The Funding of Small-Scale Business in Pre-Industrial Europe[1]

Oscar Gelderblom and Francesca Trivellato

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Introduction

Small-scale firms in pre-industrial Europe occupy a marginal place in current academic work by economists, business historians, or even by traditional historians who long held the subject dear. Until the 1960s, the study of business organization was central to most grand narratives of the Rise of the West, whether those centered on late medieval Italy or those that located the great divergence in the overseas expansion of northern Europe. Economic history was then integral to all large-scale accounts of historical change, regardless of the paradigm from which they drew inspiration -- Karl Marx, Max Weber, modernization theory, or the *Gemeinschaft*/*Gesselschaft* dichotomy. To understand who did business with whom and according to which legal arrangements, and thus when and how impersonal credit market were born, was part and parcel of the effort to identify the metrics of modernity.[2] Since the 1960s, however, the subject has fallen by the wayside, largely on account of the rise of cultural history and the growing gulf that separates traditional historians from those trained in economics. Historians, for the most part, have

[1] Please note that the references in the paper are far from complete.
[2] Cf. for instance, the work of Raymond de Roover, *Money, Banking and Credit in Mediaeval Bruges: Italian Merchant-Bankers Lombards and Money-Changers: A Study in the Origins of Banking*. (Cambridge, Mass.: Mediaeval Academy of America, 1948); Raymond de Roover, *L'évolution de la lettre de change: XIVe-XVIIIe siècles* (Paris: Armand Colin, 1953); Raymond de Roover, *The Rise and Decline of the Medici Bank 1397–1494*. (Cambridge, Mass.: Harvard University Press, 1963).

abandoned economic history (at least until recently), while economists have become more and more dependent on large-scale datasets that are amenable to statistical treatment --a dependence that makes pre-industrial Europe a less than suitable terrain of inquiry. Meanwhile, among business historians, although scholarship on family business dies hard, greater emphasis is generally placed on the emergence of large-scale enterprises and modern financial institutions. Thus, the conventional narrative, influenced by the history of the United States since the late nineteenth century, holds that modern banks and joint-stock corporations represent major breakthroughs in the economic history of the world.[3] These new institutions allowed entrepreneurs to invest in large-scale production facilities, create permanent concerns, and shield the owners' assets from the downside risks these enterprises entailed.

The convergence of these multiple and sometimes independent historiographical trends has had a profound influence on the interpretation of the business history of pre-industrial Europe. Depicted as a traditional world dominated by sole proprietors and family partnerships, punctuated by a small sector of deposit banks and joint-stock companies, initially only active in long-distance trade but later also in public utilities and the insurance market, pre-industrial Europe figures in broad surveys only to the extent that it is assumed to have paved the way for the rise of more efficient institutions.[4] In this paper, we take a markedly different approach. Our topic is the heterogeneity of business organization and financing institutions across pre-industrial Europe. We wish to emphasize the importance of understanding this heterogeneity before we place it into a long-run perspective that risks to distort its meaning in the interest of grand narratives. Here and there, we also point to the lessons that this heterogeneity has for current concerns, since even the contemporary world of multinational corporations remains far from homogenous.

The singling out of modern banks and joint-stock corporations as the more sophisticated, forward-looking solutions to funding problems sits uneasily with what we know of actual business practices, both before and after the Industrial Revolution. English

[3] On the rise of the corporation: Alfred D. Jr. Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, Mass., 1977). On banks: Rondo Cameron *Banking in the Early Stages of Industrialization. A Study in Comparative Economic History* (Oxford: Oxford University Press, 1967).
[4] Cf. for instance W. Baumol, D. Landes, and J. Mokyr, eds. *The Invention of Enterprise: Entrepreneurship from Ancient Mesopotamia to Modern Times* (Princeton: Princeton University Press, 2010).

industrialists in the late eighteenth and early nineteenth century did not need outside financiers to build their first factories. Myriad credit instruments may have been available in London, but for most firms, ploughing back profits in combination with their suppliers' credit sufficed to fund business operations.[5] As for corporate solutions, Lamoreaux and Rosenthal (2005) and Guinnane et al. (2007) have demonstrated that as late as the nineteenth century, entrepreneurs in England, France, Germany, and the United States had recourse to a wide choice of options, including various permutations of the basic partnership form, and they all used these alternative forms intensively regardless of the legal regimes of their respective countries.[6] These scholars do not deny that the modern corporation as it emerged in the late nineteenth century had clear advantages for the organization of operations in a number of sectors, but insist on the fact that the modern corporation was neither an inescapable outcome nor the universally preferable form of business organization. They also stress that it took different forms depending on local government regulations and business environments.[7]

These observations suggest that a teleological approach to business history leads, on the one hand, to a distorted picture of the modern Western world and, on the other, to the elision of the pre-industrial period. Both trends converge in some influential accounts. Nowhere is this double pitfall more visible than in the bold assessment of the history of Islamic finance advanced in recent years by the political scientist Timur Kuran. Kuran attributes the late arrival of modern economic growth to the Middle East to the absence of an indigenous form of the corporation. However, his argument rests, among other things, on a faulty comparison with early modern Europe, which is inaccurately depicted as a time and place where the corporation was a dominant institution.[8] Other comparative studies have fallen into a similar trap. A traditional historiography long depicted imperial China as

[5] Larry Neal, "The Finance of Business during the Industrial Revolution." In *Economic History of Britain since 1700*, ed. R. Floud and D. N. MacCloskey (Cambridge: Cambridge University Press, 1981), 151–81.
[6] Lamoreaux, Naomi R. and Jean-Laurent Rosenthal, "Legal Regime and Contractual Flexibility: A Comparison of Business's Organizational Choices in France and the United States during the Era of Industrialization," *American Law and Economics Review* 7 (2005): 28-61; Timothy Guinnane, Ron Harris, Naomi R. Lamoreaux, and Jean-Laurent Rosenthal, "Putting the Corporation in its Place." *Enterprise and Society* 8 (2007): 687-729.
[7] For a similar conclusion regarding corporate finance in the Netherlands before 1900: Abe de Jong, Joost Jonker, and Ailsa Röell, *Dutch Corporate Finance, 1602-1850* (June 4, 2013). ERIM Report Series Reference No. ERS-2013-008-F&A. Available at SSRN: http://ssrn.com/abstract=2274577.
[8] Timur Kuran, *The Long Divergence: How Islamic Law Held Back the Middle East* (Princeton, N.J.: Princeton University Press, 2011).

antithetical to Europe because it never developed a public debt and only had clannish and localized private financial organizations. Recent studies, however, have shattered this Orientalist portrait. Jean-Laurent Rosenthal and R. Bin Wong have shown why an agrarian empire relied on different forms of taxation system and did not require a public debt. In so doing, they demonstrate that comparative history needs not search for the presence of identical features across time and place but rather understand why different societies may have developed different solutions to the same problem (in this case, state capacity and finance).[9] An alternative and equally fertile line of inquiry has demonstrated that ideological blindspots had obstructed earlier comparative studies. Once historians of China began to search for features that resembled those existing in the West, they found them. Thus, detailed descriptions of non-kin based partnerships financed by external investors and tradable stocks are now available for early modern China, in sectors as diverse as small-scale agriculture or salt mines.[10] Ongoing work also shows that the so-called native banks of the late nineteenth and early twentieth centuries rivaled with the earliest foreign banks in the Canton area in terms of capital endowments, range of services, and management structure.[11]

Evidently, the history of finance is a history of heterogeneity that grand narratives have too easily forced into straightjackets. For those of us interested in the pre-industrial period, the recent realization among broader sectors of the public and across the political spectrum that today, certain global corporations and banks deemed "too big to fail" wield disproportionate economic and, in some cases, political power has had an unintended positive outcome. It points to the need to further our understanding of the variety of solutions to the problem of financing business that have been adopted across time and space.

Part 1: Why Study the Funding of Business in Pre-Industrial Europe, and How?

[9] Jean-Laurent Rosenthal and R. Bin Wong, *Before and Beyond Divergence: The Politics of Economic Change in China and Europe* (Cambridge, Mass.: Harvard University Press, 2011).

[10] Kennenth Pomeranz, "Traditional Chinese Business Forms Revisited: Family, Firm, and Financing in the History of the Yutang Company of Jining," *Late Imperial China* 18 (1997): 1-38; Madeleine Zelin, *Merchants of Zigong: Industrial Entrepreneurship in Early Modern China* (New York: Columbia University Press, 2005).

[11] This statement draws on work in progress by Jialu Chen, a doctoral student in Econ at Yale. We welcome suggestions for further readings.

