

THE CAPITAL MARKET BEFORE 1600*

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Working Paper 99-06

February, 1999

ABSTRACT: This paper describes the evolution of long-term debt and equity finance in medieval and early modern Europe. The main issuers of long-term debt were landowners and municipalities. The paper discusses the evolution of debt secured by land and the use by municipal borrowers of annuities and 'funded debt' (securitization). The paper then describes the various forms of equity finance and how they addressed the corporate governance problem.

JEL Categories: G3, H74, N23

*This paper is a draft chapter of *Finance, Business, and Government Before the Industrial Revolution*.

PREFACE

There are two classes of question one might ask about financial systems. The first and broader class relates to their role in the economy: What is their contribution to economic development and growth? What is their impact on the way business is organized? On the organization and behavior of government? The second and narrower class of question relates to financial systems themselves: What is their economic function? How do they evolve? What are the causes and consequences of financial innovation?

History is perhaps the most promising source of answers to both classes of question. This paper is a draft chapter in a planned work that draws on the economic and financial history of the period to 1600. The section of the work to which this chapter belongs focuses on the narrower class of question about the financial system itself during this period. Other sections will take up the broader class of question. Draft chapters of this section are available as the following working papers¹:

1. Finance before the Industrial Revolution: An introduction
2. Medieval and early modern coinage and its problems
3. Early deposit banking
4. Bills of exchange and the money market to 1600
5. Merchant banking in the medieval and early modern economy
6. The capital market before 1600
7. Risk instruments in the medieval and early modern economy

The financial system is part of the institutional structure that facilitates economic transactions. Specifically, the financial system facilitates lending, payments, and trade in risk. While lending often steals the limelight, the role of the financial system in facilitating payments and trade in risk is no less essential. Before 1600, because of the poor quality and inadequate quantity of coin, the payments function was particularly important (Paper 2 discusses the problems of the coinage in this period). As commerce expanded, the pressing need for adequate means of payment prompted a great deal of financial innovation—in particular, the emergence of the deposit bank and the bill of exchange. The deposit bank (Paper 3) provided a means of payment—the transfer of deposits—that minimized the need to use actual cash. The bill of exchange (Paper 4) provided a means of remittance—of transferring funds from one place to another—without

¹Copies may be downloaded from: <http://www.dartmouth.edu/~mkohn>

having to ship specie or bullion. The bill of exchange was also an instrument of credit, the basis on which merchant banks built an efficient international system of commercial credit (Paper 5). While the bill of exchange satisfied the need for short-term finance, the growing need for long-term finance was met by a developing capital market (the current paper). Trade in risk was still in its infancy, but the period saw the development of marine insurance and the beginnings of futures and options (Paper 7). Paper 1 provides some general background on saving and investment during the period, on the effects of the prohibition of usury, and on the extensive system of ‘informal’ finance’, out of which specialized financial institutions and markets evolved.

INTRODUCTION

The capital market is the market for long-term finance—debt and equity. The capital market before 1600 differed from that of today both in the issuers and in the instruments and organization. Issuers in the debt market were predominantly landowners and municipalities: business and central governments issued little long-term debt. In the equity market, issuers were generally small businesses rather than large ones. In terms of instruments and organization, while the capital market faced the same basic problems as it does today—how to reduce the risk of debt, how to ensure equity-holders a return on their investment—differences in the legal environment and in technology led to very different solutions.

THE MARKET FOR LONG-TERM DEBT

Unlike equity, debt has no potential upside to compensate the lender for the possibility of loss: the best that can happen is that it is repaid as promised. Consequently, the focus with debt is on preventing loss—on security and on a reliable cash flow that can ensure repayment. In the preindustrial economy, business was largely commercial in nature: its cash flow was anything but reliable, and it had little need for long-term finance. On the other hand, landowners and governments did possess reliable cash flows and did have a need for long-term finance. It was they, therefore, who were the principal issuers of long-term debt .

LAND-RELATED DEBT

Landowners had a major advantage in issuing long-term debt—the ability to secure it with land. Under Roman law there were two ways to do this. In a *pignus* or pawn, the property that secured the loan passed into the hands of the lender, to be returned on repayment of the loan. In a *hypothec*, the property remained with the borrower, but could be seized by the lender if the borrower defaulted. The two arrangements differed principally in who bore the burden of suing for possession in the event of a dispute: in the first case, it was the borrower; in the second, it was the lender. Under feudalism, ownership of land became intertwined with lordship, so that courts rarely upheld a lender trying to seize land from a defaulting borrower. As a result, lending against land generally took the form of a *pignus* rather than a *hypothec*.² In such a land-pawn, the income from the land—whether in the form of produce or of cash—went to the lender who

²The land-pawn or “antichretic lease” has a long history, going back some 5,000 years to the ancient near east. Usury restrictions may have played a role in its popularity then, as they did in the Middle Ages. (Knoll (1997))

was in possession of the land. In one variation, the *vivgage* or live-pledge, the income counted against the outstanding principal, and the lender returned the property as soon as the loan was fully repaid. In a *mortgage* or dead-pledge, the income did not count against the principal but compensated the lender for making the loan; repayment of principal was due after a predetermined number of years, and if the borrower defaulted, the land became the property of the lender.³ Not surprisingly, the mortgage was more popular with lenders and less so with borrowers.

