Alejandra Irigoin

Respondentia: The alternative contract for global trade finance in the Early Modern Period

Respondentia in the title is evocative of the name of the main thoroughfare in front of all European factories in eighteenth century Canton and that of the main promenade between East India Company's Fort William and the Hoogly River in Calcutta at the time. To name such surroundings at the heart of European commerce in Asia with that of a contract is interesting and curious enough to merit a reflection on its role in the financial history of early modern global trade. Such central loci were not named after alleged superior and more efficient alternatives – in the canonical literature – like the bills of exchange. This paper argues that what explains its prevalence in financing long-distance trade was a basic characteristic of this contract across markets and nations until the 1800s, namely the specification of the monies in which the contract was settled, which made it perform better than other cashless alternatives. In an international trade lacking both a common standard for precious metals across markets and a cashless means of settlement, trade meant dealing with different monies and diverse means of payment. Thus, performing with «foreign money» added another risk to the better known mercantile and navigation hazards: a currency risk.

Drawing mostly from references available in (admittedly a bit aged) historical literature on different trades, it is possible to look at the respondentia contract anew through the lens of monetary issues. This paper argues that respondentia granted certainty to the values expected in return of the capital or, more broadly, the future value of the trade. In so doing, it provided a mitigation of a currency risk in the long-distance trade of the period. It also allowed those who intermediated in it to reap the benefits of arbitrage profits This also justifies the persistence of respondentia contracts across markets and nations until the 1800s.

The paper documents the use of the instrument in a variety of trades that Europeans and non-Europeans alike carried out outside Europe. The **first section** traces the global use of respondentia into the 1800s, and discusses the understanding of the instrument in a comparative assessment of the drivers of this mode of trade finance. The **second** delves into the nature of the premia and the determinants of its high rates. Roughly, it describes the trends across eighteenth-century global commerce; the **third** takes on the exchange character of the instrument looking into the monetary issues embedded in maritime trade that performed within a diverse monetary setting. It discusses the relative efficiency of the contract over cashless alternatives which boomed in Europe at that time. Some conclusions follow.

Alejandra Irigoin, LSE, London School of Economics, United Kingdom, m.a.irigoin@lse.ac.uk, 0000-0001-5395-1537
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Respondentia appears to be the most ubiquitous private contract for trade finance outside the chartered companies. The instrument was 'widespread' in the commerce of Europeans overseas where the use and circulation of bills took much longer to take roots (Prakash 2008). It had different names in different trades (*correspondencia, cambio marítimo, riesgo marítimo o de mar* in Spanish; *risco or ganho de mar* in Portuguese, *risque* or *prêt à la grosse aventure* in French, *cambio marittimo* in Italian, *bordermerije or bomerie* in Dutch and respondentia in English. It was widely used in the Mediterranean since Roman times, probably by the Phoenicians as well, and was particularly associated with the Genoese early intermediation of trade in Byzantium and the Levant (DeRoover 1969). It was similar to the *muzarbat* or the *awak* among Indian *sarräfs* (Haider 2019) or the *nagegame* of the Japanese trade with China before the sixteenth century (Oka 2001), so it is difficult to claim, conclusively, that respondentia had clear European roots. Yet, after 1600, it reached another global scale with European long-distance sailing. It spread from the Mediterranean to the three oceans and the China seas, at a time when the circulation of bills was evolving into a cashless system of payment at the core of Europe.

Charles Lockyer, a supercargo of the East India Company, EIC hereafter, in the 1710s, advised that «A man of an honest character seldom wants money at *Bottomree, or Respondentia* to what port soever, he is bound, on his own personal security». Nevertheless, he detailed the rates of premia in Madras for lending to eleven Asian destinations ranging from 16-18% for Aachen and Bengal to 40-45% to China and Persia (Lockyer 1711, 17-18). Captains of the English Company in India used respondentia to transfer profits and legacies back home and in deals with South Asian lenders (Prakash 2008). Because it was dominant in the trade finance of Spaniards in both America and Asia, it has been cursorily associated with Spain's limited financial development (Carrière 1970). However, the contract was also instrumental to subscribe the initial capital of the *Compagnie Francaise des Indes Orientale* in 1700 (*Recueil ou collection des titres* ... 1775) and was what financed early Portuguese trade from Brazil in the seventeenth century, when sugar served as remittance (Strum 2017; Mauro 1960). In the early eighteenth century, private merchants used it for remittances in the diamond trade through the EIC (IOR.Misc IOR/M/fs 389-406). It also appeared in the businesses of the Dutch and of the Danish and Swedish companies in the East Indies later in the century. It showed up equally in the West Indies trade. Dutch merchants in Curaçao sent «sealed bags of Spanish silver» to Amsterdam via Albany, NY in the 1740s on respondentia with «a 10% agio» (McCusker 1978, 293-95), and North Americans, who were latecomers to the East Indies,used respondentia too in deals in India and China by the 1800s (Porter 1937).

This ubiquity is intriguing. It highlights another feature of respondentia that seems central for its spread: its preference over bills of exchange in those trades. By prescribing the quality of the monies in the repayment of investments, the contract seems convenient for maritime commerce involving different currencies and peoples with a long waiting time – as apparently it was not used in overland (shorter distance) exchanges. Arguably, it served well to hedge against uncertainty in future prices.

I

Across trades and over time, this contract had common basic characteristics. It comprised an advance of capital (whether in goods or money) to be reimbursed after the vessel's successful arrival to a port of destination, for a pre-established percentage on the principal without a clear maturity or sight term. Everywhere the loan was timed from the date of the ship's departure to an additional, defined period following the arrival to destination. This could be a matter of weeks in the Mediterranean and in the China Seas; of months (between one and three) in intra-Asian trade or in the Atlantic, where terms followed the fairs of goods, and it might extend over years in longer distance sailing over the Pacific. It mostly applied to one-way trips, which suggests a trade or capital flowing in one direction only. The destination port was not always specified or was broadly defined. For instance, destination could be to the «Kingdom of China, Coast of Java, and Coast of Coromandel» in lending contracts for Asia, or to «the Indies» or «Mar del Sud» (South Seas) in the Atlantic. Sometimes the loan allowed other ports of call on transit, which was a frequent occurrence in the seventeenth century in intra-Asia trade or in the Caribbean. Over the Pacific, lending in Manila was confined to Acapulco as terminus of the one galleon line. Round-trip specific destinations were rare; they seem related to capital originating elsewhere than the port of departure.

A caveat is in order though: given the private nature of the contract, i.e. a one-off, termed, and non-negotiable agreement between private parties, little hard evidence remains to quantify information on values or trends. As in the case of bills, few traces of its systematic use survive unless there was a dispute or the intervention of a notary. Institutional lenders were an exception rather than the norm and they notably clustered in the Asia trade. Evidence is more abundant among their records, in private papers of merchant-brokers and in the registers of notaries whose role in maritime commercial contracts was different from that of eighteenth-century France (Hoffman et al. 1995). There is no evidence that matching borrowers and lenders to mobilise capital or liquidity was their function. They did not necessarily overcome asymmetric information but rather established the legitimate claims and means to solve disputes on transactions which were realised thousands of miles away and took months (and often years) to settle. Nevertheless, the qualitative evidence is very abundant, as historians have widely recorded its use in the vast scholarship of the different trades, but always separately and in isolation, with various and disparate interpretations. This segmented approach to the instrument has led to different understandings of the contract. Because it was waning in the later half of the eighteenth century and a cashless means of remittance altogether replaced it in the nineteenth century, financial historians assumed the inefficiency of respondentia, associated with the shallow development of the financial markets where it was ordinary.

There was some attention to the contract, mostly in continental Europe, from historians looking into the «commercial revolution» (See 1928, Hoover 1926, Sayous 1927, De Roover 1946). Flemish, French, and Italian economic historians studied its Mediterranean iteration into the Atlantic in the 1960s and 1970s, where the contract was preminent in the sourcing of American silver to the Old World since 1600

(Everaert 1971; Carrière 1970; Bernal 2013). Despite its importance for French commercial houses invested in the re-export of textiles, slaves and silver specie, French scholars defined the respondentia as «*technique menue* …..» (Carriere 1970, 231) and qualified the business as «tantamount to trying luck, to making a good move; this playful conception of business reveals an increasing ... diversion of funds from productive investments» (Chamboredon 1995, 387).

So, research on the instrument declined as it had not ostensibly been conducive to the development of the financial system or to improvements in productivity. Financial historians turned their attention to the finance of wars, of princes and of parliaments, and to the establishment of banks and stable fiat monies, focusing instead on the role of bills of exchange, bonds, and soverign debt instruments. Research on private trade finance was overshadowed by the incipient corporate finance of the East Indies companies, and remained locked in a multitude of separate, micro studies on the business of individual merchants or merchant houses. But respondentia did not disappear, and probably even expanded beyond Europe. In fact, historians of extra-European trade have repeatedly come across the contract, without much exploration beyond it being mostly considered an 'anomaly'. For McCusker, «not all is perfectly clear (about the contract) but it was certain there were no bottomry transactions of the usual sort» (McCusker 1978, 295).

Historians' definition of respondentia owes much to a vast literature that appeared in Europe in the late eighteenth century on the contractual and legal elements of commercial and financial instruments. (Targa 1692/1803; Ricard 1722, 1723; Cunningham 1761; Weskett 1781; Émérigon 1783; Allen Park 1787/1799; Marshall, S. 1802; Annesley 1808). These titles, mostly published in English, offer a common general description of the instrument and point at the specificities of how the Spanish used it. For a lack of a clearer definition, Weskett noted that it was «in Spain where they (respondentia) are more frequent than elsewhere – and better understood» (Weskett 1781). Yet, Spain's legal tracts on commercial and financial contracts, namely the *Ordenanzas de Bilbao* enacted in 1737, distinguished respondentia (ch 23) for the first time, from bottomry, policy insurance and other lending instruments after centuries of use. In a 1783 book dealing with commercial contracts, the French lawyer Balthazard-Marie Émérigon contended that «the contract *à la grosse* is adopted in all maritime places. It is neither a sale, nor a partnership, nor a loan properly so called, nor an insurance, nor a monstrous compound of various contracts. […] It has a character and attributes of its own. […] *It is different from all other contracts. It forms a special kind of contract*». (Émérigon 1783, 389 emphasis added). So, exactly what sort of contract was the respondentia? Was it a securitised loan or a risky investment?

