CRISIS OF CONTRACTS FOR MERCHANTS IN CRISIS

INSTITUTIONS, CORPORATE FINANCE AND GROWTH IN GENOA (11TH -17TH C.)

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ABSTRACT

I study Genoa's economic rise and decline between 11th and 18th C. through the sequential and parallel evolution of its institutional regime and its financial system. Genoa's economy went through two long-run expansion phases (roughly from 11th to late 13th C., and then from 16th to mid 17th C.) interrupted by about two centuries of decline and then stagnation. In its first expansion phase Genoa created a powerful loop between strong institutions and an efficient financial system allocating capital into distant ventures. Initially it was notaries drafting "commenda" contract (short-term equity) that provided an unsophisticated but critical tool to channel funds. From 13th C., a new model took place with emergence of Fairs, the rise of "merchant-bankers" and the "bills of exchange". At that time, Genoa hosted a large community of foreign merchant-bankers and it was at the forefront of this revolution. But, the conflicts between aristocrats and "popolares" and rivalry between old incumbents undermined this model. Dozens of civil wars ravaged Genoa from 14th C. Many assets became under the control of a few incumbent family clans and Genoa's financial system protracted. Elsewhere in Europe, bankers and brokers started to replace notaries in international transactions, supporting innovations in debt, equity, and insurance products. By comparison, in Genoa in 14th C. most transactions remained drafted in Latin by notaries and many foreign bankers left the city. The outdated commenda remained in use throughout the 14th C. and early 15th C. Few long-term equity vehicles emerged (e.g. mahona, societatis) but it was "club-business" involving only few families controlling monopolies abroad. Genoese "insurances" drafted by notaries were in fact complex "fictive sales" or "fictive debt" aimed at hiding insurance premium (usury prohibition). After two centuries of decline and then stagnation, the comeback of Genoa in 16th C. was marked by a new institutional architecture (new republic in 1528), the reemergence of Genoa as the major financial center in the South and the return of Genoese merchant-bankers.

1. INTRODUCTION

1.1. Background

In 1873, Walter Bagehot, then chief editor of *The Economist*, wrote a thoughtful book, 'Lombard Street', about the role of finance and markets in the so-called "industrial revolution". He pinpointed that finance matters because:

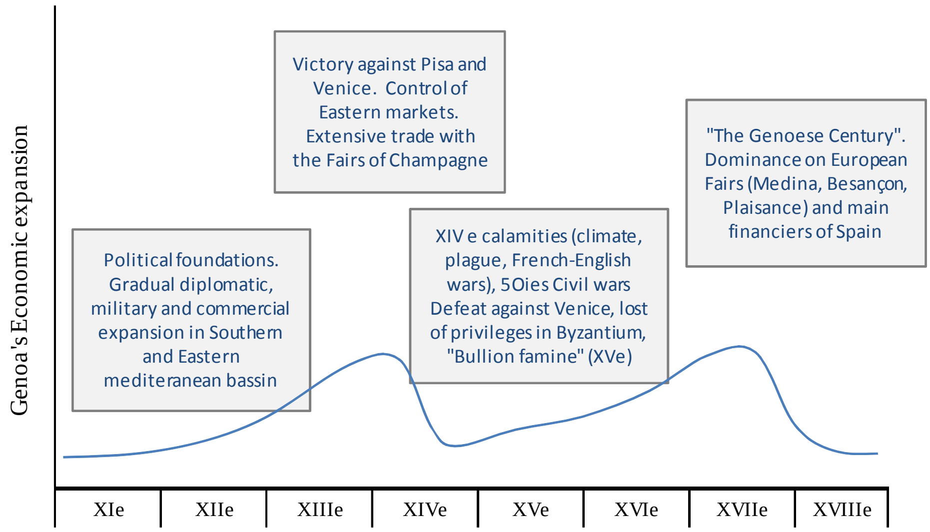
> "a citizen in Long Queen Elizabeth's time would have thought that there was no use inventing railways (if he could have understood what a 'railway' meant), for you would not have been able to collect the capital with which to make them".

Later on, Walter Bagehot's 'Lombard Street' emphasized the institutional foundations of finance and markets by comparing the then declining Italy and United-Kingdom which was, at that time, at the forefront of the industrial revolution:

> "This increasingly democratic structure of English commerce is very unpopular in many quarters, and its effects are no doubt exceedingly mixed. On the one hand, it prevents the long duration of great families of merchant princes, such as those of Venice and Genoa, who inherited nice cultivation as well as great wealth, and who, to some extent, combined the tastes of an aristocracy with the insight and verve of men of business. These are pushed out, so to say, by the dirty crowd of little men. […] A country dependent mainly on great 'merchant princes' will never be so prompt; their commerce perpetually slips more and more into a commerce of routine. A man of large wealth, however intelligent, always thinks, more or less 'I have a great income, and I want to keep it. If things go on as they are I shall certainly keep it; but if they change I may not keep it. […]But a new man, who has his way to make in the world, knows that such changes are his opportunities; he is always on the lookout for them, and always heeds them when he finds them. The rough and vulgar structure of English commerce is the secret of its life; for it contains 'the propensity to variation', which, in the social as in the animal kingdom, is the principle of progress."

My paper focuses these “merchant princes” from Genoa before the “industrial revolution”. The rise and fall of Genoa provides indeed a striking case about the success and failure of what, in the same vein than Bagehot, Joseph Schumpeter called the “creative destruction”, and the role financial markets in that process.

Before the gradual decline of Genoa in late 17th C., Genoa’s economy encountered two long-run expansion economic cycles. These two cycles were interrupted by a deep crisis of abouttwo centuries. Although there are no accurate figures to assess exactly the magnitude of the cycles, direct or indirect evidences (tax revenues on foreign trade or individual assets, demographics, and so on and so forth) allow a rough educated-guess about the shape of this economic roller-coaster.



The first expansion cycle took place right after the foundation of the Commune of Genoa (end 10th C.). After three centuries of a continuous expansion of its military and trade “empire”, Genoa dominated its sister enemies (Venice and Pisa). It became the connexion point between Northern (e.g. Fairs of Champagne) and Southern markets (e.g. Byzantium, North Africa). The cycle ended up around the first quarter of 14th C.. During a long period of political chaos and violent civil wars (about 50 in a century), Genoa suffered more than any other citiesfrom the numerous calamities of the disastrous 14th C. (e.g. climate, Plague epidemic, disruption of trade due to the English-French wars). Gradually, the Genoese economy recovered in 15th C. but at a very slow path. The genesis of the come-back of the “Genoese merchants” took place around the beginning of the 16th C.. To put a date and a event on this renewed expansion cycle, one might say that it started with the foundation of the

Republic in 1528 by A. Doria, and lasted for about a century, until the second quarter of 17th C.. During that period Genoa became again a leading power of the Western world.

1.2. Summary

My paper articulates two messages

The first one is that the case early of modern Genoa is a classic example of a process described by modern economists focusing on economic development. Following Bagehot and Schumpeter, modern “institutional” economics literature emphasized that lasting economic development goes hands in hands with strong institutions. Institutions support exchange beyond private-order relationships (e.g. family, ethnicity, religion). It creates a regime enforcing property rights and contracts. In this context emerge naturally a financial system fuelling capital allocation. Thanks to the design of new products to channel fund and manage risks, capital goes in the hands of those who have best project at lower cost. But such a process is difficult to sustain because it creates a continuous tension between newcomers and incumbents. There are many places where economic development failed because, at one stage, incumbents became an impediment to the development of institutions and finance. The whole society become “entrenched “ by incumbents who have too much too loose from institutional changes, development of finance and ultimately “creative destruction”. My paper shows that this process explained much of Genoa’s economic cycles.

My second message focuses on the link between this broad “institutional finance” framework and the rise of financial markets et corporate finance products in early modern Europe (and in Genoa in particular). From an institutional point of view, there is a large body of historical research about the ambivalent role of Genoese family clans – called “alberghi” from 14th C. – and the power of aristocrats. Initially, aristocratic clans cooperated together and supported the emergence of “social capital” that fostered the set up of institutions and contracts aimed at channeling investments in crusades and distant trade. But, at the turn of 13TH-14th C., these informal rules also undermined the Genoa’s public institutions and its way to enforce property rights and contracts.

What is the link between the institutional evolution and corporate finance contracts? To answer that question, most scholars focus on the well-known “commenda” contract. A

commenda was a short-term equity-vehicle biding a sedentary investor and a travelling agent managing a long-distant venture. In some case, the commenda linked a wealthy sedentary investor (often aristocrat) pouring capital into a maritime venture managed by commoners without start-up assets. Usually, profit was then shared ¾ - ¼ between the investor (principal) and the traveling merchant (agent). Trust and good contracting institutions was a paramount of such agreement for long-distance ventures plagued with asymmetry of information. This literature says that, up to 14th C., better contracting institutions, more finance and more opening to commoners translated into more commenda. According to this literature, conversely, the recession of the Genoese economy in 14th C., can be in part explained by the decline of commenda contracts from 14th C.. This decline corresponds to the rise of a political and business oligarchy at the expense of commoners.

The second message of my paper is that this traditional perspective about "commenda" needs to be fundamentally amended. This explanation works for the initial phase of Genoa's expansion but it fails to capture the evolution of trade organization and corporate finance from 13th C. onwards. To elaborate on my thesis, my paper proposes a three-stage sequential evolution of corporate finance in Europe, in general, and Genoa in particular. I show how Genoa's corporate finance institutions and products fit into this broad framework.

The initial phase of development of early modern corporate finance came with the rise of maritime cities and sea trade. Sea trade was fostered by the emergence of a legal and contractual arsenal and the design of innovative corporate finance products dealing with risks. These products provided risk management solutions for long-distance sea ventures in the context of usury prohibition. As a consequence, they were mainly equity (e.g.commenda) and not debt. Commenda was popular became an umbrella contract covering all forms of capital injection (cash, galleys, goods) and different capital/profit sharing combinations. Institutions (e.g. notaries, scriba/auditor, judges, arbiters) supported contract enforcement and enabled the spread of such risky equity structure for sea trade (asymmetry of information). At the margin of commenda started to flourish hybrid debt-like solutions bundling credit with casualty (e.g. "sea loan") and currency risks (e.g. "maritime exchange") in order to hide interests.

A second development phase took place in 13th C. with the rise of Fairs (e.g. Champagne) and then some cities (e.g. Bruges) which acted as "joints" in the rising triangular trade between Northern Europe, Southern Europe and Eastern markets. These new market places

gathering merchants from all over Europe at the same time provided a better exchange solution for lower cost of transaction compared to bilateral trade between distant cities. In that new business environment emerged new finance institutions, the merchant-banks with branches or correspondents on Fairs and then in key cities), and new contracts providing more efficient and specialized risk-management solutions. Debt like contracts took the form of bills of exchange, equity gradually extended to long-term partnerships and risk-transfer was covered by a separate insurance policy. Gradually, in some cities at the forefront of these evolutions, merchant-bankers and brokers replaced notaries as intermediaries in international corporate finance.

A third phase – I only briefly cover in this paper - started with the huge increase of trade and the large inflow of capital that followed the discovery of the "new world". International trade reached a new level with the revival of fairs (e.g. Medina del Campo, Lyon, Besancon, and Piacenza) and corporate finance changed again. There was a gradual migration of debt, equity and insurance as standard and liquid products towards secondary markets. On stock markets, shares became re-exchangeable continuously. Through endorsement and discounting, credit risks could be disseminated with a deeper capital basis. Insurance became then transferrable products to re-insurers.

My paper argues that strong institutional regime and a vivid capital market put Genoa in the leadership place during the first phase and the beginning of the second phase. Its capital allocation was based on efficient contracting institutions (notaries) which gradually adapted to new techniques (merchant-banks, bills of exchange) emerging during the second phase. But then its business model collapsed because some incumbents started to undermine Genoa's "creative destruction". Genoa's society and economy became gradually re-controlled by a few large "alberghi" (clans) formed around families of incumbents. Corporate finance suffered. There was less contracts. Many bankers left the city. Most contracts remained outdated transactions drafted by legalistic notaries. Commenda maintained its dominance; insurance with upfront premium did not emerge before end 15th C.. Genoese insurance was in fact a complex notarial contract hiding policy premium into fictive sales or fictive debt "gratis e amor". The rise of monopolies in distant trade also produced few long-term equity vehicles firmly controlled by groups of merchants (e.g. mahona). But early 16th C., after years of violent of civil wars and facing the danger of losing it all under the threats of external powers (e.g. France), rival factions decided to cooperate again. This was the basis of a new

institutional regime (e.g. 1528) establishing a “modus vivendi” between aristocratic clans and popolo, between old feudal society and new urban merchant class. This is precisely the time of the comeback of Genoese merchant-bankers and the dominance of Genoese financial system (stock exchange, fairs of Medina del campo, Lyon, Besancon).

1.3. Structure

I structure my paper as follows. After this introduction (section 1), in section 2, I review the existing literature from (2.1) economists about institutions and economic development and historians and from (2.2) historians about institutions and corporate finance in early modern. In section 3, I develop a broad framework to understand the evolution of early modern corporate finance. In section 4, I retrace the evolution of institutions and corporate finance contracts in Genoa in this evolving trade and finance environment. In section 5, I present the quantitative findings corroborating arguments developed in sections 3 and 4..

2. REVIEW OF EXISTING LITERATURE

2.1. Economic literature about institutions, finance and economic development,

A large body of modern research pinpoints a strong empirical correlation between the development of a financial system and economic growth (King and Levine, 1993; Levine, 1997; Demirçunt and Levine, 2001). Finance is important because of what Joseph Schumpeter (1911) called the “creative destruction” process. An efficient financial system developing new risk-management solutions is central in economic development because it enables the allocation of scarce capital into the hands of those who can best manage risks and take advantage of new opportunities. Best managers have access to capital from savers at lower cost thereby creating a lasting advantage over competitors who have no options, in the long run, to reinvent their business model or simply to retire.

Financial institutions can emerge only in a context that supports property rights and contracting institutions. Institutions expand “social capital” (trust to engage in a transaction) from private relationship (e.g. family, neighbors) to a broader and more anonymous exchange across the society. Arrow (1972) once wrote: “Virtually every commercial transaction has

within itself an element of trust […]. It can be plausibly argued that much of the economic backwardness in the world can be explained by the lack of mutual confidence." [1] In all societies, networks based on kinship, families, communities, membership of clubs and associations are useful to establish trust. Networks can foster "social capital" (Banfield, 1958; Coleman, 1988; Putnam et al, 1993; Fukuyama, 1995).

Formal institutions enable the migration of trust based on private relationship to anonymous exchange through times. Institutions are *incentives* to respect contracts across a society beyond ethnic, religious or geographic proximity (D. North, 1990). Institutions supporting contract enforcement lead to the parallel development of financial intermediation that fuels exchange. In turn, the economic development attract capital and labour from new comers, resulting into more investments and growth.

But sustaining this virtuous loop proves to be immensely difficult to sustain (Rajan and Zingales, 2003). History of economic development provides many examples where, at one stage, there is a gradual reversal of institutions, finance and markets, and growth. These "great reversals" are more than often caused by incumbents who viewed changes and "creative destruction" as a threat. They blocked the evolutionary process and social mobility. Rajan's and Zingales' words, this process often leads to "a system of the incumbents, for the incumbents, by the incumbents". Often these blockages take place when external shocks accelerate the need for adaptation and thereby put more pressure on existing political, institutional and social foundations. Crisis can foster change or exacerbate weaknesses. In the later case, when legal and social foundations are too fragile, the whole of society regresses into a negative spiral of polarization and entrenchment of existing incumbents."Social capital" required to exchange goes backward from public to private institutions. This affects financial institutions as well.

For instance, Guisio et al (2004) show that, in some parts of modern Italy too, "familism" and informal networks (bad social capital) prevent the use of checks or banking credits, or the allocation of savings into stocks because the economy is run by informal financial practices. [2]Networks also cause numerous problems of moral hazard and adverse selection, as applied to

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[1] Arrow (1999) rejects the very notion of "social capital" for theoretical motives too long to explain here.

[2] An interesting parallel in Southern Italy is also provided by the recent financial crisis (2008-2009). The Italian industrial federation (COFINDUSTRIA) in its recent *Check-up Mezzogiorno report* (03/02/2009) warned

the insurance market by Arnott and Stiglitz (1991). The same applies to the case of corporate finance and Dasgupta (2004)[3] show how private institutions can insulate societies from efficient exchange and capital allocation. As a result, a typical feature of failing developing economies is the *main mise* of a small group of clans and families over the entire public and economic sphere. There is a predation of assets by dominant "barons" and "oligarchs" and their affiliates. Morck et al. (2005) define this as "entrenched" economies in terms that are not far removed from what a historian could write about medieval Genoa.[4] (See also Morck and Yeung, 2004). The path of these societies is fundamentally broken because they are polarized into groups. Scholars in political sciences show that the failure of a "state" to amalgamate heterogeneous groups increases the likelihood of polarization and violent conflicts (Esteban and Schneider, 2007) increasing thereby the economic backwardness.

