The Organization of Rome to India Trade Loans and Agents in the Muziris Papyrus.docx

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Organizing Long-Distance Trade

In pre-modern times, long-distance trade was the most demanding business activity. Men and goods had to be sent on long and only barely familiar oceanic or overland routes to unfamiliar lands whose market conditions were unknown and whose rulers’ reactions were unclear. It involved considerable uncertainties, only partially converted into measurable risks, including, to be sure, a high probability for total loss. It involved significant informational asymmetry. It involved high agency costs. Enforceability of contracts with foreign counterparts was unattainable with either local or foreign rulers. Contracts with agents were subject to observability and verifiability problems and to potential defection. Capital investment was relatively high and circulation time long. There was hope for enormous profits upon return of the ships or arrival of the caravans due to the huge arbitrage gaps between distant markets, but there was a real possibility of loss at sea, at the hands of pirates or bandits, or due to expropriation by a foreign ruler; loss of goods, money, ships and lives.² The challenges made this sector of business activity the frontier of organizational innovation. The organization of long-distance trade had to

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² For the unique organizational challenges involved in Eurasian trade, see (Harris, 2005, 2009a, 2009b).
address the most severe agency problems, contract enforcement problems, expropriation
concerns, managerial challenges, and financial investment tools.

**Rome's India Trade**

The Roman Empire was vast and diverse enough to keep much of its trade within its boundaries. This provided the advantage of a secure trade environment, Empire wide contract enforcement system, political commitment not to arbitrarily expropriate, an information flow infrastructure and more. The Mediterranean, *Mare Nostrum*, was the cradle of Roman maritime trade, as it had been for Greek trade. Going outside of the Empire was only worthwhile when merchants could obtain exceptional goods, say tropical products, which promised exceptionally high profits.

Rome's eastern trade was carried out along four major routes. The main overland route was from Palmyra (Tadmor) in Syria to Mesopotamia, the Parthian Empire and beyond. A secondary, more northerly overland route branched off from the first and connected Armenia to the western segment of the Silk Road leading to Central Asia. A southern overland route led from Gaza on the Mediterranean, through the Nabataean Kingdom, with Petra at its hub, into Arabia. It served the incense and aromatics trade, carrying products from the southern regions of Arabia into the Roman Empire (Young, 2003).
India was on the edge of civilization as it was known to the Romans. Its goods were exotic, rare and of high value in the markets of the Roman Empire. Overland trade with India via Palmyra involved long and risky journeys and high transportation costs. Indian Ocean trade was sporadic and very risky and confined to short seasons. As Roman mariners, in or about the 1st century AD, learned how to cope with the monsoon, more of the trade to India was diverted from

Trade practices on the Indian Ocean routes are sporadically known from surviving manuscripts (Casson, 1980: 22-23; McLaughlin, 2010: 7-23). The most notable of these is *Periplus Maris Erythraei*, a Greco-Roman voyage manual, describing navigation and trading opportunities from Roman Egyptian Red Sea ports to destinations in India and East Africa. It was written around the time of the Muziris Papyrus (give or take a century). It provides much information about ports, routes and goods, but not on the way trade was organized, managed or financed (Casson, 1989).

The fourth way connecting Rome with the east, was the main oceanic route from India to the Roman Empire that began in one of the ports of the Malabar Coast of southern India, famously Muziris, and infrequently in Sri Lanka or destinations further away in the Indian Ocean. From one of these ports, the ships sailed the Indian Ocean, usually along the coastline of India, Persia and Southern Arabia and entered the Bab el-Mandab straits into the Red Sea. At this point, it joined the East African trade route. The ships sailed up the Red Sea and anchored in one of the ports on the Egyptian side, Myos Hormos (commonly identified with Quseir al-Qadim?) or Berenike. Goods next crossed the desert on camel caravans to Koptos (Coptos), a hub of several desert crossing roads in Upper Egypt, the closest point on the Nile to the Red Sea. There they were loaded on boats and shipped down the Nile to Alexandria. From Alexandria, the Indian goods were shipped to Rome, Antioch, Ephesus or other Mediterranean ports, and distributed to markets throughout the Roman Empire (McLaughlin, 2010: 23-33; Warmington, 1974: 1-18; Young, 2003: 28-36).
Our knowledge of the goods traded is much more extensive than our knowledge of organizational aspects because ample archeological evidence and significant tax collection records exist. Black pepper was the most common good found in the Berenike and Quseir
excavations (Tomber, 2012). Other imports from India and the Indian Ocean that left traces in archeological sites along the way, in inscriptions and in preserved papyri and literary texts, include spices, coconut, glass, coins and precious stones (McLaughlin, 2010: 179-181; Young, 2003: 221-251). Evidence from Indian archeological sites on imports from the Roman Empire is very limited. It suggests that imports included wine, olive oil, red corals and Roman coins (Gurukkal, 2013).