The label “pre-industrial Europe” refers to multiple centuries and vast regions, yet this is not the most acute problem we are facing. The dearth of statistical data makes large-scale comparisons exceedingly difficult. Many if not most businesses were self-financed family enterprises, and little or no paper trail survives of financial obligations made between relatives aside from a few well-preserved family archives, which have been the object of case-studies but inevitably raise questions of representativeness. Moreover, after the fifteenth century, commercial credit (that is, credit extended without collateral) was rarely notarized and thus remains documented almost exclusively by bills of exchange, account books, and business correspondence, whose survival rate is low. Finally, in virtually no time or place do aggregate data exist that afford scholars of pre-industrial Europe a full snapshot of the menu of choices of financing contracts available to entrepreneurs and the relative distribution of each contract. Nothing analogous to industrial censuses existed and central registration of business contracts was rare.

In the face of these structural limitations, at present it is impossible to outline a comprehensive synthesis, let alone develop a general hypothesis concerning comparative patterns of private financing in pre-industrial Europe. Therefore, our aims is more modest but, we hope, no less valuable. We begin here work that others may wish to continue, refine, and challenge. Our effort aims to offer an analytical description of the heterogeneity of business organization in pre-industrial Europe and to begin to identify patterns of change in scale and legal forms that emerged across time, space, sectors, and social groups. In short, this paper has two intertwined goals. It surveys the existing literature in an effort to take stock of what we already know. It also frames general questions that we hope will inform future research aiming to map the relative importance of different kinds of debt and equity contracts used across Europe.

To start, we wish to defend our preference for the adjective “pre-industrial,” which is admittedly capacious (it can be applied to the entire period from the commercial revolution of the Middle Ages to the British industrial revolution) and somewhat nebulous (insofar as it makes little distinction between distinctive periodizations within this long historical arc). We nevertheless find that it is useful to revive this label, which, in recent times, has largely fallen out of use, especially among Anglophone scholars who reacted against what they perceived as the determinism of Fernand Braudel’s depiction of the “pre-industrial period" as one of slow change and technological stagnation. Regardless of how one wishes to interpret Braudel, we contend that there are several good reasons why "pre-industrial" is a fertile notion for a new approach to both European and comparative business history.

The first reason has to do with the uncontroversial importance that information technology and transportation systems play in financing choices. In reference to the circulation of information and business letters in the sixteenth-century Mediterranean, Braudel famously called "distance, the first enemy" and "news, a luxury commodity."[12] Scholars of naval technology and the postal systems have by and large put forth more optimistic views of the incremental innovations that punctuated both sectors.[13] What remains uncontroversial is that before the invention of telegraph in the mid-nineteenth century (and its slow adoption by the business community on account of its cost), information traveled at the same speed as human beings and cargo. A printed sheet or a hand-written *avviso* could be placed on board a ship or on the back of a donkey, but it would only be delivered once the ship captain or the courier had reached their destinations. A few experiments were initiated with lighthouse signals or carrying pigeons, but obviously, they had only minimal effects on the transfer of information.

In addition to their slowness, the information technologies of pre-industrial Europe had another general characteristic: in comparison to the modern period, financing choices were largely made on the basis of privately-held information. In his influential work, *The Structural Transformation of the Public Sphere*, Jürgen Habermas attributes considerable importance to the emergence of printed newspapers and coffee-houses for the democratizing processes not only in the political but also in the economic arena.[14] His broad historical-sociological account has inspired a number of more detailed studies, notably by John McCusker, on the dissemination of printed sources of economic

[12] Fernand Braudel, *The Mediterranean and the Mediterranean world in the age of Philip II*, 2 vols. (New York: Harper and Row, 1972-73), vol. 1, 355 and 365.
[13] Among a vast bibliography, see Russell R. Menard, "Transport Costs and Long-range Trade, 1300-1800: Was there a European 'Transport Revolution' in the Early Modern Era?", in *The Political Economy of Merchant Empires*, ed. James D. Tracy (Cambridge: Cambridge University Press, 1991), 228-75; Richard W. Unger, *Ship in the Medieval Economy, 600-1600* (London: Croom Helm, 1980).
[14] Jürgen Habermas, *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*, translated by Thomas Burger with the assistance of Frederick Lawrence (Cambridge, MA: MIT Press, 1989 [1962]).

information in the early modern Atlantic, and by Larry Neal, on the integration of Amsterdam and London's stock markets thanks to the availability of printed sources circulating in both cities.[15] It is undeniable that the printing press altered significant aspects of economic institutions. But it arguably had a greater impact on some phases and on certain regions of the business world than others. For example, the availability of printed sheets of current prices, marine insurance premia, currency exchange rates, or stock valuations presumably curbed the fluctuations of prices and rates in any one location. Any degree of local standardization, however, did not affect all regions equally nor did it necessarily lead to a rapid convergence. If Amsterdam and London were relatively close and well integrated from a communication point of view, a merchant in, say, Bordeaux was not in a position to compare all marine insurance rates across Europe when purchasing insurance for a cargo to be shipped overseas. Artisans and land cultivators were even more bounded geographically when borrowing funds for the purchase of raw material or seeds.

A second feature distinguishes the entire pre-industrial period from the post-revolutionary phase that began in the late eighteenth century, namely, the absence of universal freedom of contract even for adult men of sound mind. Pre-industrial Europe was a society of status, and status affected access to financial sources. Local written and customary norms varied considerably, but as a rule, women were significantly constrained in their capacity to act as independent legal persons. A nobleman, at the same time, could generally count on considerable greater collateral (both tangible and intangible) than a commoner and was often granted access to separate jurisdictions. Membership in craft guilds required religious conformity and thus excluded those belonging to minority Christian confessions and anyone who was not baptized. Even where no normative limitations existed, social constraints could be imposing because of the circles within which privately-held information circulated and the importance of extra-legal enforcement.

To test the significance of status in pre-industrial Europe, it would be helpful to look at the one city where status had --de jure-- the least importance in business organization:

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[15] John. J. McCusker, "The Demise of Distance: The Business Press and the Origins of the Information Revolution in the Early Modern Atlantic World," *American Historical Review* 110:2 (2005): 295-321; John J. McCusker and Cora Gravesteijn, *The Beginning of Commercial and Financial Journalism: the Commodity Price Currents, Exchange Rate Currents, and Money Currents of Early Modern Europe* (Amsterdam: NEHA, 1991); Larry Neal,*The Rise of Financial Capitalism: International Capital Markets in the Age of Reason* (Cambridge: Cambridge University Press, 1990).

Amsterdam. As Oscar Gelderblom has documented, the capital of Holland did not bar anyone from participating in international trade and high finance and established public-access institutions, while it not only discouraged but in some cases also prohibited foreign merchants from developing their own corporate organizations.[16] This model departed from the prevalent forms of public governance that had existed until then and continued to exist across pre-industrial Europe. Amsterdam, in other words, was an early instance of a society of contract, albeit only within certain economic sectors and social group. Restrictions remained effective in many areas. Catholics were formally forbidden from residing and worshiping in the city. Since marriage remained a religious rather than civil institution, few inter-confessional and no inter-religious marital unions emerged. Jews were encouraged to settle in Holland and allowed to build majestic synagogues, but denied access to most guilds. No formal barrier was erected against joint Jewish-Christian business ventures but the degree to which these developed remains to be fully investigated. Not all financial contracts associated with long-distance trade, moreover, were negotiated in an open market.

To repeat, the organization of long-distance trade in Amsterdam was the one sector in pre-industrial Europe in which considerations of status mattered the least in determining the menu of options available to each individual in their choices of financial sources and contracts. If one is looking for lessons from the past for the history of modern credit, Amsterdam is a fertile starting case because formal equality is an extremely recent phenomenon even in liberal democracies (only in 1974 did federal law banned discrimination by gender and race from private credit markets in the United States), because many fast developing countries with large credit markets, notably China, still operate without formal legal equality, and because income inequality in advanced economies and democratic regimes has once again raised the question of substantive vs. formal equality in access to adequate credit services. In short, today as in the past, credit markets operate on the basis of elements of contract and elements of status. It follows that a more precise understanding of pre-industrial European regimes of private and public

[16] Oscar Gelderblom, *Cities of Commerce: The Institutional Foundations of International Trade in the Low Countries, 1250-1650* (Princeton: Princeton University Press, 2013).

credit is more relevant than a characterization of those regimes as "traditional," in contrast to our supposedly "modern" credit markets.

