux of trade, the transport and shipping costs, etc. With the help of professor Felloni and following his suggestions, professor Piccinno is carrying on his research. Recently, a large, comparative and multidisciplinary analysis on GA became the object of an international project financed by the ERC-2016-COG (*Average-Transaction Costs and Risk Management during the First Globalization (Sixteenth-Eighteenth Centuries)*). The project is led by Maria Fusaro, from the University of Exeter. It started in July 2017 and it will last until 2021. Professor Fusaro recognised the value of a research that could take into account the complexity of the Genoese sources, in a comparative perspective with other European seaports. This project will lead to the creation of an online database with thousands of GAs from different seaports. For this reason, we are facing the documents trying to register every available information, in order to allow the user to refer directly to the uploaded records. The name of the merchants, the ship’s nationality, the cargo, the route and the weather conditions they faced during the voyage: every detail will be filled in the database. We want to analyse, at the same time, the voyage itself as well as the business and interests involved.

Our hypothesis is that the core rules and principles governing General Averages across Europe in Early Modern Age were very similar, despite the formal differences. For

¹⁶ Fernand Braudel, *Civilization and Capitalism, 15th-18th Century: Perspective of the World*, vol. 3, HarperCollins, New York, 1984, p. 157,164. When speaking of Genoa, Maria Fusaro often refers to it as a “Republic of accountants”.

example, if we consider the cases of Genoa and Livorno, rivals on the same trade routes with different authorities in charge for the procedure, we can affirm that the common traits prevailed on the differences in GA procedures. We should take great care in establishing a method of comparison, as an uncritical application of the *Lex mercatoria* doctrine has often led to uncertain assumptions of uniformity, frequently made by exaggerating similarities and diminishing differences¹⁷. It is true that local rules applied to all the transactions and not just to long-distance trade, as critics of the *Lex Mercatoria* illustrate. However, mercantile culture and practice did solve problems specific to long-distance trade in ways that were not in conflict with established law. Commercial instruments, such as bills of exchange, bills of lading, futures contracts, or insurance, left gaps that needed to be filled by practice¹⁸.

Archival sources on GAs can be used on two different levels. On the “macro” level, we can investigate the sector of maritime trade in total. Since almost 40% of maritime trade in Genoa was involved in GAs declarations, according to Felloni, we can reconstruct the main feature of trade calling at the port of Genoa with reasonable accuracy¹⁹. Moreover, we will be able to compare our sources with the ones kept in other ports such as Livorno and Venice. From the registration of bad weather with linked locations, a research team in Exeter will investigate also on the climate changes in the Mediterranean during this period. On the other hand, we can analyse the investment’s risks afforded and damages suffered by any financial operator involved in the voyage. How much did the Averages affect trade? Which were the possible ways to face the risks? What was the proportion between profit and losses? Which were the strategies adopted by captains and merchants coming from ports all across Europe, when dealing with GA’s law and procedures?

Indeed, when a scholar has to face merchant shipping, he will have to work not only on the ships’ typology, on the nature of the cargo and on the journey from port to port, but also on several other aspects. The main ones could be: the ship-owners and their business management; the commodities that are carried and the productions that can stimulate; the

¹⁷ Cfr. Albrecht Cordes, *Lex maritima? Local, regional and universal maritime law in the Middle Ages*, in *The Routledge handbook of maritime trade around Europe 1300-1600*, edited by Wim Blockmans, Mikhail Krom and Justyna Wubs-Mrozewicz, Routledge, Oxford, 2017, pp. 69-85.

¹⁸ Ricardo Galiano Court, *Honore et Utile: The Approaches and Practice os Sixteenth-Century Genoese Merchant Custom*, in *Understanding the sources of Early Modern and Modern Commercial Law*, ed. by Albrecht Cordes, Serge Dauchy, Dave De ruysscher et al., Brill, Leiden Boston, p.60.

¹⁹ Giuseppe Felloni, *Una fonte inesplorata per la storia dell’economia marittima in età moderna: i calcoli di avaria*, in «Wirtschaftskräfte in der europäischen Expansion», n. 2, 1978, pp. 37-57.

importers and exporters with their backers; the port city activities fostered by these commodities and merchants, etc.