2.2. Literature about institutions, corporate finance and growth in medieval Genoa

A long-time ago, several prominent German scholars Schaube (1893), Goldschmidt (1891) and its disciple Max Weber (1911), in his gigantic work about the "ethical" (*beruf*) roots of European "capitalism", started to discuss the medieval corporate finance contracts and in particular the *commenda* contract which presents some characteristics of our equity-based modern company. Since then, there has been a vast amount of literature about *commenda* and its origin (Udovitch, 1962; Pryor, 1977, 1983) - and its Venetian counterpart the "*colleganza*" (Astuti, 1933; Luzzatto, 1934) which emerged slightly earlier - and its role in the expansion of medieval maritime cities.

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authorities about a massive surge of illicit financing activities from mafia as a substitute to traditional banking channels in Southern Italy.

[3] "Networks can even prevent markets from coming into existence. In such situations networks are a hindrance, not an engine of economic development. They may have served a purpose once, but they are now dysfunctional. […] This means that, to the extent that communitarian institutions are a dense network of engagements, they are like economic enclaves [...] But if the institutions act as enclaves, they retard economic development. For example, social impediments to the mobility of labour imply that "talents" aren't able to find their ideal locations. This can act as a drag on technological progress. More generally, resources that should ideally flow across enclaves do not do so. Society then suffers from an inefficient allocation of resources."

[4] "Many countries effectively entrust substantial parts of their corporate sectors to large pyramidal groups of a few extremely wealthy families. This can potentially magnify poor governance by a few family patriarchs into inefficient economy-wide capital allocation, reduced investment in innovation and retarded economic growth. Moreover such elite families understandably value status quo. They sometimes, but not always, appear to influence public policies to curtail private property rights development, capital market development, economic openness, and other threats to the status quo."

As far as Genoa is concerned, it is the great medieval historian Roberto Sabatino Lopez (1937, 1955, 1958, 1970, 1975) who popularized the view that *commenda* was the key contracting vehicle that fuelled Genoa's economic expansion. According to Lopez, *commenda* enabled the attraction of more economic agents. In particular, agents without up-front capital were able to raise funds from wealthy and passive investors. Krueger (1958, 1962), from the so-called "Wisconsin School", delivered some data from notarial records from 1154 to 1230, starting with the first known cartulary from Giovanni Scriba. Based on this somehow sketchy data, [5] Krueger made the hypothesis that, initially, the vast majority of funds were invested through *societas* or *societas maris* – two investing partners from the top layer of Genoase society– and that, gradually, *commenda* involving smaller investments from and to commoners superseded *societas*.

Applying the economics of "principal-agent" that plagued medieval trade with informational frictions and transaction costs, and the role of institutions helping to enforce contracts and mitigating agency risks, several modern scholars have recently become interested in *commenda* contracts. Avner Greif (1996, 1998) explored the link between institutions and contract design, developing a formal game-theoretical model about the emergence of *commenda* (1996, 1998). He shows that *commenda* became optimal if, and only if, merchants cooperated with each other by sharing agents, increasing knowledge about agents and lowering the cost of hiring agents.

Using modern "contract design" theory and game theory too, but focusing on Venice instead of Genoa, Gonzalez de Lara (2004) focuses on the *commenda*-like *colleganza*, using a sample of contracts related to trade between Venice and Alexandria. She shows that colleganza replaced debt-like contracts – and not *societas* as proposed by Schaube and Krueger (see under) – when an information infrastructure enabling contract monitoring and enforcement were in place. Dean Williamson (2004) expands the scope of the comparative analysis of contracts in Venice based on a set of about 700 contracts related to Venetian trade to Crete in 1303-1351. He concluded that the choice of contracts - including the *colleganza* - was determined by a range of factors, these being the riskiness of ventures (irregular trade

[5] Krueger's presentation of data is, however, unsystematic. He relies on very few genuine investment contracts. Between 1154 and 1164, Giovanni Scriba's cartulary includes only 335 genuine investment contracts. The sum involved does not exceed £21,000. These data are also highly biased because they rely on a single notary source. Each notary had a specific customer basis (social origin, geographical focus of trade, preference for one form of contract against another) which cannot be extrapolated across the whole economy.

zones, wars, epidemic) and the ability to monitor.

Benjamin Kedar (1976) analyzed linked his analysis of commenda and the *main mise* of leading aristocratic clans over the whole Genoese society and economy. Based on records from customs duties in 1376 (Day, 1963), Kedar underlined that 64% of total trade value was controlled by aristocrats. Kedar also proposes that after continuous rise of *commenda* contracts from 12th C., notarial “filze” (records) witnessed a sudden decline of *commenda* and a rise of insurance contracts at the trun of 14th C.. Therefore many agents with no assets became unable to raise equity capital to start a venture as in classical *commenda*. This chicken-and-egg vicious loop became cause and effect of the protraction of Genoa’s economy. In Kedar’s wording “Henry Pirenne [1913] once wrote that every change in economic organization causes an existing group of entrepreneurs to withdraw from business and become an aristocracy, while a group of enterprising new men takes their place in the realm of affairs. Not so the reorganization of commerce which took place around 1300: here the new mode of activity was promoted by old established merchants and was detrimental to the advancement chances of newcomers”.

More recently, Quentin van Dosseleare (2009) produce a book echoing Kedar’s thesis. He used an existing network software mapping network structures through graphs. [6] to capture how Genoa’s evolving social structures (affected contract outcomes. He uses about 11,000 commercial transactions gathered by scholars in miscellaneous studies, and then inputs contract characteristic (e.g. contract structure, names of parties, aristocrats/commoners) intoUNICET. The evolving graph structures show a gradual opening of maritime trade to small investors and agents through commenda. His mapping shows that, during Genoa’s expansion, there were more and more nodes and connections, and fewer dominant nodes (size/frequency of contract). By opposition, he shows that from 14th C. onwards that (1) commenda declined at the expense of insurance and debt (2) hierarchical and clan-based network overcame the previous opening to newcomers.

2.3. Why going further

These miscellaneous perspectives - institutional, social or even psychological - about

[6] UNICET (http://www.analytictech.com/ucinet.htm).

Genoa's corporate finance are immensely interesting. In particular, I think that they point in the right direction regarding the link between the quality of institutions supporting property rights and contracts (for long distant trade), required for the development of an efficient financial system and, ultimately, "creative destruction" supporting economic development. But this existing literature of medieval Genoese corporate finance also presents at least six unsolved puzzles.

First, by all times, even when it was condemned for ideological or religious reasons, credit is a crucial capital allocation tool. For many reasons (e.g. asymmetry of information, agency problems, assets specificity, liquidity,) I am not going to develop here, short and long-term credits are indispensable vehicles to allocate capital into the economic circuit, notably in developing economies. Private-equity (and public equity holdings, later on) and alternative products (e.g. options) are useful and indispensable complement of debt-financing in capital structure. But *per se* one, the former should not replace the later.

Second, and this is linked to my point one, there is a fundamental anachronism in the analysis about the commenda in 14th C.. Since the seminal research from Raymond De Roover, we know that from late 12th and 13th C, there was a major shift in the European economy. The commerce between North and South Europe and indirectly Eastern markets was boosted by the rise of Fairs – and in particular the Fairs of Champagne –, and, in parallel, the emergence of a regular trade network between some key cities. This shift was accompanied by the transformation of the old "instrumentum ex causa cambii" and the "martitime cambium" into the "bill of exchange" – and then letter of exchange ("littera pagamenti", "littera cambi") - and the gradual rise of bankers and merchant bankers exchanging bills. For many reasons I am going to recall later, bills and letters were much more efficient to exchange capital and manage risks (market, casualty, liquidity, regulatory) than traditional notarial commenda or collegenza. The latter became obsolete institutions in many locations.

Third, if bills of exchange (debt) emerged and replaced in some locations commenda-like contracts (equity) it was *because* there was *more* information, property rights and contracting institutions. Simply, for a vast majority of transaction, this simple debt contract became the more optimal contractual product, again for reason I am going to recall in my paper.

Fourth, there is a misunderstanding about the role of wealthy families in the long-distant commerce. In Genoa, the "Poop to Desk" (Kedar's thesis) phenomenon *à la* Datini never really happened before end 15th C.. Before the rise of Genoese merchant-bankers in late 15th C. and early 16th C. in Genoa wealthy Genoese families were managers operating on sea. This is an important aspect. One can monopolize economies by blocking financing to third parties. But there are also market distortion when incumbents actually control a majority of assets through large pyramidal organizations that leave no place for new comers. Atypical feature of "entrenched" economies is a combination of both (industrial conglomerates and ownership of banks) in the same hands

Fifth, there is a problem in putting on the same level insurance and commenda. Saying that the former replaced the later does not make sense. The core function of insurance is a risk-transfer and not risk-finance. As such, an insurance contract cannot replace financing because the "policyholder" does not receive an upfront cash amount from "insurer". It is the other way around.

Sixth, in addition to the flawed argument about the substitution of commenda by insurance, I have some serious doubt about the substitution of commenda by debt-like contracts in 14th C.. From my data, for many destinations, commenda contracts remained the major medium of investments. One can always discussed the magnitude of this phenomenon, but the fact remains that up to the end of 14th C. and also in 15th C., the Genoese still contracted through notaries in Latin and that, for distant trade, in many cases these contracts were commenda. The resilience of old contracting practices can also be diagnosed in the way Genoese insurance contracts were structured. These contracts remained fictive sales or debt up to end 15th C.. In many other markets, "plain vanilla" insurance existed from mid to late 14th C.

In a nutshell, there is no doubt that there was the emergence of a small club of well connected families who gradually took control of business opportunities, and that this phenomenon impacted corporate finance contracts. But to understand this impact there is a need to understand

- the gradual rise of more efficient markets and risk-management solutions in Europe;

- the reasons why Genoa's institutional regime enabled the early adoption of such solution in Genoa or, on the contrary, led to the protraction of its capital allocation system.

This is what I propose to analyze in the coming two sections.

3. A (VERY) BRIEF REVIEW ABOUT THE RISE EARLY MODERN CORPORATE FINANCE

The financial system has two core functions: (1) channeling funds materially or immaterially and settling transaction (2) manage all sorts of risks (e.g. market/price, currency, liquidity) due to market imperfections (e.g. asymmetry of information, regulatory). The scope of corporate finance is the way external capital (e.g. individuals, State, business entities) is channeled and structured between savers/investors and business assets. The development of an efficient financial system comes with the design specific products matching transactional and risk management needs from buyers and sellers. Innovation (Tuffano, 2002) comes from intermediaries (e.g. bankers) who are paid to design new products matching more specifically the needs of buyers and sellers. In particular, they establish structure and control mechanism (screening, monitoring, audit) to solve informational issues, reducing thereby the cost of transaction. But gradually with the increase in volume of transactions some specific solutions can migrate to open market-platform. On these liquid markets, the buy/sell of these standard products reveals continuously information about asset price and, overtime, correct discrepancies through arbitrage at a very low cost of transaction. (Merton and Bodie, 2005).

The evolution of corporate finance products and institutions is therefore driven by two factors. One is the way new needs in terms of transactions settlement and risk-management impose the design of new solutions manufactured by intermediaries. The fundamental trait of such evolution is therefore a form of specialization matching more specifically the demand from buyers and sellers. The second is the way some of these solutions can gradually migrate to more liquid secondary markets. The prerequisite is that there should be enough demand for these specific products, and that they can be easily manufactured as standard and comparable products that people can re-exchange. Increasing volume of transactions creates more liquidity and enables the formation of market price equilibrium according to demand and supply. Fair market price solves thereby the asymmetry of information between buyers and sellers at very lower cost of transaction.

Based on this broad framework, I sum up (see annexe 1) the 3 main phases of the development of international corporate finance between 10th C. and 17th C., starting with the rise of sea trade in 10-11th C. and finishing the set up of international capital markets in 17th C..[7]

3.1. Phase 1 : Early risk management and financing for long-distant maritime ventures

The first phase started with the expansion of the West in the Mediterranean basin (e.g. Crusades) and the rise of maritime empire built by several Italian communes (e.g. Genoa, Venice, Pisa). The new trade pattern was long-distance maritime ventures. Most Northern traders (French, Flemish, German) importing wool, draperies and other products settled in those Italian cities waiting for the returns of galleys. They bought back imported products from Eastern markets and then transport them through continental routes to Northern markets. The central risk management issue for such sea ventures was the need and the risk of working capital. The cashflow cycle between initial investments and revenues was very long (from a few months to a year). Most transactions were done cash-and-carry (no order in advance) leaving merchants fully exposed to market (price) risks. Other risks were casualty risks (weather, and mainly piracy), and for ventures involving calls in many markets there was a clear currency exchange issue.

Another problem was the asymmetry information. It was difficult to anticipate future payoffs and risks because markets were distant and communication network deficient. In particular, commercial partnerships with travelling merchants were plagued by risks of frauds and fund embezzlements. For instance, in 14th C., the Status of Pera, a foreign colony for Genoa, mentioned this problem of cheaters in long-distance ventures: ”*et quia multociens fraudes commituntur per acomendatarios in rebus societatis seu acomerndationum*”.

But, at the same time, usury prohibition which started to spread again in 12th C. and 13th C. reduced the ability of parties to fund ventures through “plain vanilla” debt which, in that context, was a more optimal solution. There are thousands of studies about this issues. For

[7] My summary has many themes in common with seminal research from Raymond de Roover (1948, 1958, 1973) but it also inherited from general perspective of Herman Van Der Wee (1977, 1991) who propose in miscellaneous publications that the evolution of early modern banking was a step-by-step refinement of g more specific risk-management solutions. Other more recent studies are useful like Hunt (E.) and Murray (J.) or (1999)Spufford (2002).

many Italian communes, although credit has always been in use, usury prohibition matters. For instance, in Genoa, we know again from the Statutes of the Pera that the maximum interest rates for sea trade is 1,25% a month or, therefore, an annual compound interest of circa 16% ("*Non possit nec debeat mutuare nec dare pecuniam ad usuram alicui persone, pro usura recipiat vel habeat ultra denarios iii per libram in mensem et ab mense infra per eandem racionem*").

To match parties (investors and entrepreneurs), there was first a need people able to draft contract and smooth mechanisms to insure enforcement of terms and conditions in case of litigation. The main institutional innovation that offered such a solution was the rise of notary as the main medium for contracts and a whole legal and accounting arsenal to screen, monitor and audit transactions. Bankers were involved in exchange and deposit banking, but they remained at the periphery of sea trade. In any case, initially, even if a banker funded a venture, it was the notary who was in charge of structuring and recording the final transaction.

In late medieval Genoa like in other maritime cities, notaries designed several standard traditional corporate finance contracts. The first one is commenda (or in Venice colleganza). In its most basic form, this contract brought together for the length of one venture a passive investor injecting some capital and a travelling merchant who provided the labor. The payoff was fully variable (equity-like). At the end of the venture, the merchant was often given about ¼ of the profit, ("ad quartam lucri"), or 1/3 ("ad terciem partem") and the investor the rest. Sometimes the travelling merchant also invested capital in the venture (multilateral commenda). For instance, for a 1/3 investment, he could obtain 1/2 of the profit. Of course the number of investors, (fixed/variable) payoff rules and capital/labour split were mixed to produce an infinite number of contracts. The same is true about assets contribution (cash, galleys, people, goods). This flexibility of commenda's structure and the fact that such equity-like product was not condemned by the Church made it popular although it was costly (short-term, notaries) and a"one fit for all" form of risk managemnt.

Another equity-like contract was the "societas". This is a joint partnership with both parties investing in assets, often based on a 50/50 investment and profit sharing rule. Societas could last either the time of a trip or several years. In the case of a single-trip societas, commenda and societas were sometimes equivalent as one societas partner could also manage the venture. Societas were, by nature, investment binding long-term and trusted business partners,

and, in many case family members. [8] Eventually, because the cost of shipping merchandise was high – for instance, about 50% for some commodities exchanged between Eastern markets and Italy -, a pool of equityholders could finance together transport. The value of galleys was divided into "loca" or "carati". These transactions, often larger that small commenda, were also less frequent.

As far as other products (debt, risk transfer, currency exchange,) were concerned, things were more complex. Equity products were risky in distant trade but Church's attitude limited the reach of other solutions. In order to circumvent usury prohibition. Notaries started to structure products bundling all together the miscellaneous risks ingredients of the ventures (market, casualty, currency) and the credit element that produced the regulatory risk (usury) For instance, the "sea loan", derived from the old the "foenus nauticum", packaged a mixture of debt and insurance. The" borrower" received an upfront cash amount and could later default on the repayment (principal + interest), in case of adverse event on sea and loss of goods and potentially the galleys.[9]

Another contract was the "instrumentum ex causa cambi". This was capital providing a fixed payoff (debt-like) but the refunding (principal and interest) was paid later to the lender or one of his agents in another currency and often in a different distant place. The cambi could be "dry exchange". In that case, the borrower had the option to pay back in the same place and same currency, so the change and re-exchange eliminated the exposure of the lender to currency risks. In some case, the sea loan and the instrumentum were mixed together to produce a contract capturing a upfront payment, casualty risk transfer and a currency exchange.