The mortgage was widely used in the eleventh and twelfth centuries, especially in financing the Crusades. For example, Baldwin of Ghent financed his participation in the First Crusade by mortgaging his *curtis* of Ootegan to a local abbey for 42 marks. And, in 1162, Godfrey III, Duke of Brabant mortgaged his fief of Herstal to the Bishop of Liège for 300 marks to finance his journey to Jerusalem.⁴ Abbeys and bishops were happy to make the loans in such a worthy cause, not to mention the excellent return and the good chance of acquiring property at a favorable price.⁵ Perhaps because it so often ended in default, the mortgage became increasingly unpopular. Abuses by lenders were common: for example, a lender could engineer default through the simple device of making himself unavailable on the legal day of repayment.⁶ As a result, courts became increasingly sympathetic to borrowers, allowing them to redeem the property even if payment was late. And in 1150, Pope Eugene III, responding to popular sentiment, declared the mortgage usurious, making it easier for the borrower to obtain relief in court.⁷ By the end

³Usher (1943) Ch. 5. Loans were generally over-collateralized, with the loan on average being about 60% of the value of the pledge. In some cases, the lender was required to make an additional payment to the borrower (additional to the original loan) before the property became his. (Van Houtte (1977) .) In sixteenth-century England, the mortgage contract took a different form: it was a conditional deed of bargain and sale dated on the date of repayment, rendered null and void if the loan was repaid; the borrower retained possession and kept the income for the duration of the loan. However, this form was no more popular with borrowers—"a desperate expedient to be avoided when possible" (Ashton (1960))

⁴Spufford (1988) pp. 98-9

⁵If the borrower was unable to repay on time, the creditor could acquire the property by paying a supplementary amount, usually not large. Since loans averaged about 60% of the value of the property pledged, this was an attractive way of acquired real estate. (Van Houtte (1977))

⁶Knoll (1997)

⁷Noonan (1957) Eugene considered only the *vivgage* to be consistent with Christian charity: unfortunately, this did not seem to be enough to recommend it to lenders.

of the twelfth century, the mortgage was becoming increasingly unsatisfactory to both parties, providing them with poor legal protection, and it largely fell out of use.

The instrument that replaced the mortgage was the sale of rents.⁸ This instrument, which originated in Northern France in the twelfth century, evolved from the feudal custom of creating a rent-charge or *cens* on land—a formal obligation to pay a stated annuity, in produce or in money, out of the income of a specified property. An annuity might be for the life of the beneficiary or perpetual and heritable. Originally, a lord might have received a *cens* from a vassal in return for a fief. Or a landowner might have granted a *cens* to an heir as a legacy or to a retainer as a pension. But the instrument was readily adapted to other uses. For example, rather than selling land for cash, it could be sold in exchange for a rent constituted on it—a *bail à rente* or rent-sale. Or, rents could be made the basis for a loan: a lord could assign rents due him from his vassals to a third party in exchange for a capital sum, or he could constitute a rent on his land and sell this in exchange for a capital sum.

Viewed as a sale rather than a loan, the sale of rents (*rente* or *census*) was not considered usurious: the annuity was seen as a payment for a permanent and irrevocable transfer of capital and not as interest, which was a reward for a temporary and revocable one. Because it was considered a sale rather than a loan, the creditor had less difficulty in seizing the property on which the annuity was drawn in case of default. The term of the annuity was either for the life of the buyer (or sometimes the seller) or perpetual and heritable. While rates on perpetual annuities were significantly lower, rates on life annuities did not vary with the age or sex of the beneficiary (mortality statistics began to influence annuity rates only in the seventeenth century). Initially, only some contracts included a right of redemption—at the option of buyer, of seller, or either. However, by the late Middle Ages, annuities, especially perpetual annuities, generally gave the seller the right of redemption.⁹ Annuities were transferable in principle, but in practice the procedure was cumbersome, and there was no organized secondary market for private annuities.

⁸Usher (1943) Ch. 5, Van Houtte (1977) , Tracy (1985) . The sale of rents does not seem to have caught on in England: there, there was very little borrowing against land until mortgage reforms in the seventeenth century (Dickson (1967) pp4-5)

⁹Redemption by the seller reopened the issue of usury. However, papal bulls of 1425 and 1455 declared *rentes* not to be usurious and actually required them to be redeemable—presumably to protect the

From the mid-fifteenth century, there was a tremendous expansion of the issuing of *rentes*, encouraged no doubt by the steady fall in interest rates. These fell from 10-12% in the fifteenth century to 5-7% in the sixteenth.¹⁰ While *rentes* previously had mainly financed the consumption of the nobility, in this period they began increasingly to finance investment in fixed capital. The demand for such finance came mainly from agriculture and from urbanization. In Northern France, in the Low Countries, in Germany, and in Spain, landowners financed investment in agricultural improvements by selling *rentes*: the improvement generated the additional income out of which to pay the annuity.¹¹ Urbanization—for example, the building of Antwerp—was largely financed with *rentes*. Typically, a developer—often a craftsman or small businessman with little capital of his own—would purchase a tract of land with a *bail à rente*; he would then finance construction by selling annuities constituted on the anticipated house-rents.¹²

The market for annuities, both in town and country, was well organized, with notaries and scribes drawing up the contracts and acting as brokers.¹³ Since they knew who had money to invest, they were able to bring borrowers together with potential lenders. Since they were well acquainted with the credit of potential borrowers, they were able to advise lenders on their investments. In the Hansa, the popularity of private annuities (*Rentencredit*) was enhanced by the practice of enrollment in the town records (in a *Rentebuch*), which reduced the chance of fraud.¹⁴ While the market for annuities was mostly localized, the strong demand for funds for agricultural investment in the sixteenth century did succeed in drawing funds from the cities into the countryside.¹⁵

The existence of a well-organized market for *rentes* also had the effect of making real estate a more attractive asset. Land was one of the few investments available, but its lack

seller. The papal bulls also required that the *rente* be constituted on a specific real property and that the annuity not exceed 10% of the capital invested.(Van der Wee (1977))

¹⁰Van der Wee (1993) Ch10

¹¹Van der Wee (1977) Parker (1977)

¹²“Improvement or renovation of farming and building of towns, the two basic sectors of local investment, were largely buttressed by credit via annuities. They brought long-term and medium-term credit within reach of the smaller businessmen in town and country. This penetration of investment credit within the smaller units of production of the local economy unquestionably helped to stimulate European expansion in the sixteenth century.” (Van der Wee (1977) p305)

¹³Tawney (1925) p98. Hoffman, et al. (1992)