Not much is known about the organization of the trade between Egypt and India in Roman times. Actual organizational documents were practically unavailable until 1985. The discovery and publication of the Muziris Papyrus provided a rare opportunity to study the organization of Rome's most challenging trade route. The analysis of this unique papyrus is at the core of the current chapter.

This chapter will proceed as follows: I will first present the Muziris Papyrus, then discuss the legal framework within which it was drafted, then analyze it in light of its legal framework and lastly in light of the wider historical context.

The Muziris Papyrus

The Muziris Papyrus, named after the port on the Malabar coast of India that it mentions, is also known as the Vienna Papyrus, because it was purchased in 1980 by the Austrian National Archive from an antiques merchant. Its exact place of origin in Egypt is unknown. It is written in Greek. It was dated the mid-2nd century CE. A transcript was first published in 1985. It has been republished, translated and annotated several times since (Rathbone, 2000: 39-41). Because it is unique in the Greco-Roman papyri corpus, in that it mentions a port in India, it became the
subject of great interest among papyrology scholars. It adds a new dimension to our knowledge of the organizational practices of Eurasia trade in antiquity and is in fact the best available source on the contractual practices of Middle Eastern India merchants in antiquity and in the early middle ages, up to the era of the Cairo Geniza, almost a millennium later.

The papyrus contains incomplete texts on both its sides. Its back side (verso) contains an account of goods shipped from India to Egypt on a single voyage of the ship *Hermapolis*. It calculates values and customs payments based on weight and prices. The goods that could be identified in the one column that was sufficiently preserved include 60 containers of Gangetic nard (a fragrance), ivory tusks and ivory fragments. Much of the list was not preserved and the exact status of the prices, before tax, including tax, or after tax, is not clear. The total weight of the shipment is calculated at nearly 4,000kg, and its value, according to one calculation, in Alexandrian prices after taxes, was nearly 7 million Drachmas, a huge amount equal to that needed to buy a premium estate in Italy.

The front side (recto) of the papyrus looks like a contract. Due to its importance for the present study, I will provide its text in full, using Casson's 1990 transcription and translation (Casson, 1990: 200):

... of your other agents and managers. And
I will weigh and give to your cameleer another twenty talents for loading up for the road inland to Koptos, and
I will convey [sc. the goods] inland through the desert under guard and under security to the public warehouse for receiving revenues at Koptos, and

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3 For an analysis of this side in an attempt to reconstruct the cargo of the *Hermapolis*, see Frederico De Romains (2012)
I will place [them] under your ownership and seal, or of your agents or whoever of them is present, until loading [them] aboard at the river; and

I will load [them] aboard at the required time on the river on a boat that is sound, and I will convey [them] downstream to the warehouse that receives the duty of one-fourth at Alexandria and I will similarly place [them] under your ownership and seal or of your agents, assuming all expenditures for the future from now to the payment of one-fourth—the charges for the conveyance through the desert and the charges of the boatmen and for my part of the other expenses.

With regard to there being—if, on the occurrence of the date for repayment specified in the loan agreements at Muziris, I do not then rightfully pay off the aforementioned loan in my name—there then being to you or your agents or managers the choice and full power, at your discretion, to carry out an execution without due notification or summons, you will possess and own the aforementioned security and pay the duty of one-fourth, and the remaining three-fourths you will transfer to where you wish and sell, re-hypothecate, cede to another party, as you may wish,

and you will take measures for the items pledged as security in whatever way you wish, sell them for your own account at the then prevailing market price, and deduct and include in the reckoning whatever expenses occur on account of the aforementioned loan, with complete faith for such expenditures being extended to you and your agents or managers and there being no legal action against us [in this regard] in any way. With respect to [your] investment, any shortfall or overage [sc. as a result of the disposal of the security] is for my account, the debtor and mortgager...

Its fragmented nature, with the top and bottom missing, as well as some unintelligible words in the remaining text, gave rise to a variety of annotations, glosses, gap fillings and interpretations.
Due to its uniqueness, the Muziris Papyrus attracted the attention of historians of Greco-Roman Egypt. Between the years 1985 and 2000, the fragmented text was the topic of a heated controversy involving several notable historians (Rathbone, 2000: 39-41). The debate regarding the contract on the recto included several issues. Geographically, some argued that it covered the entire route from Muziris to Alexandria, others that it dealt only with the overland route from the Red Sea port to Alexandria. Some argued that it was drafted in India and some that it was drafted in Egypt. Some held that it was in the legal format of a sea loan while others claimed that it was an ordinary land loan agreement. There were at least three distinct identifications of the parties involved. The first, that one party was a financier and the other a merchant; the second, that both parties were merchants; and the third, that one party was a merchant and the other an agent of another merchant. There was also a debate as to who was the active – initiating – party. There was disagreement as to which assets were used as security in this transaction. Lastly, there was a debate as to whether the text is of an individualized contract, whose parties' names are missing
due to the missing top and bottom, or a boilerplate, a standard template in its original form that bears no names of parties.

