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Managing Exchange Risk: Foreign monies and private trade finance in pre-modern long-distance trade (or, why did bills of exchange not circulate beyond Europe?)

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The Instrument of private trade finance in the early modern global trade beyond Europe

Introduction to the collection of articles

Alejandra Irigoin

The canonical view of financial historians explains "the growing volume of long-distance trade throughout the eighteenth century" in association with the development of means "(to) mediate interest rate and exchange rate risk and facilitate trade through international bills". Despite the institutional overtones of this literature, scholars conclude that because the "commercial bills market lay largely outside of the scope of government regulation and was global in scope" it fostered the "development of banking and capital markets as complements in the long run" (Atack 2009, 10, 17). Thus, "the payments system for private trade by European merchants managed to flourish, notwithstanding the occasional shocks to the system from war finance". Yet, in the seventeenth and eighteenth centuries the global scale of the bills of exchange market seems to be limited to Europe and partially to deals among Europeans and within the European East Indies companies. Indeed, it took a good extra hundreds of years to spread to the rest of the world. Arguably, by the breath of its circulation another instrument, the respondentia was more ubiquitous contract for private trade finance in international maritime trade during the early modern period.

Given the size of the aggregated intra-European trade, probably the contract was not as significant instrument of trade finance and means of remittance as bills of exchange were within Europe (O'Brien 1982, De Vries 2010); albeit similar estimates for the value of aggregated intra-Asia trade are lacking, it was far from small (Reid, 1997, 2004, Sugihara 2013). Nevertheless, respondentia was indeed widespread in the commerce of Europeans overseas where the use and circulation of bills took much longer to take roots.

Among Europeans the contract was known by various names in their respective trades (*correspondencia, cambio marítimo, riesgo marítimo o de mar* in Spanish; *risco or ganho de mar* in Portuguese, *risqué* or *prêt á la grosse aventure* in French, *cambio marittimo* (cambium maritimum) in Italian, *bordermerije or bomerie* in Dutch and respondentia in English.[1] It was widely used in the Mediterranean since Roman times or earlier -probably by the Phoenicians as well- and was particularly associated with Genoese intermediation of early pepper trade in Byzantium and the Levant (DeRoover 1969). However, the contract was quite similar everywhere. According to Haider (1996, 299; 2019) it resembled to the *muzarbat* that circulated among Indian *sarräfs,* and to the *nagegame* of the early seventeenth century' Sino-Japanese silver for silk trade by accounts of the earlier Portuguese trade in Asia (Oka 2001, Boxer 1948, 107,115-16) or Dutch traders in Burma in the same decades (Dijk, 2001). On the word of Om Prakash (2008:4) the "institution was also widespread" in Pre-colonial India, as it was in Siam (Viraphol 1977), Indonesia and Bantam (Dermigny 1964, II 230,264, III 759) in the eighteenth century. Thus, it is difficult to claim, conclusively, that respondentia had clear European roots, although it makes a fitting case study for a migration of institutions (Harris 2020). Yet, with European long-distance sail after 1600 – it reached another, global scale as instrument of private trade finance. 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.

Across trades and over time, this contract has common basic features: It comprised an advance of capital - in goods or money - to be reimbursed conditional on the

[1] This was one of the many contracts for trade finance that appeared in the late medieval and early modern period in Europe before the age of the corporate business– although similar instruments were used in Mughal India (Irigoin this volume). Respondentia is the name in English and thus the one used in this introduction (emphasis of the editor). Similar contracts had different names in different spatial and temporal contexts; authors here use slightly different definitions and names– i.e sea loans, *correspondencia* and respondentia/ *cambium maritimum*. This also reflects different views on the nature of the contract – which I have preferred to leave as the authors conceive them for further research on the topic (note of the editor).

vessel' successful arrival to a port of destination; it conceived a pre-established return – a premium – lit. a reward, sometimes explicitly specified as percentage of the principal; in other cases it was included in the final amount due via the implicit exchange rate. It did not have a clear maturity or sight term, but everywhere the loan was timed from the date of the ship departure to an additional, defined period following the arrival to destination. This could be a matter of weeks in the Mediterranean and China Sea; of months (between one and three) in the intra-Asian trade or in the Atlantic; it might extend over years for sailing over the Pacific and in the private trade around the Cape route to Asia. The destination port was not always specified or was broadly defined. For instance, from Europe it could be issued to "Canton, in China, or any place in the East Indies", "to China and Persia or elsewhere beyond the Cape of Good Hope without deviation", to the "Kingdom of China, Coast of Java, and Coast of Coromandel", to "the (West) Indies" and the *Mar del Sud* (the South Seas). Sometimes the loan allowed other ports of call on transit, which was a frequent occurrence in the seventeenth century intra-Asia trade or in the Caribbean; however, lending in Manila was confined to Acapulco only as the terminus of the Pacific line. Round trip to specific destination often separated the –different- premium rates for each leg.