A third and related feature of the pre-industrial period concerns what the Anglophone literature usually refers to as "legal pluralism," that is, the existence of multiple sources of law and fora of adjudication (the latter not necessarily lined up in a strict hierarchical order) in any given sovereign territory. By period standards, legal pluralism was the norm rather than an aberration. Trivial as this statement may appear, it ought to be kept in mind if we do not wish to judge the past from the vantage point of post-codification nation-states. Both within and beyond Europe, states and empires were the results of dynastic unions and military conquest that brought under one --more or less centralized-- government vastly different territories, where people spoke different languages and held pre-existing legal traditions. Even in absolutist France, royal decrees coexisted alongside feudal, municipal, and local statutes and tribunals; part of the kingdom, moreover, adhered more closely to Roman law and part to Norman customary law. Only slowly did subject-matter jurisdiction replace personal-status courts in the realm of commercial law. Only in Lyon, a hub on international trade and finance, was a court (*Conservation*) created for all those who participated in the local fairs, which adjudicated on the basis of a subject-matter consideration ("pour le fait de négoce & commerce") as early as 1461. After 1563, specialized tribunals were established in the main cities of the kingdom where commercial contracts (though not bankruptcies) were litigated. Still, these were corporate tribunals, where only those recognized as merchants (because of guild membership or by public opinion) could be tried. Only in 1673 did the *ordonnances de commerce* establish that anyone who signed a commercial contract would be subjected to the legislation of merchants' tribunals. By then, if a nobleman endorsed a bill of exchange that went unpaid or financed the manning of a ship that was seized by pirates, he would need to appear before a court in which merchants sat as judges. The degree of resistance to this legal reform by the aristocracy is a measure of how deep it undermined social hierarchies and accepted customs in Old Regime France.[17] In spite of the emphasis placed

[17] For an overview of the institutions of commercial law in Old Regime France, see Jean Hilaire, *Introduction historique au droit commercial* (Paris: Presses universitaires de France, 1986); Jacqueline-Lucienne Lafon, *Les Députés du Commerce et l'Ordonnance de Mars 1673: Les jurisdictions consulaires; principe et compétance* (Paris:

by the new institutional economic history on the protection of property rights, expropriation in Southern Europe was less a pervasive risk than it has been assumed. Rather, it would be important to test how the presence and effectiveness of open-access tribunals that ruled on the basis of subject-matter jurisdiction rather than personal status affected the financing choices and the pool of actors that participated in commercial credit across different regions of Europe.

Not only was legal pluralism within a sovereign territory the norm, but there did not exist any inter-state arbitration courts or bodies of international law. Even what are often described as the antecedents of international law, notably the controversy on *mare liberum* (Hugo Grotius) and *mare clausum* (John Seldon), were largely linked to geo-political rivalries between European superpowers and never evolved into a jurisprudence to which different states had to adhere. The forms of jurisdictional autonomy conferred onto foreigners varied greatly from place to place and naturally affected the creation of impersonal credit markets. The degree of uniformity of local norms concerning financing contracts remains a disputed topic among legal and economic historians. Contrary to what it is often repeated, no such thing as a universal merchant law ever existed. However, long-distance trade required and promoted a certain convergence in contractual forms. Marine insurance, bills of exchange, and jettison were only the contracts that most needed to be intelligible and enforceable across linguistic and political boundaries since they referred to investments devised precisely to cross those boundaries. However, default and written norms about these contracts, as well as partnerships, continued to differ not only on the two sides of the Channel, but also across all of the European continent, and thus injected uncertainty in the contracting choices available to those operating in more than one location.

A fourth and final trait characterizes the world we are seeking to describe. If most enterprises in the manufacturing and commercial sectors were generally smaller than the large-scale land properties that still dominated much of the rural landscape, most privately owned enterprises were small in scale and poor in fixed capital compared to the post-Industrial Revolution production plants. What do we mean by small? Artisanal workshops

Éditions Cujas, 1979) ; Amalia D. Kessler, *A Revolution in Commerce: The Parisian Merchant Court and the Rise of Commercial Society in Eighteenth-Century France* (New Haven: Yale University Press, 2004).

employed only a few apprentices and family members. A nuclear family was the unit of production and consumption in most rural farms and rural industries. Even most merchants involved in trans-continental trade sealed partnerships with only one or two associates and otherwise relied on the assistance of commission agents to whom they extended credit on an ad hoc basis. Aside from the few joint-stock companies that were created in the seventeenth and eighteenth centuries in Atlantic Europe for trans-oceanic ventures, the only large-scale enterprises (those who could have handreds of stable employees) were owned or subsidized by the state, as in the case of the Arsenal in Venice, the royal manufactures set up by Colbert in Paris outside of guilds' control, or most of the large mines operating in Europe and the Americas. In some overseas territories, including the Americas and South-East Asia, private landowners of European descent also managed plantations with chattel slaves on a scale not seen in Europe.

In this paper, we focus on the sources of funding for small-scale firms for historical and historiographical reasons. Historically, as noted, these were the prevalent form of business organization and thus demand full consideration. Historiographically, they are the thorniest object of study because their paper trail is spoytt and because, when available, archival records documenting small-scale firms lends itself to case-studies more than to comparative perspectives. There is no easy way around the problem of source biases. Our hope is that to recognize the problem be the first step toward moving beyond it.

Part 2: Heterogeneity in the Business World of Pre-Industrial Europe

2a. The capital requirements of pre-industrial businesses

Large-scale enterprises such as the English or Dutch East India Companies loom large over the business history of early modern Europe because they pioneered the legal form of the modern corporation. These were impressive companies that employed tens of thousands of men on their ships and shipyards, in their trading posts and warehouses.[18] To coordinate their operations in different parts of the world, these companies created hierarchical structures that foreshadow those of modern multinationals.[19] And yet, these 'giants of an earlier capitalism' remained exceptional, even in the global trade of the seventeenth and eighteenth centuries. Notably in the Atlantic world, private merchant houses plied their trade with large sums of money but limited investments in fixed capital goods.[20] Circulating capital was the norm, even in the plantation economies of the Americas.[21] To be sure, the Portuguese, Spanish, English, Dutch, and French merchants who dominated this trade did collaborate intensively to control supply chains, relying on extensive family networks but also on their respective governments who sold licenses to individual merchants or larger consortia of traders. Long-distance trade within Europe was also dominated by merchants trading on their own account or in partnership with a limited number of kin and next-of-kin. Whether big or small, these businesses boasted very little fixed capital. Their assets mainly consisted of stocks of merchandise and short-term debts, with some smaller or larger fraction of the merchants' wealth invested in real estate or government bonds – money set aside to provide for the next generation.[22]

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[18] Jan de Vries, "Connecting Europe and Asia: A quantitative analysis of the Cape-route trade, 1497-1795," in *Global Connections and Monetary History, 1470-1800*, ed. D. O. FLynn, A. Giraldez and R. Von Glahn (Aldershot: Ashgate, 2003), 35-105, at 68-74.

[19] Whether these hierarchies were truly indispensable remains a contested issue Ann M. Carlos, "Principal-Agent Problems in Early Chartered Companies: A Tale of Two Firms," *American Economic Review* 82 (1992): 140–45; Ann M. Carlos and Stephen Nicholas.. "Theory and History: Seventeenth Century Joint-Stock Chartered Trading Companies," *Journal of Economic History* 56 (1996): 916–24; S.R.H. Jones and Simon P. Ville, "Efficient Transactors or Rent-Seeking Monopolist? The Rationale for Early Chartered Trading Companies," *Journal of Economic History* 56 (1996): 898-916.