¹⁴North (1990)

of liquidity was a major drawback. This was particularly a problem for merchants, who treasured liquidity above all else. However, the sale of rents provided a solution, enabling a merchant to move his capital into and out of land more or less at will.¹⁶ Selling a *rente* enabled him to mobilize a part of the land's value as needed, without having to sell the whole thing—perhaps at a loss. By improving liquidity, the existence of the market for *rentes* made it more attractive for merchants to purchase land. As landowners, merchants made important contributions to increasing agricultural productivity: they were always alert to any opportunity for increasing the income from their estates. More generally, the sale of rents made real property a much more liquid asset: anyone who owned land or a house could borrow by constituting and selling a rent on it.¹⁷

GOVERNMENT ANNUITIES

It did not take long for governments to notice the possibilities in this new instrument of credit.¹⁸ The towns of Douai and Calais were the first to sell *rentes* in 1260, and they were soon followed by many others in the Low Countries and in the Rhineland. War was the main reason for issuing annuities—to finance the building of fortifications or to meet levies imposed on the towns by the territorial ruler. To sell *rentes*, of course, towns needed to have a regular cash flow on which they could be based. In their case, the source was not income on land but taxes—generally customs or excise taxes. Usually, lenders were given a prior claim on a specific sources of tax revenue. For example, in Amsterdam, collection of the excise taxes on beer, wine, and grain was contracted out each year to tax farmers. The latter, as part of the arrangement, were required to make payments on all outstanding annuities before passing on any excess to the authorities.¹⁹ Annuities issued by towns were similar in structure to those issued by individuals, being either life annuities (on one or several lives) or perpetual redeemable annuities. Again, rates were higher on the former: German towns commonly paid 10% on life annuities and 5% on perpetual annuities.²⁰ To discourage fraud, some towns offered rewards for notification to the authorities of the death of a beneficiary of a life annuity.²¹

¹⁵Parker (1977)

¹⁶Postan (1973)

¹⁷Pirenne (1937) p 137

¹⁸Fryde and Fryde (1971)

¹⁹Tracy (1985)

²⁰Fryde and Fryde (1971)

Municipal annuities found a ready market. In the thirteenth century, the prosperous burghers of Bruges, Ghent, and Ypres (the *drie steden*) snapped up the issues of the smaller towns.²² Annuities were so popular in Amsterdam in the sixteenth century, that the city limited subscription to a new issue in 1552 to £6 of annual income per beneficiary “so that everyone may be satisfied”.²³ While the main purchasers were the wealthy, the middle classes could be drawn in during periods of prosperity: the Alderman’s register in Antwerp in 1545 shows 25% of the purchasers to be craftsmen, 21% administrative officials, 17% widows, and 16% merchants.²⁴ The reason for the popularity of annuities was not only the general lack of good financial assets, but also their particular value as an insurance instrument. They were ideally structured to provide retirement income and to provide for widows and orphans. Municipal annuities were especially popular because of their greater safety and liquidity. Cities and towns rarely defaulted: municipal government was generally controlled by merchants, a group highly cognizant of the reputational cost of default. Moreover, all citizens or freemen of a city or town were jointly liable for its debts. Consequently, in the event of default, any merchant or property from the offending municipality could be seized for ransom. This recourse was available, of course, only to people living outside the town in question. As a result, municipal debt tended to be held by citizens of other towns, and investors generally avoided the debt of their own towns. To further protect themselves, investors diversified: one individual was recorded as receiving payment from 120 different issuers.

Municipal annuities were quite liquid. Like private annuities, they were transferable. While in France this involved a complicated civil procedure, in the Low Countries, the procedure was relatively simple. The excellent credit of many municipalities made it easier to trade their debt: buyers could purchase it without investing a great deal of time and effort in ascertaining its value. During the fifteenth-century boom in municipal annuities, towns in the Low Countries established municipal banks to manage their debt. These banks promoted sales of new issues both in the town and outside it, issued new securities against payment by the purchasers, and made the annual payments due the

²¹Pirenne (1937) p 137

²²Nicholas (1971)

²³Tracy (1985) p17 fn. 19

beneficiaries.²⁵ In the sixteenth century, the *Stadtwechsel* (public bank) of Basel played a similar role for many Swiss and foreign municipal annuities—a sort of general underwriter—charging issuers a fee of 2%.²⁶ The large size of some issues justified the expense of establishing an organized secondary market: there was an active market for municipal annuities in sixteenth-century Antwerp, brokered by the *kassiers*. The same *kassiers* also made a primary market, distributing new issues.²⁷

Territorial governments found it much harder than municipal governments to tap the market for annuities, because their credit was inferior. Government debt was essentially the personal debt of the prince. Like other nobles, a prince could sell rents on his personal or ‘ordinary’ income. This consisted mainly of income on his domains but it might also include traditional taxes and mining royalties. Princes were more constrained in their ability to impose taxes than municipalities: some sort of parliamentary consent was generally required and it was far from automatic. Therefore, for princes, tax revenue or ‘extraordinary’ income was less promising as a basis for annuities than it was for municipalities. However, the greatest handicap for princes as borrowers was the lender’s lack of legal recourse in case of default: a prince could not be sued in his own courts.

The counts and dukes of the Low Countries began to sell rents on their ordinary income in the fourteenth century and the kings of France and Castile began to do so in the fifteenth century.²⁸ Castile was a particularly big issuer of annuities, or *juros*, because its ordinary income was so substantial: it included a major excise tax, the *alcabala*, as well as the *quinto real*, a royalty of 20% on precious metals from the New World. *Juros* were a popular investment, especially among the nobility and clergy. When the Hapsburgs acquired Spain, they continued the practice of issuing annuities, and they did so in ever-increasing quantities. By the 1550s, debt service approached and then exceeded 100% of ordinary income, and became increasingly dependent on the granting of extraordinary income by the Cortes (parliament). The increased risk made the *juros* considerably less attractive and created a demand on the part of purchasers to be able to dispose of them if conditions deteriorated. In response to this demand, *juros* were made transferable, and a

²⁴Van der Wee (1977)

²⁵Van der Wee (1990). In the final third of the fifteenth century, the Burgundian wars led to escalating taxes and huge issues of annuities, resulting in financial crises in many of the towns and the collapse of most of the municipal banks.