**The Legal Framework**

Analysis of the legal framework within which the Muziris Papyrus contract was drafted will be performed in three stages. The first stage aims to determine which legal system, demotic, Greek or Roman, applied to the contract; the second, whether it was maritime law or land law that applied to it; and the third, which specific type of contract was used.

**The Law in Greco-Roman Egypt**

This chapter is a good example for the fact that the law of the Roman Empire is not identical to Roman law. While most chapters in this volume deal with the later the current chapter deals with the former. The Roman legions moved forward much faster than Roman culture and law. The Romanization of the Empire was a slow and uneven process. The overlaps between the geographical application of Roman law and the boundaries of Roman Empire were dynamic. Roman law expanded primarily by the granting of full or partial Roman citizenship to additional groups (Latins, colonials, manumitted slaves) within the Empire. Foreigners were the last group to acquire Roman citizenship – in 212 CE. But even before that all residents of the Empire were subjected to common basic legal principles, *ius gentium*, ("law of nations"). Some of the basic commercial contracts were part of *ius gentium* rather than part of Roman law.

The Eastern Mediterranean, a central part of the Empire, had its own unique legal mix. The well established and highly developed Hellenistic culture, language and law did not easily yield to Romanization. This could potentially create a difference between the laws of the Western and
Eastern parts of the Empire. But on the other hand Roman culture, religion and law were heavily influenced from an early period and on an ongoing process by Greek law and culture. This narrowed the gap. Romanization in the Eastern Mediterranean often meant infusion of Greek and Roman law rather than transplantation of Roman law.

Greco-Roman Egypt, the pivotal part of the Empire for studying trade with India, was even more unique because it had a pre-Greek layer, an Ancient-Egyptian Pharaonic layer. The current understanding by historians is that the law in Greco-Roman Egypt cannot be clearly divided chronologically based on political domination, into distinct demotic, Greek and Roman law eras. Rather, the law was formed layer upon layer, in a manner in which the newly arriving law gradually diffused into the existing law. Demotic scripts replaced hieratic scripts in the Early Demotic period (650-332 BCE). The heyday of demotic law was in the Ptolemaic Kingdom, the Middle Demotic period (332-30 BCE), when it became the legal, bureaucratic and business language of Egypt. In the Late Demotic period (30 BCE-250 CE), the Roman period, the use of demotic law diminished – the last demotic contract found in Egypt is dated 175 CE (Manning, 2003: 819). The Muziris Papyrus was written in the closing decades of the Late Demotic period. It is not written in demotic.

Egyptian law went through a long and impactful process of Hellenization that began with the formation of the Hellenistic Ptolemaic Kingdom in 305 BCE and continued well into the Roman period. Demotic and Greek laws co-existed for centuries, the latter gradually making more inroads, initially applying only to Greeks, but later also affecting demotic rules and institutions and applying to Egyptians. Contract law was particularly dominated by Greek formats and was

Despite the fact that Egypt became part of the Roman Empire in 30 BCE, it did not experience swift Romanization of its law. Local law at the time of the occupation was already well-developed and resilient. Roman law applied to Roman citizens but not to local citizens. "The law of the Egyptians" was a fusion of demotic and Greek law that was, so to speak, "invented" by Roman provincial administrators so as to allow Roman judges and jurists to apply the local law in Roman tribunals to non-Roman litigants. This process of consolidation and codification of local law further strengthened and updated Greek law. The Antonine Constitution (c. 212 CE) that granted Roman citizenship to free men in the Empire, including most Egyptians, post-dates the Muziris Papyrus. The dating of the Muziris Papyrus, well into the Roman period yet before the Romanization of provincial law, and its use of the Greek language, suggest that it was drafted in the shadow of Greek law, not demotic or Roman law. Roman trade with India, the most demanding commercial task in the Roman Empire, was subject to Greek, and not to Roman, law.