3.2. Phase 2 : Pan-European Trade network, Merchant-Banks and Bills of Exchange

[8] Schaube's or Kruger's thesis about societas that outnumbered commenda in early development of sea trade is highly speculative (see section 2.2). For sure, from late 12th C., societas are limited in number.

[9] But, in 1234, the Decretale *Naviganti vel eunti ad nundinas* rejected the sea loan, and Gregory IX made clear that those who exchange "sea loans" (*foenus nauticum*) could be considered as usurers(Lapidus, 1992; Ceccarelli, 2001). Interestingly enough, the Pope did not say they were usurers but said that they could be considered as usurers ("*usurarius est censendus*"). It did say "considered as" because, in sea loan, there was a separation of casualty risks and market risks at destination. However, and this was unacceptable for the church, in case of no adverse event, the merchant had to bear all the risks (price, currency, …) of the venture himself and the financier made a profit simply by betting on events who were in the hands of God.

The turn of the 13th C marked a major shift. Before the 13th C, there was a clear separation between local economic circuits which dominated the European economy and the rising long-distance maritime trade that benefited only a few cities in the South (Genoa, Pisa, Venice) and North (Hansa). Suddenly, European trade rose in scale with the expansion of a vast network of fairs and markets located in strategic locations across Europe. Intra-European trade became the centre of this emerging trade flow and exchange with specific distant markets which became the periphery.

Spufford (2002) summed up the nature of the shift : “This (trade and finance) network grew up with the penetration of money into the European countryside, and joined at numerous points to the arteries of long-distance trade”. The nodes of the network were first the Fairs and then, gradually, some key cities (Bruges, Lubeck, Frankfurt, Geneva, Barcelona, Lyon, Paris, Montpellier, Venice, and Florence) who became some sort of permanent fairs or located nearby a fair network.

This European trade network became possible for several reasons. First, since the 13th C an increasingly reliable road network had crossed the Alps and St Gothard and expanded throughout France. There was also a more pro-mercantile attitude of several cities where a rising class of merchants were now firmly in charge of public affairs. From a regulatory point of view, some form of European *Ius Mercatora* emerged concerning trade practices and the resolution of commercial litigation. A gradual specialisation of commerce *à la* David Ricardo took place in the North (textiles, bullion) and the South (luxury goods, commodities from the East), enabling bilateral exchanges and a full use of freight capacity to reduce the marginal cost of transport. The connections between local Fairs all year round, like in Flanders (Bruges, Messine Torhout, Ypres) and Champagne (Brie, Provins, Lagny, Bar Sur Aube), created the critical mass required to produce a “network effect” by which the more participants joined the Fairs the more the Fairs created value for participants. Exchange also expanded because of the inflow of bullion, the rapid increase in minting and money changing, as well as the development of financial intermediaries. All these factors are interrelated and are part of this big change that happened in the 13th C.

The Fairs of Champagne [10] which gathered a vast community of international merchants in the same place and the same time [11] were at the forefront of this “commercial revolution” , Northern merchants who settled in Italian communes in 11-12th C. left and settled directly in Champagne. The other way around, Italian merchants started to re-export themselves a vast portion of goods and commodities from Eastern and Southern markets directly on the Fairs of Champagne.

What changed with the Fairs of Champagne? The major innovation is the bill of exchange. Compared to the old sea trade business model, the new sequence of trade and financing with the bills of exchange between Genoa and Champagne in the 13th C was the following. A merchant first raises cash from a banker, a merchant, or a merchant-banker in A (e.g. Genoa). He then shorts the borrowed cash to buy goods X in A and then transports X to B (Champagne). Then, in B, he sells the goods X to a buyer and, during the same Fair, with the sales proceeds he can look for opportunities to purchase other commodities Y to be resold later in A. Both transactions were to be settled at the end of the Fairs. If there was a negative difference between sale proceeds X and cost of goods Y, he could raise more cash in Champagne from another or the same “lender” (or an associate of this lender). But if there was no good opportunity, he could reimburse the bill in Champagne (in Tournois). Alternatively he could close transaction on the way back in Genoa. This flexibility was captured in an option to revolve cash payment (in Genoese Lira) to lender from Champagne to Genoa with an extensible “usenza” (maturity) Many have discussed the role of this option. In some case this was a fake option to hide local credit into a dry re-exchange. But for the vast majority, it was a genuine option and a real fund transfer mechanism. Some payments were made in Champagne and some others on the way back.

In addition, some transactions explicitly stated that the bills could be passed from one merchant to his agent or to business partners. It was not already a form of endorsement (16th

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[10] In the 13th C, the reason why the Fairs of Champagne became the major European exchange platform has been described by Bourquelot (1865) and Huvelin, (1898), and later debated by many historians (Chapin, 1937; Sayous, 1932; Bautier, 1957 ; Verlinden, 1971; Munro, 2001) and even modern economists (Milgrom, North and Weingast, 1990). Most of this literature underlined the central role of merchants and bankers from Genoa, notably thanks to the information infrastructure set up by Italian communities (Florence, Sienna) between Champagne and Genoa (Face, 1958).

[11] The calendar of Fairs was the following:

Month	Jan-Feb	Feb-Mar	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Sep-Oct	Oct-Nov	Nov-Dec
Fairs	Lagny	Bar-Sur-Aube		Provins		Troyes	Provins		Troyes

C.) as discussed by many scholars. [12]This would become standard practice only in the 16th C. But, in effect, bills were liquid instruments that a merchant and his representatives could pass on according to the organization of ventures. Bankers and merchant bankers could continuously adjust their balance sheets (payable, receivable, cash reserve) by selling and buying bills of exchange.

The bill was therefore a simple instrument with standard ingredients to be recorded by the notary: the parties, the amount, the currency, the time and location of the initial payment and the end settlement, the option – or not - to revolve credit, and the clause of transferability to agents. The bill fulfilled many functions in one contract. First, because the contract was simple, it was comparable, enabling parties to adjust the price of capital to "marked-to-market" (in modern jargon) valuation of risks and time. People exchanging bills were located in the same place (e.g. Piazza Banchi in Genoa) or not far away. It therefore enabled market mechanism to continuously adjust prices to the supply and demand of liquidity across trade participants. The volume of cash and bills also adapted to trade because one player could turn to other market participants to short cash or raise money according to business opportunities. Consequently there was also less risk of money transfer between markets. Last but not least, becausebillq of exange dealt with regulatory risks (usury) in two ways. First, there was a "standard price" for bills of exchange and therefore "fair market value" offered a tangible reference about "normal" cost of capital. Second, because parties were exposed on paper to currency risks it was difficult for the Church to prohibit such an instrument.[13]

In a nutshell, because capital was more liquid, less difficult to transport and less constrained by regulatory pressure, the cost of financing ventures in Champagne than in other markets was lower. Bills of exchange were not just an instrument to fund ventures. They were tools to transfer money and create a more liquid and efficient market between France and Italy and other adjacent markets. The price of bills evolved according to the seasonality of Fairs and therefore the cash balance between the two places.

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[12] But it is worthwhile that at that time (1) bills could be re-exchanged but that is process required the intervention of a notary (2) some there are several examples private letter of exchange with endorsement in Italy in 16th C...

[13] This is the reason why some suspect Genoese bankers and merchants to have exchanged straight credit instruments packaged as "dry" bills of exchange. In effect, neither the merchant nor the banker was going to Champagne, and principal plus interest was repaid at maturity in Genoa.

This big shift in the way trade was organized and financed proved to be immensely beneficial to Genoa, which became not only one of the major trading partner for Champagne, but the major clearing centre for the whole Northern region. In Genoa, there was enough volume of transactions to justify legal, informational and market infrastructure, notably the presence of large branches of bankers from Asti, Piacenza, Sienna and Florence. Because an increasing volume of transactions were done in the same place, it made sense for groups of merchants to pool resources and organize expeditions of messengers between Champagne and Genoa. This is what happened with the Florentine Arte Calimala but also other Italian cities (Sienna, Genoa) sent messengers at the Fairs of Champagne (Face, 1958). It was from Genoa that merchants from many Italian cities raised and settled bills at departure and arrival to and from Champagne at regular periods before and after the seven Fairs. This is the paradox: Genoa was a maritime empire and its merchants were not primarily interested in finance. But the attraction of money and intermediaries from nearby cities, combined with the inflow of goods and bullions from sea trade, created powerful economic artillery enabling Genoa to conquer European markets and fairs.

Soon, in many cities the bill of exchange became the “letter of exchange” which was privately agreed between business partners (and their agents) without the involvement of a notary. The central institution of such a shift was the merchant-bank. When late 13th C. and early 14th C. the Fairs of Champagne declined at the expense of the rise of direct transaction between cities - e.g. first maritime shipment to North Sea (Bruges-Southampton) in 1277 -, these banks became the main intermediaries for international traders thanks to their large network of branches across Europe (Bruges, Paris, Barcelona, Venice, Florence, Genoa, Geneva…). The vast majority of them came from Florence, but also from Sienna, Lucca, Piacenza, Asti. Interestingly, this is at the same period that there was an extension of commercial credit (payables/receivables) by opposition to the traditional cash-and-carry. This is no surprise since the emergence of merchant-bankers lies precisely in the bundling of trade credit and pure financial (exchange) transactions. Often these two activities were linked but in some Italian banks they could be explicitly separated. The international bankers and local financial intermediaries operations (changers, deposit banks) operated together, moving funds and accelerating liquidity through simple manual agreement and book accounting transfer. In addition, this formation of a pan-European capital market created opportunities of arbitrage (and also hedging and speculation) when there were discrepancies in the cost of money in letter of exchange labeled in different currencies from and to different places. This is the

reason why some separate "bank-only" focusing on exchange (excluding trade) branches developed in some markets.[14] In return, arbitrage reinforced the reliability of public price through times, reducing thereby the informational problem about asset quality.

Around the same time also emerged more specializes risk-transfer solutions. A first form of "insurance" we have analyzed in another paper (Briys and Joos de ter Beerst, 2006) consisted in hiding the premium into a fictive sales and a buyback clause. The "policyholders" sold good at departure and but bought an option to buy back. This option was to be exercised only if there was no casualty on sea. The second revolution intervened when the payment from the "insurer" was not actually done at departure. The "insurance" premium was isolated from the loan. A solution was a contract by which the "insurer" declared to have received a "gratis et amore" loan of an unspecified amount (in fact the premium) that he will reimburse (full indemnities) if there is a loss of goods on sea. The other way around, the "fictive debt" could be replaced by a "fictive sales". The insurer received a "back of the envelope" sum of money and declared that he bought the merchandise and he will pay only if merchandises do not arrive at destination, otherwise the other party buyback. These contracts were costly and complex, and required the patient supervision of notaries. Soon, bankers and brokers started to arrange a simpler transaction ("ad fiorentinam") by which an upfront premium was paid. Often notaries were appointed to check and certified transactions, but soon, in second half of 14th C., insurance contracts became straight business transactions (but not in Genoa; see under).

Eventually, another interesting evolution is about equity-holdings. There was certainly a professionalization of trade and finance activities between 13th C. and 14th C.. This increase in volume of trade, the geographical spread of ventures and international banking operations, and therefore the need to establish sedentary presences in key markets, also impose better solutions. On the one hand, there was a rise of simple employment contracts and straight purchasing agreement (often based on commission; e.g. % of value of goods).[15] On the other hand, more long-term capital structure emerged. The case of the Florentine "compania" with

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[14] R. De Roover (1948): "Merchant bankers extended credit to customers who bought merchandise from them, they did only what every merchant did, and still does, and cannot for that reason be considered as bankers. The merchant bankers deserve this qualification, however, because they financed foreign trade by purchasing bills of exchange from merchants who were not their customers and because they concerned themselves with arbitrage between different places"

[15] This type of commission-based collegenza are frequent in Venice from 14th C

"corpo" (capital) , centralized and then decentralized banking operations, has been extensively described. In Genoa, there was no "compania". But instead, emerged the so-called "mahona" and so "large societas" (see under). These structures often pooled a group of merchants managing aboard a dedicated activity in a specific location, being often a monopoly.

3.3. Phase 3 : The New World, the revival of Fairs, Antwerp-Amsterdam-London and the rise of secondary markets

I only briefly explained what happened in the third phase. The second phase was a period of fundamental changes in the business and finance landscape of Europe, but this was also a times of calamities. There was the climate disaster of first half 14th C., the falling demographics, the successive waves of "Back Death" from mid 13th C., the wars (and in particular the French-English war of hundred years). To make things worse, the "bullion famine" contracted exchange all over Europe until 15th C..

After the discovery of the "New World", the first sign of a new phase of growth came with the revival of Fairs (Castilla, Lyon, Besancon, Piacenza, Novi). I have not the time here to elaborate about the gradual rationalization of the supply chain from distant markets to local consumers which created a more efficient management of working capital and risks between suppliers, manufacturers, wholesalers, retailers and eventually customers. I need however to mention briefly that the subsequent evolution of "financial capitalism" was again driven by the specialization of risks management solutions and the creation of liquidity by the transfer to secondary markets. For equity, an important mechanism was the transfer to secondary markets. Initially, gradually partners in the miscellaneous forms of "companies" became able not only to transfer holdings to other family members but also to buy and sell their holdings to third parties (e.g. business partners). In ownership transfer mechanism was strictly controlled by other existing owners as most of business concerns were controlled by one family or a group of families. Ultimately, some entities became listed on stock exchanges (Antwerp, Amsterdam, London). But through discount and endorsement, credit instrument also started to became standard re-exchangeable and more liquid products. Re-insurances emerged very early but the standard practice of re-selling insurance policies took off in 17th C.. In this phase, Italy (Genoa) was well placed initially, but the center of gravity irreversibly moved from South to North (Amsterdam, London) from 17th C..

4. THE CASE OF GENOA

In the following section, I will discuss the place of Genoa in the early development of corporate finance. My analysis of Genoa's institutions and the parallel development of its trade and financial system is aimed at explaining here how Genoa's economy and financial system was at the centre of the first and the beginning of the third stage (roughly between 1550 and 11625) stages, but how and why it "missed the train" for the second stage.

4.1. Phase 1: Institutions, rise of corporate finance and "creative destruction"[16]

According to records from official writers appointed by the Commune to draft the *Annali* (e.g. Carfaro, the Stella brothers, Doria, Voragine), Genoa emerged in the 10th C when the Ligurian coast was attacked by Fatimides troops (935-937). According to the legend, the central fountain of Genoa spouted the blood of innocent Genoese. Some women and children were allegedly kidnapped and shipped overseas to become slaves. However, inhabitants of Genoa and its surroundings decided to stand up and fight. They pooled forces and ships and defeated the "*africani*", bringing back all the kidnapped Genoese. This is the time when the first oath of Genoa can be traced, bringing together "*omnes fideles et in civitate Ianuensi*". Then the more formal "*Compania*" (1056) established more precisely the geographical space of Genoa, as it listed the seven founding locations that define what Genoa was: Castello, Borgo, Soziglia, Porta, San Lorenzo, Maccagni, Piazzalunga. In 1099, the Commune established clearly its political constitution, which underlined the diarchic nature of Genoa, with the power in the hands of the "*bonitas*" (aristocrats) under the supervision of the Church. There were around 80 aristocratic families in Genoa. Among *bonitas*, the most prominent aristocratic families came from the Marchesi Olbertenghi.

But official writers of the Commune were not just historians. They had to write a myth founding the existence of a community. The Saracens certainly helped to boost coordination against this external threat. But, facts also contradict the influence of such factors. First, throughout Europe, from the 10th C, without the fear of the Saracens, there was the gradual formation of cities. In Italy, it was cooperation between a few old aristocratic families that

[16] Roberto Sabatino Lopez (1955, 1958, 1952, 1970, 1975, 1986) is of course also a must-read source of information about the cause of the rise and fall of Genoa between the 11th and 14th C. Since Lopez there is a long list of studies about medieval Genoa including, more recently, the books of Airaldi (1996), Petti-Balbi (1991), Pistarino, (1993), Esptein (1996), Puncuh (2003).

provided the glue to obtain political privileges from their feudal German protectors. This happened in Florence, Sienna, Venice and Genoa, and the feudal protectors were the rulers of the German Holy Roman Empire. In addition, the Genoese proactively managed military expeditions to expand and make profits. At that time, the Saracens were an attractive prey. Throughout the 11th and 12th C, the Genoese used collective military expeditions against them, and those ventures produced substantial monetary returns. They did this as "mercenaries" for other rulers or directly under the umbrella of the Commune. This strategy went to a new level with the Crusades. The Crusades had a genuine religious purpose but they were also viewed by Genoese merchants as commercial ventures. The second effect of the Crusades is that they enabled the Genoese to bargain trade privileges from local rulers involved in Crusades all over the Mediterranean basin in exchange for Genoa's financial and military support.