[20] For the Portuguese in the Atlantic, see Daviken Studnicki-Gizbert, *A Nation Upon the Ocean Sea: Portugal's Atlantic Diaspora and the Crisis of the Spanish Empire, 1492-1640* (Oxford: Oxford University Press 2006), 91-121. For Portuguese diamond traders: Tijl Vanneste, *Global Trade and Commercial Networks: Eighteenth-Century Diamond Merchants* (London: Pickering and Chatto, 2001). For the British Altantic, see Jacob M. Price, *Capital and Credit in British Overseas Trade: The View from the Chesapeake, 1700-1776* (Cambridge, Mass.: Harvard University Press, 1980); David Hancock, *Citizens of the World: London Merchants and the Integration of the British Atlantic Community, 1735-1785* (Cambridge: Cambridge University Press, 1995). For French merchants, see Paul Butel, *Les dynasties bordelaises: de Colbert à Chaban* (Paris: Perrin, 1991); J.F. Bosher, *Business and Religion in the Age of New France, 1600-1760: Twenty-two Studies* (Toronto: Canadian Scholars Press, 1994); Guillaume Daudin, *Commerce et prospérité: la France au XVIIIe siècle* (Paris: Presses Universitaires de Paris-Sorbonne, 2005). For merchants in New England: Bernard Bailyn, *The New England Merchants in the Seventeenth Century* (Cambridge, Mass.: Harvard University Press, 1955); Thomas M. Doerflinger, *A Vigorous Spirit of Enterprise: Merchants and Economic Development in Revolutionary Philadelphia* (London: Chapel Hill, 1986);

[21] References required…

[22]For the Low Countries: Peter W. Klein, *De Trippen in de 17e eeuw: een studie over het ondernemersgedrag op de Hollandse stapelmarkt* (Assen: Van Gorcum, 1965); W. Brulez, *De Firma della Faille en de internationale handel*

Early modern European agriculture displayed an equally skewed distribution of firm size and a similar preference for floating capital to run operations. Throughout western Europe we find large numbers of small farms with only modest capital outlays of some farm buildings and tools and small livestocks. These farms remained competitive until the mechanization of agriculture in the nineteenth century. Larger landholdings did exist, for instance in Eastern Europe, where wealthy landlords tied large numbers of serves to estates that easily comprised thousands of acres. But these were capital-intensive enterprises, only with regard to the large amount of capital tied up in the land. Otherwise, daily operations were funded with the capital supplied by the merchants buying the estates' produce.[23]

A similar connection between trade and agriculture can be found in the pockets of commercial agriculture that existed in the more urbanized regions of western Europe. Whether in the contado's surrounding the Italian city-states, the Île de France around Paris, the coastal provinces of the Dutch Republic, or southern England, farms in all these regions managed to produce large surpluses that were marketed by urban-based merchants. Still, investment in fixed capital goods was limited on most of these farms.[24] Big sums of floating capital were needed on estates with large stocks of cattle or large amounts of lands, but this was typically supplied by merchants selling seeds or buying produce. The same was true for the processing of industrial crops. Saw mills, madder stoves, roperies, or sail-lofts – their fixed capital requirements were modest while their more capital-intensive daily operations were funded with commercial capital.

This was not quite true for the processing of foodstuffs, whether in Europe or the colonies. Surely, throughout Europe we find many small-scale bakeries, beer breweries,

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van Vlaamse firma's in de 16e eeuw (Brussels, 1959). For France: Daudin, *Commerce et prospérité*; Pierre Jeannin, *Les marchands au XVIe siecle* (Paris: Seuil, 1957); *Check Fontaine on Colporteurs. For England: *Richard Grassby, *Kinship and Capitalism*: marriage, family, and business in the English-speaking world, 1580-1720 (New York: Cambridge University Press, 2001).

[23] *Check the literature for the basis pattern in the funding of agriculture: Van Bavel in Low Countries, Hoffman on France; Allen on English agriculture. On Russia: Tracy Dennison, *The Institutional Framework of Russian Serfdom* (Cambridge: Cambridge University Press 2014) p. 39; Epstein on Italy. T. Lambrecht and P. Schofield, eds. *Credit and the rural economy in North-western Europe, c. 1200-c. 1850* (Leuven: Brepols 2009). We still need to incorporate the Brenner debate (and Witold Kula for Poland), which was the Marxist epicenter of debates on the parcelization of lands etc; among economists, the debate is usually about the rationality of sharecropping. In any case, Phil Hoffman could help us here.

[24] Paolo Malanima, *Pre-modern European economy: one thousand years (10th-19th centuries)* (Leiden: Brill, 2009), 321 (but he does not provide any references).

distilleries, and sugar refineries, but these were industries in which economies of scale were possible. Hence, in cities with a large local consumer base and/or ready access to export markets, we find entrepreneurs investing in larger production facilities. This was true, for instance, for beer breweries in Amsterdam in the eighteenth century.[25] Still, the few surviving accounts of such breweries and refineries reveal the dominance of floating capital over fixed capital investments. Compared with the value of the stock of raw materials, the finished goods, and the debts outstanding, the investments in buildings, cauldrons, and utensils was still very small. Hence, as we will see below, few owners of these manufacturies even considered more complex governance structures.

The same holds for the biggest, most extensively researched industrial sector of early modern Europe: the production of textiles. The very extensive literature on the spinning, weaving, and finished of all kinds of cloth, reveals that fixed capital investments were limited, even through the early phases of industrializiation in the late eighteenth and early nineteenth century.[26] In this sector we find three basis patterns of funding. One is the infamous putting out system, which, like many of the examples cited above, thrived on the investment of commercial capital in raw materials and finished cloth. In some instances these were indeed very capital-intensive operations with single merchants dominating the entire production of a particular region. Yet, even in those cases investments in fixed capital stock were limited. On the other side of the spectrum were the individual rural and urban craftsmen who, often with the help of their wife and children, owned small, even minuscule workshops in which they produced cloth to sell to one or more local merchants. In between these two extremes, and only in some parts of Europe, there existed a third model of urban workshops ran by either craftsmen or merchants turned manufacturers as they employed anywhere between one and ten workers. Their capital outlay was certainly

[25] *Add more examples

[26] *More references needed. Cf. for instance for the Southern Netherlands: Alfons K. L. Thijs, *Van "werkwinkel" tot "fabriek": de textielnijverheid te Antwerpen: einde 15de-begin 19de eeuw* (Antwerpen: Gemeentekrediet, 1987); Catharina Lis and Hugo Soly, *Een groot bedrijf in een kleine stad. De firma De Heyder & Co. te Lier 1757-1834* (Lier: Liers Genootschap voor Geschiedenis, 1987); Catharina Lis and Hugo Soly, "Corporatisme, onderaanneming en loonarbeid. Flexibilisering en deregulering van de arbeidsmarkt in Westeuropese steden (veertiende-achttiende eeuw)," *Tijdschrift voor sociale geschiedenis* 20 (1994): 365-390.

bigger than that of the single craftsmen but in most cases it remained small compared with the balance sheets of putting-out merchants.[27]

The overwhelming importance of firms with short lifespans and a limited amount of fixed assets nothwithstanding, there were some sectors in which different funding strategies dominated. One was coastal and ocean shipping, which required the construction and maintenance of ships that were habitually used five to ten years, or even longer. Another were the public works of various kinds, including town defenses, granaries, polders, roads, and canals. These infrastractural projects required both large investments up front as well as a steady stream of income to secure their maintenance.[28] Such projects were obviously of a very different scale than the firms that dominated early modern business, bbut it is worth noting that even here various funding options were available for these projects. Private investors could build partnerships to pool resources, and then use their private credit lines to secure the ongoing exploitation. Public authorities, on the their part, could issue loans to obtain initial funds, and then use some form of taxation to finance maintenance. And of course, several combinations of the two forms existed as well.

2.b. Credit

Credit was essential for early modern firms because supply and demand seldom matched, and entrepreneurs were thus forced to purchase stocks of raw materials and merchandise on credit, and/or allow their customers to buy now and pay later.[29] The overwhelming importance of credit notwithstanding, deposit banking never took hold. Some banks in medieval Italy and Flanders did collect savings and issue loans at the same time, but few if any were truly successful, and it was only in the late seventeenth and eighteenth centuries

[27] The literature on proto-industrialization can be traced back to F.F. Mendels, "Proto-industrialization: The first phase of the industrialization process," *Journal of Economic History* 32 (1972): 241-261, and has since grown exponentially, as well as generated heated controversies.

[28] *References need to be added. For Dutch Republic: Jan de Vries, *Barges and Capitalism: Passenger transportation in the Dutch economy, 1632-1839* (Utrecht: HES Publishers, 1981); A.A.G.-Bijdragen 21:39-372. Also: Van Zwet, Brandon. For Southern Netherlands: Soly, Blondé; For England: Bogart on turnpikes; For France: Rosenthal on irrigation

[29] *References need to be added. For England: Earle, Muldrew, Mathias; For France: Fontaine, Daudin; For the Southern Netherlands: Willems. For the Dutch Republic: Maassen, Gelderblom and Jonker; Van Bochove and Kole, For the medieval period: Postan,

that bankers in London and its hinterland began to specialize and established more durable deposit banks. Still the capitalization of this sector remained very small in comparison with the circulation of bills of exchange, current accounting, and other forms of short-term lending.[30] Early modern entrepreneurs understood the basic technique of deposit banking, i.e., the transformation of the size, maturity, and risk of the money handled by a banker, but they preferred alternative forms of credit and intermediation. If anything, this was one of the outstanding features of early modern finance: the creation of myriad forms of credit, each one carefully adapted to the financial needs of one economic sector or another.