**Maritime or Land Law**

Was the contract drafted in the shadow of maritime law or land law? Athenian maritime courts were distinct from regular Athenian courts. They appeared as early as the 4th century BCE. They used different procedures. They also adjudicated non-Athenians. They applied distinct forms of customs, contracts and rules (Chowdharay-Best, 1976; Cohen, 1973: 3-10; Lanni, 2006: 149-174). Roman law, as well, recognized a distinction between maritime contracts and terrestrial contract law. This distinction is evident in the Justinian Digest (Libingier, 1935: 10). Both Greek
and Roman traditions were carried into the 7th century CE and beyond, and were embedded in the Byzantine law of the Eastern Mediterranean in the form of the Rhodian Sea Code (Ashburner, 1909; Khalilieh, 2006: 224-233). Both sets of rules existed side by side in the Greco-Roman world and either could apply to a commercial transaction. We will soon deal with the question of which actually applied to the contract.

**Loans, Agents and Partnerships**

In the Greco-Roman period, the organization of long-distance maritime trade could, in the abstract, use three different organizational forms: the loan, the agency and the partnership. The loan was based on ex-ante agreed-upon pay for the use of capital. The agency was based on ex-ante agreed-upon pay for labor. The partnership was based on ex-post splitting of profits (the upside) or losses (the down side).

The basic contractual category in Roman law that could apply to the employment of agents in trade was the *mandatum* (Watson, 1961). The *mandatum* was a gratuitous consensual contract between a mandator and mandatary according to which the later would act on behalf of the former. It was used for commercial transaction such as personal security, suretyship or guarantee. It is thought of by scholars as the Roman equivalent of agency. Another framework, applicable to the relationships between ship owners, ship captains and third parties is that of the *actio exercitoria*. The basic category that could apply to partnership was the *societas* (Randazzo, 2005). Financial land loans could rely on the *stipulatio* contract or the *mutuum* contract. The *stipulatio* was a contract recognized by Greek and Roman law “by the

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4 Several scholars have identified additional organizational forms that have equity investment features. Malmendier (2009) identified the Roman *societas publicanorum*, namely the “society of government leaseholders”. Abatino, Dari-Mattiacci, & Perotti (2011) identified the *peculium* as slave run company. Other equity based investments such as the *commenda* and the joint-stock company were not yet invented.
uttering of formal words [verbis].” It could apply to loans. In Roman law, there were two loan contracts created by the transfer of an object (a res, hence termed 're' or ‘real’ contracts). These are mutuum and commodatum. Mutuum is the loan of something whose use requires its consumption (e.g. money), and commodatum is the loan of an object that is not to be consumed and thus not relevant for our purpose here (Knopf, 2005: 138; Riggsby, 2006: 121-134; Schulz, 1951: 400-401; Zimmermann, 1996: 47-58). The mutuum was traditionally a gratuitous loan, could not bear interest and as such, was not very useful for financing business activity. In order to charge interest and make the loan feasible, the parties had to resort to the more formal stipulatio.

Both Athenian and Roman maritime law recognized a separate category of loan contract applicable to the financing of sea voyages. In Athenian law, this was the nauticum⁵ (Cohen, 1992: 160-171; Millett, 2002: 188-196). In Roman law, the category of faenus nauticum was applicable to maritime loans (Hoover, 1926: 475-500). These loans were distinct from land loans in two major respects. First, the rate of interest. Unlike gratuitous loan contracts such as the mutuum, it allowed the charging of interest. Unlike other forms of non-gratuitous loans, such as the stipulatio, it was not subject to strict usury restrictions and permitted the charging of higher interest due to risk. Second, the ability to separately allocate different risks to the various parties. The sea risk was allocated to the lender, while the business risk was held by the borrower. More specifically, in case of loss of the ship or goods at sea, either due to natural causes or to pirates, the borrower was discharged of the debt. Apparently sea loans were commonly used in 4th