In a transnational approach to maritime history, at first, it is hard to keep a clear methodology. It is essential to state the objectives of the research and the tools at disposal. By investigating GAs in Genoa in Early Modern Age, we are working on singular and peculiar cases. As we have already said, the documents available in the State Archive cover the period from 1590 to 1797. Still, considering the nature of the sources, provided by different actors (a state's magistracy, a captain, the merchants), some precautions are due. We have mainly two kinds of sources: the "testimoniale", the first report made by the captain with his crew to explain the nature of the accident; and the calculus, made by designated calculators that were in charge of the evaluation of the ship, of the cargo and of the damages occurred. The first one is written in a narrative form. The captain's objective was to state his good behaviour and describe the unpredictable nature of the accident. The second part is an extremely detailed calculation, ordered by the magistracy, of everything involved in the Average, from the ship itself to the cargo. We can often find the indication of the seller, the shipping agent, the port of destination, the final buyer and the goods' value both in local value (the one of the port of loading) and in Genoese Lira.

In Genoa, we started to upload on a database (build and provided by the ERC research team) all the General Average's data available by using the analytics records (i.e. paper templates for each GA report) of the archival sources made by professor Felloni 20 years ago and preserved in our Department. In this way, we can speed up the filling in the first phase. Up until now, July 2018, we have uploaded the first 100 cases in our offline database, from 1590-1598. Today we want to show you some preliminary results based on this work and some of the features and research fields that will be available for scholars when the database is completed and put online. We are trying to shed light both on a general analysis of trade flows and on the financial structure and business risk of maritime trade. Our goal is to take into account three main aspects of maritime trade: the voyage, the GA, and the investors related to the sea journey and maritime trade.

The voyage

Based on the 100 cases we have recorded up until now, we can observe some general features of Genoese trade in the last decade of the XVI century. These results are to be

matched with further investigation concerning the following centuries. At present, they confirm what we already know about Genoa in these years:

The import of grain was a vital sector in Genoese trade. The region could not provide the amount of grain needed, so it was a common measure to buy cereals from nearby regions, especially from southern Italy. Moreover, in the years 1590-1591 there was a severe food shortage that spanned all over the Mediterranean area. Despite this, we can still find several cargo of grain coming from Sicily. The Genoese, thanks to their strong relations with merchants and businessmen from Northern Europe, especially from the Flanders, managed to persuade them to bring cereals to Genoa and proclaimed for the first time the “free port” to face this shortage²⁰. It was restricted to cereals and it was mainly addressed to northern merchants. GA reports of that period highlight the presence of northern merchants, for example from Amsterdam, Lubeck or Hamburg, but we have also found ships bringing oil from Mallorca, as well as wool and wine from several Spanish cities.

Regarding the captains’ nationality, we still have a majority of Ligurian captains and ships. The bibliography on this subject highlighted that in the following years there was a progressive rising in the number of northern captains and a reduction of the Ligurian ones.

Another field of investigation, or at least something of which at present we do not know much about, is strictly related to the voyage: the length of the journey, the problems occurred because of bad weather conditions (delays, stopovers, damages) and the decisions taken by the captains for the common safety. Focusing on the 100 cases recorded, we have an average length of 89 days per voyage: the farthest departure points were from the Holy Roman Empire (Hamburg and Lubeck) and from the Netherlands (Middelburg and Amsterdam). This is a rough statistic that should be filtered according to every port of departure in order to find out how many days occurred to sail from one port to another and

²⁰The Free Port of Genoa dates back to 1590, when the Government of the Republic and the Casa di San Giorgio agreed to grant free port rights to all the ships carrying grains for at least two thirds of their cargo, in order to deal with a severe food scarcity affecting the whole Mediterranean area. In 1609, this right was extended to almost all goods handled there. In 1623, a “free, general and very general Free Port” was established and it remained in force until the fall of the aristocratic Republic. Cfr. Alfio Brusa, *Dal porto franco della Repubblica genovese al franco dei giorni nostri*, in *Il Porto di Genova nella mostra di Palazzo San Giorgio*, Milano 1953, pp. 134-135; Giulio Giaccherio, *Origini e sviluppo del Porto franco genovese. 11 agosto 1590-9 ottobre 1778*, Genoa 1972, pp. 51-59, 119; Luisa Piccinno, *Economia marittima e operatività portuale. Genova, secc. XVII-XIX*, Genoa 2000, pp. 222-225.

what was the importance, for example concerning any additional expenses, of lay days because of an average occurred during the voyage.