To fully appreciate the wide range of credit instruments available to early modern entrepreneurs, it is important to distinguish between direct and indirect finance, that is, between forms of credit with and without intermediation. Take for instance one of the most widespread, though surprisingly poorly documented type of loans: suppliers' credit. To the present day, this remains the lubricant of any commercial economy, with loans that simply appear as deferred payments or 'paper' payments in current accounts. In its most basic form these were peer-to-peer operations, but traders sometimes benefited from the intermediation of local governments registering debts contracted on their local markets. This was true for the *lettres de foires* recorded in medieval Flemish towns, as well as for the *schuldboecken* kept by town secretaries in Holland in the fifteenth and sixteenth centuries. We find a similar variety of forms in the handling of bills of exchange that were used to settle accounts or extend credit from one location to the next. When this instrument was first invented in Renaissance Italy, notaries were required to register these bills. Once merchants gained confidence in the instrument they started trading bills among themselves. Then, in several commercial cities urban governments stepped in with the

[30] In the major commercial cities of early modern Europe there did exist a second, much larger group of 'merchant bankers' who specialized in the international transfer of money through bills of exchange, and sovereign lending. Well-documented examples include the Fuggers and Welsers of southern Germany (Richard Ehrenberg, *Das Zeitalter der Fugger, Geldkapital und Creditverkehr im 16. Jahrhundert, Band II, Die Weltbörsen und Finanzkrisen des 16. Jahrhunderts* [Jena: Fischer, 1885-1896]; Mark Häberlein, *Brüder, Freunde und Betrüger: Soziale Beziehungen, Normen und Konflikte in der Augsburger Kaufmannschaft um die Mitte des 16. Jahrhunderts* [Berlin: Akademie Verlag, 1998]), the Salviati and Roux in France (*Matringe; *Carriére; *Santarosa), Deutz, Pels, Van Eeghen, and Hope in the Dutch Republic (Joost P. B. Jonker and Keetie E. Sluyterman, *At Home on the World Markets: Dutch International Trading Companies from the 16th Century until the Present*. The Hague: Sdu Uitgevers, 2000]; Nettine and *** in the Austrian Netherlands (De Peuter***); the Rothschild and * * * in London (*Ferguson). These merchant bankers constituted a separate world of 'high finance', who only took deposits from major international clients, and who remained unimportant for retailers, manufacturers, farmers, and other locally oriented entrepreneurs.

creation of exchange banks, forcing the centralized settling of bills. As a final step in the second half of the seventeenth century merchant houses started to specialized in the payment of bills, through a service known as acceptance.

We find a more permanent involvement of the government in the registration of loans secured by real estate, but even here variation was the norm. In southern Europe and France, notaries registered most of these loans from the late medieval period up until the nineteenth century. In the Low Countries, and possibly also in German lands, the town secretaries that were responsible for keeping lien registers, also recorded the loans secured by real estate.[31] In rural areas, notaries or other public officials also provided these services.[32] There is ample evidence that merchants used these mortgage loans to set up businesses, and possibly even transfer them from one generation to the next. However, to fund their daily operations most businessmen required far more credit than the value of the fixed assets they owned. This then gave rise not just to current accounting and bills of exchange, but also to money markets, in which merchants wrote promissory notes and obligations to secure short- and medium-term loans.[33] Again, in some cases we find brokers, notaries, and town officials supporting these money markets, while in others this was the purest form of peer-to-peer lending.

[31] On France, see Hoffman, Philip T., Gilles Postel-Vinay, and Jean-Laurent Rosenthal, *Priceless Markets: The Political Economy of Credit in Paris, 1660-1870* (Chicago: University of Chicago Press, 2000). On the role of town secretaries in the Low Countries: Hugo Soly, *Urbanisme en kapitalisme te Antwerpen in de 16de eeuw : de stedebouwkundige en industriële ondernemingen van Gilbert van Schoonbeke* (Brussel : Gemeentekrediet van België, 1977); Johan Dambruyne, "De 17de-eeuwse schepenregisters en de rente- en immobiliëntransacties te Gent: enkele beschouwingen," *Handelingen der Maatschappij voor geschiedenis en oudheidkkunde te Gent* 42 (1988): 153-182; J. Hanus, *Tussen stad en eigen gewin. Stadsfinancieën, renteniers en kredietmarkten in 's Hertogenbosch (begin 16e eeuw)* (Amsterdam, 2007). For the northern Netherlands: C. Boschma-Aarnoudse, *Tot verbeteringe van de neeringe deser Stede: Edam en de Zeevang in de late Middeleeuwen en de 16e eeuw* (Hilversum: Verloren, 2003); Jaco Zuijderduijn, *Medieval Capital Markets: Markets for Renten, State Formation and Private Investment in Holland (1300–1550)* (Leiden: Brill, 2009); Christiaan Van Bochove, Heidi Deneweth and Jaco Zuijderduijn, "Real estate and financial markets in England and the Low Countries, 1300-1800," *Continuity and Change*, 30 (2015): 1-30. *Gelderblom, Hup and Jonker 2016; For Germany: Hans-Peter Baum, "Annuities in Late Medieval Hanse Towns." *Business History Review* 59 (1985): 24-48.

[32] * Add references and Check: Thoen, Erik, and Tim Soens, "Credit in rural Flanders, c.1250-c.1600: Its variety and significance," in *Credit and the Rural Economy in North-Western Europe, c. 1200-c. 1850*, ed. Thys Lambrecht and Phillip R. Schofield (Turnhout: Brepols, 2009), 19-38; Thijs Lambrecht, *Een grote hoeve in een klein dorp. Relaties van arbeid en pacht op het Vlaamse platteland tijdens de 18de eeuw* (Academia Press, 2002).

[33] *Add references. E.g. for Antwerp: H. de Smedt, "Antwerpen en de opbloei van de Vlaamse vérhandel tijdens de 16e eeuw: Rijkom en inkomen van de antwerpse koopman Jan Gamel volgens zijn staat van goed, 1572", *onuitgegeven licentiaatsverhandeling Katholieke Universitieit Leuven* (1970).

Early modern businessmen with access to such a wide, diverse supply of credit instruments may have been very flexible in the funding their firms. But exactly how well they could tailor their financial operations to their needs is hard to tell. Few merchants and manufactures have left account books in the first place, and only the biggests one have attracted the attention of historians. We do find that these leading entrepreneurs used a wide variety of debt contracts but this may simply be a result of the large scale and scope of their operations. Maybe smaller entrepreneurs, or those in more peripheral economies were much less able to finetune their financing strategies. One way to measure this would be to look at the bigger or smaller variety of debt contracts in the estates of deceased entrepreneurs. The limited evidence we have for Holland, Flanders, and Germany suggests that there were considerable social and geographic differences in this respect.[34] Another measure could be the extent to which businessmen were able to change the terms of existing debt contracts. This was a notable feature of the credit transactions recorded by town secretaries and notaries in the Low Countries. For instance, out of a total of 5,700 credit contracts with a stated loan purpose, 550 loans concerned the consolidation of a previously incurred debt, for instance a loan from a supplier that had expired (Gelderblom, Hup, and Jonker, forthcoming). Laurence Fontaine documents a similar practice in early modern France, were villagers turned to notaries to consolidate small outstanding debts into obligations. How common this was among early modern businessmen obviously requires further research.[35]

[34] On the evidence from probate inventories: Sheilagh Ogilvie, Markus Küpker, and Janine Maegraith, "Household Debt in Early Modern Germany: Evidence from Personal Inventories," *Journal of Economic History* 72 (2012): 134-167. On probate inventories in Flanders: On the Dutch Republic: Thera Wijsenbeek, *Achter de gevels van Delft: Bezit en bestaan van rijk en arm in een periode van achteruitgang (1700-1800)* (Hilversum: Verloren, 1987); Heidi Deneweth, "The Cost of Health Care in the Netherlands, 1650-1900," unpublished paper VUB University Brussels, 2013; J.A. Faber, "Inhabitants of Amsterdam and their possessions, 1700-1710," *AAG Bijdragen* 23 (1980): 149-155; Hidde Feenstra, *De bloeitijd en het verval van de Ommelander adel, 1600-1800* (Groningen: Rijksuniversiteit, 1981); Anne E. C. McCants, "Inequality among the poor of eighteenth century Amsterdam," *Explorations in Economic History* 44 (2007): 1-21; Anne E.C. McCants, "Goods at pawn: the overlapping worlds of material possessions and family finance in early modern Amsterdam," *Social Science History* 31 (2007): 213-238. On Flanders and Brabant: Karel Degryse, "De Antwerpse fortuinen: kapitaalsaccumulatie, -investering en –rendement te Antwerpen in de 18de eeuw," *Bijdragen tot de Geschiedenis* 88 (2005): 1-4. Carl Schelstraete, Hilde Kintaert, and Dorine de Ruyck, *Het einde van de onveranderlijkheid. Arbeid, bezit en woonomstandigheden in het land van Nevele tijdens de 17e en 18e eeuw* (Nevele: Heemkundige kring "Het Land van Nevele," 1986); W. Ryckbosch, *A consumer revolution under strain: consumption, wealth and status in eighteenth-century Aalst (Southern Netherlands)*, unpublished PhD dissertation Universiteit Antwerpen, 2012.