Because bottomry loans also consisted of an advance in capital securitised on the ship or on freights if taken by shipmasters, historians writing in English have associated both instruments and defined respondentia as a «loan cum insurance» – mostly to reflect on its waning importance once the maritime insurance policy appeared in Northern Europe (Steckley 2001; Ebert 2011; Leonard 2012). However, the risk of total loss was moderated by General Average (Weskett 1781, Fusaro et al 2023) or the best practice of the local Lex Mercatoria. Partial losses from jettison or proven negligence of the captain were apportioned among those vested in the ship load; or in the Spanish case by the averia, which was managed by commercial guilds

at the port of departure after 1660 (Diaz 1961). In France, for instance, creditors of *prêts-à-la-grosse* had prelation over other freighters in the case of damage (Émérigon 1783, 241).

Securitisation by pledging the ship to a commercial transaction was still common practice in eighteenth century Europe (Bernal 2013, 47; Lo Basso 2016b). Even in England after 1720, when the insurance of marine property was incorporated, lending by respondentia continued, albeit more sparingly, in London's private deals in the East Indies (Steckley 2001; Weskett 1781, 58; Annesley 1808, 173-194). As a result, historians in all trades insist on considering the contract as a mix of insurance and capital (Van Dyke 2011, 45; Carrasco-Gonzalez 1995, 81; Haider 1996 fn58) although London insurers did not cover respondentia because they found it «inconvenient to price the risk» as the nature of the assets was controversial (Weskett 1781, 461-467). The payment of the principal, interests and premium would happen only if the return of the ship had been successful. Otherwise, lenders lost the whole investment.

Under respondentia, the lender assumed the «sea risk» if the goods or the ship never arrived at destination. Such risks were conventionally presented as "the risk of fire, sea and unintentional loss"; it became a fixed clause everywhere in all contracts written in an increasingly formulaic manner. Thus, while the borrower took the commercial risk, the lender assumed the risk of losing any claim to repayment if the goods or the ship pledged as security failed to reach the destination safely because «an act of God, the fortunes at sea or the assaults of men of war -corsairs, pirates or enemies». For instance, a contract in Surat for Batavia in 1749 indicates the risks as «by fire, storm, arrest, war, robbers, or in any other way whatsoever»;[1] and another one signed in Cadiz for Lima in 1777 defined «risk from the sea, wind, earth, fire, friends, foes and any other wretched events at sea».[2] Proforma specifications in a model of a respondentia bond in Madras in 1818 stated «the usual Risk of the Seas, Rivers, Enemies, Fires, Pirates, &C».[3]

Security was placed on the goods on board and eventually on the assets of the person(s) who took the goods on lien. Thus, the loan was increasingly void of collateral other than the goods themselves. As the separation between capital ownership and management of the investment increased with the scale of trade, they became distinct. This separation of the security from the principal accelerated with the expansion of overseas commerce after the sixteenth century, and by the eighteenth century, it was overwhelmingly a lien on the merchandise aboard.

In advancing goods for cash (or other goods), respondentia seems a sort of private limited partnership (e.g., *mutuum, in solidum*), having been considered a

[1] «Bottomree Johanees Kupe for Surat, 5,505 rupees. Batavia, Surat 16 Jan 1790» Source Tamil Nadu State Archive, Chennai, India. Doc. No. 123 pp. 315-17. Thanks to Gulhan Nadri for kindly sharing the document with me.

[2] «Riesgo, Jose Retortillo contra Juan José Ezpeleta, 7,080 pesos, para Lima. Cádiz, 20 Dec. 1777», Archivo Histórico Provincial de Cádiz, Protocolos Notariales de Cádiz, leg. 389, ff. (illegible). Thanks to Xabier Lamikiz for sharing this document.

[3] Template of a respondentia bond contract Madras for Penang, Source: *The Madras Commercial Ready Assistant* (1818) pp. 169-70

derivation of the *commenda.* However, with an allocation of gains and losses independent of the results of the trade, it was unlike the *commenda (*Pryor 1977). As the repayment of the principal upon returning to the port of departure was contingent on the safe arrival of the ship or cargo, historians have also associated it with sea loans (*nauticum foenus)* (Gonzalez De Lara 2001; Williamson 2010). Yet, unlike the sea loan, which was paid in the *same* currency, respondentia was by design repayable in a different (and specific) currency at a foreign port.

II

The assumption of very high risks in long-distance trade has persuaded historians that the high 'interest rates' charged on the principal was directly related to such hazards. Recorded rates of more than 40, 50 or even 70 per cent were frequent in the seventeenth century as allegedly they included the insurance. Hence, the characterization of respondentia as a high profit. high risk investment prevailed. As rates tended to correlate with the distance, historians have seen a time dimension in the cost of capital that reinforces the impression about navigation risks pushing the rates (Boxer 1963; Mesquida 2018). Others interpret the high rates differently as the suitability of the contract to by-pass usury law restrictions (Lamikiz 2023), the scarcity of «indigenous capital» (Van Dkye 2005, 153) or, at destination (Bernal 1992), the greater «hazards of coastal navigation» over open seas (VanDyke 2011, 47), and even the 'exploitative' nature of the financing (Torri 2018, 116-17). Everywhere, however, rates quoted were systematically much higher than the customary interest rates or rates charged on alternative investments. The commercial risk distinctly fell on the borrower and the rate, indeed the premium,[4] was established ex-ante with the initial capital outlay; the borrower must have been confident that the ventures would yield even higher returns. Arguably, the premium could also be considered the upper bound rate at which borrowers were willing to pay for capital rather than indication of risk or the opportunity cost of capital. Reportedly, respondentia rates declined over the eighteenth century; high rates and a falling trend throughout that century are common phenomena across long-distance commerce by 1800.

Nevertheless, respondentia premiums were similar in the Cadiz-Veracruz and in the Acapulco-Manila lines, despite different business organisations and time at sea. In the 1660s, Genoa's rates for Lisbon, Smyrna or Athens were 80 per cent higher or double than rates for Alicante or the «coast of Spain», despite comparable distances. Moreover, these rates pale before rates for 'New Spain' via Cadiz (Lo Basso 2016a, 155-58). Europeans (non-Spanish) charged 15-16 per cent from Flanders and Amsterdam to Cadiz in the late seventeenth century, rates jumped to 40 and 60 per cent if capital continued to 'the Indies' or the River Plate (Everaert 1971, 5; Freeman 2020). It was still so in deals from Nîmes in the 1760s, which paid 18-20 per cent to Cadiz and 30 per cent for America (Chamboredon 2016). Seemingly, premia did not have a time component and it appears more related to the marketplace of destination.

[4] The word «premium» is derived from the Latin *praemium*, lit. «reward» or «prize», premia in plural. Broadly speaking, a premium is a price paid for above and beyond some basic or intrinsic value of goods or assets.

An additional, and clearly separate, interest was charged for delays when the clearing went beyond the established time period after arrival. Whereas it never applied in the very liquid Manila, the additional interest on delays appeared later in Cadiz, when returns began to fall (Lamikiz 2023; Ruiz Moreno 2023). Clearing was delayed in Mexico once the fleet and the termed fairs ceased to operate by the mid-eighteenth century. Selling the goods required a longer time now, and goods were often consigned to the next season to minimise low prices and losses from overstocking, as flows of similar goods from Acapulco and Cadiz kept pouring in. Thus, delays in the clearing added interests to the capital. Elsewhere, where interest rate were charged, premia bore no relation with the (approximate) customary local rates. In Asia, these rates moved around a monthly 0.75 per cent in Surat and Bombay (Chaudhury 2015, 91; Haider 1996), 1.5 per cent in Canton (Van Dyke 2011, 45), or an annual 10 per cent in Macao (Guimaraes 2003); In Europe, merchants and brokers were charged at a monthly 0.5-1 per cent in Cadiz, and 1.25 per cent in Genoa, or 12 per cent per annum in Flanders. Much higher premia seem independent from the local cost of money, so they cannot be an indicator of the cost of money.

Historians point at premium rates overshooting during wars as a foremost risk to trade; the effects, however, are ambiguous. In some cases, there were provisos for increasing the premium if there was a threat, as in the original subscription of the French *Compagnie des Indes* (*Recueil ou collection des titres, édits, déclarations, arrêts, règlements et autres pièces concernant la Compagnie des Indes orientales établie au mois d' août 1664 or, hereinafter, Recueil ou collection des titres*). Yet it is unclear whether the risk was related more to the impact of war in Europe than at sea or overseas. This situation affected risk and premia differently. For a Geneva broker of respondentia, Francois Tronchin, war was also an opportunity to stock and advance goods in Cadiz for re-exports in the future, and to hedge against higher prime costs caused by labour shortages in manufacturing from the war mobilisation. In turn, if war was at sea or on the journey, the aftermath was a safe «opportunity for high profits because the accumulation of silver the American ports» (Tronchin 1740s). Reporting to his clients, he made very clear the direction of trade: prices (and the expected rates of return) were heavily dependent on the relative abundance of silver at destination, so the risk calculation was always to avoid glutting markets in America.

Unlike insurance – where a premium as calculation of risk was paid *before* the ship left port and the insured was reimbursed if a claim was filed by a third party – under respondentia the lender assumed the risk in full. He advanced the principal and waived the right to claim repayment if the goods (or ship) pledged as security failed to reach the destination. So, premia seem to be more an estimation of the future returns. Lenders might, and did in some cases, additionally ensure the value of the capital if the loan was registered with authorities before departure. Borrowers were not allowed to take insurance on the lien, whether goods or money, and insurers in England had misgivings to issue policies on «such immaterial asset» (Weskett, 1781). War effects are not visible in the case of Manila, shown below in Figure 1. Clearly losing the Galleon Covadonga to Admiral Anson near Manila in the 1743 – laden with 1.3-million-peso coins and bars for a total of 35 tonnes of silver (Williams 1999, 167) – was a blow to lenders as respondentia returns never arrived, creating a credit crunch. Yet, the responendia rates did not change and jumped only once silver-laden

galleons returned. So, premia did not exactly capture risk from war incidents; if anything, premia seem *directly* related to the availability of capital.