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⁵ The Athenian form may have been based on an even earlier Phoenician merchant practices (Ziskind, 1974).
century BCE Athens. Demosthenes’ speeches include references to some 20 such loans. They were mostly used for financing voyages from Athens to various ports, some as far off as Sicily or the Black Sea. A traveling merchant with limited wealth, or wishing to spread risk or leverage, would borrow money from a wealthier person, an older person who did not wish to travel, a non-merchant, or a syndicate of several individuals, to fund the purchase of a ship or goods or both, for a single or return voyage. While some scholars viewed Athenian sea loans as having fixed formulae or templates, more recently others, notably Cohen, identify a significant level of flexibility and modularity in drafting sea loans, so as to meet the conditions of diverse voyages and the risk-taking inclinations, wealth constraints and business preferences of the parties. Risk of sea loss could be allocated to either party, interest was fixed based on level of sea risk given season and destination, security could be created in either the goods, the ship itself or real estate back home, moral hazard was deal with in several ways, minimum equity investment by the borrowers was sometimes required, different monitoring devices could be agreed upon, loans could be provided by individuals or syndicates (Cohen, 1992:134-148). While there is ample evidence for the use of sea loans in 4th century BCE Athens, mainly in literary sources, the evidence for their use in either Greece or Egypt in later periods is scantier. A papyrus dated from the Ptolemaic period records a contract between a consortium of five merchants and a financier in which the consortium borrowed money in the form of a sea loan in order to finance a voyage to “the spice-bearing lands” (McLaughlin, 2010: 157; Young, 2003: 55). In Rome itself, the main evidence is found in juristic sources, notably in the Justinian Digest. Much of what we know about sea loans in 2nd century CE Greco-Roman Egypt is either a forward extrapolation from 4th century BCE Athens or a backward extrapolation from 6th century CE Constantinople.
The question of whether the loan referred to in the text was subject to maritime law or to land law, to the regular contractual categories of *stipulatio* or *mutuum* or to the maritime category of *faenus nauticum*, can and should be addressed from three perspectives. It can be addressed by analyzing the state of the law in whose shadow the contract was made, and particularly the legal distinction between the law applicable to land and the law applicable to sea. It can be addressed endogenously by reading, completing and interpreting the text of the contract itself. It can be addressed by trying to reconstruct what the underlying transaction was likely to be, given the nature of Egypt-India trade in Roman times. Each of these perspectives has its shortfalls. We don't know much about the legal framework or the nature of trade in the specific time and place independent of the papyrus because of the scarcity of other sources and the centrality of the papyrus in the historical research of both mercantile law and India trade. A conclusive interpretation of the text is unattainable due to the missing sections and the absence of context. This chapter will combine in its analysis the three approaches.

**Analyzing the Agreement**

**Sea Loan**

The legal-financial device mentioned explicitly on the recto of the Muziris Papyrus is a loan. The surviving sections of the text refer to "loan agreements" and twice to "the aforementioned loan". The "I" party was the borrower. The "you" party was the lender. The Muziris Papyrus could at first sight be viewed as a loan agreement, most likely a sea-loan agreement, as it mentions an agreement made in Muziris and Muziris could only be reached by sea. Thus it can be understood to be a sea loan, *faenus nauticum*, agreement. But a more careful reading suggests that it could
also be a subsequent agreement to an original Muziris-made sea-loan agreement. If this is the case and the text refers to the Red Sea-to-Alexandria segment, an overland (and down river) segment, then the applicable law could be land law, and the agreement was to convert a sea loan into a land loan. But a land loan, if not made with the formality required to form a *stipulatio*, could not bear interest. However, if the practice was to have a single transaction that covered the entire Muziris-to-Alexandria span, and if legal doctrine classified an agreement that combines several segments based on the characteristics of the longer segments, then it would view the agreement discussed in the papyrus as part of an overarching sea-loan agreement. Yet, a doctrine that would classify a combined sea cum land trade was less likely to develop in the Athenian or Mediterranean Roman context that involved mostly port-to-port trade, than in the exceptionally long combined Egypt-to-India trade. But we don't really know much about the law applicable to this particular trade beyond our papyrus. Methodological limitations bring us back to square one, at least for the time being. We cannot definitely determine whether the agreement that was preserved on the papyrus is that of a sea loan. Nevertheless, sea loans seem to be a core organizational component of the Egypt-to-India trade, be they reflected in the papyrus itself or in the wider transaction of which it was only a segment.

**Agency**

The agreement does not declare itself to be an agency agreement. Yet, one party, the "I," keeps referring to instructions given to him by the other party, the "you": "I will weigh and give to your cameleer another twenty talents for loading up for the road inland to Koptos, and I will convey [sc. the goods] inland through the desert under guard and under security to the public warehouse for receiving revenues at Koptos, and I will place [them] under your ownership and seal, or of
your agents or whoever of them is present, until loading [them] aboard at the river, and I will load [them] aboard at the required time on the river on a boat that is sound, and I will convey [them] downstream to the warehouse that receives the duty of one-fourth at Alexandria." The text is in fact saying that the "I" has been given instructions by the "you." It includes a set of five operational instructions, covering the entire span from the Red Sea port to Alexandria. Furthermore, the last paragraph of the surviving text lists expenses that had to be accounted for. Expenses are typically incurred by agents (or partners) and not by lenders as the latter are responsible for their own expenses. These parts of the agreement can be viewed as a mandate provided by the "you" party, the principal, to his agent, the "I" party. In other words, this is a mandate, an agency contract.