The Crusades and fights against the Saracens were the starting point of a broader and systematic process of expansion in overseas territories that started with the setting-up of institutions to pool assets and coordinate public actions through the Commune. The Genoese gradually established tools for funding public institutions. These were the miscellaneous taxes and duties related to export/import or to specific commodities (e.g. salt). The city also gained the rights from its citizens to raise debt. However, up to the end of the 13th C, the Genoese were known for their reluctance to let public finance plummet. Public finance of the Commune was under the meticulous surveillance of leading families holding positions in public bodies. Much public expenditure was made on exceptional items related to war or investment opportunities to buy territories abroad. These items needed formal approval from the Council. I will come back to this later, but it should be noted at this stage that public expenditure for dedicated actions was often supported by a group of merchants. The same applies to debt which was often raised through securitization of assets – e.g. coinage – by a small pool of wealthy families.

The first goal assigned by prominent families of the Commune was the support of trade and military expansion . An "anonymous" author, probably a member of an important Genoese family, described this expansion in the Genoese dialect: "*E Tanti sun li Zenoexi* / *E per lo mondo si distesi/ Che und'eli van o stan*/ *Un'atra Zenoa ge fan*".[17] To support this, in

[17] "And many are the Genoese/And going all over the world/In any place he goes and stays/Another Genoa he makes there".

each and every distant market, the entry strategy was about the same.[18] First Genoa obtained privileges to trade. Often Genoese merchants were granted trade exclusivity over dedicated products, tax privileges compared to other merchants and, in some cases, even the rights to claim certain taxes from local merchants! Later on, they established a local sedentary presence. Typically the Genoese colony was made up of "*logia*" for its travelling merchants, the house of an ambassador or a consul which was inhabited by a "*scribaene*" and/or a notary, some dedicated "*fondaco*" (warehouses) with access to public facilities like public baths and ovens. To give a rough order of magnitude about the number of Genoese emigration in some locations between the 13th and the end of the 14th C, there were probably circa 600 or 700 Genoese in Pera, more than 300 in Famagousta, and 100 in Caffa and somewhere close to 100 in Tunis. In addition to these numbers of sedentary residents, there were other non-Ligurian people involved in the day-to-day activities in the colony plus the Genoese travelling merchants going back and forth.

There was of course significant trade and political competition from other "colonial" cities, notably from the Venetian and Pisano merchants. In addition, in distant places, Genoese communities also faced some opposition which turned into hostility from local inhabitants. Playing a "carrot-and-stick" strategy, some populist rulers then forgot their commitments and turned hostile against Genoese merchants established in their country. In such cases, the Genoese merchants, through the Commune, used three different approaches. The first one was diplomacy by sending envoys to resolve the conflict and, whenever the investment was profitable, money and bribes were often part of the equation. The second was the embargo (*devetum*) of the local market. The Genoese consul or *podestàt* declared an absolute prohibition on any merchants to trade with the aforesaid market until the conflict had been

[18] Studies about the Genoese expansion are numerous. An outstanding bibliographical review by geographical area is provided by Michel Balard in the third re-edition (2004) of Lopez (1938) *Storia delle colonie genovesi nel Mediterraneo*. The main milestones of this expansion are the following: Genoa's expansion started with privileges in Languedoc and Provence granted by Bauduin of Jerusalem and the counts of St Gilles en 1004. From the Count of Barcelona they obtained, in 1127, privileges in Barcelona, Nice and San Felice de Guizu. Then Narbonne and Bougie, in 1136 . Then several harbours - Antibes, Fos, Fréjus, Marseille - signed a treaty of mutual assistance with Genoa in exchange for trade concessions. Then came Valencia in 1150. A big breakthrough was the first treaty with Byzantium (1152) and "Romania" would play a pivotal role in Genoa's expansion. A century later, Michel II Paleologus granted significant trade privileges at the expense of Venitian (1261, Nymphaum treaty) and the crucial monopoly on trade in the Black Sea. Not surprisingly, in 1268 the Genoese, a Doria, established a presence in Caffa (Crimea). Thanks to diplomatic agreements with Almohades, they continued their expansion in North Africa - Ceuta in 1161 – and then in Majorque in 1188. Frederick II, king of Sicily, gave them numerous privileges in Messina, Treponi, Syracuse and Napoli. Then they established a first footprint in Monaco in 1220. In 1232, they received privileges from Frederic over Cyprus. The Genoese were also present in Aigues-mortes from 1240, providing decisive help to St Louis to build the city walls and later, in the 1290s, to Philip Le Bel who needed some foreign expertise in shipbuilding. Corsica was conquered in 1280, as well as Sardinia. They also received concessions in Spain from Sancho of Castille who needed Genoese to defeat Fatimid troops in Almeria (1291).

resolved. The third approach was more radical. A fleet with armoured galleys was sent to strike or make a nautical blockade of the places. At the end of the 13th C Genoa achieved military supremacy and its galleys dominated a vast geographical area and secured the dominance of its merchants in many key markets. This culminated in Genoa's victory over its sister enemies, Pisa in Meloria (1286) and the "*Serrenisima*" of Venice in Curzola (1298).

In addition to public institutions taking decisions, pooling capital (tax, public debt) and labour (public service) to coordinate military and diplomatic intervention to expand overseas, such institutions were also crucial in establishing a legal regime supporting contracts. In modern parlance, in medieval Genoa there was a strong "contract law" supporting transactions and enforcing property rights. The law applied to numerous aspects of transactions. At the head of contracting institutions were the judges and the arbiters resolving commercial litigation. Both were appointed by the Commune and some were highly ranked public officers on the Commune payroll. If a judge was to intervene in a dispute between parties, a standard cost was to be paid up front. But the principal trait of the Genoese legal arsenal was the high proportion of arbiters. Genoese merchants tended to prefer resolution of conflicts rather than trial.

The other cornerstone of Genoa's legal system was the notary. There was about one notary for every 200 inhabitants. Many of them studied law in Bologna. The Commune appointed many notaries for its own organization in Genoa and abroad, but most notaries were private. This number is not exceptional compared to other cities at that time. What was peculiar was the somewhat legalistic mentality of Genoese merchants and strong public supervision to enforce contracts through notaries. Before a notary could start a business he had to receive official authorization by public authorities who screened training and records of the applicant. Any major commercial transaction had to be recorded by a notary in front of two or three witnesses and, in particular, all transactions related to sea trade had to be recorded by a notary. The law also imposed a standard contract design including the name of the parties, in "*solidum*" or acting as "procurator", the assets involved, the price, terms and conditions, and then the signatures, the names of the witnesses, the date and time of the contract, where it was signed and who was the notary. Genoese law imposed heavy penalties on notaries who drew up fraudulent contracts. There is an archive recording that, following a case of fraud, a judgment ordered that the treacherous notary lose his hands and his accomplices, the witnesses, be beaten and have their noses cut off (Epstein, 1994). In this extreme and

exceptional case, the physical traces left on the body of cheats probably had the serious consequence of preventing potential business partners from contracting with them any more.

The law also gave standard rights and duties for contracting parties involved in the funding of a venture or a simple employment contract for a captain or a mariner. For instance, the law ensured that the oarsman received as a minimum a standard food package per day with bread, vegetables or cereals. In the 13th C, these mariners could not be slaves, because this was considered too risky in long-distance trade. Successive legislation also imposed some shipment rules but before the "*Office Gazarie*" of 1334 it is difficult to assess what those rules were precisely. Certainly they dealt with the recommended season of transport, the use of convoy and mutual assistance in case of shipwreck or piracy. An important aspect was the presence of a *scriba* on board to monitor the transactions in an "audit" book. The *scriba* monitored assets and transactions (stocks, payroll, purchasing, sales) at departure, during calls and at destination. In case of litigation between a ship owner and his captain, or between an investor and the travelling merchant, the judge or the arbiter audited the *scriba's* records. The law was also strict for merchants and bankers who did not fulfil their contractual obligations. In the public jail of Malapaga, near the harbour, there were numerous merchants or business agents waiting for judgment. In particular, in case of litigation, assets from parties were frozen by legal authorities in order to prevent any fund evasion before settlement. If one party was convicted of refusing to pay back a certain sum of money, the prison sentence was complemented by a monetary fine that was usually double the aforesaid sum.

The enforcement of property rights supported contracts and innovations of financing instruments required to foster investments in distant trade. This was particularly important for commenda contract which was a risky contractual agreement in the context of distant trade. They not only produced more growth but also, as a result, attracted more newcomers from the countryside and other cities – according to most historians, Genoa had a bit less than one hundred thousand inhabitants end 13th C compared with the ten thousands in circa 10th-11th C.

The role of newcomers and foreigners is another point. In the Genoese society was initially very open to newcomers granting citizenship after just a few years residence. Among these newcomers, a special emphasis needs to be made about bankers. The first category of bankers was made of the small local Genoese banks involved in money changing and deposits banking. Most of these banks were very small boutique managed by commoners. But there

was a large community of international foreign bankers in Genoa in 13th C.. An estimated guess is about 100. For instance, we know from documents) about the finance of the crusade of Louis IV in 1253(Belgrano, 1889; Sayous, 1931) that about 57 bankers from Piacenza [19] were operating from Genoa. Some others came from Luca [20] but also Asti, Sienna (e.g. Bonsignori), and, gradually in the second half of 13th C., also from Florence (e.g. Peruzzi, Bardi). There was certainly a crisis of foreign banks (e.g. collapse of Leccacorvo) in Genoa in the 1250ies due to poor economic conditions and political dispute between Guelfs and Gibbelins, as analyzed by Lopez (1956), but throughout the 13th C., a long list of notarial contracts, notably about Genoa-Champagne bilateral trade, give enough evidences that these bankers were still at the centre of Genoa's economic circuit

These bankers were raising money from all prominent Genoese families. For instance, the ultimate debt holders of Louis IV's debt were all wealthy patricians (e.g. Lercari, Della Volta, Grimaldi, Negro, Grillo). Bankers were intermediaries nurturing the capital formation process through new balance sheet techniques and contracts, and then moving it across business opportunities. The main contract used by these bankers was the "bill of exchange" or cambium between Genoa and France. In particular, there was a triangular flow of bills contract between Genoa, Champagne and Paris. In the "coutumes des foires de Champagne" (1327), one Frenchman explained the irremediable decline of Champagne as the outcome of a long process. It starts with by banning of Flemish merchants – they were expelled in 1305 by Louis Le Hutin - and then the departure of Genoese merchants. He said that the "Genoese were important to Champagne because they were the best merchants in the world and with the best entrepreneurial skills".[21] But, as I show later, that these merchants were often merchant-bankers, and that if many of them travelled from Genoa, they were in fact, in many case, foreigners residing in Genoa.

In 13th C., bankers used notarial contracts to formalize transactions with investors and fund issuers. Notarial contracts could also structure the re-exchange of bills between different parties. But these bankers were not involved in sea trade who remained an intra-Genoese

[19] Leccacorvi, Abbati, Speroni, Angnisolla, Braciforti, Sordi, Tedeschi, Diani, Della Porto, Pecoraria, and so on an so forth

[20] Scotti, Aghirroni, Pagani, Carli and so on an so forth

[21] « par suite de l'édit de Louis le Hutin, les flamands ayant cessé de paraître au foire de Champagne, les génois qui sont les plus grands marchands du monde et de la plus grande entreprise s'arrangèrent pour aller en Flandre par mer et à travers l'Allemagne » (Bourquelot, 1846)

business increasingly monopolized by large family-based organisation. For these kinds of sea-trade contracts, the traditional notary was the exclusive intermediary and commenda was the norm.

4.2. Phase 2: The institutional collapse and the rise of business incumbencies (14th-15th C.)

Genoa was not alone in suffering from a sharp and long economic recession during the early 14^{th} C. This phenomenon has already been described (e.g. Lopez and Miskimin, 1962, 1964). and the factors are known: bad weather and successive crop failures, the Hundred Years' War, the crisis of the textile industry in the Low Countries but also in Italy, the bubonic plague epidemic imported from Caffa and its successive waves (1347-1350), the successive bankruptcies of several large banks in Sienna and Florence, and eventually the "great bullion famine" that exploded in the 15^{th} C but that was already contracting economies in the 14^{th} C . But the case of Genoa is peculiar because these exogenous shocks combined with deeper endogenous institutional problems. The result of this poisonous combination was the end of the virtuous economic spiral and the inability of the Genoese society and economy to adapt in a period of greater turbulence that required new solutions, new leaders and new entrepreneurs.

Institutional problems did not suddenly emerge from the end of the 13th C. Arriving in Genoa around 1172, the Spanish rabbi Benjamin of Tudela wrote: "everybody has a house with a tower and every time there is a war between them, the balconies of these towers become war fields". The expansion of Genoa abroad never halted the strong rivalries among its elites and a constant taste for political intrigue and civil wars. In a sense, its success abroad and a common purpose to fight against external enemies (Saracens, Frederick II, Venice, Pisa) created an incentive (Greif, 2006) to find provisional compromises and alliances. This weak "institutional" arrangement collapsed when the European economic recession struck in the 14^{th} C and because, after the victory against Venice and Pisa, there was a lack of direct threat. This situation undermined the foundation of this weak state from the start.

All this stemmed from a coordination problem at the roots of Genoa's institutions. Genoa's

origin was based on family clans that became known as "*alberghi*" from the mid 13th C.[22] A Genoese clan, an *albergo*, is more than a family. An *albergo* also included neighbours and business associates under one common political, social and economic umbrella supporting all members and their relatives. They lived nearby, worked together in Genoa or overseas and, in periods of conflict, fought together. From the 14th C, the *albergo* reached a new level. Some *alberghi* started to amalgamate with each other in order to create more powerful clans. But even before the creation of *alberghi*, families were the nucleus of Genoese society and public institutions always failed fully to amalgamate and coordinate them beyond short-term political purposes. Rules of clans and private networks maintained their prerogative.

The most powerful *alberghi* were aristocrats. They controlled key public positions almost like hereditary titles. This was the case with the della Volta, the Doria, the Spinola, the Embriaco and many others. They owned most assets. In my introduction I mentioned data for the 14th C provided by Kedar. In the 15th C, nothing had changed. In 1465 the list of families paying "*avaria*", the tax on trade, is revealing. The top seven payers (with the number of individuals in brackets) with the same names are Spinola (81), Doria (59), Cattaneo (54), Giustiniani (54 records), Lomellini (46), Gentile (46), Grimaldi (41) (Heers, 1961). These data tell a few things. First, the high number of incidences for each family translates the process of mergers between different clans as many large *alberghi* labelled under one common name regrouped from the 14th C two, three or even more families (see under). Second, adding up the tax value paid by each clan, the Spinola alone held one-sixth of the tax liabilities of all aristocrats and one twelfth of the whole of Genoa! Third, in the list, the Giustiniani is the only truly *popolo* clan; all the others are old aristocrats. There were of course other rising non-aristocratic *alberghi*, but the case of the Guistiniani clan was the exception rather than the rule.

If we keep just the most prominent name of the non-aristocrats, the sequence of the gradual emergence of wealthy merchant families from *popolo* like Giustiniani is as follows. The Negro and the Zaccaria became quasi-*bonitas* and then formerly integrated among the aristocratic elite from early 13th C. From the 14th C the second wave emerged. The wealthy *popolani* families in the 14th C can be divided into two groups. The first one was formed by a

[22] For more about the peculiar role of family clans in Genoa, see Hugues (1977, 1978), Grendi (1975), Heers (1961, 1978) and Greif, (1998) who proposed an original game-theoretic model describing Genoa's podestà as an equilibrium in a repeated tit-for-tat game between rival factions.

group that dominated politics. These were the Bocanagra, in 13 and 14th, and after the Adorno and the Fregoso, who were enemies for generations (Musso, 1998). Another category of *popolo grasso* brings together merchant clans, like the Giustiniani. Important families are the Montaldo, the Vacca, the Franchi or the Guarco, who emerged in the 14th C. In the 15th C, some other names appear, like the Oliva, the Promontorio, the Ritilairo or the Maruffo and the Draperio which became one of the wealthiest dynasties thanks to – once more - the monopoly in the business of alum from Chios and Collonia.

All in all, my educated guess is that a group of 50 noble families out of the total 80 aristocratic names – some declined in influence or returned to a more hands-off role outside the city - plus some changing 20 to 40 families of commoners, controlled most of the political, clerical, business, military and charity organizations between 14 th and 15th C.

But these clans caused several irremediable divisions that segregated Genoa’s society gradually Genoa’s society and produced the collapse of 14th C. This phenomenon crated my problems. The first one was the tension between branches of the old aristocracy that formed the nucleus of Genoa’s Commune. The old aristocracy was made up of two branches, one from *marchesi* Obertenghi and the other Visconti. Visconti’s descendants gradually separated into three branches around the Carmadino clan that combined the Avvocato, Lusio, Pevere, de Mari, Serra, Usodimare, the Manesseno clan with the Castello, Embriaco, Spinola, Bruscus, and the de Insulis clan. Each of these clans and their affiliates tried to control public offices and soon they caused violent fights from the 12th C. In the 12th C, a second problem emerged that was common to many Italian communes like Sienna, Florence or Milan. This was the tension between the pro-Pope Guelfi, also called the “*negro*” (black) or the “*rampini*” (covered), and the Ghibellini, the “*bianco*” (white) or the “*mascherati*” (masked).[23] This phenomenon reached a unique magnitude in Genoa. Eventually, a third problem appeared when the rising class of merchants with no aristocratic roots, the *popolares*, asked for more powers within public institutions, thereby creating a backlash between old noble families and newcomers from *popolo*. In the latter category a further division emerged between what will be called in several Italian cities “*popolo grasso*” and the poorer “popolo *minuto*”.