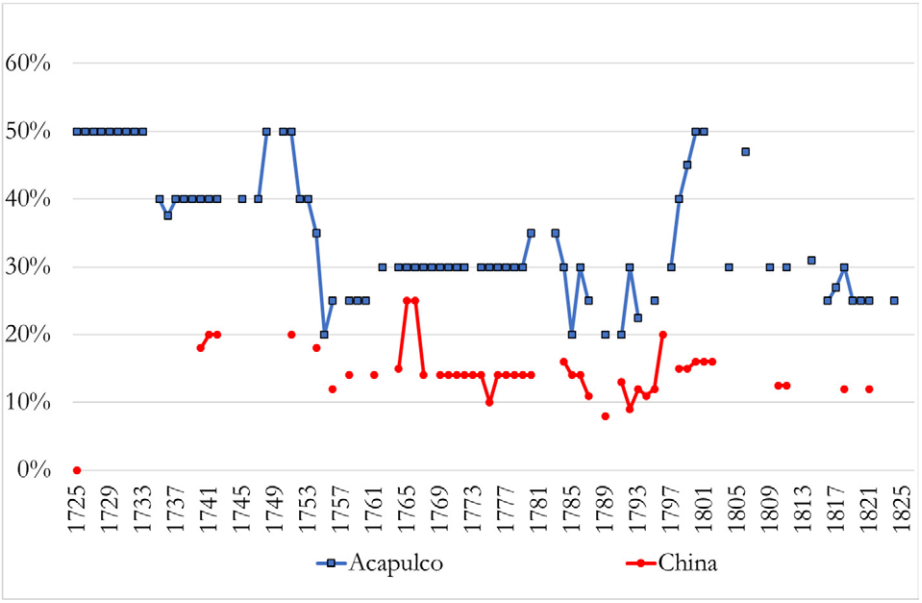
There were means to mitigate the overall exposure to risk, however. Throughout, loans were spread among many ships and in many small amounts, even on the same ship. It was the case in foreign lending to junk merchants in Canton (Van Dyke 2011, 153), Genoese lending in the Mediterranean, as well as in the Spanish and French deals in the Atlantic (Carrasco-Gonzalez 1995, Appx A-1; Chamboredon 1995, 704-07). Clearly, respondentia did not favour economies of scale. Similarly, the contract was neither non-negotiable or transferable across the cases, so the contribution to liquidity was limited.[5] Without enhancing further liquidity and without increases to scale, the contract did not seem effectively designed to favour the growth of trade. Over time, there was some of concentration of lending in bigger amounts by fewer lenders in the Spanish Atlantic (Bernal 1992). As loanable sums grew larger in the Pacific, more suppliers of funds sprang up in Manila. In any case, they continued using the contract over the course of the century. Historians of Spanish commerce characterise it as a 'highly regimented system', with a monopolistic design geared to generate extraordinary profits to privileged (Spanish) agents by creating an 'artificial scarcity' of imports in Spanish America (Baskes 2005, 29). This seems more persuasive as an identification of the symptoms rather than an explanation of the causes. Considering the potential purchasing power of colonial exports (e.g., silver) this and other oft-cited rationing strategies (like spacing fleets, etc.) misrepresented the agency of metropolitan and colonial economic actors. A proper discussion of this matter reasonably falls beyond the scope of this article.

Thus, premia did reflect neither the risks nor the duration of the journeys; it did not seem to bear a particular relation to the nationality of borrowers or the organisation of the business. Even respondentia rates were frequently different for different transactions in the *same* ship (Carrasco Gonzalez 1995, 94; Lamikiz 2023, 5). It is difficult to see a time component in premia, as interest for delays was charged separately, as mentioned above, so it did not price the opportunity costs of capital. Lending at respondentia charged a premium ex-ante defined as a fixed rate of return, which being an advance of capital appears to have been directly related to the expected profits from that trade.

Figures below chart rare longitudinal data on respondentia premia in different long-distance routes of the time. Figure 1 shows respondentia rates in Manila on lending for Acapulco and China throughout the eighteenth century. The premium charged for both destinations followed a parallel trend, where rates were systematically higher for the Pacific trade, which had silver specie as a return. Respondentia for China, in turn, changed silver coins for merchandise. The difference in the level suggests the difference in the expected returns from one and another commerce.

[5] Denzel describes the «*prestamo marítimo* as a "*emprunt contracte"*, an instrument that served (alone?) to acquire money» (2010, xlvii, his emphasis).

Fig 1. **Respondentia Premia in Manila 1725-1821**[6]

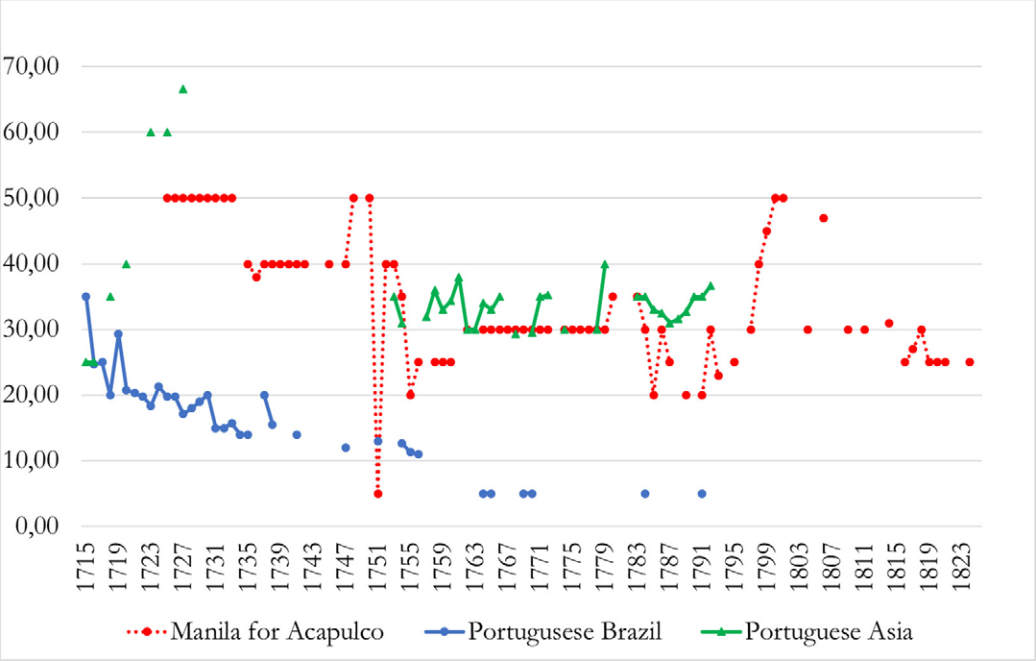


Source: Rivas Moreno, Juan José, "An Alternative Model for Early Modern long-distance Trade Finance: The Capital Markets of Manila, 1680-1838", PhD. Diss., Department of Economic History, LSE, 2023, p. 227.

Figure 2 frames the premia paid in Manila for the Pacific tarde with Portuguese lending in the Atlantic and India trades; it outlines the trend that premia followed in the respective commerce. Throughout the eighteenth century, rates declined in the Atlantic, while the reduction was much slower in the Pacific. Premia in commerce with Asia over the Pacific and Indian oceans remained steady and at higher levels than in Atlantic commerce – the latter being clearly the most competitive of the three trades (De Vries 2003).

[6] Thanks to Dr. Rivas Moreno for sharing this unpublished data from his Ph.D. dissertation, and to Professor Costa for the data on *riscos* from her presentation.

Fig. 2. **Premia on Risco do Mar for Asia and Brazil, Lisbon, 1715-1791, Manila for Acapulco**



Sources: Data on Manila from Rivas Moreno (2023); Portuguese Brazil and Asia (annual average round trip) from Costa and Pinto de Albuquerque (2022)

Clearly, premia varied according to the trades. As in the case of Manila, the rates paid in Lisbon suggest that they varied according to the destination rather than the origin of capital. Higher and steady rates in lending to Asia reflect the persistent potential for arbitrage of trading there.

Why would merchants with the same legal culture use dissimilar instruments? Why merchants from different legal-institutional backgrounds would use the same instrument? Was a cashless system of payments necessarily an inferior design when trade was in specie (gold/silver coins) as it was in the East?

III

As the contract mobilised capital with which to procure working capital to further trade elsewhere with a turnover in the order of several months or years, the respondentia contract resembles venture capital. Yet, when looking into the currency component of the contract, e.g., the specification of the specie on which to be reimbursed, respondentia also looks more like a forward swap, as it was dealt with spot and future prices of goods whose quality was difficult to price – like sugar and

diamonds.[7] The contract clearly was suitable to finance trade among economies performing with different cash means of payment and to obtain Mexican silver specie in Cadiz and Manila. In these regards, it was clearly an 'importer' type of finance, that avoided currency risk costs and realised profit from arbitrage when dealing with foreign specie within private money markets, as discussed below. Looking into notarised contracts in thirteenth century Genoa, De Roover (1969) could not establish whether this was an exchange or a credit transaction. If the latter, as a «transfer instrument it could serve as an international long-distance settlement» (20); if the former, an operation to disguise a loan, it was then a credit instrument for trade, although both were probably not mutually exclusive. In any case, as de Roover put it, «It anticipates future developments in the money market» (22).