At the same time, from the captains' reports we can extract new information about climate changes, winds and geography of Early Modern Age Europe. This is only a first impression of the potentiality of the analysis concerning the voyage that we can extract from GAs.

GA's resolution

What can we discover from a GA's administrative resolution? We have worked on GA data, by calculating several values that can be useful to shed light on how the risks afforded and damages occurred affected businessmen involved in maritime trade.

First, we calculated the average value of the ships arrived in the port as indicated in the GA's calculus, which was of 3.134 Genoese lire, of the total freight paid for the transport, which was 1.214 lire and of the cargo itself, 28.059 lire²¹. The sum of all the "contributing values", i.e. the ship, the freight, the cargo and the crew's properties, formed the "passive mass" (or "*risico/risk*"), which means the total value of the investments sharing the risk of the journey (see Table 1). The average value of the passive mass is of 32.444 lire. Anyway, we have some values of numbers out of range: 53% of the cases are between 0 and 20.000 lire. At the same time, we have, for example, a single case where the passive mass (or "risk") was 678.709 lire. We decided to calculate the mode and medial numbers to provide a more accurate evaluation. The mode number is 19.787 lire, while the median number is 17.429 lire. These numbers are closer to the most common values that we have found so far.

Alongside the value of the passive mass, there was the "active mass", which means what was actually involved in the General Average, i.e. an estimation of the damage suffered. Usually this value was not very high: in 63% of the cases examined it was less than 1.000 lire; in one extraordinary case it was more than 33.000 lire (see Table 2). After the captain's report and the opening of the procedure in Genoa, there was the nomination of one or more adjusters that had to make an assessment of the damages occurred and present their calculus to the notary of the magistracy. The presence of the adjuster, of any additional experts and of

²¹ The ship's value was not always included into an Average. It depended on several factors and sometimes it contributed only with half of its value. In this case, we believe that the contributing value was only the 50%. An average evaluation of the ship's value should therefore be of 6.268 Genoese lire.

the notary caused additional expenses registered in the calculus. These expenses, even if they were of a small value, could influence the choice of the port where the captain decided to stop and present an Average declaration. We have some cases in which a captain declared that he wanted to report his accident in Genoa because the procedure would have been less expensive than in other seaports. Another possible reason to prefer one port to another was the days that occurred for the procedure to be completed; in Genoa, we have an average time of 67 days.

By analysing the administrative expenses (Table 3), we found an average value in Genoa of 33 lire, 2 soldi and 5 denari. This value is higher than the median and mode number. The median number is 11 lire, 13 denari and 4 soldi, while the median number is 23 lire, 18 denari and 4 soldi. What is particularly interesting regarding GA expenses procedure is that we found some fixed tariffs that do not seem to be related or in proportion to the passive mass or the value of the damage. Probably, in some circumstances, the costs were standard and the captains knew them well. We have found several times a recurring tariff paid for GA procedure of 11 lire, 13 denari and 4 soldi and another one of 23 lire, 6 denari and 8 soldi. In the future, we will compare these values with the ones applied in other seaports in order to understand if the cost and the speed of the procedure was a crucial factor in driving captains' decisions on where to present the GA declaration.