Tensions between *popolo* and *nobili* – and between members of each side - were not a

[23] The word “Guelf” comes from Otto “Welf” who was supported by Rome and failed to become Emperor. “Gibelin” is a deformation of “Waiblingen” the location of the castle of the Emperor.

feature peculiar to Genoa, but no other Italian city encountered the same violence infused by this social disorder. Suddenly, from the end of the 13th C and throughout the 14th C, the situation deteriorated irreversibly. There were now three distinctive demographic groups: the *alberghi nobili negro* (e.g. Fieschi, Grimaldi, Lominelli), the *alberghi nobili bianco* (e.g. Spinola, Doria, Grillo) and the *alberghi popolo* (e.g. Bocanegra, Giustiniani, Adorno). But among *popolo* a further split emerged between the white (e.g. Boccanegra) and black, and between the *grasso* (the "rich") who became a *de facto* part of the elite and the *popolo minuto*. On the *gibilini nobili* side, violent tensions divided the Doria and the Spinola clans who were previously close allies and shared power as consuls in the late 13th C. Revolts and new coalitions succeeded one after another in order to obtain control of the position of Captain and then Dodge (from 1339). Populares had taken some of the political privileges from aristocrats but Genoa became unmanageable. External rulers came in to pacify the city, but such a solution failed. First was Henri VII (1310-1313), then Robert of Anjou King of Naples (1318-1336) who was brought in by the Guelfes, then Giovanni Visconti of Milan, and even Charles VI of France. In particular, a long and uninterrupted state of violence ravaged the city between 1314 - after the death of Henry XII in 1313 - and 1331. Later, another rivalry divided Genoa. It was the fight between the Ardono and the Fregoso, both *popolani grasso*, to obtain the Dodge position as well as other public offices inside and outside Genoa. In the end no fewer than circa 25 violent coups and civil wars destroy the city during the 14th C, and about the same number in 15th C.

Gradually, the whole business model reversed. The State became more and more expensive and less effective. There was a proliferation of institutions (e.g. *officium*)[24] inside Genoa and abroad. There was also less trust resulting in fewer contracts and certainly less entrepreneurship, less innovation. As a result, fewer newcomers joined the city and, instead, many foreigners left the city. If factors like famine and plague ravaged many Italian cities in the 14th C, the amplitude of the problem was unique in Genoa. The population declined from about 100,000 to an educated guess of 40,000. The public debt rose by about 400% between 1330 and 1400, reaching circa £3.2 million. Although these figures need to be taken with a "pinch of salt" due to miscellaneous computation problems, Day (1994) noted that the yield on Genoa's public debt exceeded its major competitors (Venice or Florence) throughout 14th

[24] Officium magistrorum rationalum (public accounting), Officium victualium (import of foods), Officium salvatorum porrtu s(maintenance of harbor infrastructure), Officium guerre pro armandis (Marine), Officium maris (warfare and galleys), Officium robarie (Indemnisation of merchants against pirates), and so on on so forth

C.[25]

This negative institutional framework had some visible consequences on business and finance. Paradoxically, if populares had more power "on paper", the whole economy became gradually controlled by aristocratic clans and a very few families from popolo. This process took the form of a control of business assets in distant locations. Let me give two examples. [26]The first one is the continuum between public and business matters in distant locations. This phenomenon started in 13th C. during which many aristocratic families like Della Volta, Doria, Zaccaria or Embriaco combined public roles and merchant activities in many lucrative markets (Sicily, Tunis, Chios, Caffa). A prototypical case of this interference is the della Volta dynasty in the 13th C. For instance, Ingo and then Marchio hold the top positions in mid-13th C. They used it to spend public money to promote their interests in Sicily or Sardinia at the expense of other merchants and taxpayers. But, by 14th C., this phenomenon reached a unique magnitude with a form of monopolization of assets. In particular, this is the second aspect, there was a gradual rise of groups merchants that cooperate together to take control of one lucrative business in a dedicated markets and excluded all forms of competition (see under).

The negative consequence on corporate finance contracts became visible and straightforward. First, there was a decline of contracts. The political and economic crisis can explain a good part of this phenomenon. Another additional and plausible explanation is that large business organization organized around one family or a group of family less needed to raise external capital through external intermediaries. The gradual rise of monopolies could also explain the decrease of contracts as rent-owners were keen not to dilute capital to

25

	Venice	Genoa	Florence
1340-1343	5%	8%	5%
1353-1358	5%	8-10%	5-15%*
1381	4%	8-10%	5%
1400-1408	4%	7%	5%

Note: the exceptional rise of Florence's debt yield in 1353-1358 was due to some suspicious transactions with privileged banks.

26 I have no space enough here to elaborate about the complex and interesting role of the Casa Di San Giorgio (1404) who acted first as the main public debt vehicle ("compere") and a bank (up to 1444) and then as a conglomerated organizing trade and financing monopolies from some key external assets of Genoa. Most owners of the very lucrative shares ("paghe") in Casa Di San Giorgio were again part of the Genoese elite. The market for Casa Di San Giorgio was in fact controlled by opaque preferential terms and conditions that resulted in astonishing returns between buy and sale prices.

external stakeholders. These institutional problems had another profound impact on the economic and financial system. We have said that bankers from Piacenza were already caught in the dispute between Guelfs and Gibbelins in the 13th C.. Obviously, from 14th C., the continuous state of violence in the city, the gradual decline of the economy had a negative effect on financial intermediaries. As a result most foreign bankers left the city. This aspect is often not enough underlined in study about medieval Genoa. There are just a few traces of foreign bankers in all notarial contracts for trade with Eastern markets, and more surprisingly Bruges.[27]

In that context of monopolies in distant markets, when capital was issued, long-term equity-partnerships between few associates emerged (Heers, 1989). There was first this unique capital structure called "mahona". [28] Mahona was a partnership linking a group of family owners. The second form of innovation was the gradual rise of long-term "societas" and a few long-term commenda. From 14th C. and throughout 15th C., there are miscellaneous examples of such kind capital structures (Mahona, societas "a carati"). But the common denominator of all these similar capital structures is that they are related to monopolies in distant markets: the alum and mastic of Chios, the corals in Tunis or in Monaco, fruits in Malaga and Grenada, and so on and so forth. The capital of mahona and societas was of course protected by specific preemptive clauses regarding share re-exchange and dilution to external investors. The role of intra- or inter-family ties was crucial in such equity vehicles.

The *mahona* of Chios is interesting to explain the poisonous relationship between private and public interest, as well as the impact on corporate finance. In Chios, the continuum

[27] One explanation might be that because foreign bankers switched from notarial to the private letter of exchange there're transactions from Genoa cannot be found. I discuss this point under exhibit 1

[28] The etymology of "*maona*" or "*mahona*" has been long debated, but today's consensus is that the word derives from the Arabic and that its first meaning was "assistance". The first known Genoese *mahona* was the *mahona* of Ceuta that emerged around 1234. Genoa ended up in Ceuta to fight Saracens and, as often, the funding and resources were provided by a group of "merchant-mercenaries". In the case of Ceuta, the benefits of such involvement were low and many Genoese suffered losses. The Commune decided to set up a funding vehicle aimed at collecting compensation from the local rulers and its inhabitants. The financing was also supported by Genoa's public finance. Nobody knows exactly how the "fair" amount of compensation was set and how much this amount was. The next century there were three other *mahona*, although their structure differed from Ceuta's *mahona*. These were the Mahona of Cyprus (1347), the Mahona of Corsica (1378) (Petti Balbi, 1991), the Mahona of Chios (1347) (Argenti, 1956, 1979). Other

between public and private interests went to a new level. It showed how the whole of Genoese society, and not just aristocrats, was controlled by family clans. The the story of the *mahona* started in 1346 when the Commune organised a fleet in order fight Venetians in Pera. To cut a long story short, the galleys went further South to Chios and the merchants decided to re-conquer the island which was previously owned by Genoese merchants (Zaccaria). Most merchants came from the upper layer of *popolo* (Adorno, Oliva, …) and a few of them were aristocrats. Because the Commune did not have enough money to pay back merchants for their involvement, a *mahona* was set up. Merchants had the right to benefit from trade with Chios and they had some tax privileges for 20 years. The *mahona* had a capital of 190,000 Genoese Lira. The amount was based on the relationship between the debt and the value of the lease of the island. The capital was broken down between 12 partners. Twenty years later, the deal was extended for another 20 years because the Commune had no money to buy back Chios. The "old" *mahona* became the "new", and merchants started to resell their stakes to *new-mahona* holders. The leading clan was the Guistiniani and soon many merchants became part of the Guistiniani *albergo*. With the *mahona*, a vast amount of trade flow and taxes were now in the hands of a small group of merchants. In addition, this organisation and the way it was able to finance operations from tax and trade revenues implied that a large piece of foreign assets no longer needed capital from external investors. In Chios, the virtuous process of fluidity of capital and efficient capital allocation did not apply, like in many other assets controlled by business dynasties.

The question is, in that context, what kind of other regular and short-term contracts emerged? The striking feature of 14th C. corporate finance in Genoa is not innovation but the resilience of old contracts. The first one is commenda. From 14th C. onwards, commenda contracts evolved slightly but its basic structure remained the standard contracting vehicle up to beginning 15th C.. Commenda's evolution in three directions shows a gradual control of family clans over the economy. First, before, there was many commenda contracts involving outside agents providing only labour as in the classical commenda ("ad quartam lucri"). From 14th C., in many commenda the two partners invested in the initial capital. The second aspect is the huge rise in the average value of commenda. Thirdly, more and more commenda involved partners from prominent merchant groups who knew each other, either because they were de facto part of an enlarged albergo or because parties were members of families who regularly cooperate at a political and business level. In a nutshell, commenda was less and less a contract involving low-income commoners as investor or agent. The size of commenda

was simply out-of-scope form many low-income investors. It became also more and more difficult for a young entrepreneur to raise capital from a wealthy albergo if you were not part of it.

4.3. Phase 3: New institutional foundations and the time of merchant-bankers (16-17th C.)

Something started to change behind – or *because* - the institutional, social and economic crisis of 14th C.. The dominance of the French (1499-1512, 1515-1522) and the danger of a gradual fragmentation of Genoa's "hinterland" (e.g. Savone) certainly instilled a spirit of renewed cooperation among clans. Years of conflicts also made rivaling factions realizing that there was no other options that rebuilding a new institutional regime. The '*Book of Peace and Concorde of the People of Genoa*" (1506) is one of these example of a new political literature calling for the end of negative forces ("clans", "factions", …) providing calamities in Genoa ("war", "deaths", "burnings", "misery", …). The targets are clearly tenants of the opposition between aristocrats and popolares, guelfs and gibbelins, but also the two families of Dodges, the Fregoso and the Adorno. This is on this basis that A. Doria founded the new Republic through a astute political strategy. He ended up the power of Adorno and Fregoso, and established a clear "aristocratic foundations" of the Republic. But within this architecture, there was a place for the rising class of merchants. Doria's "double-bind" strategy that provided a provisional institutional solution became possible because two things gradually took place in the Genoese social fabric.[29]

The first phenomenon is the aggregation of families around fewer alberghi. For instance, the famous Guistiniani name gathered together numerous people who were part of or associated with the *mahona* of Chios since 1363; the Centurioni *albergo* grouped the Oltramarini, the Becchigniogne, the Bestagno, the Cantelli; the Scipioni *albergo* was made up of the Ardementi, the Embrone, the Ceba, the Pinelli, and the Dentuto; the merchant family Di Olvia and later the Ceba joined the Grimaldi *albergo*; the Scotto became part of the

[29] The parallel between the XI-13TH e and 16th C. institutional foundations is striking. In both case, external threats provided the impetus for cooperation (Greif), external or" neutral "rulers/arbiters were called in (note : Andrea Doria came from a prominent Genoese family but he lived outside Genoa before his return in his late 30ies and he defined himself above clans) In both case too, the solution found to establish an equilibrium between parties also create the roots of future problem.. In the case of the initial Commune there was too much power for (family clans) represented in ruling bodies. The common public interest ("res publica") was a sort of aggregation different private interest ("res privata") of leading families. One day the system was doomed to fail. In the 1528 Republic, the compromise ended up in control of clans but also the legitimating of aristocracy privileges combined with new power for populares. This system provided a provisional stability and some social mobility, but not in the long-run.

powerful Cattaneo clan; the Noceto joined the *albergo* Spinola; the Gentille amalgamated the Ricio, the Falamonica and the Pallavicini; the Cattaneo merged with the della Volta and four other families, the Bustinari, Stangoni, Scoti, Maloni.Gradually the number of alberghi declined. From a guess-estimate of about 80 to 100 familial clans in the 13th C., they were about just 60 alberghi according to the "gabella possessionum" in 1447. In 1467, they were only 35 in the same tax register. When A. Doria issued the new law establishing precisely the role and privileges of the 28 families, in the foundation of the Republic (1528), there was indeed a surprise. Going through the list of individual names behind the 28 alberghi, that includes some important non-aristocratic clans (Sauli, Giustiniani, Franchi, Promontorio). That is the tour de force of the institutional foundations of 16th C..

The second distinctive feature of the end of the 15th C. in Genoa is the gradual retirement in the countryside of some prominent old or more recent aristocratic families. In the past, they used to own large mansions in the country side and large quarter in the city, they held public positions inside the city and abroad, and most of the time they established a business dynasties from commerce with distant markets. In a way, there were now two distinctive aristocracies. One is more mercantile, more open to newcomers, based in the city. The other was more traditional, still often wealthy but far less than many newcomers, with more interest in public service, or cultural and religious matters.

In summary, Jacques Heers noted that a lot of non-aristocratic families had actually reached the top of the city in about a century. There was a whole new layer Genoa's society and economy:

> "From 1470 to 1528, we see some deep changes in the list of families that constitute the Genoese aristocracy. This is the sign of a society where social classes are not separated by strictly closed barriers, but, on the contrary a society which transformed itself quickly where enter and win lots of new elements. Most of the names in the Spinola's albergo in 1528 where absolutely unknown around 1460 [This proved that again] all social ascensions are possible"

This institutional change impacted financial intermediaries as well. There was always a small group of local deposit bankers in Genoa. Heers believes found about names of 25 local retail bankers between 1450-1460. What is new, however, is the role of aristocratic families

in international banking operations. These families were barely involved in banking operations during the initial expansion phase of Genoa. They were primarily merchant making money from sea trade and maritime warfare. In 14th C., there are just a few names of aristocratic bankers, a Grillo here, a Lominelli there, and later a Vivaldi or a Mallocello. But they are the exceptions. But, gradually, international finance become part of business practices, even for second-rank economic players. Many merchants became primarily bankers involved in international exchange. The only surviving book of account, the one of the aristocratic notary Giovanni Piccamiglio, shows that banking came back from mid 15th C. A large amount of investment of revenue and investments are for letters of exchange. He cooperates with the merchant-bank of the Centurioni brothers who themselves worked a lot with the Medecis everywhere around Europe (Florence, Geneva, Lyon, Bruges) and before the Datini. A contract show him involved in a triangular exchange between Barcelona, Bruges and Genoa.

But the true emergence of Genoese merchant-bankers is 16th C. There is no place enough in this paper to remind the gradual rise of these bankers who first expanded by acting as key financial intermediaries in three markets. First, the trade with the new world and the inflow of silver, second the financing of Ascientos (and the replacement of Fugger House), and third the revival of Fairs in Spain then in France and North Italy 5ruiz Martin, 1991). All a sudden there is a flourishing of banking house in Genoa. Beside the Centurione, there are merchant-bankers among the Grimaldi, the Salvago, the Doria, the Spinola, the Grillo and so on and so forth.

I have no time and space to analyze in details the great Genoese financial architecture of the 16th-17th C., that impressed so much Ferdinand Braudel and that is now well documented by several strudies. One just needs to read of few of the about 50,000 letters exchanged by the Ruiz merchants in the second half of 16th C. to understand how Europe finance became firmly in hands of the Genoese bankers. A modern banker from SG Warburg, David Scholey, said about Genoese financial markets in 16TH-17th C. (Fratianni, 2009), : “This Genoese system of international finance stands alone in history up until the present day as an example of an IFC [international financial center] built not so much on locally base trade or primarily on a local surplus (although both elements were present), but rather on an efficient and sophisticated system for gathering the monetary surpluses of other parties, in part through a process of –to use a familiar phrase- securitization, or the extension of paper credit.