²⁶Körner (1995)

²⁷Van der Wee (1993) 10

²⁸Much of the following is based on Tracy (1985)

secondary market soon developed. Selling at a discount in the secondary market, with consequently higher yields, the *juros* attracted a broader class of buyer.²⁹

Given their relatively poor access to the market, territorial governments sought ways to exploit or emulate the superior access enjoyed by the municipalities. One way was simply to have municipalities issue annuities in their own names and pass on the proceeds to the territorial ruler; the municipality received in exchange a tax imposed by the ruler that they could collect to pay the annuities. This was common practice for the Burgundian rulers of the Low Countries, and it was continued by their Hapsburg successors. Antwerp, in particular, became a large issuer of annuities to the benefit of Charles V, beginning in 1517. Another way for a prince to improve his standing in the annuities market was to make his debt less ‘personal’ by having it issued by parliament. As borrowers, parliaments had some of the same advantages as municipalities: they were permanent bodies rather than mortal individuals and they had the authority to impose new taxes. They were therefore more credible borrowers than princes and found it easier to issue long-term debt. From the fifteenth century, a number of German princes made over their revenues and their debts to their parliaments to be managed by them. The Hapsburgs, too, tried this approach—they were willing to try anything—and ceded taxes to the States (parliament) of the County of Holland, which issued annuities backed by them. Beginning in 1542, there was a further refinement—the ‘novel expedients’. The provincial States began to sell annuities based on taxes they themselves determined and collected rather than on existing taxes ceded to them by the ruler. The financial and fiscal apparatus they developed in the process proved invaluable to them in their revolt against the Hapsburgs later in the century.³⁰

Among territorial rulers, the king of France was at a serious disadvantage in the issuing of long-term debt. His ordinary income was relatively modest, and the French parliament, the Estates General, was so lacking in authority that it was useless as a debt intermediary. The king’s only alternative was to rely instead on a municipality. From 1522, the king placed certain royal revenues from the Isle de France in the hands of the City of Paris as the basis for the sale of heritable annuities. These *rentes sur l’hôtel de ville* were well received by investors so long as they were issued in modest quantities. However, when Henry II began to issue large amounts in the 1550s, investors balked and the burghers of Paris had to be coerced into buying them. During the civil war of religion

²⁹Muto (1995)

³⁰Tracy (1985)

that broke out in 1572, enormous amounts were issued but as forced loans rather than as open-market sales.

ITALIAN FUNDED DEBT

The city-states of Italy relied for their borrowing on a financial instrument that differed from the annuities of Northern Europe. The basic institution was pioneered by Genoa.³¹ Whenever the commune needed to finance a major expenditure, such as a war or colonization, it formed a syndicate (*compera*) of investors to provide the capital. Each investor contributed 100 lire and received in exchange one share (*luoghe*). To fund the interest and repayment, the commune vested in the *compera* ownership of a tax, usually created for the purpose. The earliest known *compera*, from 1164, had 11 shareholders and was constituted for a period of 11 years. More details are available for a later example, from 1432, when a *compera securitas* was formed to finance the building of a war fleet of twelve galleys. This *compera* was given control of a new excise tax of 0.5% imposed on maritime insurance contracts, that was to pay the promised 7% interest; *luoghi* were redeemable by the commune at 90% of par.

The *compera* is an early example of a financial structure known today as a securitization. A borrower sells specific receivables, for example automobile loans, to a specially-created 'pool' or 'special purpose vehicle'. The pool issues securities in its own name to fund the purchase (these securities are secured by title to the receivables). For a borrower with less than stellar general credit, but with a reliable flow of receivables, securitization can lower the cost of borrowing. The *compera* can also be seen as a variation on a common medieval institution—the tax farm. Governments often sold the right to collect a given tax for a specified time to a private individual. This allowed the government to capitalize the stream of future income (in much the same way as a sale of rents) and it also relieved it of the administrative burden of collecting the tax—for which it was generally ill-equipped. Normally, the tax farmer would fund the purchase out of his own capital. With a *compera*, however, the 'tax farm' was purchased with borrowed money, raised through the sale of shares.

Venice, Genoa's great rival, used a different procedure to finance its extraordinary expenditures.³² Whenever it had an urgent need for funds, it would ask its leading citizens to contribute to a loan. The loan paid no interest, but it was repaid within a few years out of taxes specifically set aside for the purpose. This device—the interest-free loan—was a common recourse of medieval rulers: wealthy subjects often agreed to it,

³¹Tracy (1985) , Van der Wee (1977)

³²Lane (1966) , Mueller (1997)

however uncertain repayment, preferring it to an outright tax. By 1200, however, voluntary loans could no longer keep up with Venice's growing needs and the city began to impose forced loans (*prestiti* or *imprestiti*). Citizens were required to subscribe a fixed percentage of their assessed wealth; a public assessor was appointed to determine the base for the tax (the *estimo*). These forced loans, too, were initially interest-free and they were repaid over a period of years. The Venetian forced loan was imitated by other city-states: Florence and Siena introduced the *prestanze* in the fourteenth century. Forced loans were generally backed by dedicated taxes, but lenders were often offered additional security. In Florence, the city's obligations were guaranteed 'by the lord Pope': this was not a surety but rather a promise to make the city pay. Siena, which unlike Florence was not on friendly terms with the pope, instead passed a law imposing heavy fines on officials if they so much as mentioned the possibility of diverting the dedicated taxes to any other purpose.³³