Indeed, insofar as there was a change (*permutatio*) of money (*pecunia*), respondentia differed from all other contemporary instruments in one critical aspect which although it was noted by De Roover (1969), it was disregarded by historians.[8] By specifically establishing the species with which the capital was to be paid back, the covenant reduced the uncertainty ingrained in long-distance trade in goods and money. Thus, respondentia, as *cambium maritimum*, always involved an operation of exchange (Lo Basso 2016). This made respondentia also very distinct from bills of exchange, which sought to minimise the use of bullion in settling international balances.

Economic historians consider silver another commodity. So trading in coined silver in foreign markets poses the question as to whether this was a barter of commodities. *Cambium maritimum*, as the contract was known in the Mediterranean, implied by design an operation for exchanging currencies (Lo Basso 2016). Although premia and principal were not always distinguished in the Atlantic contracts – indeed, it was an exception – there was a clear prescription of the monies or type of specie in the repayment in all trades; for example, «*taes de prata de barras*», «*Surat silver rupees of 30 heavy stuivers each*», «*pesos Fuertes*», «*piastres*», «*pagodas at the exchange of 160 Spanish dollars per 100 star pagoda*», etc. (see the Appendix). Whilst in the Manila deeds, pesos minted in Mexico were the default currency. Historians of the Spanish Atlantic trade emphasise a feature of the contract that allowed a further «33% (extra) gain» on top of the premia agreed upon, as the exchange involved specie as remittance back to Spain. (Bernal 1992, 318-19). Despite the obvious implications for the balance of payments, and the dissemination of silver beyond Spain, studies confined to national cases have disregarded this issue.

The role of foreign specie in exchange (and the potential for arbitrage) was clear as stated by the EIC Council at Fort St. George in Madras as early as 1628:

> Should the Company determine to revive that trade (at Bantam), it would be advisable, instead of sending reals [Spanish silver specie] thither direct, to forward them, in the first instance, to Surat, where they might be invested in

[7] The alternative was to wait for the sale in London «by accepting a bill at given rate, i.e. 162d per pagoda when the book rate was 114d or sending the diamonds for sale at probably higher profit» (Lee Saxe 1979, 14)

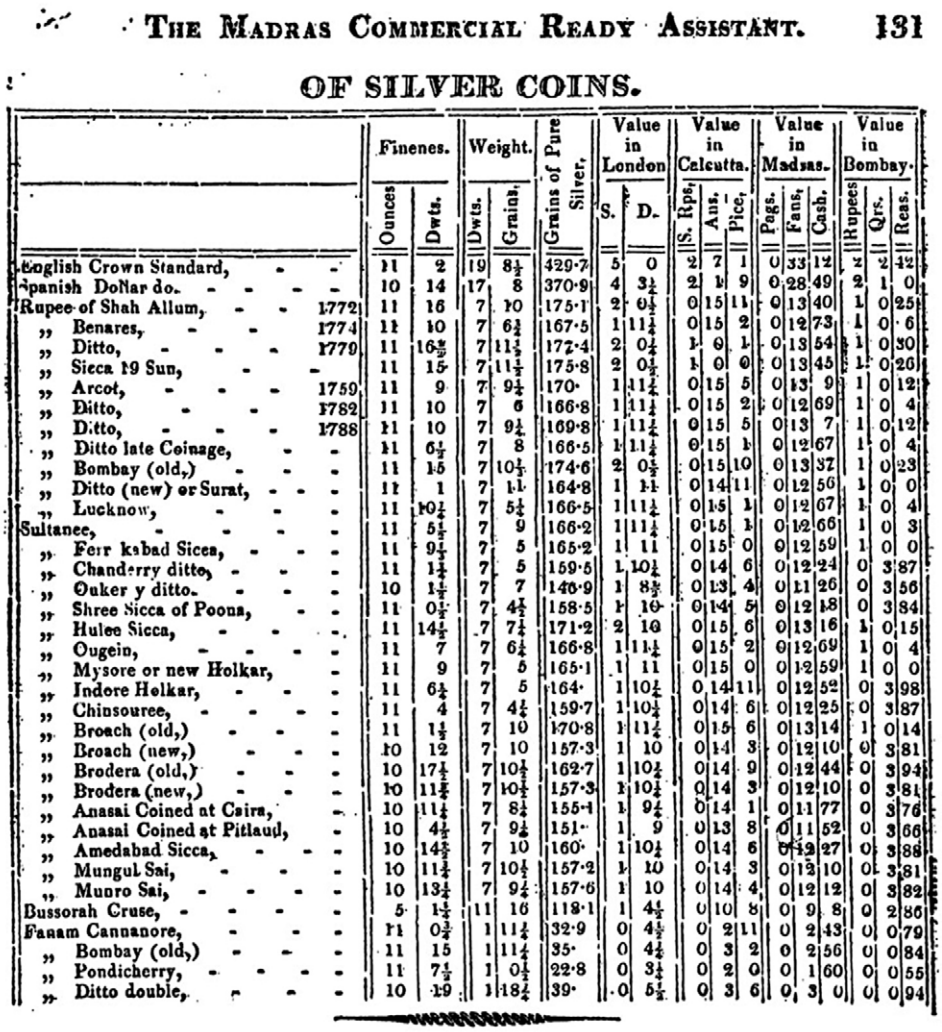
[8] This hid the interest and true nature of the contract as a loan, so historians allege that respondentia was favoured to avoid usury laws.

> goods that would produce 100 per cent profit or more at Bantam. A ship should also be (dispensed) direct to Masulipatnam (as is done by the Dutch) to purchase goods and then go to Bantam; for upon these two factories will and must your southern trade be grounded, if ever you mean to reap profit thereby (Foster 1909 I, 307).

This excerpt showcases the deals with foreign silver monies in India, and in Asia more generally. Procurement of Chinese goods in Canton was a privilege of the Hong (guild of merchants). Europeans advanced capital to them by using a combination of «at least 80%» silver specie and import goods, «or paid entirely of silver *coins*» (Van Dyke 2011, 41 my emphasis). Prices clearly depended on the money of the advancement. Still in the 1800s, the U.S. merchant and Consul in Canton, Sullivan Dorr, reported that deals with silver would improve by 20 per cent the price they ought to pay for teas in Canton. «Sometimes teas, silks and nankeens were not procurable on credit or by bartering with other goods … they were "cash goods"; so the correspondent advised "loading ships only with (Spanish) dollars"» (Dorr 1945). At the turn of the nineteenth century, Dorr reckoned that «*there was a premium on cash*» for trade in Canton (Dorr 1945, 299 my emphasis). Still at the turn of the twentieth century, the *Tate Modern Cambist* reported foreign (Mexican) dollars «formed a favourite medium of exchange», in the interior of China, principally in the tea districts, and «circulated with a premium well above their intrinsic value» (Tate 1908, 184-86).

Thus, as foreign silver specie improved the terms of trade of Europeans in Asia, most of deals with Asia involved cash. Their economies performed with currencies of various metals, gold, silver, brass or copper that were traded freely in markets and bazaars. Thus, the rate of exchange between currencies was sensitive to price tradable goods and returns. The variety of 'foreign' coins in circulation and their valuation in sterling, as late as 1818, shown in Figure 3, was further enlarged by intense intra-Asian commerce, creating uncertainties about future prices to price-taking European merchants (Deyell 1987; Haider 1996).

Fig 3. **Variety of Coins in Circulation in Madras, 1818**



THE MADRAS COMMERCIAL READY ASSISTANT. 131

OF SILVER COINS.

	Finenes. Ounces	Finenes. Dwts.	Weight. Dwts.	Weight. Grains.	Grains of Pure Silver.	Value in London S.	Value in London D.	Value in Calcutta. S. Rps.	Value in Calcutta. Ans.	Value in Calcutta. Pice.	Value in Madras. Pags.	Value in Madras. Fans.	Value in Madras. Cash.	Value in Bombay. Rupees	Value in Bombay. Qrs.	Value in Bombay. Reas.
English Crown Standard,	11	2	19	8½	429·7	5	0	2	7	1	0	33	12	2	1	42
Spanish Dollar do.	10	14	17	8	370·9	4	3½	2	1	9	0	28	49	2	1	0
Rupee of Shah Allum, 1772	11	16	7	10	175·1	2	0½	0	15	11	0	13	40	1	0	25
,, Benares, 1774	11	10	7	6¼	167·5	1	11¼	0	15	2	0	12	73	1	0	6
,, Ditto, 1779	11	16⅝	7	11½	172·4	2	0¼	1	0	1	0	13	54	1	0	30
,, Sicca 19 Sun,	11	15	7	11½	175·8	2	0½	1	0	0	0	13	45	1	0	26
,, Arcot, 1759	11	9	7	9¼	170·	1	11¼	0	15	5	0	13	9	1	0	12
,, Ditto, 1782	11	10	7	6	166·8	1	11¼	0	15	2	0	12	69	1	0	4
,, Ditto, 1788	11	10	7	9¼	169·8	1	11¼	0	15	5	0	13	7	1	0	12
,, Ditto late Coinage,	11	6½	7	8	166·5	1	11¼	0	15	1	0	12	67	1	0	4
,, Bombay (old,)	11	15	7	10½	174·6	2	0½	0	15	10	0	13	37	1	0	23
,, Ditto (new) or Surat,	11	1	7	1	164·8	1	1	0	14	11	0	12	56	1	0	0
,, Lucknow,	11	10½	7	5½	166·5	1	11¼	0	15	1	0	12	67	1	0	4
Sultanee,	11	5½	7	9	166·2	1	11¼	0	15	1	0	12	66	1	0	3
,, Ferr kabad Sicca,	11	9½	7	5	165·2	1	11	0	15	0	0	12	59	1	0	0
,, Chanderry ditto,	11	1½	7	5	159·5	1	10½	0	14	6	0	12	24	0	3	87
,, Ouker y ditto.	10	1½	7	7	146·9	1	8⅔	0	13	4	0	11	26	0	3	56
,, Shree Sicca of Poona,	11	0½	7	4½	158·5	1	10	0	14	5	0	12	18	0	3	84
,, Hulee Sicca,	11	14½	7	7½	171·2	2	10	0	15	6	0	13	16	1	0	15
,, Ougein,	11	7	7	6½	166·8	1	11½	0	15	2	0	12	69	1	0	4
,, Mysore or new Holkar,	11	9	7	5	165·1	1	11	0	15	0	0	12	59	1	0	0
,, Indore Holkar,	11	6½	7	5	164·	1	10¼	0	14	11	0	12	52	0	3	98
,, Chinsouree,	11	4	7	4½	159·7	1	10¼	0	14	6	0	12	25	0	3	87
,, Broach (old,)	11	1½	7	10	170·8	1	11¼	0	15	6	0	13	14	1	0	14
,, Broach (new,)	10	12	7	10	157·3	1	10	0	14	3	0	12	10	0	3	81
,, Brodera (old,)	10	17½	7	10½	162·7	1	10¼	0	14	9	0	12	44	0	3	94
,, Brodera (new,)	10	11⅝	7	10½	157·3	1	10¼	0	14	3	0	12	10	0	3	81
,, Anasai Coined at Cairn,	10	11½	7	8½	155·1	1	9¼	0	14	1	0	11	77	0	3	76
,, Anasai Coined at Pitlaud,	10	4½	7	9⅛	151·	1	9	0	13	8	0	11	52	0	3	66
,, Amedabad Sicca,	10	14⅝	7	10	160·	1	10¼	0	14	6	0	12	27	0	3	88
,, Mungul Sai,	10	11¼	7	10½	157·2	1	10	0	14	3	0	12	10	0	3	81
,, Munro Sai,	10	13½	7	9¼	157·6	1	10	0	14	4	0	12	12	0	3	82
Bussorah Cruse,	5	1½	11	16	118·1	1	4½	0	10	8	0	9	8	0	2	86
Fanam Cannanore,	11	0⅔	1	11¼	32·9	0	4½	0	2	11	0	2	43	0	0	79
,, Bombay (old,)	11	15	1	11¼	35·	0	4¾	0	3	2	0	2	56	0	0	84
,, Pondicherry,	11	7⅓	1	0½	22·8	0	3¼	0	2	0	0	1	60	0	0	55
,, Ditto double,	10	19	1	18¼	39·	0	5¼	0	3	6	0	3	0	0	0	94