[35] Laurence Fontaine, *Histoire du colportage en Europe (XVe-XIXe siècle)* (Paris: Albin Michel, 1993), 154.

Surely, it was easy enough for the most established entrepreneurs operating in large financial centers to minimize the cost of debt financing through a careful mix of credit instruments. This is the strong impression one gets from the business leaders in late medieval Italy, Southern-Germany, and Flanders, as well as their early modern followers in Holland, England, and France. But wat about the rest? The variety of available contracts may have been far more limited beyond these core regions, while in the major economic centers smaller businessmen might have suffered, not because specific contracts did not exist, but because they could not use them. Consider for instance the financial strength of the merchants supplying local retailers and artisans. The credit they extended to these small businessmen may have made them dependent up to the point that they became structurally indebted to their suppliers. The opposite was also possible, with merchants binding their suppliers through the extension of credit. This was the case, for instance, with the production of dyes from madder in the Dutch Republic, an industry entirely financed by Rotterdam merchants extending credit to the farmers growing madder in Zeeland. Amsterdam merchants did the same thing with their suppliers of basic foodstuffs and raw materials in Denmark and Sweden.[36]

Historians like Fontaine, Ogilvie, Lis and Soly emphasize how detrimental such debt bondage can be, but it is difficult to assess how damaging it really was.[37] We simply know too little about the funding operations of the smallest among businessmen and the menu of choices they had in different time periods at different points in time. Another notable shortcoming of the existing literature is the lack of research on the role that guilds played in the financial operations of their members. These corporate groups never lent money to their members, but they may have buttressed the latter's financial position in a number of other ways, notably the imposition of entry barriers to the profession, payment of social benefits, and the fixing of prices of both raw materials and end products – all of which were measures that steadied incoming cashflows. At the same time many guilds provided for the continuation of businesses by a widow and/or her children upon the death of one the members.

[36] *Check references and expand. Klein, *Trippen*; Dickson on mercury loans Austria. Van Bochove on Danish loans.
[37] Laurence Fontaine, *L'économie morale: Pauvreté, crédit et confiance dans l'Europe préindustrielle*, Paris: Gallimard, 2008).

A further concern is the existence of potential differences in financial opportunities between incumbents and newcomers. Start-up firms may have had difficulty to establish themselves, especially if their owners had little or private wealth. This was indeed one of the concerns that emerged in the nineteenth century, when the growth of industrializing cities led to an increase in the number of shops and workshops, whose owners had difficulty building a stable business. For the earlier period we lack systematic research, which is why we simply don't know which role credit played in the establishment of new businesses. Did a modest amount of real estate pledged as collateral suffice for merchants to take out a mortgage and set up their businesses, as Dambruyne and Soly seem to suggest for Ghent and Antwerp in the sixteenth century? Was suppliers' credit the ideal means to gradually build up a stock of merchandise and establish oneself in business? And what about the role of guarantors? In a large sample of 13,000 loans registered by town secretaries and notaries in six cities in the Low Countries between 1500 and 1800 we find 1,600 contracts co-signed by one or more guarantors who pledged their own property as additional collateral to secure the loan. This reveals suretyship as a potentially very powerful tool to translate social ties into financial support. The extent to which this instrument was used by different groups of businessmen in different parts of Europe remains unknown, however.

Finally, we have to consider the vulnerability to individual and systemic shocks of businessmen relying on loans to fund operations. Crises of credit are indeed among the most researched financial events of preindustrial Europe, whether the failure of medieval moneychangers-turned-bankers, the periodic disruptions of international exchange markets, or the overextension of credit in stock market frenzies like the South Sea Bubble – financial economists and traditional historians alike are quick to point out the detrimental effect of carelessly provided credit.[38] For all their visibility, the impact of such crises should not be exaggerated. They typically involved the upper echelons of the business community, which in the majority cases was quick to terminate damaged credit lines and cut their

[38] E.g. Lawrence M. Lande, *The Rise and Fall of John Law, 1716-1720* (Montreal: McLennan Library, McGill University, 1982); Peter M. Garber, *Famous First Bubbles: The Fundamentals of Early Manias* (Cambridge, MA: MIT Press: 2000); Robert J. Shiller, *Irrational Exuberance* (Princeton University Press, 2000); W. Goetzmann, C. Labio, G. Rouwenhorst, and T. Young, *The Great Mirror of Folly: Finance, Culture, and the Crash of 1720* (New Haven: Yale University Press, 2013).

losses. Surely, each crisis had its spectacular individual failures but overall, they made an impact not because of their damage to the economy at large, but because their experience was incorporated in a cultural discourse about the ill repute of excessive risk taking. A far more serious concern for the majority of entrepreneurs were the lesser, more individual debt crises that issued from the volatile business environment they worked in. Liquidity crises and bankruptcies were endemic among the large community of small entrepreneurs. Again, the biggest businessmen were most exposed to natural disaster, warfare, price fluctuations, and other downside risks. Yet they also had the better defenses against these shocks, especially in the major commercial cities, where there existed a variety of financial instruments to spread, share or transfer risks. Ordinary retailers, artisans, or farmers probably could not rely on the market to the same extent to deal with losses. Their major defense was prudence in combination with the building of strong social ties with their principal buyers and suppliers. In addition to this, local governments seem to have played an important role designing administrative procedures that limited the financial fall-out of business failures. Again, we need to know more about the accessibility of bankruptcy courts for lower strata of society as this may have had a profound impact on the willingness of small businessmen to use credit to finance their operations.

2.c Equity solutions

With few investment projects requiring large-scale fixed investments and a wide array of credit instruments available, entrepreneurs in early modern Europe may have had little need for more sophisticated equity contracts.[39] Indeed, the vast majority of firms in agriculture, manufacturing, and trade maintained a family basis. They were organized as sole proprietorships or general partnerships, that is, private enterprises in which owners and managers had the same decision-making power and shared equally all profits and losses. However, the owners of these firms faced two fundamental problems that could not really be solved with these contracts. One was the risk of a partial or total loss of the firm's

[39] de Jong, Jonker, and Röell, *Dutch Corporate Finance*.

assets, the other was the ability to transfer of these assets from one generation to the next. Both these problems required entrepreneurs to develop additional safeguards beyond the basic equity solutions.

Shipowners are the best-known example of investors looking for safeguards against the risk of losing their means of production. The perils of the sea were many: pirate attacks, bad weather, navigation errors, privateering wars. Their shielding from these risks came in a variety of forms. *Marine insurance*, neither a debt nor an equity contract, enabled the transfer of risk to third parties. The *sea loans* or *bottomry* loans, which were found all over Europe, were credit contracts with high interest rates, in which repayment was conditional upon safe return of the ship.[40] *Commenda* contracts tied active, seagoing partners with limited resources to passive investors providing the bulk of the capital, while staying behind in the home port. The latter received the larger part of any profits that were made, but also shouldered most if not all of the downside risk. To be sure, in the case of both commendas and sea loans this downside risk never exceeded the total value of the ship and its cargo, as investments were typically made for one voyage, under maritime law which – again, everywhere in Europe – stipulated that if a ship was lost or damaged at sea, its owners could abandon the property and all claims attached to it.[41]

These solutions required wealthy investors willing to put up the money that was needed to build, equip, and often also freight the ship.[42] This was not the case in companies in which multiple investors shared the ownership of a vessel, a form of equity financing that existed in various parts of late medieval Europe, like for instance the *caratatio* in Genoa.[43] The *partenrederij* as it was called in the Low Countries – the country for which it is best documented - had two distinct advantages. To begin, risks were shared between a