In addition, the text reflects the wide use of agents in the India trade. The phrase "your agent" appears five times in the short text; the phrase "your manager," 3 times; and "your cameleer" appears once. One of the parties to the agreement, the stationed party, the "you," seems to have agents spread throughout the trade route, in the Red Sea port, in Koptos and in Alexandria. The current text is not an agency contract with respect to those agents who are not parties to it. It only acknowledges, and preserves as historical evidence, their existence.

**Partnership**

The partnership form of business organization is not referred to in the text. Yet, one of only a handful of other records that refer to the trade with “the spice-bearing lands,” possibly India, mentions a consortium. That papyrus, dated to the Ptolemaic period, records a contract between a consortium of five merchants and a financier, in which the consortium borrowed money in the
form of a sea loan in order to finance a voyage. This arrangement can in fact be understood as a partnership – a partnership of five that borrowed money (McLaughlin, 2010: 157; Young, 2003: 55).

**Security**

Much of the first preserved part of the text deals with the passage and control of goods along the route from the Red Sea to Alexandria. The goods were placed under the supervision of the lender’s agents in the Red Sea port, in Koptos and in Alexandria. These agents could make sure that the goods would not escape the lender’s control. They could possess the goods on behalf of the lender in case of repayment default. This could be understood as a technical shipping method that allows the lender closer monitoring of the whereabouts of the goods and their upkeep. The second part, on the other hand, deals not with physical monitoring but with the use of the goods as a security for the loan. It says: "there then being to you or your agents or managers the choice and full power, at your discretion, to carry out an execution without due notification or summons, you will possess and own the aforementioned security." This looks like a legal act making the goods subject to hypotheca or pledge. This part of the agreement uses the terms "security," "pledge," "rehypothecate," clearly indicative terminology. What was the meaning of the security in the goods held by the lender? Security provides the lender with self-help in the event that the borrowers default on repayment in full and on time. As far as securing the lender against sea risks, it did not provide much. Had the goods been lost, the security in them was worthless. The security was most relevant vis-à-vis other creditors of the borrower in Egypt.

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These could not take possession of the imported goods because the lender was the senior and secured creditor.

**Option**

The clauses preceding the security-forming clauses: “if, on the occurrence of the date for repayment specified in the loan agreements at Muziris, **I do not then rightfully pay** off the aforementioned loan … there then being to you or your agents or managers **the choice and full power, at your discretion**, to carry out an execution” can be viewed as an optional element built into a sea loan contract. It seems to be a call option for the lending financier to possess the goods rather than further await the money. The "you" party could "sell them for your own account at the then prevailing price." In fact, the borrowing party could also exercise a call option by failing to promptly repay his debt. Instead, he could hand over the goods rather than go through the effort of selling them on the market.

Another conceptualization of the nature of the contract focuses on the sentence “and there being **no legal action against us** [in this regard] in any f.” This can be viewed as amounting to a non-recourse loan. According to the terms of the loan agreement, the lender has recourse only to the assets, for whose purchase the loan was used, but has no recourse to the borrower personally, his other business assets, his personal assets or his body. Admittedly, non-recourse is viewed in the finance literature as an option contract. But from an asset partitioning perspective, the non-recourse clause has the effect of separating pools of assets rather than as establishing a right to sell at will at an agreed upon price (Hansmann, Kraakman, & Squire, 2006).

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7 For an analysis of the Non-recourse loan as an option contract, see (Harris & Meir, 2013: 131-137; Pavlov & Wächter)
This option hedges the downside risks of the borrowing traveling merchant, allowing him to hand over the goods when their Alexandria market price drops. The lender’s option allows the lender to capture some of the upside, in the case of a rise in prices in Alexandria, and share the profits. These options do not turn the sea loan into a full-fledged profit sharing contract, a precursor of the commenda contract, but make it into a sea loan with some profit-sharing option or market-fluctuation hedging of the loan repayment. If one views the option as one that is routinely exercised by the "you" party, or even as a nominal clause, an option that is always exercised by either party, then what we have here is in fact a service or agency contract. The "I" party provides the "you" party with the service of carrying goods from Muziris or from the Red Sea port to Alexandria, and handing them over to the "you" party. He gets money, buys goods, brings them back and delivers. This is not a loan, with an option or security attached to it, but rather a labor or agency contract.

Let’s sum up the content of the agreement. It has a loan element, an agency element, a security forming element, an option, and possibly a non-recourse element. The main economic concern that the agreement had to address, given the risks involved in long-distance maritime trade with India, was risk allocation. The various elements of the agreement focus on this concern. The sea risk was allocated to the lender. The risk of a drop in the price of the imported goods in the Alexandria market was also allocated to the lender. The risk with respect to the price fluctuations in Muziris, with respect to the life and health of the merchant, the loss of investment in labor if there is no profit, and of loss of goods due to negligence rather than sea risks, was borne by the traveling merchant. The merchant was monitored by the financiers’ agents from the moment of arrival back in Egypt so that he would not be able to steal and privately sell some of the goods.
imported from India. The incentives of the traveling merchant were quite sophisticatedly aligned with those of financier.