Generally, as new borrowing continued to grow, tax revenues proved insufficient to retire outstanding loans, and the debt effectively became perpetual. This change necessitated an adjustment in the terms. If there was to be no repayment, then there had to be interest: otherwise there was no difference between a loan and a tax. Usury was not an issue because the loans were not voluntary. If repayment was not to be the source of liquidity, then lenders needed to be able to sell their claims to others. Venice was the first to make these changes. In 1262, it consolidated all its outstanding debt in a single fund or *Monte*.³⁴ Claims on existing loans were exchanged for shares in the *Monte*, and subsequent forced loans were issued in the form of such shares. Shares in the *Monte* earned 5% interest, payable semiannually in March and September, and they were fully transferable. Transfer was easy, since shares existed only in book-entry form, recorded on the ledgers of the *Camera degli Imprestiti*. In 1343, Florence, unable to meet payments on its debt, followed the Venetian example and consolidated its outstanding debt in the *Monte Comune* on similar terms.³⁵ In 1407, the Genoese too recognized the advantages of consolidation and of ease of transfer and unified all their outstanding *compere* into a single entity, the *Casa di San Giorgio*. This continued to absorb additional *compere* until 1453, when it began to issue shares in its own name. All of the *Monti* were endowed with dedicated taxes to meet their obligations: that is, their obligations were 'funded'. The

³³Tracy (1985)

³⁴This fund came to be known as the *Monte Vecchio* when a new fund, known as the *Monte Nuovo* was established in 1509. A third fund, the *Monte di Sussidio*, was established in 1526.

Monti of Venice and Florence were administered as government agencies, while the *Casa di San Giorgio* was an independent organization of shareholders.

The *Monti* were a great success with investors. In Genoa, some 11,000 names appeared on the share register, including many citizens of modest means and many foreigners. The success of the *Monti* invited imitation, and their use spread throughout Italy. Cities relied on them not only for emergency expenditure—war and famine relief—but also for other public purposes. For example, Florence used the *Monte Commune* to finance the building of a fleet of galleys for international trade and to support its university.³⁶ The success of annuities in Northern Europe also prompted imitation. In 1424, Florence created its *Monte delle Doti* or dowry fund. A father could invest in the fund in the name of an infant daughter: if the daughter survived and married, the fund provided a specified amount as dowry (if not, the investment reverted to the fund). This was similar to a life annuity in that it enabled a father to provide security for his children. So popular was the *Monte delle Doti*, that Florence, under Cosimo di Medici, was able to rely on voluntary sales of its shares instead of on forced loans. In the sixteenth century, Venice and the papal states began to issue life and heritable annuities. The papal states introduced another innovation in the creation of *monti*—competitive bidding. The right to collect a given tax was put out to bid to Roman banks and syndicates of financiers. The winning bidder would then offer interest-bearing *luoghi* to the general public to finance the purchase.³⁷

Trading in the shares of the *monti* was very active, being driven both by the need for liquidity and by speculation on new information. The initial purchasers of forced loans often did not wish to hold them indefinitely, especially once repayment became unlikely. When the pressure of new impositions was intense, less liquid households were forced to sell old loans in order to be able to take up new ones. Active merchants, who had better uses for their funds, generally preferred to liquidate their holdings as quickly as possible. On the other hand, many who were not required to purchase forced loans were happy to buy them as long-term investments—for example, trustees of widows, orphans, and religious charities (‘institutional investors’), and foreigners.³⁸

Shares traded at market-determined prices, which were generally below par. The statutory interest rate on forced loans, typically 5%, was below what would have been

³⁵Cipolla (1982) ; Veseth (1990)

³⁶Veseth (1990)

³⁷Tracy (1985) p 25

necessary to sell the loans on the open market. Consequently, shares had to sell at a discount to raise the effective yield to a level that would satisfy voluntary purchasers.³⁹ Shares in the *Monti* were particularly popular as part of dowries, since credits purchased at a discount could be counted for this purpose at par.⁴⁰ In Venice, so long, as the city paid interest and amortization as scheduled, prices varied in the range of 75-100, giving a current yield of 5-6.7%. During wars, when interest payments became irregular, the price could drop to 60-65 (a current yield of 7.8-8.3%). When payments were suspended completely during the Chioggia War (1378-81), the price of shares in the Venetian *Monte* fell as low as 18, promising a current yield of 28%—if and when interest payments were resumed.⁴¹ However, prices could sometimes go to a premium. In 1344, the price rose to 102 as a number of Rialto banks failed and investors shifted their funds into *Monte* shares in a ‘flight to quality’; this rise in price was reinforced by heavy government spending to redeem shares at par. Share prices in Florence and Genoa also fluctuated widely. Because of fluctuating prices, there was extensive speculative trading on new information—especially political and military information that might bear on future prices.⁴² In Florence, a speculative market grew up from the mid-fifteenth century in claims to overdue interest payments (*paghi*). Separate trading also began in future interest payments, with prices depending on the proximity of the date at which they were due to be paid and on the likelihood of delay.⁴³

The book-entry form of shares in the various *Monti* made transactions in them especially easy. Ownership could be transferred by sale, bequest, or gift. Shares could be assigned in payment of debts, including taxes—at market value. In Genoa, the *Casa di San Giorgio* paid interest not in cash but in credits on its ‘interest registers’. These credits were often acquired in turn by tax farmers, who used them to pay their obligations to the

³⁸Mueller (1997) p 516

³⁹The difference between the face value and the market value was the amount of the tax implicit in the forced loan.

⁴⁰Tracy (1985)

⁴¹There was some question, at least among theologians, as to whether purchasing shares at a discount constituted usury Ehrenberg (1928)

⁴²On Venice see Lane (1966) , Mueller (1997) , Mueller (1977) and Tracy (1985) . On Florence, see Kirshner (1997) .

Casa di San Giorgio. This closed the circle and extinguished the credits.⁴⁴ Shares could be encumbered with a lien as security for loans, for real estate transactions (to protect against defects of title), and for dowries. Indeed, shares were preferred to other forms of security, because no litigation was necessary in case of default.⁴⁵ The ready availability of such convenient collateral facilitated all sorts of transactions.