[40] After the fifteenth century, the development of premium-based insurance led to a separation between sea-loans, which continued to have a financing purposes, and insurance contracts.
[41] Edgar Ruhwedel, *Die Partenreederei: das Erscheinungsbild einer historisch gewachsenen Gesellschaft im modernen Recht* (Bielefeld, 1973), 31.
[42] The same is true for a third strategy to manage maritime risk: the ownership of a large fleet of ships, which allowed investors to cover the possible loss of one ship with the profit of the others. For early modern Europe there is almost no evidence for this kind of behavior by private investors, as wealthy investors with large stakes in the merchant marine always preferred to share the ownership of individual vessels with other investors (*check this).
[43] Cf. the 'loca' in Genua and the 'Carati in Venice (CHECK Lane, Muller). For the Hanseatic world in the fourteenth and fifteenth century: Ruhwedel, *Die Partenreederei*, 28-90, esp. 37, 60; for Holland in the fifteenth century: Posthumus 1953: 110-11. For England, Robin Ward, *The World of the Medieval Shipmaster: Law, Business and the Sea, c. 1350-1450* (Woodbridge, Suffolk and Rochester NY 2009), 48-68.

larger number of investors. Moreover, the contract significantly lowerd barriers of entry, as investors with small purses could now buy into a shipping company, with shares that could be as small as 1/32 or 1/64. The combination of these two characteristics led to the widespread adoption of the *partenrederij* in the coastal regions of northwestern Europe at a time when the overall wealth of rural communities engaged in shipping was still small. But interestingly the contractual form also lend itself to the growing involvement of urban investors in coastal shipping and ocean shipping, for they could simply buy larger shares, and even built large portfolios of shares to manage risks. Not surprisingly, the *partenrederij* eventually became the dominant form of ship ownership in intra-Europeanshipping.[44]

Given the clear advantages of the *partenrederij* contract, one might expect the solution to have travelled to other economic sectors, with similar financial characteristics. Notably the food industry, i.e. milling, brewing, and refining, shared the relatively large capital outlays and the relatively large risk of a total loss of the production facilities, in this case because of fire. For seventeenth-century Holland it has been argued that the *partenrederij* was indeed adopted by hundreds of seed- and saw mills in the Zaanstreek, the industrial district north-west of Amsterdam. Indeed, the ownership of these mills was divided among different partners who referred to their stake in the investment as shares. Upon closer inspection, however, the underlying contracts were not *partenrederijen* but general partnerships with additional clauses added to the contract. The co-owners of these special-purpose partnerships remained jointly and severally liable but only with regard to creditors' claims that fell within the states purpose and duration of the firm. This contractual form was necessary because maritime law, with its full acceptance of the perils of the sea as a legal ground for abandoning one's investment, simply did not hold for landlocked investments.

Meanwhile, the duration of both the *partenrederij* and the special-purpose partnerships was always limited, whether to a single voyage, a ship's or mill's lifespan, or a predetermined period of time. The same was true for general partnerships, which always ended upon the death or departure of any one partner. Only sovereigns could create permanent business concerns through the chartering of companies. This is well

[44] Add references.*The claim may be too strong for some places. In fifteenth century Antwerp most ships owned by one or two investors, possibly because the value of these ships was very small: Asaert 1973: 110-1, 146-50.

documented for colonial trade and infrastructural works, but it also happened in other sectors . One example are the Toulouse grain mills, known as the Moulins deBazacle. Here already in the Middle Ages the local government stepped in to transfer the ownership of the mills to a public corporation in which local investors could buy shares.[45] So far, this is the only well-documented example, but we are likely to find similar more such solutions when we start looking. Still, it was not until the Industrial Revolution that entrepreneurs required contracts with much longer, if not indefinite time horizons to build and maintain their production facilities.

There is very little, if anything to suggest that the lack of legal permancence harmed the daily operations of early modern mills or ships. But it did complicate the transfer of a business from one generation to the next. Under ideal circumstances a father would train one or more of his children to become his successor, and then take him on as a junior partner in the partnership. This would still require the writing of a new partnership contract upon the retirement or death of the father, but the company's assets and liabilities could simply be transferred to the remaining partners. Circumstances were seldom ideal, however. The untimely death of a business owner could create serious problems, especially of the children were still under age and therefore practically incapable and legally not allowed to take over the firm. Equally problematic was the situation in which a inheritance was contested by various children, or some of them were ostensibly more capable than others. In yet another configuration, owners may have wanted to end their involvement in the daily management of the firm, keep their money in the firm, but without running the full gamut of business risks – a situation similar to that of any other passive investors.

Such changes in a firm's ownership structure reveal exactly how flexible financial contracting was in many parts of early modern Europe. One solution that has not yet received a lot of attention but may have been widespread is the use of fixed income credit instruments to secure the continuity of small family firms. In the typical set-up one child takes over the firm's assets and then uses term annuities to create, for his siblings, a financial claim on the firm's assets. This annuity, and the interest paid on it, constituted the

[45] David le Bris, William N. Goetzmann, Sébastien Pouget, "Testing Asset Pricing Theory on Six Hundred Years of Stock Returns: Prices and Dividends for the Bazacle Company from 1372 to 1946," NBER Working Paper No. 20199 (June 2014). Is there a more recent published version?

other children's equal share of the inheritance and a pecuniary compensation for their inability to freely dispose of the assets.[46] Another solution was to allow widows to take over their men's businesses until the coming of age of their children. Throughout Europe guilds as well as town magistrates set rules to facilitate this intermediate solution.[47]

Another common solution was the *special-purpose partnership* in which additional clauses specified, for instance, the amount of capital and labour invested by different partners, as well as the purpose and duration of the partnership. Notably the contribution of labour – instead of money – helped owners to groom poor but skilled successors. As these were mostly private contracts, it is difficult to determine how often they were used. However, from individual case studies there is ample evidence that special-purpose partnerships were ideal vehicles to bring into the firm a child, cousin, journeymen, or future son-in-law. One example of a young merchant in Amsterdam, Bernard de Moor, whose personal diary records his career from bookkeeper to independent merchant. At first he worked solely for wages but then he signed a contract with which he became a minor partner in the firm, while still earning wages for his bookkeeping activities. Then he became a regular partner, and eventually after his former boss died, he continued the firm with the latter's widow.[48]

Still, the very flexible partnership contract did not fit all purposes. For instance, it could only partially shield the assets of investors from the firm's creditors. Each and every partner remained fully liable for claims issuing from operations that fell within the partnership's stated purpose. This did not necessarily pose problems as most business transactions were firmly embedded in family networks in which information was readily exchanged. Business partners overstepping their responsibilities or borrowing too much money faced possible exclusion from the network. Further checks and balances issued from the high connectivity of commercial cities. Merchants could often tap multiple sources of

[46] Bart Willems, *Leven op de pof. Krediet bij de Antwerpse middenstand in de achttiende eeuw*. Studies Stadsgeschiedenis 5. (Amsterdam, 2009). 222-223.
[47] Cf. for instance Laura van Aert, "Tussen norm en praktijk. Een terreinverkenning over het juridische statuut van vrouwen in het zestiende-eeuwse Antwerpen." *Tijdschrift voor Sociale en Economische Geschiedenis* 2 (2005): 22–42; Daniëlle van de Heuvel, *Women and Entrepreneurship: Female Traders in the Northern Netherlands c. 1580–1815* (Amsterdam: Aksant, 2007). *Add references on England. Also Van Dekken, Van Aert.
[48] ARA 1.11.01.01 Inv. Nr. 812, "1608. Memorien voor Bernardt de Moor Aengeteeckent"

information to verify the performance of their distant agents. This is wat Dean Williamson called 'monitoring by proxy' in the case of shipping operations in medieval Venice).[49]

In addition to these network externalities, there were also contractual solutions to these agency problems. One was the limited partnership, called *accomandita* in Italian and *société en commandite simple* in French. This was basically an extension of the commenda contract used in shipping, now in the form of a publicly registered partnership, with one or more investors whose liability was limited to the total value of their capital, provided they refrained from any involvement in the company's daily operations. In spite of the importance that we can reasonably attribute to limited liability as a legal instrument that favors the expansion of more impersonal markets, we still know very little about where limited partnerships existed and who used them and for what purposes.[50] At the same time we have to consider the alternatives. One functional equivalent to the limited partnership was the use of deposits, which gave one or more financiers a stake in the company in the form of a loan with a fixed interest rate (as often as not above the going market rate).[51] Unlike the external investors in a limited partnership, their share in the company's profits was capped, but in return, they received a preferential claim on the company's assets in case of insolvency.