**Boilerplate**

The current common understanding, suggested by Rathbone, is that the papyrus contains a master contract, a boiler plate, a template (Rathbone, 2000: 40-43). What supports such a conclusion? There are no party names and no signatures or seals. There are no specified sums, interest rates, goods, or dates. There is even no name of the Red Sea port, only of Muziris, Koptos and Alexandria: origin, destination and a must-go-through hub. It is possible, but not very likely, that all such mentions were lost due to the missing top and bottom and the damage to the edges. The basic structure and drafting seems to be quite formal, legal and detailed. This is not a hastily drafted text written at a brief meeting. But the scribing, on the other hand, is sloppy, including grammatical and syntax errors, and possibly copied in haste from a master form.

Now that we add into the analysis the fact that the front side of the Muziris papyrus was not an individual contract but rather a template that could be filled in with different names, sums and dates. Rathbone suggests that it should be understood as representing a system in which the financier is the repeat player and the initiating party (Rathbone, 2000: 40-43).

The "you" party is the drafter. The contractual terms clearly favor him. It is likely that the "you" party was an Alexandria financier and was in fact the first mover, approaching traveling merchants on his own initiative and asking them to accept his boilerplate contract. These merchants could be viewed as his agents. They could be seen as counterparts to whom he granted sea loans. The financier selected experienced and reputable traveling merchants, provided them
with funding and instructions, signed them on the template contract that was preserved in the Muziris papyrus, and sent them to India. This view of the financier as the initiating party is supported by the fact, clearly stated in the papyrus, that the financier had agents and managers in the Red Sea port and in Koptos, and camel drivers linking the two. A passive investor was not likely to have such an infrastructure.

**The Papyrus in Context**

Understanding the papyrus as a standard form contract used by an active financier fits other contemporary evidence about merchants and the trade infrastructure in Egypt and its Red Sea ports. The author of *Periplus Maris Erythraei* represented himself as a Greek-speaking merchant based in Egypt with firsthand experience in India and East Africa trade (Casson, 1989: 7-10; Young, 2003: 54). Inscriptions and archaeological evidence from the upper Nile Valley, along the desert routes, and from the Red Sea ports, suggests the existence of wealthy merchants involved in trade coming from the Red Sea and the Indian Ocean. The Archive of Nicanor consists of a group of ostraca found in Coptus, dated between 6 CE and 62 CE. These are receipts for transport services provided by Nicanor and his family or partner, by camel, between Coptus and Myos Hormos and Berenice on the instruction of various people. One of the recipients of the services dedicated a temple inscription in Coptos. Another is known as a member of a rich Jewish family in Alexandria. An inscription from a temple at Medamoud in the Nile Valley is dedicated to two female Red Sea merchants. An inscription in Latin found on the desert road between the Red Sea and the Nile mentions a merchant who is also mentioned by Pliny in his *Naturalis Historia* as connected with trade to Sri Lanka and elsewhere, as the Red Sea ports tax
farmer (Young, 2003: 54-60). It is quite likely that on either end of the system, the financing side or the traveling side, a consortium could be involved, though this specific papyrus does not provide evidence for this.

It is also likely that some of the capital invested in the India trade came from as far as Rome (Fitzpatrick, 2011: 40). There is a growing sense among historians of the Roman economy that the expansion of the Roman Empire into the Greek Eastern Mediterranean after 30 BCE led to Roman investment in eastern trade. This provided Roman citizens who had accumulated capital the opportunity to passively invest in that trade through financial intermediaries, such as banks, and institutional investors, such as *societas publicanorum* (Fitzpatrick, 2011: 40-41). It created a combination of Greek and Roman merchant networks. By the 1st and 2nd centuries CE, Roman tax farmers and other contractors, Roman soldiers and veterans, the Imperial family and Rome's wealthier elite, began investing directly and actively in eastern trade (Rathbone, 2007). Next to investors a pool of willing and able agents was formed. Some of them were freedmen, some slaves, some had Egyptian social and cultural background and some Greek. The identity of the agents depended both on the background of the investors and on the tasks the agents were expected to perform (Ruffing, 2013).