Investors and actors involved in seaborne trade

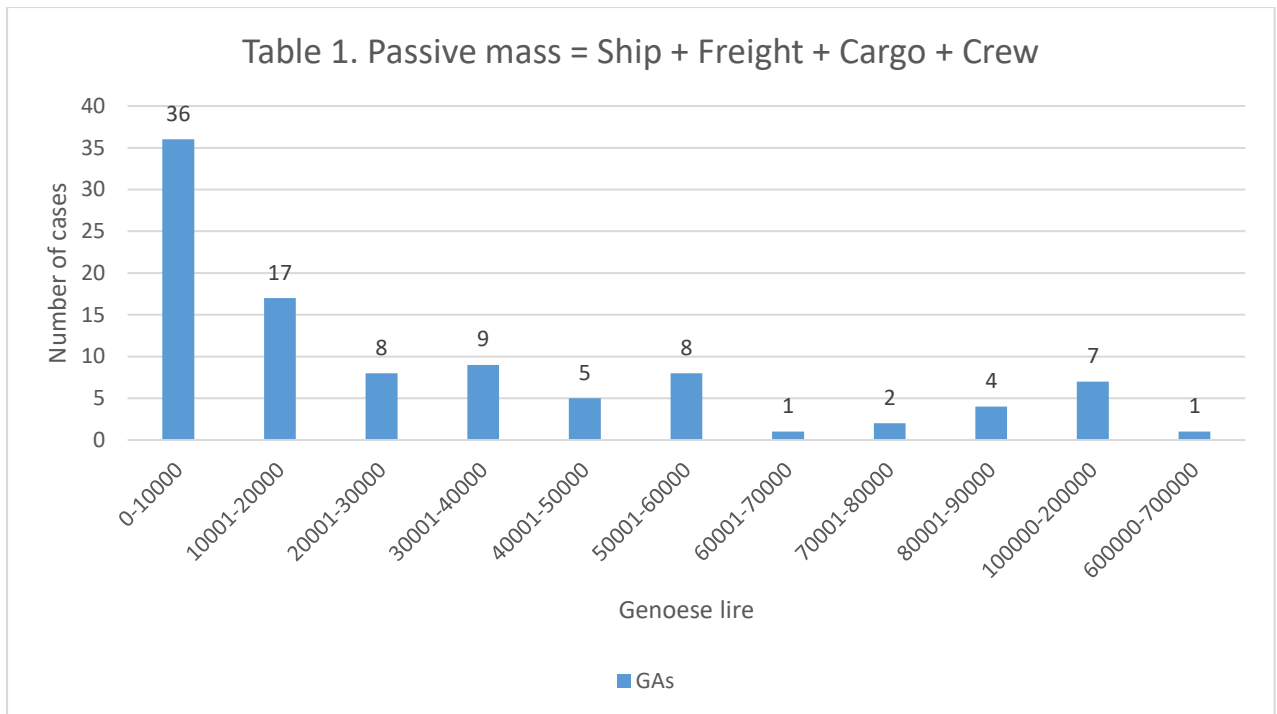
Finally, we can investigate the activities of any businessman and actor involved in the procedure. A GA calculus often reported the name of the cargo's owners, of their agents loading the goods and of any final receiver at the port of arrival. If we focus on the ships loaded with grain and we check how many receivers were involved in every voyage, we have an average number of three. On the other hand, if we consider the median and mode number, we only have one merchant involved in the shipment. This made easier the General Average's resolution, since there were fewer parties to be considered in the calculation for splitting the damage. We only have two cases with more than 10 merchants.

We tried to provide a contribution rate by comparing the suffered damages and expenses with the total passive mass (see Table 4). We have an average number of 6,8%. This should be the expected losses for any merchant if a General Average occurred. It could appear as a very high rate but even in this case we have numerical values out of range. We need to check the median and mode number. The mode is 0.85% while the median is 3,75%.