The market for *Monte* shares was well organized. Trading took place in each city in the *piazza*, alongside the exchange market, and like it was mediated by brokers. In Venice, there was enough business to justify the organization of these *sensales impresitorum* into specialized companies. Both deposit banks and merchant banks acted as dealers: they bought from and sold to the general public and took speculative positions, providing the market with liquidity. For example, the Florentine deposit banker Cerchi had a large part of his assets in public debt. He dealt in shares in the *Monte Commune*, in shares of the *Monte delle Doti*, and in *paghi*; and he bought and sold call options on these securities with maturities of up to eight months.⁴⁶ In some cases bankers formed consortia to manipulate the market. The markets were so active and so visible that governments could not resist the temptation of taxing them. Florence and Genoa imposed transactions taxes in the fourteenth century and Venice in the fifteenth. In Florence, the tax was 2% of face value; in Venice 2% of market value. Revenue from the Venetian tax was estimated at 2,000 ducats a year, suggesting a turnover of 100,000 ducats at market value or 300,000 at par, probably much higher in some years (and probably much higher before the tax was imposed).⁴⁷

EQUITY FINANCE

While landowners and governments could finance themselves with long-term debt, this option was generally not available to business: it lacked the security and the reliable cash flow required for a debt issue. On the other hand, business could promise substantial gains if things went well to compensate for the possibility of loss if things went badly. This potential for extraordinary returns did provide a basis for equity finance.

⁴³This anticipated today's market in government-security 'strips', in which individual coupon payments trade as separate securities.

⁴⁴Day (1987) . The credits were a sort of 'chartalist' money: see Wray (1998) on the chartalist notion of money.

⁴⁵Kirshner (1997)

⁴⁶Goldthwaite (1985) p 40

⁴⁷Kirshner (1997) , Lane (1966) , Mueller (1997)

The fundamental problem of equity finance is to ensure equity-holders a fair return on their investment.⁴⁸ Today, there exists a complex of institutional mechanisms to address this problem—accounting procedures and an accounting profession, legal protections, extensive reporting and analysis of financial information. Since none of these existed before 1600, equity finance had to rely on a simpler mechanism: wind up the business periodically, and divide up the proceeds among the shareholders. This procedure was possible, because business was largely commercial and did not require any substantial investment in fixed capital.

There were several types of equity finance, corresponding to different forms of business organization. The organizational form favored by commercial enterprise was the partnership—the single-voyage venture partnerships for maritime commerce; the longer-lived continuing partnerships for overland trade and merchant banking. The form favored by shipowning and mining was the share company. We consider in turn the financing of each of these forms of business organization.⁴⁹

VENTURE PARTNERSHIPS⁵⁰

Until the fourteenth century, Italian maritime commerce relied for its financing largely on the venture partnership or *commenda*. In its standard form, the *commenda* was a contract between two persons: one provided labor, the other capital. The *tractator* provided the labor, traveling with the goods to trade; for this, he received one quarter of the profits. The *stans* or *commendator* remained at home but provided all the capital—in the form of trade goods or of money to purchase trade goods; for this he received three quarters of the profit.⁵¹

The *commenda* was initially more a service contract than a financial contract. Typically, the *stans* was an established merchant, no longer required to risk his life at sea, and the *tractator* was a young man willing to accept the risks in order to make his name and build up capital of his own. Over time, however, the *commenda* was used increasingly as a way to mobilize funds. An established merchant, wishing to finance a trading venture, would do so by entering into *commenda* contracts with a number of

⁴⁸This is called the problem of corporate governance.

⁴⁹Business organization serves two functions: on the one hand, it determines the relationships among individuals working in a joint enterprise; on the other, it provides a framework for the investment of resources. Here we focus on the latter.

⁵⁰The following relies mostly on Postan (1973 [1957]), Mitchell (1904), and Lopez (1976)

⁵¹Similar types of contract, under different names, existed in Germany and England (Postan (1973 [1957])).

investors. In such contracts, the merchant would be the *tractator* and the investor would be the *stans*, providing capital in the form of money (the merchant, rather than traveling himself, would send the goods to an agent overseas). Investors could diversify the risk by being party to many contracts with many different merchants. For example, the executors of a Genoese nobleman who died in 1240, Guglielmo de Castro, found the bulk of his assets invested in some two dozen separately notarized commenda contracts.⁵² Merchants too could use the *commenda* to diversify: the same merchant who raised funds for his own ventures as a *tractator* would often, at the same time, invest part of his own capital as a *stans* with other merchants.⁵³

The term of the *commenda* was normally for a single venture: the voyage rarely took more than a year and often took only a few months. The contract could be, and frequently was, rolled over to finance subsequent ventures. This provided good incentives for performance by the *tractator*. In its earlier, service-contract, days, the *commenda* exposed the *stans* to liability for the actions of the *tractator*, who was regarded as his agent. However, in its later financial version, the *commenda* provided investors—in practice, if not in theory—with limited liability: their liability was limited to the capital they put up. Given the rather passive role of the investor, granting him the standard three quarters of the profits due the *stans* might seem overly generous. In practice, this was less generous than it might seem, since the calculation of the amount of profit was in the hands of the *tractator*. Initially, the *tractator* was obliged to make some formal accounting, but as the instrument matured, investors normally agreed to accept the word of the *tractator* “without an oath or witness”.⁵⁴ Indeed, as use of the instrument became more routine, and as it was used for progressively less risky enterprises, it became more debt-like: in many cases, the rate of profit was fixed in advance, independent of the outcome of the venture in question.