Source: *The Madras Commercial Ready Assistant, containing of the Exchange of Money of the Different Settlements in India, also, of English Money with Madras currency, Mocha dollars and Caveers reduced to Spanish Dollars and the weight of Spanish dollars and Canton Money* … (Madras, Commercial Press, 1818, 131-32).

Paper instruments (hundis) existed in Mughal India run by *sarrafs*, money changers and/or lenders, that spread to north and west India. These private bankers issued and discounted convertible hundis offering a means to transfer money over distant places (Habib 1971; Haider 2019). The exchange rate was determined by the balance of payments among these markets, so *sarrafs* 'regulated' it by changing the

rate accordingly. Factors of the EIC and the VOIC borrowed from them too as they were mostly remitters given that their balance of trade with India was largely negative. So Europeans were also 'takers' in the exchange rate. Hundis worked well as means of payment and contributed to other means of settlement like book credit. Although it is not clear to what extent hundis fully substituted cash and conveyed a cashless means of remittance (Habib 1971, 300), Nadri persuasively considers the large money market they organised as "open and competitive" (Nadri 2008, 71). A study on the business of one of the largest Bengal bankers of the mid-eighteenth century, and main lender to European Companies, shows that some sort of respondentia lending still generated more than a third of his income from financial assets, including re-coinage (*batta*), tax revenue collection and lending (Chaudhury 2015, 91). Equally, merchants of Surat trading to Mokha chose between bills and respondentia in lending to the English in the mid-1780s, according the (then current) «advantages of favourable exchange between Surat rupees and Spanish dollars needed for investment at Mokha» (Nadri 2008, 68).

Monetary diversity was especially high in South and South-East Asia where sultans, rajas and princely states coined silver and copper. Foreign coins circulated by tale and the exchange rate between coins fluctuated with market prices. Regional differences in the price and exchange rates of silver coins were apparent in the correspondence at EIC's Fort of St. Georges (Madras) in the mid-eighteenth century:

13. That notwithstanding a head of Batty is open'd on the DeveCotah Books for the difference between the real Exchange of Rupees at that Settlement and the price at which they are invoiced yet you have in some Instances credited yourself in Cash for Rupees paid away even at higher Rates than the Invoice Price altho' in reality the Exchange was much less by which you have made a considerable Gain, for Example, In the Month of June 1754, 12000 Rupees are receiv'd at DeveCotah and invoiced at the usual rate of 350 Rupees for 100 Pagodas, the Current Exchange then being 388 Arcot Rupees for Pagodas 100, the difference between those two Exchanges is wrote off to Batta; but in the same Month Batta paid in Rupees to Seapoys carried to the Credit of Cash at the Rate of 320 Rupees for 100 Pagodas, so that a Gain is made here of 68 Rupees on every 100 Pagodas which is near 22 ℘ Cent.

Source: Records of Fort St. George Diary and Consultation book, May 1756 (1943 vol. 85,130)

Thus, in a trade where differences between exchange rates and current cash may be large, pricing and returns faced additional costs from currency risk. To work this out, a contract that secured the specie in which the investment was to be settled seems more convenient than otherwise.

Mughal tried to standardise the silver in circulation with the sicca rupee in the sixteenth century, but it was not complete as it wholly depended on imported silver. Along with cowrie shells and other commodity monies in Gujarat and Bengal, for instance, foreign silver coins such as Shahis from Iran and Larins from Hurmuz and Basra circulated at premium. Regional chieftains also had access to coinage, so Gujarat persisted in using their Mahmudi (88 grains of silver) and even issued inferior

coins under Mughal names (between 75 and 87 grains) (Haider 1999). With European trade at Surat, by the mid-seventeenth century, the Spanish real or piece of eight became the preferred silver coin from Mokha to Canton. After 1680, Asia imported silver mostly coined in the shape of reals and pesos. (Chaudhuri 1968, table 1; Gaastra 1983; Dermigny 1964). This supply of foreign coins expanded together with the extraordinary growth in Spanish America silver coinage (Irigoin 2020).

Among the great variety in the Asian monetary setting, the case of China stands out. Although China used units of account of silver tael (a weight measure) and copper coins, the empire never minted silver or gold, and copper was a provincial coinage prone to debasements and counterfeiting (King 1965). Thus, China lacked a standard, or a par value for silver, and from the mid-eighteenth century it increasingly relied on foreign coins coming to South China ports. «Silver (coins) was a public necessity in Asia» and the «proof was in the price» (De Vries 2015, 24). This establishes a first difference between Asian monetary regimes and those of Europe, where gold and silver circulated by tale and sovereigns' control over mintage was limited; neither money markets nor coinage was centralised, and they relied on imported silver for their own coinage or on foreign coins as a means of payment in domestic transactions. Without an official par or mint value, even a mint to where individuals could bring the silver, there was no way (or standard) for trading silver weight for silver weight (or gold) but, rather, coin for coin, whichever the metal. Thus, Spanish American coins, the most abundant high quality currency of them all, were made to circulate by tale and enjoyed a growing premium (in sterling) over its content. As in the Mediterranean in the 1640s, where the coin was priced at 52-54d in Alicante, 54-57d in Malaga, 54-60d in Livorno, 56d in Genova and 57 to 66d in Smyrna, in the same years it was quoted by the High Admiralty Court in maritime disputes (Blakemore 2017). In Asia, the silver peso quoted at 62d in Basra, $63^{1/2}$d in Bombay and 50d in Batavia, at 57d in Malacca and $64^{1/2}$d in Surat in 1789 (*An account of monies* .. 1789).

Monetary historians considering metallic currencies as commodity monies owe a lot to models conceived in the bimetallism of Europe (Flandreau 2006; Bignon and Dutu 2014), but their assumptions do not help to appraise monetary developments in extra-European economies nor in Spanish America. In the latter case, the assumption that silver and gold as commodities were minted in "relatively small" volumes (Velde, Weber and Wright 1997, 1) as in Europe does not hold. Between 1772 and 1800 – when the first reliable population data are available – Mexico minted an annual average of 110 grams of silver (about 4 pesos) per capita every year of the most current coin worldwide (Irigoin 2020). Although Indian rulers also cut coins, mostly of silver sourced as returns from trade. Rupees had different market values according to the year and mint of issue and their content of fineness varied greatly, including the coinage at the three ports controlled by the English Company. There was not even any consistency among these rupees though (Furber 1948, 350). Foreign coins could be converted into rupees at the imperial mints but in fact, it was the *sarraf* who actually established the value of foreign coins in money markets. Thus, there was not a silver standard for foreign trade either until 1835, when a new Company rupee was based on the sterling standard. In China, foreign coins too were priced by private shroffs (money changers and/or assayers) according to the weight

and touch (fineness) of the specie. So Europeans were also takers in the price of silver until the Bogue (1843) and Tientsin (1858) treaties, which gave them a word on the rate at which foreign coins were converted (Irigoin et al. 2023). Thus, in Asia, a complementary system of metallic monies and a substitution of silver coins could happen at the same time instead of bimetallism.

There were no 'foreign coins' in Spain or Spanish America until the nineteenths century; and if at all, they were considered bullion in Spain. Until 1686, both performed with the same monetary unit under similar names and denominations. Following the wild debasement of copper in the 1640s, which brought considerable disorder to money markets in Europe, Spain in the 1680s added a new lighter silver coin to the piece of eight (peso de 8 reals) minted in the colonies. The debasement made the peso worth 10 silver reals or 15 reals equivalent to 2 maravedis of billon, which depreciated the new silver coin in Spain by $33^{1/3}$ per cent compared to the old coin, a difference that increased over the years. This gave way to a distinction of monies, both physical and of account, weakening the exchange rate of Spanish money with the coin minted in America. Maravedis, an imaginary money, was the basic unit of account, so everything in Spain was valued as a compound of maravedis; i.e., 34 of which made a real, and as 8 reals made the old silver peso minted in America worth 272 maravedis the new one coined in Spain, was worth 512. Merchants and the Treasury used maravedis in their accounts in Spain, but were unknown in Spanish America where silver coinage of steady intrinsic content dominated. Reliant on cash from Acapulco, Manila too performed with these coins, and neither Manila nor Spanish America issued small change of copper coins. Commercial transactions inside Spain (and with Europe) used gold and silver imaginary monies; the *doblon* for gold, the *ducado* of 375 maravedis and the *peso de 128 cuartos* of 512 maravedis, which became the *peso de cambio (peso de 128 cuartos).* Its value declined relative to the base coin of 8 reals per peso (old silver) as more reals made a peso.[9] This permeated into foreign trade; in England, whereas the par exchange value of the *peso (de cambio)* oscillated around 40d, the mint par value of the coin was 54d, making a 33% per cent premium on the physical peso in London.