Although Amsterdam in the 18th century and London in the 19th century also based many of their financial activities on the issuance and discounting of securities, these were backed primarily by increasing volumes of trade and of surplus capital which were centered locally." Long time ago, the sarcastic Quevedo (1580-1645) wrote:"*Nace en las Indias honrad/ Donde el mundo le acompaña/Viene a morir en España, Y es en Génova enterrado/ Y pues quien le trae al lado/ Es hermoso, aunque sea fiero/ Poderoso caballero/ Es don Dinero*". [30]

5. MEASURING THE SHIFT AT THE TURN OF 13TH -14TH C.

In this section, using both an institutional and a corporate finance perspective, I am going to elaborate further on the causes of Genoa's inability to sustain its leadership in 14th C.. In particular, I want to:

- confirm the entrenchment phenomenon and the gradual control of aristocratic merchants over long-distant ventures from 13th C. (and not 14th C.)

- demonstrate that this phenomenon was not accompanied by a massive decrease of commenda contract but by a protraction of Genoa's financial system in terms of institutions, innovation and volume of external financing

- the specificity of the Fairs of Champagne and the role of international banking in Genoa's leadership on this new platform (in comparison to old business patterns and contracts from sea trade).

5.1. Data

The material used in this paper is based on four sets of primary and secondary sources of about notarial contracts covering circa 6,700 transactions in different periods and

[30] "Born in the honest Indies/Where all the world accompanies him/It comes back to pass away in Spain/And is then buried in Genoa/ And then who brings to him alongside/Is beautiful, although he is proud/What a powerful knight/ Is such a sir Money". (our translation)

geographical areas.[31] I compare contracts through time and space. I define the key attributes of contracts, these being the number of contracts, the volume of capital invested in ventures, the demographics of contracts in terms of social origin ("aristocrats", "foreigners" and "commoners") and the professions of parties (e.g. banchiari = "bankers"), and the structure of contracts. Regarding transaction structure, I cover the aforesaid five main kinds of financing contracts: the commenda; the societas; the instrumentum ex cause cambi; the sea loan; and, the bill of exchange. I first analyse the evolution of contracts from maritime trade. The first data source is provided by Georges Jehel (1993) who analysed 2,998 investment transactions involving ventures between Genoa and partners in the Western side of the Mediterranean basin between 1151 and 1298. This economic area covers nearby Italian harbours (e.g. Sicily), France (e.g. Provence), and North Africa (Alexandria, Ceuta, Tunis, Bougie). I first analyse the evolution of contracts from maritime trade.

A second set of data comes from Balard (1978) who focused on 2,233 investment contracts from Eastern trade or "Romania" between 1290 and 1408. Romania covers the whole region from the Black sea to Constantinople and the Byzantium Empire, and further South in Genoese colonies like Phocea. Neither Balard nor Jehel provided original transcriptions of contracts, and we had to rely fully on their categorization of contracts, and their statistical computation.

To quantify trade with the "*Oltramontani*" ("beyond the mountain"), trade in continental Europe, I first use data from transactions between Genoa and the Fairs of Champagne and

[31] In his recent book, Q. Van Dosselaere's sample (2009) covers about 11,000 commercial transactions. But my sample is more specific in several ways and this explains most of the differences in contract numbers. I focus on international corporate finance. I use only contracts referring to investments in the aforesaid four trade zones (East and West Mediterranean, Champagne, Bruges). My objective is to see how contract structure for one destination evolved through times; otherwise it is a bit "comparing apples with oranges". Second, I excluded contracts inside Genoa. For instance, there are many contracts covering local transactions (e.g. local credit) in data from Doehaerd and Liagre because they compute all contracts with a least one reference to one location in "Oltramontani" (Flanders, France, ...) . For instance, a Genoese customer buying a Flemish drapery with commercial credit from Genoese merchant in Genoa is recorded as Liagre and Doahaerd's data as a "relation commerciale avec l'Outremont" . I excluded from sample such kind of contracts unless I found a genuine financing transaction betweenBruges-Genoa. I also excluded all promissory notes which are simple payables/receivables agreement between buyers and sellers. It is a form of debt financing but it is by nature limited to trade transaction and excluded corporate financing from third parties. I also treat separately risk-transfer (insurance) while Van Dosselaere's data includes about 3,000 insurance transactions (mainly fictive sales/debt), notably obtained from Balard's private archives (but already summarized in Balard, 1978). I also provide the detailed volume of contracts and value investments. This is important because there are large discrepancies between both computations (number of contracts or value of investments). In case of contracts involving foreign currency, I used proxies based on available exchange rates provided by authors or by other sources (Spufford).

Brie, culminating mid 13th C and ending early 14th C. Data are based on transcripts of contracts gathered by Renée Doehaerd (1941) who provided 730 investment transactions.

The last set of records covers Genoese trade to Flanders in general, and Bruges in particular, and England to a lesser extent. I start again with Doehaerd's compilation of contracts with "low countries" , focusing only on financial transactions to and from Flanders between 1280 (first transport by sea is 1277) and 1320. At that time, Genoese ventures in Flanders were irregular and we know this is the period during which some archives have been destroyed. As a result, there are just 57 investment contracts. I analyse further the set of data from Liagre de Sturler (1969) that covers trade between Genoa and Flanders between 1320 and 1400. This period saw a gradual increase in trade – notably after the end of the Fairs of Champagne - and it includes 631 investment and insurance transactions. I have reviewed data both from Doehaerd and from Liagre, contract by contract and, in a few cases, I amend the categorization, although the number of amendments made is marginal.

Exhibit 1 presents the data series.

(insert about here Exhibit 1)

5.2. <u>The entrenchment of the economy and the rise of aristocrats from 13th C.</u>

The gradual rise of aristocratic clans is a well documented phenomenon. I am going to confirm this phenomenon but I add a caveat : this phenomenon started not in 14th C., but in 13th C.. This is what demonstrates the following exhibits[32]

(insert about here Exhibit 2.1, Exhibit 2.2)

Balard provided a demographic analysis of investors (and agents). Comparaed with Jehel's data, such a huge increase between Western and Eastern trade can be explained by 2 factors. First the gradual rise of the control of the economy by family-clans from12th C. to end 13th

[32] See also annex 2, for a more detailed analysis of the families.

C.. [33] Second, and this is linked to the first one, it seems that for longer vcentures and more distant markets, commoners were less present.

My explanation is that the more capital-intensive (bigger galleys, large payroll, …) and more risky the more “aristocratic” were the ventures. For long distant trip in Eastern markets, already in 13th C., the average value of contracts was higher (see under). In more distant markets, the need for significant local infrastructure (local agents, fondaco) and good connections with market participânts and local authorities could also explain why prominent dynasties combining public (e.g. consuls abroad) and business roles had a fundamental “competitive advantage” over commoners.

5.3. <u>The decline of external financing, the resilience of notarial contracts and commenda</u>

Traditionally, historians mentioned a decline of commenda contracts from early 14th C. onwards. There was certainly a decline in the number of contracts. The longest data series we have (Balard, 1974) underscores this phenomenon.

(insert about here Exhibit 3.1)

A potential explanation is that, all a sudden, merchants started to used “apodixia” (private transactions) instead of using notaries. I think that there are possible more “apodixia” that what we might think 14th C.. But notaries remained the key contracting institutions through 14th C. (see my comments 3 under exhibit 1) . Insurance contracts from Balard (1978) drafted by notaries, including about 1200 transactions, confirm this intuition. In addition, bankers were not primarily involved in Eastern commerce (less than 2% transaction according to Ballard). This means that there are maybe more (private) letters of exchange, but certainly not in the amount counter-balancing the over trend of decreasing external financing contracts which was silightlmy offset by an increase in the average value of financing contracts.

I elaborate on this point by going further in the details of transactions’ structures of maritime ventures in 13th C. and 14th C. data series in the different locations. The result confirms that there is a decline of contracts and a decline of investments, but an lasting resilience of

[33] There is always a question about defining exactly what an aristocrat is or not. But differences in categorization have no significant impact.

commenda contracts as the main financing tool.

(insert about here Exhibit 3.2, 3.3)

One might argue that there is potentially a difference between investment structure between short-distance (e.g. Western zone) and long-distance zone (e.g. Eastern zone). This is not what shows data. Players and size of operations are different, but contract structures and dominance of commenda was already about the same in 13th C.

(insert about here Exhibit 3.4)

One aspect that explain a good part of the underestimation of this phenomenon is the magnitude of the increase of the average value of commenda contracts. This phenomenon is in line with the monopolization of trade opportunities by aristocrats[34]

(insert about here Exhibit 3.5)

In addition, one should notice that my data excluded very large equity-based transaction like Mahona. There are also few large societas I found reference in notarial contracts, but not the biggest one we know existed at that time. By nature these large but infrequent transactions are often not in the remaining contract sample from the Archivio di Stato.

5.4. The missing opportunity of the 13th C.

We have mentioned that two conflicting business models emerged in 13th C.. The first one was the traditional business of long-distant maritime ventures. The other lies in the integration of Genoa in the emerging pan-European trade and financial market. Genoa had all the

[34] I have to acknowledge here a major difference between my findings and data from Q. Van Dosselaere (2009). I simply don't find a massive increase in debt contracts and a collapse of commenda (in value terms) as a percentage of the total contracts. In addition I certainly don't find an bigger increase of aristocratic ties in debt (+) vs commenda (-) as in Van Dosselaere's data. Two different charts potentially explain this discrepancy. On p. 94, Q. Van Dosselaere also found a large increase of the share of aristocrats in terms of total amount of commenda contracts (from mid 13th C. to 1315 where his graph ends) and a lower increase in terms of number of ties. This confirms my interpretation (fewer contracts but higher average value of contracts). But on p. 146, his data shows that aristocrats' involvement was mainly channeled through debt and not commenda from 1300. However, on this graph there is no reference to value of investment but only to the number of ties. That could explain the difference as I analyse value of investments. In any case, my point is that commenda remained the central contractual tool in 14th C.

ingredients for the success thanks to a powerful merchant-banking system made of several dozens of established foreign banks that used Genoa as a major clearing platform for bills. The contract between Genoa and Champagne leaves no doubt about the changing patterns of trade and financial activities.

(insert about here Exhibit 4.1)

What is even more significant is the weight of foreigners in the trade flow between Genoa and Champagne. This confirms that, for a large part of the XII-13th C., Genoa became one of the major financial centre in Europe. This phenomenon can be analysed by going through individual records. However the nature of merchant-banking make difficult to list precisely who was a genuine banker making profits mainly from cambium and who was primarily a trader "buying low and sell high" to use the famous expression from Bardi's agent Pegolotti. At least, I provided here under an un-exhaustive list of some bankers. Again it is interesting to see the dominance of foreign bankers. Second, among Genoese bankers there are just a few aristocratic names.

(insert about here Exhibit 4.2, 4.3, 4,4)

The role of aristocratic clans in this emerging platform was also different. They became passive investors and most transactions are made through intermediaries (bankers) and agents. If I take the ratio "aristocrats = investors/aristocrats= merchants), the difference between the trade zone is interesting. The data about Bruges are also interesting because it shows that the declining involvement of aristocrats in ventures as travelling merchants is not a proven fact, quite the contrary. Genoese merchants in 14^{th} C. were still very much on the poop, and not at their desk like most merchant-bankers that transformed business and financial practices at that time.

(insert about here Exhibit 4.5)

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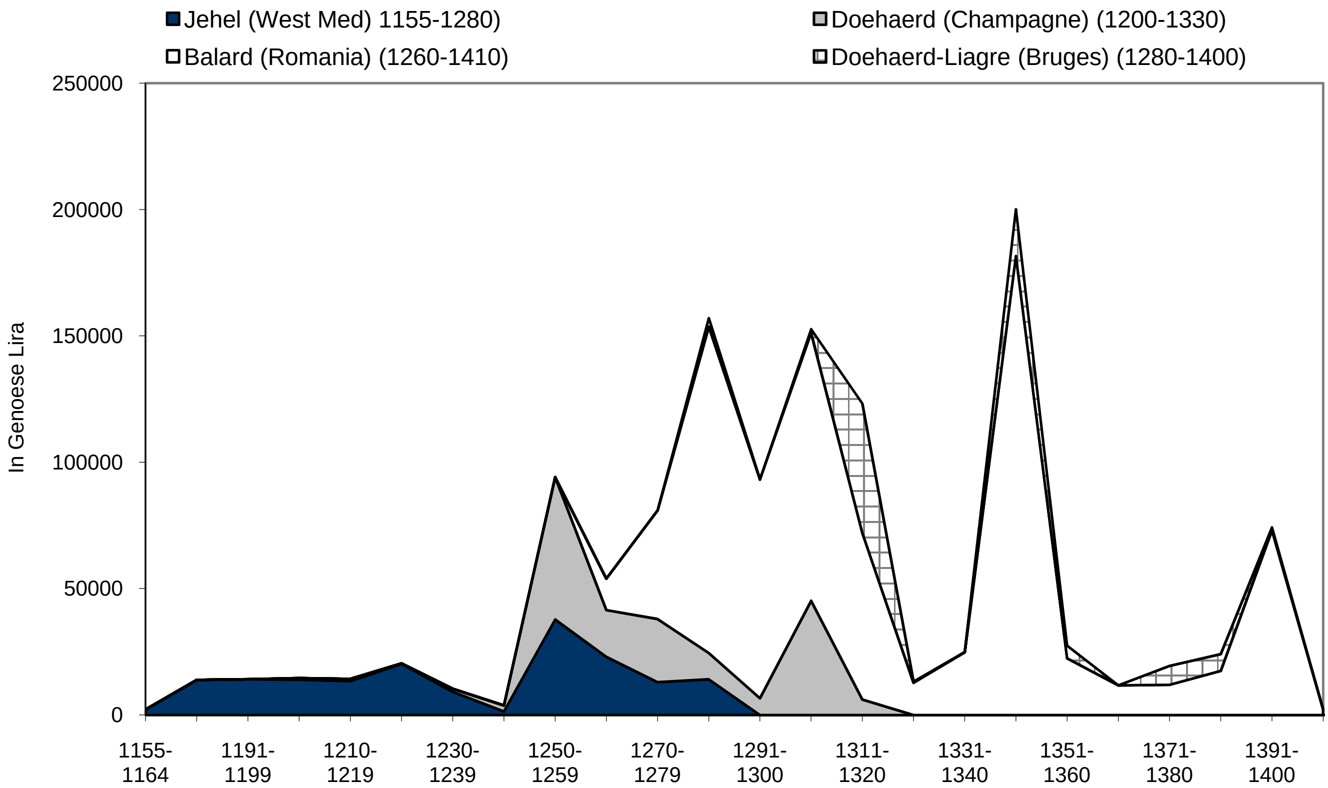
Exhibit 1

Data set : Value of investment mentioned in notarial contracts by data set (in current Genoese £, by destinations of ventures)*



(1) DIFFERENT TIME-SERIES BY DESTINATIONS

The different time-horizon of data series does not allow an aggregation to produce a global view about the evolution of trade volume from notarial contracts.

(2) MOST LONG-TERM EQUITY STRUCTURE ARE NOT IN THE PANEL

Long-term equity structures that emerged like Mahonna or very large societas are infrequent. The mahona of Chios had a capital based of 200,000 Genoese Lira and a time-horizon of for 20 years. By nature, it is harder to find records of these rare transactions, but this can also in part offset the decline of short-term equity contracts.

(3) NOTARIAL CONTRACTS ARE NOT REPRESENTATIVE OF TRADE VOLUME

Although I believe this sample of data is large enough to give information about corporate finance contracts, it is not representative of trade volume for several reasons. First, many contracts have been lost (notably in first half 14th C. and later during the bombing of Genoa in 18th C.). Second, there was also in 14th C. the emergence of large long-term capital structure (mahona, societas) attracting capital invested in distant ventures (see section 4).

Indirect cross-checking of these data with tax records have been proposed but, so far, inconclusively. First, there were miscellaneous tax advantages granted to categories of merchants or specific trade destinations. Second, the fiscal basis for customs duties excluded some of the direct trade by Genoese merchants from one foreign market to another. This became increasingly a standard practice in 14th C.. Eventually, tax data are missing for a very long period.The link between notarial records and the total volume of commerce through with tax data has been first proposed by Sieveking (1898) and since then by many other scholars (Slessarev, 1968; Abulfia , 1977; Bach, 1955; Lopez (1975); Epstein , 1996) have tried to find a multiple between notarial contracts and trade volume based on these indirect measures of trade volume. But although some trends can be underlined, the details of the findings are not consistent. The problem is that before 16th C., there are only few indirect references about tax revenues. From, 14th C., there're is a broader source of tax data, being maritime tax records (*denari maris*) available from 1341 to 1370 (Day, 1961). But there are significant inconsistencies between what we know about Genoa's trade at that time and the evolution of trade according this tax records. For instance, records indicates revenues in Genoese Lira for the following years:

Date	1341	1342	1345	1346	1347	1348	1350	1352	1353	1357	1358
Value in '000	1,403	1,430	994	1,123	1,380	1,386	1,589	1,484	1,399	1,403	1,504

First, there is no massive decline of trade due to the bubonic plague whose first wave started in 1347 (and also 1358). In the same vein, based on records for 1376-1377 Day gave a breakdown of trade by destination. Alexandria came first with about 25%, Spain with 18%, Flanders with 17% and France with about 16%. The surprise is that trade in Eastern markets is almost absent. In particular, Chios and its *mahona* represented only 0.2% of total value of trade. This is not plausible if one bears in mind the importance of Chios for the commerce of mastic and alum. In any case, we do not have estimates of tax records for most of the period we cover.