The use of the *commenda* as a financial instrument reached its highest degree of development in Venice, where it was known as the *collegantia* or *colleganza*. Thousands of investors from all walks of life—from retired merchants to monks, from housewives to parish priests—financed much of Venice’s trade through their investment in *colleganza* contracts. The amount of each contract was relatively small—from 10 ducats to 500 ducats. It was initially customary for the *tractator* to provide one third of the capital (in exchange for half of the profit). However, as investor confidence grew this requirement

⁵²Spufford (1988)

⁵³de Roover (1945)

⁵⁴Lopez (1976) p 76

fell into abeyance, allowing merchants to operate with sums greatly in excess of their own capital.⁵⁵ Consequent abuses led the authorities in 1324 to prohibit any merchant from carrying overseas on *colleganza* an amount of goods that exceeded the value of his personal wealth as assessed by the *estimo*. The popularity of the *colleganza* grew during the thirteenth century, and by the early fourteenth it was being used to finance all sorts of non-venture enterprises. Borrowers on these so-called ‘local *colleganza*’ contracts included shopkeepers, artisans, and deposit banks. Maturity became standardized—mostly for one year. The ‘profit’ was generally indexed to some market rate prevalent at the time of maturity (often the rate on *depositi a discrezione* paid by leading merchants or bankers). The popularity of the *colleganza* waned during the fourteenth century. Maritime trade became more routine and was increasingly taken over by large companies with agents overseas, and the availability of marine insurance allowed them to finance their operations at lower cost with bills of exchange. However, the riskiest ventures, such as an expedition to India, continued to be financed with *colleganza* contracts. At the same time, investors increasingly found an alternative outlet for their funds in the market for government debt.⁵⁶

CONTINUING PARTNERSHIPS

The large, permanent companies that replaced the traveling merchant used a different form of organization—the continuing partnership or *compagnia*. This had evolved during the twelfth century as a more flexible version of the Greco-Roman *societas*—a legal structure that allowed a number of individuals to pool capital and labor in order to share the risks and profits of an ongoing enterprise. The duration of the partnership was limited but indefinite: a term of from two to twelve years was normal.⁵⁷ The purpose of closing the partnership was generally to distribute the profits (shares could be transferred without dissolving the partnership). Closing the partnership did not, however, mean the end of the business: the partnership was usually reconstituted immediately with many of the same partners

⁵⁵A similar phenomenon of increasing leverage occurred in Genoa, where borrowed funds increased from about 20% in the mid-twelfth century to over 90% in the early thirteenth.

⁵⁶The *commenda* may have inspired the *mezzadria*, a sharecropping contract that in the fourteenth century largely displaced fixed rents in agriculture in north and central Italy. Under the *mezzadria*, the landlord supplied the land and most of the working capital, while the tenant supplied the labor: each received one half of the harvest. This arrangement seems both to have improved the lot of the peasants and to have boosted agricultural productivity. (Herlihy (1967, 1977), Botticini (1997))

⁵⁷Similar structures, under different names existed in Germany and England (Postan (1973 [1957]))

Like the *commenda*, the *compagnia* served both organizational and financial functions. However, its value as a financial vehicle was limited by the joint and several liability of the partners: any partner, however small his capital investment in the enterprise, could be ruined by the actions of any other. In some cases, where the enterprise involved little risk, this was not a problem. Consequently, the *compagnia*, or some other arrangement much like it, was widely used as a way to obtain external finance for petty trade and manufacturing.⁵⁸ However, in international commerce and banking, where the risks were great, outside investors were unwilling to expose themselves to the chance of ruin. As a result, partners in the great trading and banking companies were generally related by blood or by marriage. Moreover, they usually were not passive investors: they either worked in the business or at least participated in major decisions to protect their interests. Because equity was not a viable means of mobilizing external finance for these companies, they generally relied more on debt. This usually meant *depositi a discrezione*. Although the *deposito* had an initial maturity of from six months to two years, investors typically allowed it to run on for much longer (it then became payable on demand), making it essentially a form of long-term debt. For the large merchant banks, such debt could be as much as ten times the firm's own capital.⁵⁹

The problem of unlimited liability was eventually solved through the creation of a new structure, the limited partnership or *accomandita*. This was first recognized by legislation in Florence in 1408. The *accomandita* distinguished between active and 'sleeping' partners. The status of active partners was much as it was under the *compagnia*. However, sleeping partners were treated as purely financial investors, and their liability was limited to the amount of capital they subscribed. To enjoy limited liability, the *accomandita*, unlike an ordinary partnership, was obliged to register with the Merchants' Court. Sleeping partners played no role in the day-to-day running of the business. However, since they usually contributed most of the capital (as much as 95%), they had the final say on major decisions, such as the selection of managers and the duration of the partnership. The initial term of the partnership was typically from three to five years, after which it could be renewed from year to year at the discretion of the partners. Sleeping partners were generally wealthy non-merchants. Since sleeping partners did not have to be named specifically on the document of association, the

⁵⁸"In town and country alike the commercial classes had made free use of the contract of partnership which enabled them to trade with borrowed capital, while avoiding the suspicion of unlawful practices." Tawney (1925)

protection of anonymity made it easier for the nobility to invest in business without losing status (this was a major reason for the popularity of the *accomandita* in France). Anonymity also made it easier for foreigners to invest, when such investment was restricted or prohibited by regulation. The *accomandita* also proved a useful way for large trading companies to invest in smaller companies that supplied them with manufactured goods. Because of these advantages, the *accomandita* gradually replaced the ordinary *compagnia*.

SHARE COMPANIES

Stimulated largely by the Crusades, Genoa saw a rapid expansion in its shipping business in the twelfth century.⁶⁰ Until then, ships had been small and had served mostly local trade; they had been owned and operated by mariners individually or in simple partnership. However, with the Crusades, the enormous expansion in demand, the growing size of ships, and the greater risks of long-distance trade, exceeded the financial capacity of mariner-owners. From 1150, it became increasingly common to finance the construction and operation of ships by dividing the ownership into shares or *loca*.⁶¹

A number of investors would pool their resources, each purchasing a share. The number of shares, from 16 to 70, seems often to have corresponded to the number of mariners operating the ship: each shareholder was responsible for the expenses and wages of 'his' mariner. The duration of the agreement was usually a single voyage. Share ownership was registered with the ship's scribe, who was also responsible for accounting for the venture's revenues and expenses and for dividing the profits among the shareholders. Often shareholders were themselves active participants in the voyage, and those who were not generally placed their shares in the hands of others who were. One of the shareholders who sailed with the ship might be given command as *patronus*. Alternatively, the owners might hire a ship's master—perhaps by means of a *commenda* contract. While the principal investors were merchants, *loca* became a popular investment for all classes. Families pooled their resources to purchase a share, and shares were subdivided, sometimes into quite small fractions. By the middle of the thirteenth century, banks too were investing in *loca*.