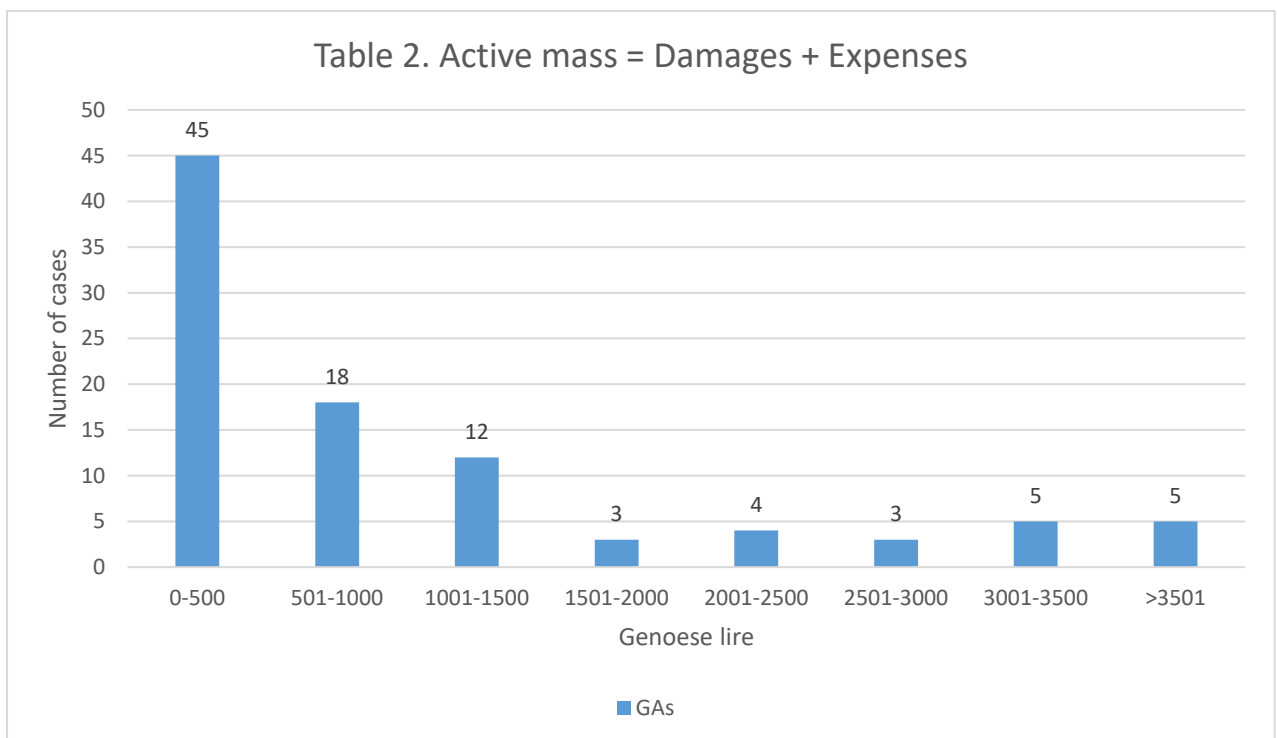
These figures represent the great majority of cases. Only in few General Averages, the cargo was seriously damaged. For example, in a shipment of wine from Spain to Genoa the damages reached 53% of the cargo's value. This case is an example of the unpredictability of a General Average.

We have just showed you only a few kind of information that could be extracted by a systematic GA study. As we stated before, the filling procedure is still in its initial phase. The research team is working to improve the database's structure in order to register every information from the archival sources.

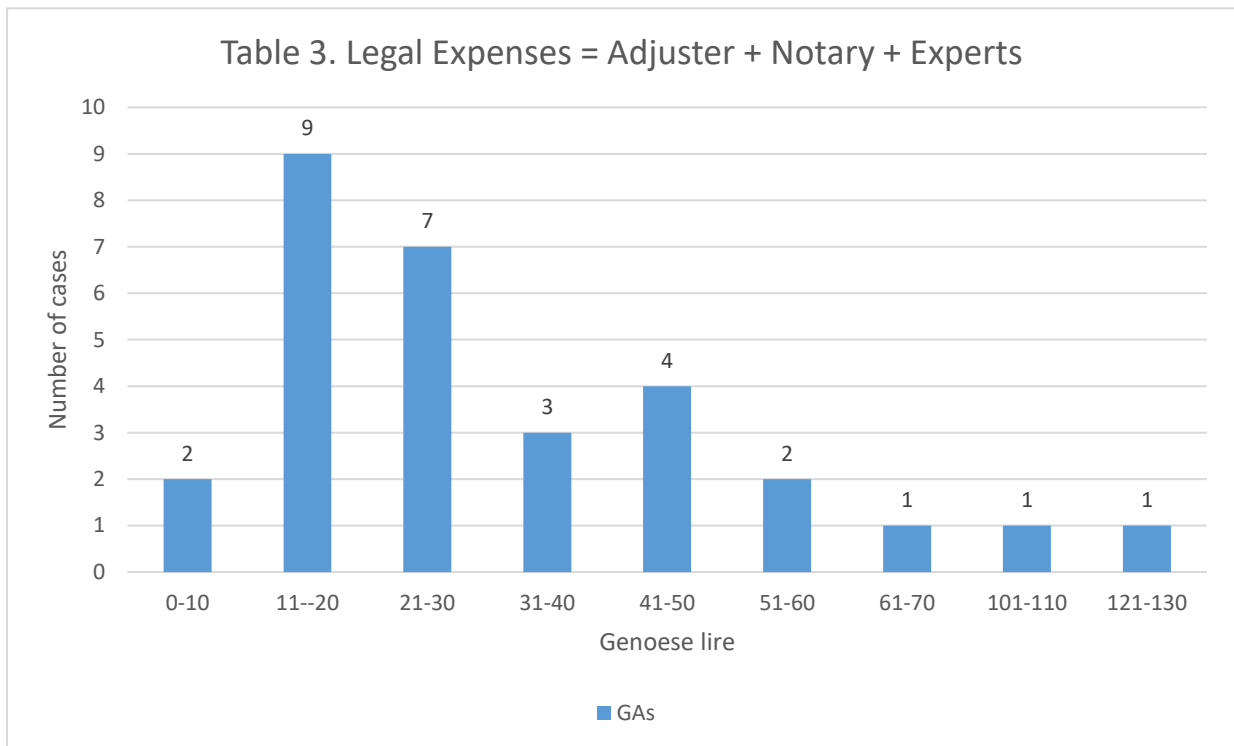
Once we will be in an advanced stage of the research, we will be able to provide a much more precise analysis. The project's peculiar aspect is to develop a comparative and multidisciplinary approach both on the economic, business, legal and social side of maritime trade by using an unexploited source such as GA.