This contextual evidence, though not directly engaging with the organization of the India trade, fits an interpretation of the Muziris Papyrus as having, as one of its parties, a wealthy merchant. Such a merchant, one of a class of similarly situated merchants echoed in the inscriptions and the Nicanor archive, had agents and service providers along the route between Alexandria and the Red Sea. Such a merchant provided capital to traveling agents/merchants, either as sea loans or as money held by the agent on the principal's behalf.
Conclusion

The investigation of papyrology records as legal-historical sources allows legal historians to obtain a totally different perspective than the study of juridical texts. It allows them to reconstruct the perspective of contracts rather than doctrine. The methodology of interplaying between business practices and legal doctrine allows us to obtain a thicker, more realistic and less abstract picture of the operation of commercial law in the Roman Empire.

The Muziris Papyrus captured only a snippet of an ongoing enterprise, in which the merchant actively managed and repeatedly transacted with employees, agents and itinerant merchants, based on a standard form contract. It used options, non-recourse loans and security in assets. One can conclude, based on the Muziris Papyrus and contextual evidence, that by the 2nd century CE, a legally and financially sophisticated trade network connecting Egypt and Rome with India was in operation. The legal categories of sea loan, agency and partnership did not bind merchants. They did not select either one legal category or another. They picked a few and mashed them together in order to solve real life problems. Solutions extended not only beyond single legal category but also beyond a single contract. They were neat together into trade networks, involving multiple investors, itinerate agents and service providers, multiple transactions, numerous contracts and a variety of legal tools. This complex organizational model is absent in the law books and could escape historians altogether but for the accidental discovery of the Muziris Papyrus. With the discovery of any additional contractual evidence we'll be able to reconstruct more fully the business model used in Roman India trade and shorter distance trade.
Such networks as the one glimpsed at here must have declined with the decline and ultimate collapse of the Roman Empire and the weakening of the Byzantine Empire holding in Egypt. This is not surprising. Trade declined dramatically with the decline and ultimate collapse of the Roman Empire. Shipwreck evidence is unavailable for the Western Indian Ocean. Practically no shipwreck from antiquity was found so far in that part of the globe, due to oceanic conditions. But the ample evidence from the Mediterranean shows that the number of dateable shipwrecks plumbed in the 2\textsuperscript{nd} century CE and dropped even further in the 5\textsuperscript{th} century CE and there is no reason to believe that Indian Ocean trade fared better.

Indeed, extensive evidence for India trade after the 2\textsuperscript{nd} century CE was only found in the Cairo Geniza, in the 10\textsuperscript{th} to 12\textsuperscript{th} centuries CE, and in Qusayr al-qadim for 13\textsuperscript{th} century Arab merchants (Meyer, 1992: 105-110). It is interesting to note that the level of sophistication of that trade seems to be much lower than that of the 2\textsuperscript{nd} century CE as reflected in the Muziris Papyrus. There is no evidence of an infrastructure of similar scale. No evidence of the use of sophisticated contractual and financial instruments. No evidence of the use of boilerplates. No evidence of drawing investments from further afield through intermediaries and consortiums.

The one notable contractual design that was used by the Geniza traders but not by their Greco-Roman predecessors is the \textit{commenda}. The Muziris Papyrus tells the story of sea loans and agents. The business organization model that was reconstructed in this chapter based on the Muziris Papyrus could possibly be optimal for the heyday of the Roman Empire. Wealth was ample, markets within the Empire were well integrated, the legal system was effective and developed, and entrepreneurs were sophisticated. Large scale trade could be feasible and profitable. In later periods the scarcity of capital, the disintegration of markets, the weakening of
formal legal enforcement, the loss of institutional knowhow and the insertion of uncertainty
drove merchants to the use of more basic arrangements such as the commissioned agency and the
*commenda*. The history of *commenda*-based networks is still at its early stages of research. I
hope that historians, including myself will, be able to tell more of it elsewhere.

The corporation is also conspicuously absent from the history of Roman India trade. The
corporation was developed in late Medieval Europe, when organizational and constitutional
frameworks had to be offered to the Latin Church, to the city, the university and the guild. The
Romans could possibly do without it due to the institutional framework the state offered in
support of trade and law. The early modern North-Western Europeans needed it as a substitute to
state based frameworks. They needed it because they faced higher organizational challenges than
the medieval merchants of Cairo. They had to sail all the way from London or Amsterdam to
India and beyond, around the Cape of Good Hope. They needed their organizational forms to
feature longevity, repeated voyages, hierarchical management, ability to raise external equity
finance and enhancement of information flows. They took a different institutional path than the
Greco-Romans of Egypt because they used different building blocks and because they were
trying to solve different long-trade related problems. The history of corporation-based India
trade will also have to be told elsewhere (Harris, 2009b).  

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8 See also my forthcoming book: Ron Harris, The Birth of the Corporation: East and West (Princeton
University Press, Forthcoming).
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