Part 3: Toward a Comparative Framework

Taking stock of the existing literature on the funding of business in pre-industrial Europe reveals a rich historical record of a multitude of ways in which entrepreneurs funded their operations. Unfortuntaly, this record plays hardly any role in the modern debate on business finance, which is dominated by an ever more detailed scrutiny of the contribution

[49] Dean V. Williamson, "Transparency, Contract Selection and the Maritime Trade of Venetian Crete, 1303–1351," unpublished manuscript, 2002; Cf. also Vogel 1915: 381

[50] It is also important to remember that until 1907, limited liability did not exist in the United Kingdom, argubaly the most advanced economic region of Europe after 1700. Ron Harris, *Industrializing English Law: entrepreneurship and business organization, 1720-1844* (Cambridge: Cambridge Univeristy Press, 2000). Nor did limited partnerships seem to have existed in Holland before the arrival of Napoleon, in the sense that no central registration of this contractual form existed, although Amsterdam recognized all legitimately documented contracts that foreigners brought to court.

[51] Already by the fifteenth century, Tuscan merchants registered deposits (the so-called *sovraccorpo*) in their partnership agreements. Notable exmaples in the firms operated by Francesco Datini and the Medici bank.

banks and corporations make to funding of large-scale enterprise. In those rare instances when finance economists invoke the early modern experience, it is typically to highlight the origins of banks, corporations, or other present-day institutions. As a result, the analytic potential of pre-industrial finance remains untapped, which is unfortunate both because it flattens our understanding of the medieval and early modern periods as such and because it can shed new light on the financial concerns of present-day SMEs in OECD countries as well as emerging economies. In fairness, we cannot really blame financial economists for this, as most studies of pre-industrial businesses emphasize their historical specificity rather than the more general economic (but also social or political) rationale behind funding decisions. This approach typically leads even the most kindly disposed modern observers to conclude that the pre-industrial period was simply too different to inform current debates.

We think there is a way out of this stalemate if we stop looking for the pedigree of modern forms like deposit banks and joint-stock corporations. Neither should we limit our explorations to the diffusion of a few well-known success formulae, like bills of exchange, life- and term annuities, or marine insurance. Surely, we want to understand why some of these forms survived for many centuries, while others died a quiet death, but if we adopt a teleological perspective, we cannot capture the most salient feature of the pre-industrial enterprise: merchants and artisans, shopkeepers and farmers, always and everywhere used multiple debt and equity contracts to fund their businesses. To explain what determined the combination of contracts they used, we have to take one step back from from the experience of individual entrepreneurs in specific historical settings and begin our analysis with the three basic financial problems of pre-industrial business owners: liquidity, uncertainty, and continuity.

The majority of early modern entrepreneurs needed very little fixed capital to fund operations. Their basic concern was to match incoming and outgoing cashflows. As a result, in most economic sectors run-of-the-mill equity and debt solutions, such as sole proprietorships, trade credit, or general partnerships sufficed to set up a shop, workshop, or farm. But larger operations, for instance in commercial agriculture or foreign trade, also depended on the circulating capital's ability to finance stocks of merchandise and customer credit. This put a premium on the use of financial contracts whose terms and conditions matched the volatility of incoming and outgoing cash flows. Business owners who did invest in fixed assets were not so much concerned about the size of the firm's assets, but rather about natural hazards, warfare, or accidents on the shopfloor that could lead to a total loss of their property. Similarly, entrepreneurs in ocean shipping or processing industries like saw mills and sugar refineries wanted to write contracts that allowed them to share, spread, or transfer the risk of losing their investment.

The third concern of all business owners in the preindustrial world was the transfer of firm assets (fixed and floating) from one owner to the next. This is indeed why legal personhood, or permanence in economic terms, is considered a key feature of the modern corporation: it allows the continuation of operations regardless of any changes in ownership. As the corporate form did not spread beyond public utilities and colonial enterprise in early modern Europe, farmers, shopkeepers, artisans, shipmasters had to find different solutions for the problem of permanence. In the historical literature this has given rise to the stereotypical image of a son learning his father's trade, taking on ever more responsibility until his father retires and the son continues the business. But what happened if more than one child wanted to take over the business? What if there were no suitable candidates, or if the owner of a firm died while his children were still too young to take over? Case studies of individual firms again show a range of possible solutions, including the grooming of a nephew or a son-in-law, the widow taking over, or family elders or public officials temporarily managing the estate, but the obvious question is why entrepreneurs chose one or the other.

We believe the identification of these three basic financial concerns – liquidity, uncertainty, and continuity – will enable historians to draw comparisons between firms with a similar outlook on these three dimensions, regardless of the time and place in which they operated. But comparing like with like is only a first step towards a new research agenda for the funding of business in preindustrial society. If we limit ourselves to asking how these three problems were resolved, our investigations will remain stuck at the micro-level of individual firms or sectors. To move beyond the mere description of cases, we have to consider what determined the eventual contractual choices made by entrepreneurs at a specific time or place. Our current exploration of the literature suggests three basic determinants. The first is technological change, which influenced both the floating and fixed capital requirements of individual firms and the private and public information available to business owners to choose between funding options and monitor their applications. Well-known examples of new technologies that impacted on the funding of pre-industrial businesses are windmills, price currents, cast iron, double entry bookkeeping, regular postal or shipping services, newspapers, and (eventually) steam engines and the telegraph. A straightforward analytic approach to explore the effect of these technologies on the funding of enterprise is to compare, across time and place, the financial organization of firms within a specific sector that did or did not adopt these new technologies when they became available.

A second chief determinant of the funding of pre-industrial enterprise was the role of the government, again in two distinct ways. On the one hand local and/or central governments set the legal boundaries within which individual firms shaped their financial organization. The key issue in pre-industrial Europe was the effect of legal fragmentation on the funding decisions of individual entrepreneurs. To what extent was their menu of contractual choices determined by the prevailing laws and customs of an investor's place of residence? This is not just about commercial law proper but also about family law, notably the way in which inheritance was dealt with. Comparing firms with similar capital requirements and risk profiles operating in different legal environments can show the effect of these legal conditions on funding decisions. In particular, it will allow us to measure the strength of network- and agglomeration effects. For instance, footloose international traders may have enjoyed a greater degree of contractual freedom because commercial cities were willing to adapt or append local customs to attract their business. At the same time, smaller businessmen in major commercial centers may (or may not) have had easier access to advanced legal forms that remained out of reach of their peers in less advanced commercial settings.

In addition to their role as legislators, governments also had material interests in a wide range of investment projects for public purposes, most notably infrastructure and the military, but also grain supplies, social care and education. The usual suspects here are Europe's chartered companies that typically combined trade with warfare, colonial rule, and sometimes also plantation farming. But there was a much wider range of investment projects, including shipyards, roads, waterways, irrigation works, grain mills, hospitals, and universities. These projects alll shared two basic characteristics: they required considerable sums of fixed *and* floating capital, and their lifespans extended well beyond that of privately owned firms. These special financial requirements in combination with the public utility of all these projects led governments to introduce new organizational forms, among which, most famously, the joint stock corporation. Instead of focusing on these organizations as precursors of the modern corporation, there is a more rewarding comparative strategy to pursue here. For the presence of these new forms seldom led to changes in the financial organization of private enterprise. The question then is, why did not other businesses adopt the legal forms pioneered in public utilities?

This question points to a third, systemic determinant of the funding of business: the extent to which entrepreneurs had to adapt their financial organization to that of other firms, most importantly up and down their own supply chain. This interdependence of financial decision making, is the least understood aspect of early modern business finance, because business historians have primarily focused on individual firms, not on sectors or supply chains.[52] But as Landes (1986) pointed out three decades ago, the introduction of machinery at one stage of the production process could have a profound impact on changes in the organization of labour and capital in the rest of the business column, because the owners of these capital goods wanted to ensure they were used as intensively as possible.[53] This transformative power of fixed capital investments is visible in the early stages of the Industrial Revolution, when large numbers of weavers settled in the immediate surroundings of new textile mills. But the mill owners did not always get it their way. As Pat Hudson demonstrated for the textile industry of the West Riding in England, cooperation between workers could limit the financial control of the mill owners.[54] Beyond the intensively researched textile sector of pre-industrial Europe, we know very little about the interdependence of the financial organization of individual firms, simply because most business historians have focused on single business instead of entire sectors.

[52] Note that there is a rich literature that emphasizes the social embeddedness of contractual choices – a factor which, we feel, has very little explanatory power in cross-country comparisons, as it is a common characteristic of all the firms we can observe.
[53] *Add reference to Landes.
[54] Pat Hudson, "From Manor to Mill: the West Riding in Transition," in *Manufacture in Town and Country before the Factory*, ed. Maxine Berg, Pat Hudson, and Michael Sonenscher (Cambridge: Cambridge University Press, 1983), 124-44.