From the monetary standpoint, noteworthy are two interesting features of the instrument as was used in thirteenth century Genoa (De Roover 1969). First, the lender's profit was determined by «undervaluing the foreign currency in which the loan was repayable» (De Roover 1969, 17) and «overvaluing it at the fair» (De Roover 1969, 20) or otherwise, it was «determined by manipulating the exchange rates and setting arbitrary values» (De Roover 1969, 24). Second, being conditional on the ship's arrival, the instrument «was rarely, if ever, used for the purpose of remitting funds to another country» (De Roover 1969, 23). In the eighteenth century, this was available to only a handful of few European countries.

Europeans had also struggled to establish a uniform coinage throughout the seventeenth century (Van der Wee 2005). They had, however, different means of

[9] The exchange with Amsterdam quoted the (imaginary) *Ducado de cambio* (ducat) at 375 maravedis. In 1761, the silver to gold ratio between current physical coins at 1:15 made the price of the old coin minted in America equal to 680 maravedis (*Itinerario de las Carreras de Posta*… 1761, 9-10).

securing the monetary system away from private agents; they established institutions that «standardised» money and «centralised» money markets (Neal 2000). Along with their own coins, they developed monies of account, e.g. a unit of measurement for metallic monies or an assigned quantity of weight of a certain fineness, whose value attempted to follow the market price of gold and silver, setting the exchange rate at a variable number of their current monies. Imaginary monies (e.g., the Venetian' *scudi d'or* and the Genoese' *scudi de marche*) developed as units of account that standardised payments and simplified the settlement of balances in foreign money in the exchange fairs (Denzel 2010).[10] As a rule of thumb, current monies, denominated in monies of account, tended to overvalue the foreign coins at home to avoid the melting of their own silver (already scarce) and to attract precious metals to their mints (Van der Wee 1977); the difference between these two prices of the money of account and current monies was called agio.

In the 1640s, the *Amsterdamse Wisselbank* used bank money as money of account and centralised transactions with shorter and more regular turnover of bills, fostering a cashless system of payment. Hence, public banks replaced the fairs, developing the international system of transfer payments that matured in the eighteenth century (Nogues 2018). Its bank guilder became a unit of exchange for international deals within Europe and both Dutch Indies, whether trading in precious metals, buying from the West Indies and Europe, selling to mints, or administering exports to the East (Guillard 2004). Amsterdam became the chief money market in Europe and the marketplace for American silver (Morineau 1985). This intermediation allowed for the domestic economy to decouple from uncertainties in international markets. Subsequently, in London and Hamburg, other banks too offered a cashless settlement of balances for overseas trade that coevolved with financial development. Bank money became fiduciary and agio worked as a «sluice gate» (Neal 2000), allowing for a flexible exchange rate to fend off the withdrawal of coins in reserve. In Amsterdam, agio oscillated around two and five per cent between 1640 and 1775 (McCusker 1978, 43, 44, 62) while Hamburg offered a 20-30 per cent premium on their *reichsthaler banco* (Pfister 2017). In 1761, agio was 25 per cent in Genoa, 18 per cent in Venice and in Hamburg, and 22 per cent in Frankfurt am Main (*Itinerario de las Carreras de Posta*… 1761).

Outside Europe, commodities and merchandise were transacted in current monies (Posthumus 1943, LX). In the West Indies, Europeans used the monies of account of their metropoles, but colonists set their own currencies on the most current Spanish American silver coin (piece of 8 standard) and used it as a unit of account. Even French and English merchants in the Caribbean traded on the Spanish American peso (McCusker 1978, 287). Apparently, bills were ultimately «credit instruments for metropolitan merchants» only (Denzel 2010, xlvii). In North America, local assemblies separately set and repeatedly changed the face value of their monies, so exchange rates diverged wildly (McCusker 1978, 125-229, 234-256; Mossman 2012, 62-63). Eventually, Queen Anne's proclamation of 1704 undervalued the foreign coin in the colonies at 72sd – one third below the mint par

[10] Admittedly, Denzel refrained from discussing the impact of American silver (2010, lxii).

value the peso coin was assigned in Britain (54d). So did the French in their Caribbean colonies (at the same ratio) (McCusker 1978, 282) and the Portuguese in Brazil, who 'cried up' the current money between 33 per cent and more in the 1710s during the gold boom and the renewal of minting in Brazil (Cerqueira Lima 2017).[11]

Monies of account were unknown in the Spanish Indies, where her coin (called the dollar in English after the 1680s) served to price goods and services. As the coin enjoyed a steady intrinsic value throughout (albeit three minor debasements in 1732, 1772 and 1786), variations in the exchange were driven by devaluations elsewhere or changes in the metropolitan monies of account. It was Spain (with much less centralised coinage) that in the late eighteenth century counted twenty different types of «physical current» coins of silver, gold, copper and various «imaginary currencies» (or monies of account) (Larruga 1778 I, 73), with, overall, an undervalued rate of exchange compared with the colonial coin.

In the East Indies, companies equally undervalued the foreign coin in Asia to obtain silver and reduce silver exports from Europe. By the mid-eighteenth century, the Dutch issued *assignaties* (i.e., interest bearing bills) denominated in different monies that priced lower the silver ducatoon in Asia; e.g., at 78 stuivers in Batavia (it went to 72 between 1732 and 1782) against 63 in Amsterdam. They helped to mobilise private capital in further financing imports of Asian goods, although this did not fully substitute the export of silver (Feenstra 1994). Hence, private agents made a 24 per cent profit on the exchange rate difference between Batavia and Holland (Prakash 2008, 88, 89). Having traded Spanish American silver in Asia at 54d since 1619, over a mint par in London of 50d, as of 1681 the East India Company invoiced the dollar coin at 60d per ounce sterling in Asia in their bills, all the while adding transaction and transportation costs to their prime cost in London, which was set at 54d after 1720 (Morse 1926 I, 47). In the 1770s, bills on Canton denominated in Spanish dollars now «at the exchange of the season» (a fixed, yet variable, exchange rate) sought to procure specie in Asia for the China trade. Competition pushed up the exchange rates; the EIC further increased it to 62 and 66d, but the Danes and Swedes were offering both higher rates and shorter sight (Morse 1922). In 1787, EIC started issuing 30-day sight bills on Bengal at 39 rupees per 100 dollars, a premium over the current exchange par of 41 ½ (Morse 1926 II, 142). Bills went up at 84s during the French Wars, which put a lot of pressure on the pound to suspend convertibility in 1797; the rate for rupee bills climbed to 42-43 per 100 dollars (Morse 1926 II, 358,388) and the Company paid up to 69d-66d in 1801-02 and 1804-05 in London for the coins (Report, 1810 table 13, 168). There were even no purchases in 1809 and in 1810-11; extraordinarily, flows reverted and London imported silver dollars from China and India.

As in the Caribbean, the peso/real coin in Asia was also the «measure of all money, (the) universal basis for the exchange quotations» (McCusker 1978, 280-81). However, the exchange par was determined by the purchasing power in private markets «free of regulations». Thus, neither in East or in West Indies, did the value of the piece of eight / dollar ever reflect the actual par of exchange at the commercial

[11] The Dutch used a different exchange rate that overvalued the silver coin in Europe; it was worth 48 stivers there versus the 38 it was in Amsterdam in 1740 (McCusker 1978, 297).

rate and far less the intrinsic value.[12] As Roover pointed out, «the manipulation of exchange rates and setting arbitrary values» to coins at home and abroad conceived in the *cambium maritimum* affected the flow of silver. Thus, bills did not circulate outside the companies, other than as remittance of profits or for coins negotiated throughout Southeast Asia rather than of credit. Contrarily, respondentia thrived in all European deals with China in Southeast Asia at the peak of the trade in the 1780s (VanDyke 2011, 41-48).

Private bills appeared only much later in Asia when the standard of the silver dollars was collapsing, so sound specie was short. They appeared in the Canton trade in the 1820-1830s by way of U.S. merchants drawing on London and British houses in India (Irigoin et al. 2023). As late as 1831, Mr Palmer, then governor of the Bank of England and partner in the Calcutta house of Palmers, Mackillop and Co., declared to Parliament:

> All exchange operations in bills *have reference to the actual produce of the remittance in bullion* in the country to which those remittances are sent" .."The company *will at all-time order bullion to be transmitted*, if bills are not procurable at the bullion rate (remitters calculated «the bullion rate by adding various costs for bullion shipping to its value»)... bullion was remitted (BPP 1831/32, 107, 111 my emphasis).

Thus, in long-distance commerce, bills could not be an efficient cash substitute beyond Europe, without some monetary authority or institutions capable of setting and regulating the value of the foreign coins. In most of Europe, foreign silver coins were received by count and priced in monies of account that tended to overvalue it. In Britain, they were priced by weight (Tate 1908, 318) at the ratio of the sterling standard, i.e., the mint par established in 1604 and restored by Newton's assay after the «great recoinage» of 1696. By 1779 in Canton, the Spanish dollar had become current already and had "acquired an imaginary value through convenience"; the Dutch were already «pass(ing) the silver coin by tale instead of weight» (Morse 1926, 280; Van Dyke 2011, 43). Chinese assayers were pricing exports and import, including gold coins, in Spanish dollars. In 1796, the EIC followed suit. By then, the specie was already trading at a 9 per cent premium over its intrinsic value (Morse 1926 II, 41, 313). Within Europe, the greater efficiency of bills enabled the substitution of precious metals for a cashless means of payment when prices fell within import/export bullion prices (Sperling 1962). This was impossible in Asia, where cash had a premium determined by demand, which was increasing steadily after the 1790s, or in America, where as a source of the cash had an overvalued currency driven by a very elastic Asian demand. Thus, Europeans chose respondentia to settle exports to the New World and to pay for their imports in Asia, while they chose bills in more 'certain' money markets inside Europe only, or in exchanges within a 'more convenient' rate the Company might offer, compared with the bullion rate.