⁵⁹Braudel (1982)

⁶⁰The following relies largely on Byrne (1930)

⁶¹The idea was not new: the *locum maris* has its origins in Classical antiquity.

The main difference between *loca* and partnerships was the ease with which the ownership of shares could be transferred.⁶² A share-owner was able to dispose of a share, or part of it, without requiring the consent of others. Shares in ships of all types and sizes were traded, bequeathed, pledged, hypothecated, and given in *commenda* as freely as any other property. Shares were regularly pledged as security for loans raised to finance a voyage—to purchase trade goods and supplies and to pay the mariners' wages. Shares could also be used to finance construction of the ship, with builders accepting shares in lieu of payment.

Use of the *locum* began to decline in Italy from the middle of the thirteenth century. To a large extent its popularity had derived from its ability to spread risk among many investors and to allow individual investors to diversify by purchasing shares in many different ships. By 1250, overseas trade had become more secure and the market for marine insurance had developed to the point that it offered an alternative way to manage risk. Moreover, some merchants had acquired fortunes sufficiently large that they could comfortably bear the risk of owning a ship—or even many ships.

Although share ownership in ships declined in importance, at least in Italy, the use of the share-company structure spread to other forms of enterprise and continued to thrive. Share companies were set up to finance the construction of mills and to finance silver mining in Sardinia. Share companies, known as *maone*, were set up to finance trading colonies in Ceuta and Chios. In the fifteenth century, share companies were set up to mine and transport salt, alum, and mercury. And it seems reasonable to suppose that the share company provided the model for the *compere* used in public finance and for the *Casa di San Giorgio*.

The use of the share-company structure also spread geographically. The mines of Tuscany and of Central Europe were largely financed through share ownership. In Germany, silver and copper mines were financed with as many as 640 shares or *Kuxen*, often further subdivided. In addition to their initial subscription, shareholders were sometimes called upon to provide supplementary funds as the need arose. *Kuxen* became a popular investment in Germany: investors included not only merchants, but also local noblemen and clergy, municipal governments, and trusts.

In the fifteenth century, share ownership in shipping spread to the Netherlands, perhaps reaching there from the Hansa where the practice was widespread.⁶³ As had been

⁶²Although there was unlimited liability in principle, liability in practice was limited to the capital subscribed plus the pro-rated expenses, since no debt was taken on.

⁶³Glamann (1972) Parker (1977) de Vries (1976) de Vries and van der Woude (1997)

the case in Genoa earlier, the growth of share finance in Dutch shipping was stimulated by the rapid growth of the commercial fleet and an increase in the size of ships. Hundreds of share companies or *rederijen* were established to finance the construction, purchase, or chartering of vessels and their provisioning for fishing or trading voyages. A *rederij*, with as many as 64 shares or *parten*, would usually be set up for a single voyage. Generally, one *reder* commanded the ship and traded, while the others contributed goods and capital. Shares, which could be sold, bequeathed, and subdivided, were a popular investment, not only among merchants, but also among farmers and artisans. As had been the case earlier in Genoa, the popularity of shipping *rederijen* declined as marine insurance became widely available in the seventeenth century. But in the Netherlands, too, share-company organization spread to other types of enterprise, including industrial windmills, refineries, breweries, and tile works. Indeed, share finance funded much of the industrial expansion of the Netherlands in the sixteenth and seventeenth centuries. Diversification allowed individual investors to bear the risks of specialized investments, and the easy tradability of shares allowed them to adjust their portfolios as market conditions changed. Share finance was also the basis for the trading companies set up in the late 1590s. These *vóórcompagniën* were to be combined in 1602 to form the great *Verenigde Oostindische Compagnie* (Joint East India Company), to which thousands of shareholders subscribed a total of some 6.5 million florins.

Share companies also appeared in England in the sixteenth century. However, it is not clear whether the English joint stock company was an imitation of Continental forms or whether it evolved from indigenous arrangements.⁶⁴ In England, share finance did not originate in shipping: while the practice did exist there, it was uncommon. The first joint stock companies were set up to finance trading ventures (the Russia Company and the Adventurers to Guinie in 1553) and enterprises in mining and metallurgy (the Mines Royal and the Mineral and Battery Works in 1564). Later companies financed privateering and colonization as well as domestic land improvements (enclosures and the draining of the Cambridgeshire fens).⁶⁵ The early companies were in effect much like partnerships. Shareholders were relatively few in number, had unlimited liability, and were subject to calls for additional capital. To protect their interests, shareholders had no choice but to involve themselves in the affairs of the company. Although in principle shares were transferable, the nature of the instrument limited its marketability and the

⁶⁴Scott (1912)

⁶⁵Wilson (1925 [1572])

procedure was cumbersome. To the extent shares did trade, it was among relatives and acquaintances rather than among the public at large.

Share companies, like partnerships, determined and distributed their profits through periodic liquidation. Periodic liquidation also provided shareholders with a simple mechanism of control: if they were satisfied with their profits, the enterprise could be reconstituted for an additional voyage or period; if not, they could withdraw their funds.⁶⁶ Because there were no institutional mechanisms to protect the interests of shareholders, shares were personal rather than impersonal instruments. Shareholders had no choice but to involve themselves in the affairs of the company to protect their interests. The personal nature of the instrument limited the extent to which shares could trade in a secondary market, since their value was not independent of who owned them.

Although the capital market before 1600 differed in many respects from the capital market of today, it still played a vital role. While its importance in financing commerce was relatively minor, it was essential in financing agriculture, housing, mining, and transportation—sectors that comprised a large part of the economy and that contributed significantly to productivity growth during the period. Moreover, as transoceanic commerce began to require substantial investment in fixed capital after 1600, it too came to rely increasingly on the capital market. In addition, the capital market played a crucial role in public finance. The ability of cities and towns to tap the capital market gave them an important advantage in their struggle with territorial governments, which lacked similar access. And after 1600, gaining access to the capital market became a matter of life and death in the struggle among territorial governments and, implicitly, in the struggle among different forms of government.

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⁶⁶Baskin (1988)

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