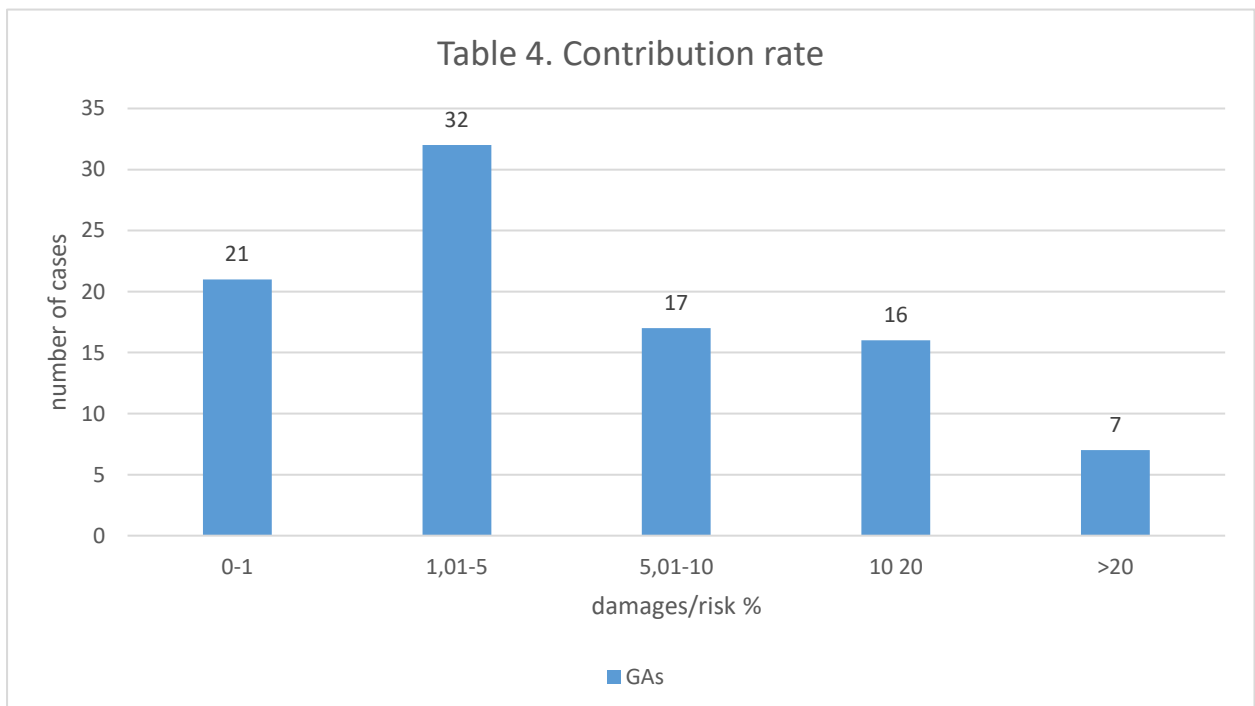
Source: ASG, *Notai Giudiziari*, filze 629-630-634.



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