[12] The Proclamation of 1825 failed to centralise coinage in the possessions. They maintained their own currency regime until late in the Nineteenth century (Shannon 1951). Hong Kong used the (extinct) Spanish dollar as unit of account until the 1860s.

IV

This paper shows the global dimension of respondentia as a private instrument in early modern global trade. Although bills of exchange were known in Europe for long already, the contract that established the specie of the return was preferred in commerce outside Europe. The instrument known in the Mediterranean moved to the Atlantic and the Pacific to finance the procurement of American silver. Asian economies depended on trade for their coinage of silver and gold; and Europeans took it over the Indian Ocean and China sea as they intermediated global trade. Large economies in Asia lacked institutions to set or keep a standard for their own coinage and their money markets were not centralised, so they relied on foreign specie and performed within a huge diversity of means of payments. Originally, the contract allowed a mitigation of uncertainty in the future returns of investments in contexts lacking common standards for precious metals, as it had formerly been the case of earlier maritime commerce in tradable good that were difficult to price, such as pepper, sugar and diamonds. With the expansion of trade that intermediated American silver to Asia, respondentia developed as an instrument for exchange over time. In so doing, it also allowed the capture of arbitrage.

Asian elastic demand for sound silver coins gave a growing premium to cash, overvaluing, in turn, the purchasing power of Spanish American silver. European intermediation found means to deal with the resulting issues in prices and exchange rates. They designed (or adapted) instruments and institutions to manage variations in international supply and demand of precious metals. By using monies of account applied to prices, contracts and accounting, they buffered their own currencies from such changes. Furthermore, they set different prices and exchange rates (or currencies) for their colonies than at home, and managed exchange rates according to their international trade position. Europeans intervened overvaluing their currencies at home by introducing changes in their monies of account; they, too, had a dual monetary system in the metropolis and the home country, with different valuations for the silver coin in one and another. Spain, on the other hand, undervalued her own currency against the stronger silver coin from her colonies, resulting in different capabilities and results.

Decoupling the price of precious metals from the market with institutions that could control the flows allowed a crucial tool of monetary policy to some European markets. Such means and institutions did not exist in Asia or America, so private money markets were far more 'open', following raw variations in international trade. While high-quality coins continued flowing out of Spanish America, they met the near bottomless demand for sound money in Asia, and China in particular. Trade expanded in a Smithian way as the instrument was not designed to enhance productivity, but to capture arbitrage profits. As long as cash enjoyed a premium in Asia, silver specie continued flowing East, from America to Europe, and from Europe to Asia, so bills took longer to serve as remittance. They were not a realistic alternative to make a cashless means of settlement for global trade, so respondentia lingered beyond the notional inefficiencies of its nature.

MANUSCRIPT

Tronchin Archive

Tronchin, F. Colonies angloises, Commerce des Indes espagnoles, Commerce de Russie, Douane de Londres, **Arch. Tronchin 372.** seconde moitié du 18e siècle et sans date (Around the Austrian War of Succession).

Tamil Nadu State Archive. Chennai, India

Bottomree Johanees Kupe for Surat, 5,505 rupees. Batavia, Surat 16 Jan 1790. Tamil Nadu State Archive. Doc No. 123, pp. 315-317.

Archivo Histórico Provincial de Cádiz.

Riesgo, Jose Retortillo contra Juan José Ezpeleta, 7,080 pesos, para Lima. Cádiz, 20 Dec. 1777, Archivo Histórico Provincial de Cádiz, Protocolos Notariales de Cádiz, leg. 389, ff. (illegible).

Template of a respondentia bond contract Madras for Penang. Source: *The Madras Commercial Ready Assistant* (1818) pp. 169-170.

PRINTED SOURCES

An Account of the Monies, Weights and Measure in general use in Persia, Arabia, East India and China. 1789. In two parts ... The whole alphabetically arranged. London: British Library.

Annesley, Alexander. 1808. *Compendium of the Law of Marine Insurances, Bottomry, Insurance on Lives* … New York: I Riley.

Corning, Howard, ed. 1945. *The Letters of Sullivan Dorr (from Canton to Joseph and John Dorr)*. 1945. Proceedings of the Massachusetts Historical Society LXVII. Boston: Massachusetts Historical Society.

Easton, Harry Tucker, ed. 1908. *Tate's Modern Cambist: A Manual of Foreign Exchanges and Bullion With the Monetary Systems of the World* …. London: E. Wilson.

Émerigon, Balthazard-Marie. 1783. *Traité des assurances et des contrats a la grosse*, vol. 2 Marseille: Jean Mossy.

Fort St. George Diary and Consultation book Presidency of Madras 1672-1756. 1943. Madras.

Foster, William. 1909. *The English Factories in India, 1618-1669*. 8 vols. Oxford: Clarendon.

Itinerario de las Carreras de Posta de dentro, y fuera del Reyno que contiene también: 1761. I. …. II y una Noticia de las Especies corrientes de Moneda Estrangera, reducidas à la de España, … la Imprenta de Antonio Perez de Soto.

Kennet, Charles. 1818. *The Madras Commercial Ready Assistant, containing of the Exchange of Money of the Different Settlements in India, also, of English Money with Madras currency, Mocha dollars and Caveers reduced to Spanish Dollars and the weight of Spanish dollars and Canton Money* … Madras: Commercial Press.

Kennet, Charles. 1833. *The Madras Commercial Ready Assistant: Containing Correct Tables of the Exchange of Money, Current at the Several Presidencies and Settlements in the East Indies, at the Standard and Fluctuating Rates* ... S.l.: s.n.Larruga y Boneta, Eugenio.

1787-1800. *Memorias políticas y económicas sobre los frutos, comercio, fábricas y minas de España*: … tomo I [-XLV]. Madrid: Benito Cano.

Lockyer, Charles. 1711. *An Account of the Trade in India, Rules for good Government in Trade, Price Courants* … London: S. Crouch.

Porter, Kenneth. 1937. *The Jacksons and the Lees, Two Generations of Massachusetts Merchants, 1765-1844*. Cambridge, MA: Harvard University Press.

Recueil ou collection des titres, édits, déclarations, arrêts, règlemens et autres pièces concernant la Compagnie des Indes orientales établie au mois d'août 1664. 1755-1756. T. 2. Paris: Boudet.

Weskett, John. 1781. *A Complete Digest of the Theory, Laws, and Practice of Insurance*. London: Frys, Couchman and Collier.

BIBLIOGRAPHY

Baskes, Jeremy. 2005. "Risky Ventures: Reconsidering Mexico's Colonial Trade System." *Colonial Latin American Review* 14, 1: 27-54.

Bernal, Angel Miguel. 1993. *La financiación de la Carrera de Indias. (1492-1824). Dinero y crédito en el comercio colonial español con América*. Sevilla: Fundación El Monte.

Bernal, Angel Miguel. 2013. "Dal Mediterraneo all' Atlantico. Il cambio marittimo e il finanziamento del comercio coloniale spagnolo (secolo XVI)." *Storia Economica* XVI, 1: 37-88.

Bignon, Vicent, and Richard Dutu. 2014. *Coin Assaying and Commodity Money*. Banque de France Working Papers August.

Blakemore, Richard. J. 2017. The HCA Wage Dataset: A Descriptive Report. *Sailing into Modernity: seventeenth Century European Economic Transition*. ERC Starting Grant No. 284940 University of Exeter. Available at: <http://humanities.exeter.ac.uk/history/research/centres/maritime/research/modernity/> (21-08-2017).

Boxer, Charles R. 1963. *The Great Ship from Amacon*. Lisbon: Centro de Estudos Históricos Ultramarinos.

Carrière, Charles. 1970. "Renouveau espagnol et prêt à la grosse aventure (Notes sur la place de Cadix dans la seconde moitié du XVIII^{e} siècle)." *Revue D'histoire Moderne et Contemporaine* 17, 2 : 221-52.

Carrasco González, Ma. Guadalupe. 1995. *Los instrumentos del comercio colonial en el Cádiz del siglo XVII, 1650-1700*. Madrid: Banco de España.

Cerqueira Lima, Fernando. 2017. "The monetary system of the Luso-Brazilian Empire: The changing role of the "provincial" currency in the 17th and 18th Centuries." *Review of Business and Economic Studies* 5, 2 : 68-74.

Chamboredon, Robert. 1995. *Fils de soie sur le théâtre des prodiges du commerce: La maison Gilly-Fornier à Cadix au XVIII^{e} siècle (1748-1786)*. Thèse de doctorat en Histoire Université de Toulouse.

Chamboredon, Robert. 2008. "Des placement of Voltaire à Cadix." *Cahiers Voltaire* 7: 41-72.

Chaudhuri, Kirti N. 1968. "Treasure and trade balances: The East India Company's export trade, 1660-1720." *Economic History Review* 21, 3: 480-502.

Chaudhury, Sunil. 2015. "The banking and mercantile house of Jagat Seths of Bengal." *Studies in People's History* 2, 1: 85-95.

Costa Freire, Leonor, and Tomas Pinto De Albuquerque. 2022. *The Deep Blue Sea: The Burden of loss and technological challenges in Early Modern Europe*. Paper presented at "State Navies, Transnational Private Economic Networks and the Circulation of Technology (1500-1800)", Universidad Pablo de Olavide, Seville, 14 and 15 November 2022.