(4) NOTARIAL CONTRACTS EXCLUDE PRIVATE TRANSACTIONS

In Genoa, the use of notary was a standard and more or less compulsory practice up to the end of 14th C. for most contracts. "Apodixia" (private transactions) emerged only from late 14th C.. Afew notarial contracts enable to capture indirectly investments through private letter of exchange already in 14th C.. The first accounting book of notary Piccamiglio (1456-1459) indicates that such a kind of private contracts was common practice from mid-15th C. (although notarial contracts were still in use). Balard (1978) found some references about non-notarial letters of exchange used by the Commune for the financing of military expenditures in Eastern markets. But so far, nobody found any other references about a large market for letters of exchange in Genoa in 14th C.. There are some indirect references to letter of exchange in Liagre 's contract compilation (1969), but these are very rare case. Many of these indirect references involved transactions of Genoese traders with foreign merchants who exchanged themselves letters (usually in foreign currency). This is consistent with the presence of some rare remaining foreign banking houses in Genoa in 14th C.. For instance, we know that Datini had representatives sending and receiving letters of exchange from Genoa from end 14th C.. As a conclusion on this important point, "filze" from the Archivio di Stato di Genoa (excluding the destruction of some archives from roughly 1315 to1340) indicates that throughout the 14th C. centuries notaries were still at the center of the Genoese economy for financing and "insurance" contracts. This thesis is the consensus among most medieval scholars familiar with Archivio di Stato di Genoa.

Exhibit 2. 1.

The gradual rise of aristocratic clans in long distant trade (from 13th C.)

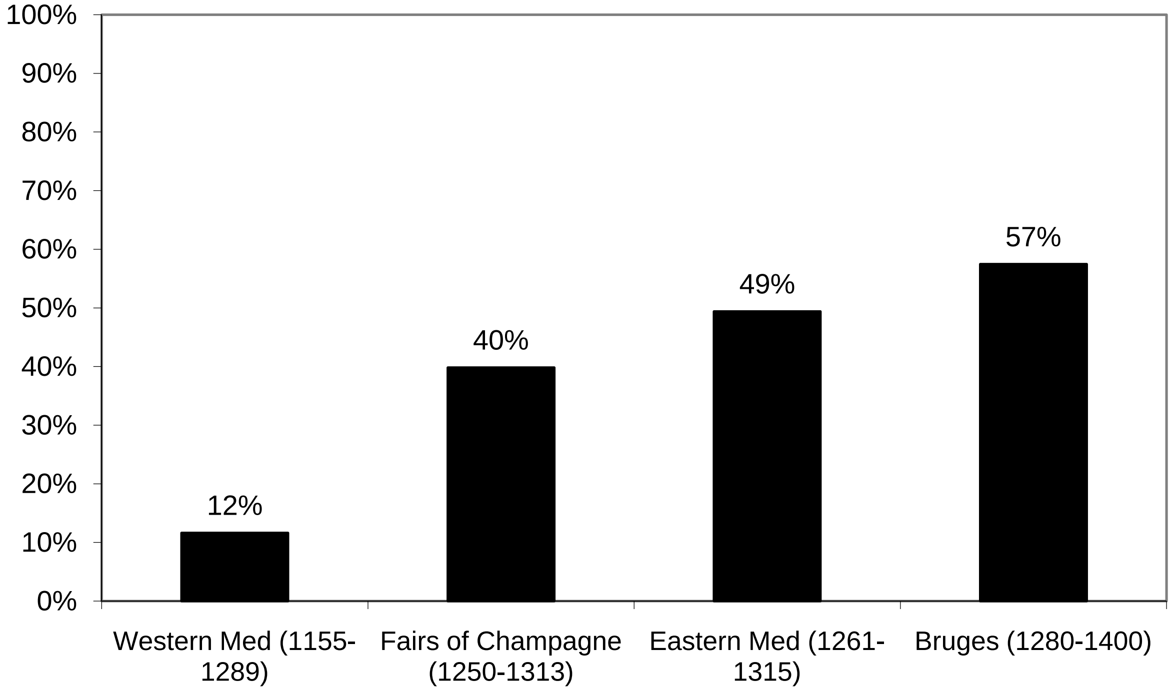


Exhibit 2. 2.

The concentration of external financing into few family clans

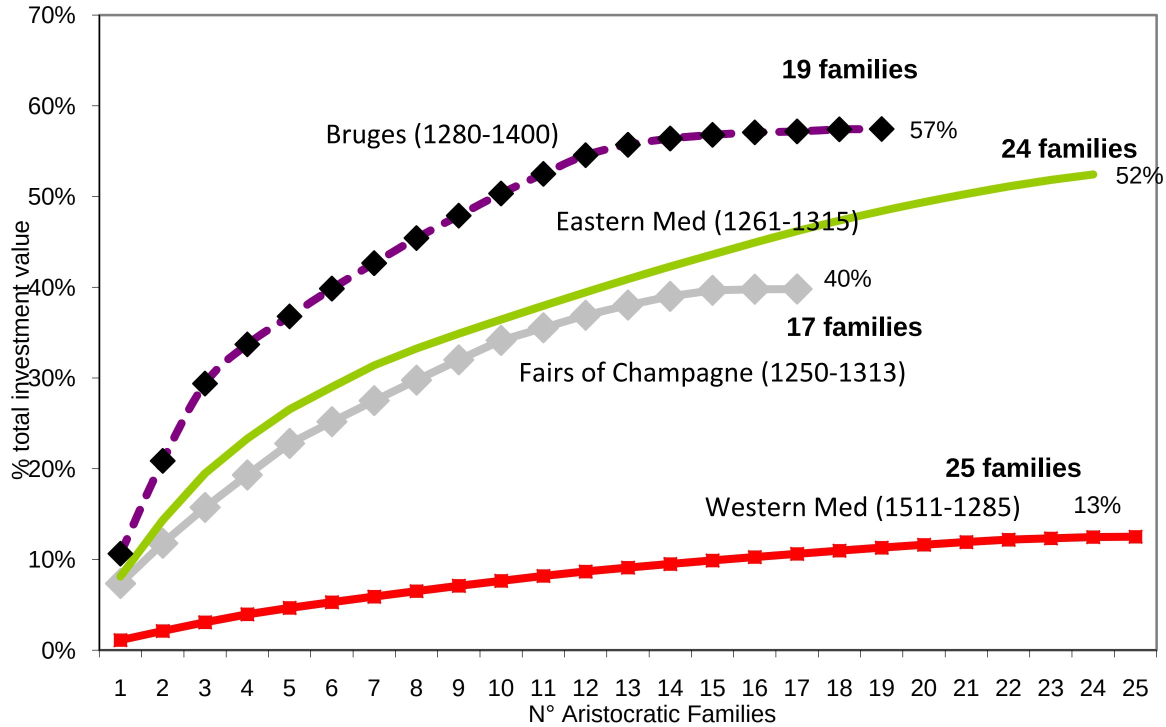


Exhibit 3. 1. Volume of contracts (n°) for ventures between Genoa and Eastern Mediterranean basin (1261-1408)

Exhibit 3. 2.

Capital structure of contracts for ventures between Genoa and the Western Mediterranean basin (1200-1289) (current Genoese £)

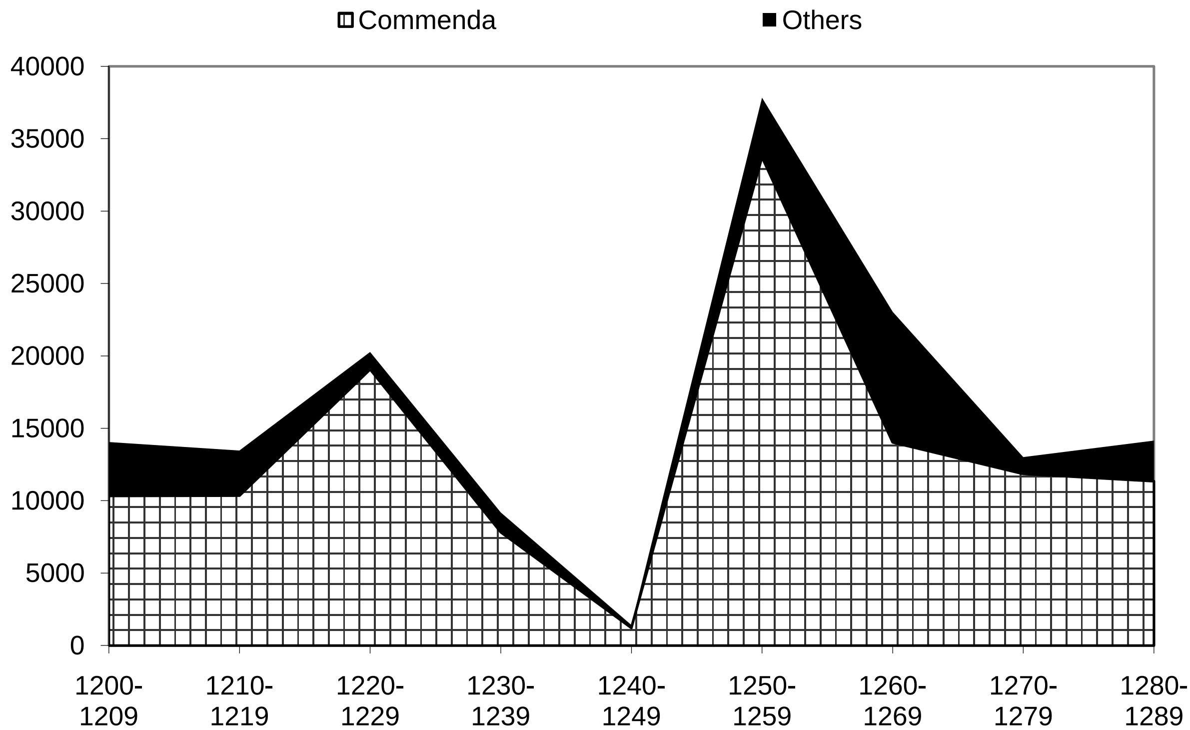


Exhibit 3. 3.

Capital structure of contracts for ventures between Genoa and the Eastern Mediterranean basin and Genoa-Bruges (1300-1400) (current Genoese £)

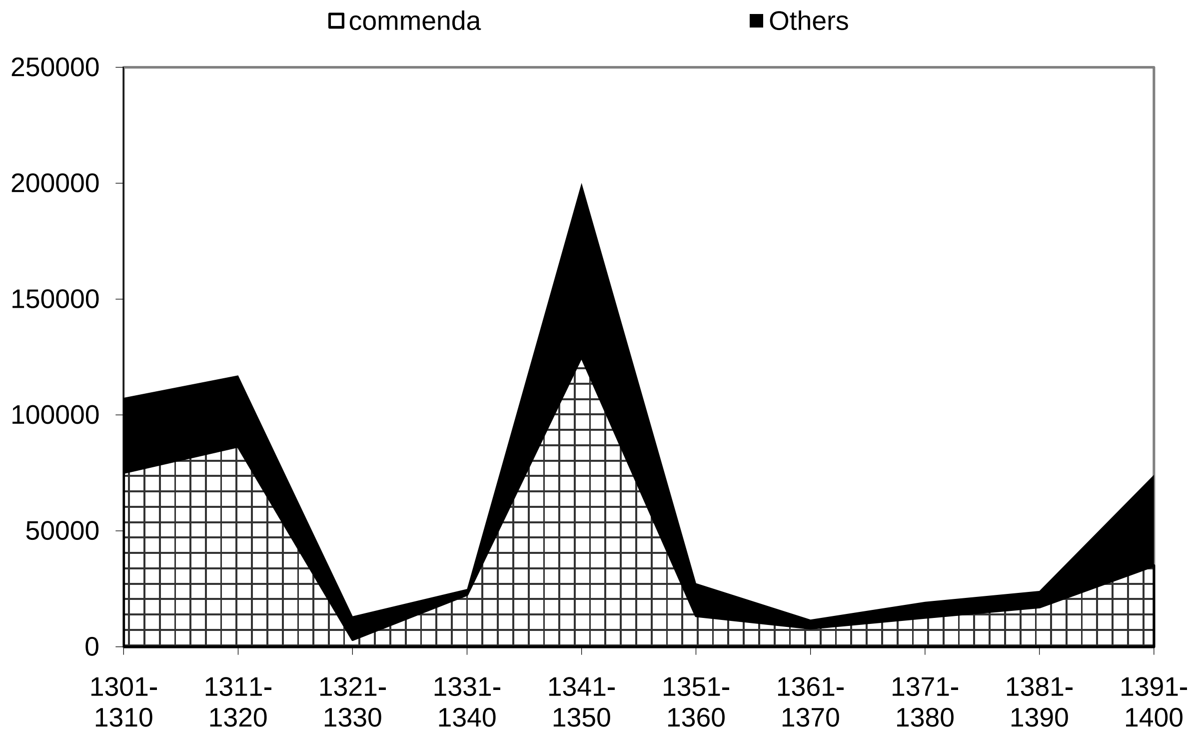


Exhibit 3. 4.

Comparison of capital structure of contracts in 13th C. for Genoese ventures between in the Eastern Mediterranean basin (Balard's data) and in the Western Mediterranean basin (Jehel)

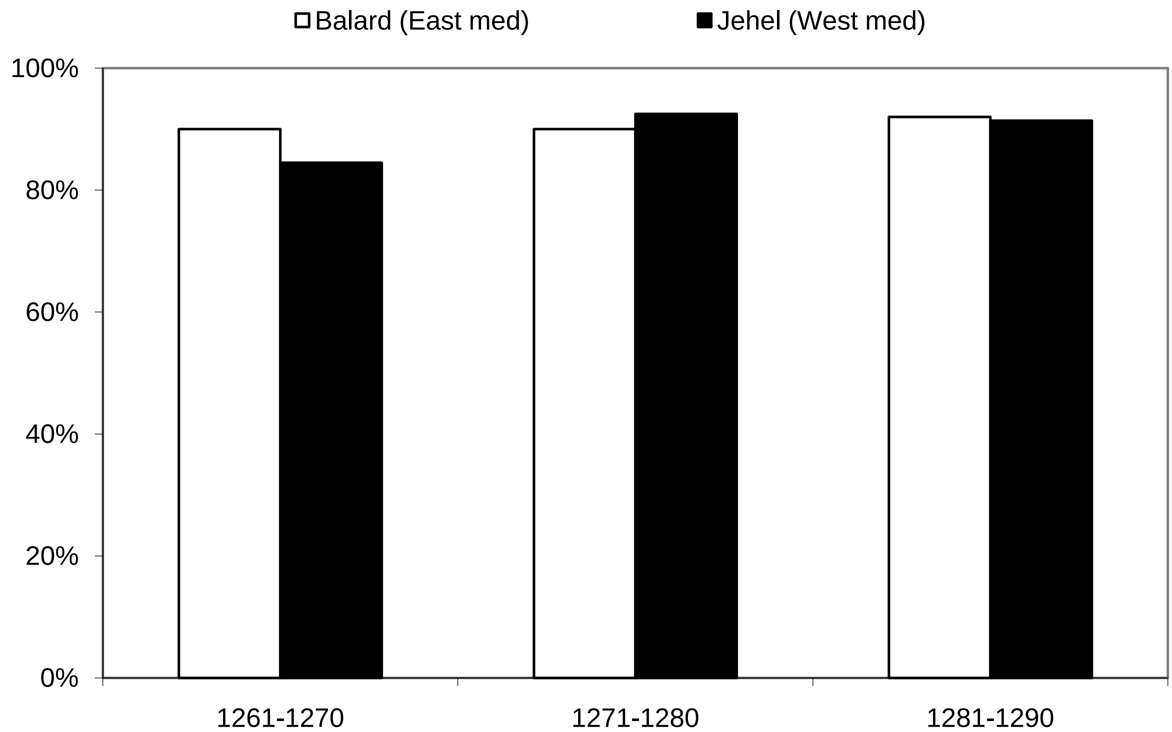


Exhibit 3. 5.