De Roover, Raymond. 1969. "The Cambium Maritimum Contracts according to the Genoese Notarial Records of the Twelfth and Thirteenth Centuries." *Explorations in Economic History* 7, 1-2: 15-33.

De Vries, Jan. 2003. "Connecting Europe and Asia: A Quantitative Analysis of the Cape Route Trade, 1497-1975." In *Global Connections and Monetary History 1470-1800*, ed. Dennis Owen Flynn, Arturo Giraldez, 35-106. Aldershot: Ashgate.

De Vries, Jan. 2015. "Understanding Eurasian Trade in the Era of the Trading Companies." In *Goods from the East, 1600-1800: Trading Eurasia*, ed. Maxine Berg, and Felicia Gottman, 7-44. London: Palgrave Macmillan.

Denzel, Marcus.A. 2010. *Handbook of World Exchange Rates, 1590-1914*. Farnham: Ashgate.

Dermigny, Louis. 1964. *La Chine et L'Occident. Le Commerce à Canton au XVIII Siècle (1719-1833)*. Paris: S.E.V.P.E.N.

Dermigny, Louis 1960/61. *Cargaisons indiennes Solier et Cie., 1781-1793*. Paris: S.E.V.P.E.N.

Deyell, John. 1987. "The development of Akbar's currency system and monetary integration of the conquered kingdoms." In *The imperial monetary system of Mughal India*, ed. John F. Richards, 13-67. Delhi: Oxford University Press.

Dos Guimaraes Saa, Isabel. 2003. "Ganhos da terra e ganhos do mar; Caridade e comercio na Misericordia de Macau (seculos XVII -XVIII)." *Leer Historia* 44: 45-57.

Everaert, John. 1971. "Le Commerce Colonial de la "Nation Flamande" à Cadix sous Charles II (ca. 1670-1700) ." *Anuario de Estudios Americanos* 28: 139-51.

Feenstra, Femma. 1994. "Private Money for Company Trade, The role of the bills of exchange in financing the return cargoes of the VOC." *Itinerario* 18: 65-76.

Flandreau, Marc. 2004. *The Glitter of Gold: France, Bimetallism, and the Emergence of the International Gold Standard, 1848-1873*. New York: Oxford University Press.

Freeman, David. 2020. *A Silver River in a Silver World: Dutch Trade in the Rio de la Plata, 1648-1678*. Cambridge: Cambridge University Press.

Furber, Holden. 1948. *John Company at work: A study of European expansion in India in the Late eighteenth Century*. Cambridge: Harvard University Press.

Gillard, Lucien. 2004. *La Banque d'Amsterdam et le florin européen au temps de la République néerlandaise (1610-1820)*. Paris: Éditions de l'EHES.

Habib, Irfan. 1971. "The system of bills of exchange (Hundis) in the Mughal Empire." *Proceedings of the Indian History Congress* 33: 290-303.

Haider, Najaf. 1996. "Precious metal flows and currency circulation in the Mughal Empire." *JESHO* 39, 3: 298-364.

Haider, Najaf. 1999. "Mughals and Mahmudis: The incorporation of Gujarat into the Imperial Monetary System." *Proceedings of the Indian History Congress* 60: 270-86.

Haider, Najaf. 2019. "The Moneychangers (Ṣarrāfs) in Mughal India." *Studies in People's History* 6: 146-61.

Irigoin, Alejandra. 2018. "The New World and the Global Silver Economy, 1500-1800." In *Global Economic History*, ed. Tirthankar Roy, and Giorgio Riello, ch. 15. London: Bloomsbury.

Irigoin, Alejandra. 2020. "The rise and decline of the Global Silver Standard." In *Handbook of the history of money and currency*, ed. Stefano Battilossi, Youssef Cassis and Kazuhiko Yago, 383-410. Singapore, Springer.

Irigoin, Alejandra, Atsushi Kobayashi, and David Chilosi. 2023. "China Inside Out; Explaining Silver and Trade Flows, c.1820s-1870s." London: *LSE Economic History Working Papers Series*. No. 357.

King, Frank. H.H. 1965. *Money and Monetary Policy in China, 1845-1895*. Cambridge: Harvard University Press.

Lamikiz, Xabier. 2023. "Préstamos a riesgo de mar y redes transatlánticas en el comercio entre Cádiz y la costa del Pacífico sudamericano, 1760-1825." *América Latina en la Historia Económica* 30: 1-22.

Lo Basso, Luca. 2016a. "The Maritime Loan as a Form of Small Shipping Credit (seventeenth-eighteenth Centuries): The Case of Liguria." In *Informal Credit in the Mediterranean Area (XVI–XIX Centuries)*, ed. Antonino Giuffrida, Roberto Rossi, and Gaetano Sabatini, 145-173. Palermo: New Digital Press.

Lo Basso, Luca. 2016b. "Il finanziamento dell'armamento marittimo tra societa e istituzioni: Il caso ligure (secc XVII-XVIII)." *Archivo Storico Italiano* 647, 1: 81-106.

Mccusker, John.J. 1978. *Money and Exchange in Europe and America, 1600-1775*. Chapel Hill: University of North Carolina Press, Omohundro Institute of Early American History and Culture.

Mauro, Fréderic. 1960. *Le Portugal et l'Atlantique au XVIl siècle (1570-1670): Étude économique*. Paris: SEVPEN.

Mesquida, Juan.O. 2018. "Pious Funds across the Pacific (1668-1823): Charitable Bequests or Credit." *The Americas* 75, 4 : 661-69.

Morineau, Michael. 1985. *Incroyables gazettes et fabuleux métaux : Les retours des trésors americains d'après les gazettes hollandaises (XVIe-XVIIIe siècles)*. London: Cambridge University Press.

Mossman, Philip L. 2012. "Monies of the American Colonies and Confederation." *Numismatic Studies*, vol. 20, NY: American Numismatic Society.

Morse, Hosea Ballou. 1922. "The Provision of Funds for the East India Company's Trade at Canton during the 18th Century." *Journal of the Royal Asiatic Society* 2:

227-55.

Morse, Hosea Ballou. 1926. *The Chronicles of the East India Company Trading to China, 1635-1834*. Oxford: Clarendon Press.

Nadri, Ghulam. A. 2008. *eighteenth-Century Gujarat: The dynamics of its political economy, 1750-1800*. Leiden: Brill.

Neal, Larry. 2000. "How it all began: The monetary and financial architecture of Europe during the first global capital markets, 1648-1815." *Financial History Review* 7: 117-40.

Nogues-Marco, Pilar. 2018. "Money markets and exchange rates in preindustrial Europe." In *Handbook of the History of Money and Currency*, Stefano Battilossi, Youssef Cassis and Kazuhiko Yago, 1-24. Singapore: Springer.

Oka, Mihoko. 2001. "A Great Merchant in Nagasaki in the 17th Century. Suetsugu Heizô II and the System of Respondência." *Bulletin of Portuguese - Japanese Studies* 2: 37-56.

Oka, Mihoko, and Francois Gipouloux. 2013. "Pooling Capital and spreading risk: Maritime investment in East Asia at the beginning of the seventeenth Century." *Itinerario* 37, 3: 75-91.

Pfister, Ulrich. 2017. "Great Divergence, Consumer Revolution and the Reorganization of textile Markets: Evidence from Hamburg's Import Trade, eighteenth Century." LSE, *Economic History Working Papers*: Vol. 266.

Posthumus, Nicolass Wilhelmus. 1943. The history of prices in the Netherlands – *Nederlandsche prijsgeschiedenis, Deel I: Goederenprijzen of de Beurs van Amsterdam, 1585-1914; Wisselkoersen te Amsterdam, 1609-1914*. Leiden: E. J. Brill.

Prakash, Om. 2007. "English private trade in the Western Indian Ocean, 1720-1740." *JESHO* 50, 2-3: 215-34.

Prakash, Om. 2008. "The European trading companies: Exports from Europe and the generation of purchasing power in Asia." In *European Commercial Enterprise in Pre-Colonial India* (The New Cambridge History of India, 72-110. Cambridge: Cambridge University Press.

Rivas Moreno, Juan Jose. 2023. *An Alternative Model for Early Modern Long-Distance Trade Finance: The Capital Market of Manila, 1680-1838*. Ph.D. Dissertation, Economic History Department, London School of Economics.

Shannon, Hugh. A. 1951. Evolution of the Colonial Sterling Exchange Standard. IMF Staff Papers, vol. I, pp. 334-354.

Steckley, George. F. 2001. "Bottomry Bonds in the seventeenth-Century Admiralty Court." *The American Journal of Legal History*, 45, 3: 256-77.

Strum, Daniel. 2017. "A lucratividade do comércio açucareiro e sua composiçao na década de 1620." In *Ramificações ultramarinas: Sociedades comerciais no âmbito do Atlântico Luso*, ed. Carlos Leonardo Kelmer et al., 25-50, Rio de Janeiro: MAUAD Ed. Lim.

Torri, Michelguglielmo. 2018. "The British Monopoly on the Surat trade to the Middle East and the Indian ship-owning merchants' struggle against it: 1759-1800." *Journal of the Royal Asiatic Society* 28, 1: 101-34.

Van Der Wee, Herman. 1977. "Monetary, credit and banking systems." In *The Cambridge Economic History of Europe*, ed. Donald C. Coleman, Peter Mathias, Michael M. Postan, Edwin E. Rich, and Charles H. Wilson, 290-392, Cambridge: Cambridge University Press.

Van Dyke, Paul A. 2005. *The Canton trade: Life and enterprise on the China Coast, 1700-1845*. Hong Kong: Hong Kong University Press.

Van Dyke, Paul A. 2011. *Merchants of Canton and Macao: Politics and Strategies in eighteenth-Century Chinese Trade*. Hong Kong: Hong Kong University Press.

Velde, Francois, Warren Weber, and Randall Wright. 1997. "A model of commodity money with applications to Gresham's Law and the debasement puzzle." *Review of Economic Dynamics* 2, 1: 291-323.

Williams, Glyn. 1999. *The prize of all the oceans*. New York: Viking.