The evolution of the average value of commenda by destinations(current Genoese £)

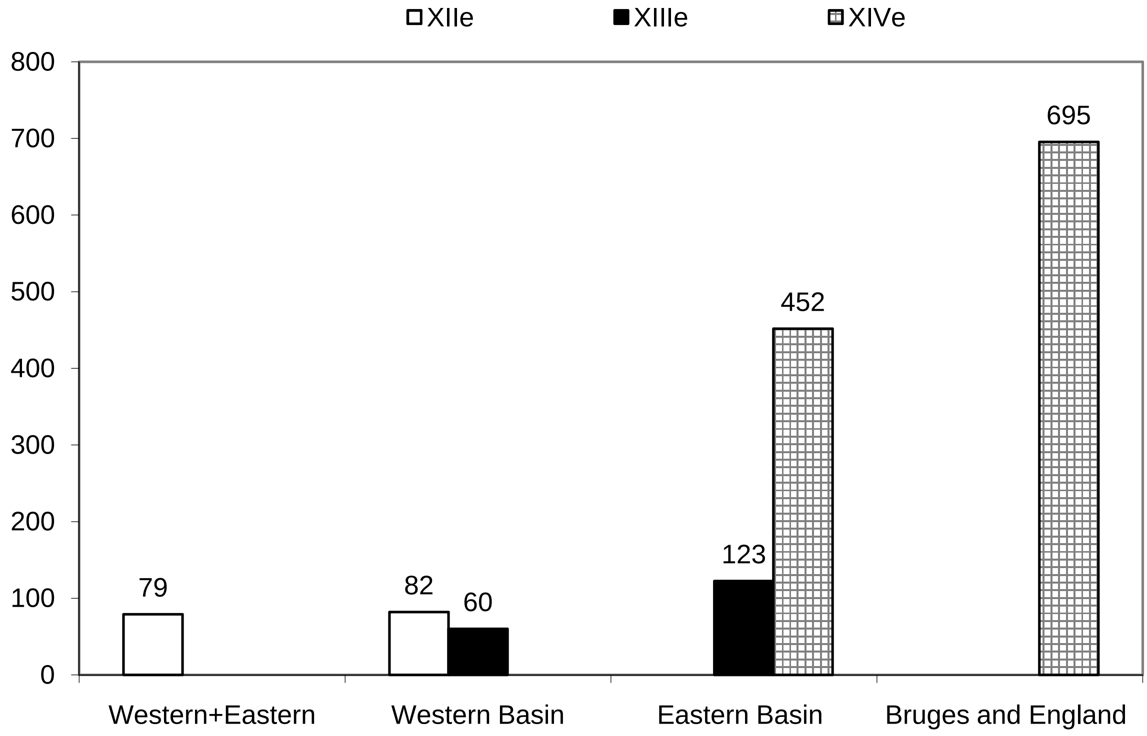


Exhibit 4. 1.

Capital structure of contracts for ventures between Genoa and the Fairs of Champagne (1200-1319) (current Genoese £)

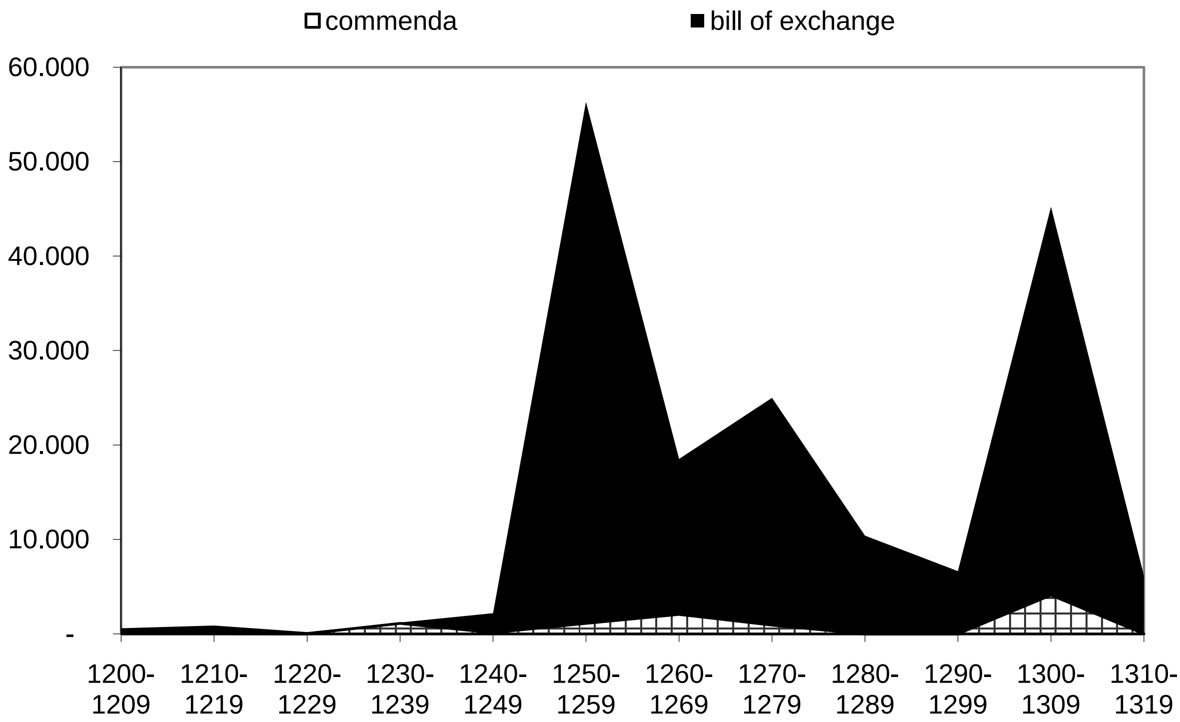


Exhibit 4.2.

Weight of foreign merchants and merchant-bankers in the volume of investments between Genoa and the Fairs of Champagne (1200-1319) (current Genoese £)

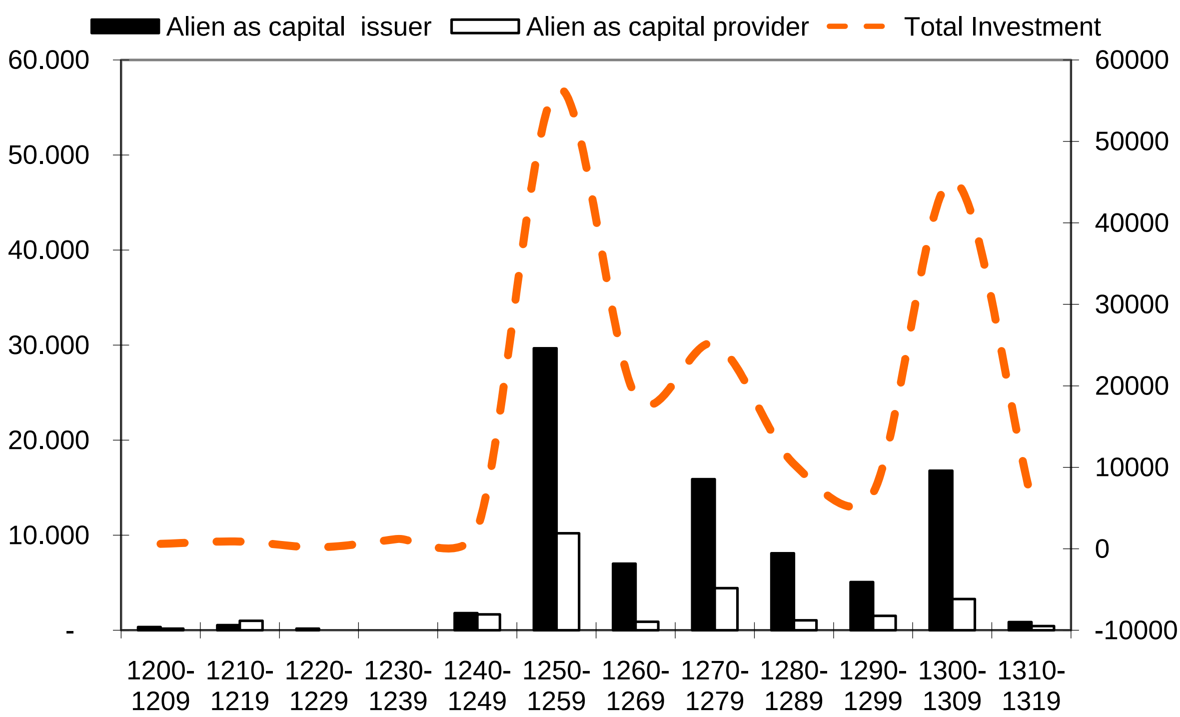


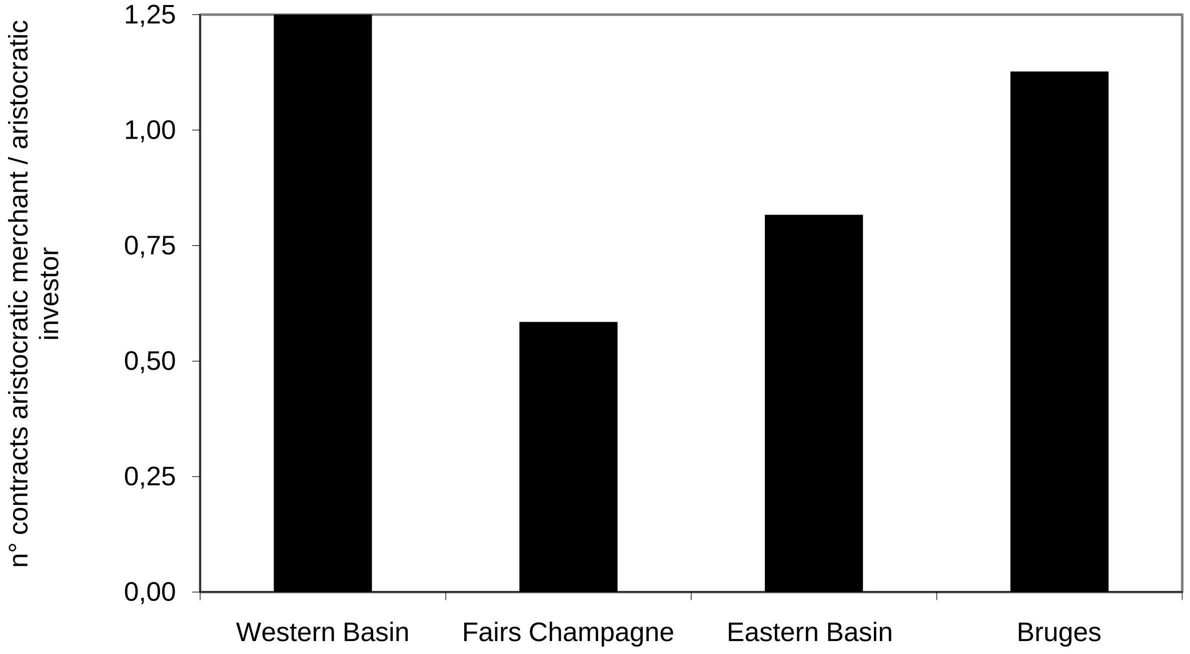
Exhibit 4.3.

Sample of known bankers or merchant-bankers involved in trade flow between Genoa and Champagne

	Foreign bankers				**Genoese bankers**		
	Total	**Lender**	**Borrower**	**Banker**	**Total**	**Lender**	**Borrower**
				Vedereto	2.600	-	2.600
Bonsignori	4.876	1.040	3.836	de Turi	1.357	447	910
Ascherius	4.082	-	4.082	Malocellus	1.040	-	1.040
Peruzzi	3.280	3.280	-	Paganus	897	-	897
Batosius	2.455	1.545	910	Montenarius	780	-	780
? (banker)	2.111	-	2.111	de Brobo	780	-	780
Lecacorvo	1.729	-	1.729	Malocellus	780	-	780
Bambasius	1.084	1.084	-	Brunus	774	774	-
Macirou	866	-	866	Lafrancus	533	533	-
Alamandirum	824	-	824	Balduinus	365	235	130
Tholomei	260	-	260	Panelussa	95	-	95
				Martini	44	44	-
Sub total	21.568				7.445		
TOTAL							**29.012**

Exhibit 4.4.

Role of aristocrats as merchants or merchants (Ratio n° contract =merchants/ =merchants)



Annexe 1: The evolution of trade organization and corporate finance in Europe (11th -18th C.)

		Phase 1 (XI-XIIIe)	Phase 2 (XIV-XVe)	Phase 3 (XVIe-XVIIIe)
Business model	Where	Early long-distant trade (Genoa, Venice, Pisa) Fairs of Champagne	Long-distance trade + Pan-European trade and information network between cities (Bruges, Venice, Florence, Barcelona,…)	+ Revival of Fairs (Sevilla, Medina, Lyon, Piacenza, Geneva) Anwerp, Amsterdam, London
	How	Cash-and-carry High asymetry of information Usury prohibition	+ fairs inside/outside cities Commercial credit buyers/suppliers	Permanent trade exchange (e.g. Merchant Adventurers), Wholesalers Shops (stock -> sample, order in advance)
Financing Contract institution		Notary	International Merchant-Banker Insurance Brooker	Banks and Brookers + Public markets
Corporate finance instruments	Equity	Commenda Societas Loca (share in galleys)	Long-term equity (Societas, Compania, Mahona) *+ salary, commission, equity for employees/agents /suppliers* Transferrability of ownership to third parties Limited liability	Stock exchange
	Debt Change	Straight debt Instrumentum ex causa cambi Maritime exchange Bill of exchange	Letter of exchange Public exchange of lettres/bills	Endorsement Discounting
	Insurance	Sea loan Foenus nauticum Fictive sales or debt « gratis et amor »	Insurance with upfront premium (ad fiorentinam)	Reinsurance

Annexe 2: top aristocratic families investing in long-distant trade (value of investment and percentage of total investment)

	Western Med * (1155-1289)			Fairs of Champagne (1250-1313)			Eastern Med (1261-1315)			Bruges (1280-1400)		
	Name	**L**	**%**	**Name**	**L**	**%**	**Name**	**L**	**%**	**Name**	**L**	**%**
1	della Volta	1.804	1,1%	Ghisolfi	12.790	7,3%	Zaccaria	36.503	8,1%	Spinola	10438	10,6%
2	Squarciafico	1.618	1,00%	Spinola	7.727	4,4%	di Negro	27.931	6,2%	Mari	10027	10,2%
3	Rodolfo	1.559	0,96%	Flisco	6.890	4,0%	Lomellini	23.263	5,2%	Grillo	8351	8,5%
4	Stancone	1.422	0,88%	Picamiglio	6.232	3,6%	Ghisolfi	17.220	3,8%	Vivaldi	4243	4,3%
5	Di Negro	1.141	0,71%	de Savignone	6.050	3,5%	Vivaldi	14.477	3,2%	Lercari	3027	3,1%
6	Grimaldi	1.008	0,62%	di Negro	4.172	2,4%	Spinola	11.160	2,5%	Squarzafico	3000	3,1%
7	Usodimare	992	0,61%	Ricius	4.047	2,3%	Pinelli	10.640	2,4%	de Savignone	2750	2,8%
8	Lercari	980	0,61%	Murta	3.931	2,3%	Mallone	8.395	1,9%	Malocello	2708	2,8%
9	Boletto*	953	0,59%	Lominelli	3.903	2,2%	Squarciafico	7.363	1,6%	Mallone	2426	2,5%
10	Leccavelle	883	0,55%	Lercari	3.740	2,1%	de Savignone	6.974	1,6%	Doria	2396	2,4%
11	Embriaco	875	0,54%	De Mari	2.415	1,4%	de Mari	6.904	1,5%	Grimaldi	2120	2,2%
12	Croce	785	0,49%	Pineli	2.413	1,4%	Lercari	6.599	1,5%	Pesagno	2015	2,1%
13	Streiaporco	689	0,43%	Zaccaria	1.951	1,1%	della Volta	6.548	1,5%	Lominelli	1125	1,1%
14	Gavi	651	0,40%	Ultramari	1.666	1,0%	Marini	6.302	1,4%	Vento	680	0,7%
15	Mallone	627	0,39%	Grimaldi	1.170	0,7%	Grillo	5.950	1,3%	Pinelus	400	0,4%
16	Spinola	607	0,38%	Marino	208	0,1%	Cimemaris	5.912	1,3%	Cataneo	264	0,3%
17	Cibo	577	0,36%	Grillo	50	0,0%	Cattaneo	5.632	1,3%	Flisco	100	0,1%
18	Embrono	573	0,35%				Rosso	5.190	1,2%	Cigala	225	0,2%
19	Castro	524	0,32%				Doria	4.851	1,1%	Salvago	38	0,0%
20	Mazolo*	516	0,32%				Salvago	4.411	1,0%			
21	Cavarunco	479	0,30%				Maniavaca	3.873	0,9%			
22	Marino	425	0,26%				Piccamiglio	3.842	0,9%			
23	de Mari	237	0,15%				Longo	3.226	0,7%			
24	Galliana*	237	0,15%				Usodimare	2.706	0,6%			
25	Doria	51	0,03%				Malocello	2.285	0,5%			
26							Cibo	2.207	0,5%			
27							Cigala	2.089	0,5%			
TOTAL		**20.213£**	**12,5%**		**69.355 £**	**39,8%**		**242.453 £**	**53,9%**		**56.332£**	**57,4%**

* To my best knowledge, these names are not traditionally considered as aristocratic.