Most historians currently draw a definition of respondentia from the vast eighteenth-century literature on contractual and legal matters – without much inquiry on the nature and implications of the contract. Those sources described respondentia along with other commercial and financial instruments of the time – bills, insurance, bottomry, etc- used in Europe at the time (Targa 1692/1803, Ricard 1722, 1723, Cunningham 1761, Allen Park 1787/1799, Marshall, S. 1802, Annesley 1808 – for a sample of titles in English). Most of them pointed at the specificities of the Spanish use of it. For a lack of clearer definition, English underwriter, merchant and eighteenth-century publicist John Weskett noted that it was "in Spain where they (respondentia) are more frequent than elsewhere- and better understood" (Weskett 1781, 466). Yet, Spain's first legal tracts on

commercial and financial contracts – *Ordenanzas de Bilbao* enacted in 1737- neatly distinguished respondentia for the first time from other contracts in place like bills, bottomry, policy insurance and other lending instruments after centuries of use[2]. In a 1783' book dealing with commercial contracts, French jurist and arbitrageur 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. […] I*t is different from all other contracts. It forms a special kind of contract*". (Émérigon 1783:389 emphasis mine)[3]. So, what sort of contract the respondentia was? Was it a securitized loan or a risky investment? The articles in this collection aim to shed some light on these issues studying the use of respondentia in various maritime trades of Europeans in both Indies.

Earlier historians looking into the "Commercial Revolution" in continental Europe several decades ago paid attention to the contract in the Mediterranean trade for the late medieval period (See 1928, Hoover 1926, Sayous 1927, De Roover 1946). In the 1960s and 1970s' Flemish, French, and Italian economic historians studied its iteration into the Atlantic trade. Because the contract was dominant in sourcing American silver for the Old World after 1600, it was cursorily associated with Spain's limited financial development (Everaert 1971, Bernal 1992). French historians of the 1970s qualified respondentia as "*technique menue et archaique de credit commercial*" despite its importance (Carriere 1970: 231). More recently

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[2] The title of chapter 23 *"De las contratas del dinero o mercaderías que se dan a la gruesa Aventura, o riesgo de nao; y forma de sus escrituras"* [or Money or merchandise covenants that is given at [respondentia], or risk of the ship and the forms of its deeds- my translation]; chapter 13's title was "Of the bills of exchange, their acceptance, endorsement, rejection (protest) and terms"; chapter 14 was " Bonds (*vales*) and promissory notes, acceptance, endorsement and terms". *Ordenanzas de Bilbao* (1737/1769).

[3] However, in the section about the mode of paying contracts *a la grosse,* Émérigon made a significant observation: "Avec la risqué fine, le preneur est obligé the payer, *argent comptant* la principal et le change maritime qu'il a promis»; i.e the payment ought to be cash in the currency stated in the contact. (1783 ; Chapter IX, section II pp 556 « Comment en quel temps et en quel lieu, le contrat the grosse doit il être payée? » (my emphasis).

researchers on French commercial houses invested in the re-export of textiles, slaves, and silver specie to the rest of the world qualified the business as "tantamount to trying luck, to making a good move; ... (a) playful conception of business (that) reveals an increased diversion of funds from productive investment" (Chamboredon 1995: 387). Nevertheless, French commercial houses extensively traded on respondentia. The instrument served to channel private savings into the Atlantic, like that of the Voltaire into the slave trade (Chamboredon 2008). Henceforth, research on respondentia declined, as it was ostensible that this was not an "innovation" leading to the development of a financial system or improvements in the [so-called] efficiency[4]. Financial historians turned instead on bills of exchange, bonds, and sovereign debt instruments of princes and parliaments, focusing on the establishment of banks and stable quasi fiat monies. More recently, with the institutionalist "turn", economic historians have turned the attention to the late medieval institutional innovation in contractual forms and business organization. In the last ten years scholars have turned back to the institutions of the European commercial revolution to trace them back – and link - with the institutional path conducive to "economic growth" and eventually the onset of the Great Divergence in late Medieval Venice (Gonzalez de Lara). Gonzalez de Lara stressed the relevance of the *commenda* and the *compagnie* as innovative forms of business organization in late medieval Venice; Zanini (2023) and Van Doosserland (2009) have recapped the virtues of the different variations of sea loans used in late Medieval Genoa. Lamikiz (2023), who contributes to this issue, has elaborated different versions of the contract used by Spaniards in the early modern Atlantic imperial trade. All of them are clearly heirs of DeRoover and Émérigon writings and follow their equivocal definitions quite closely[5]. This research has well documented cases that

[4] A recent comprehensive summary on the "innovations" in business organization in Late Medieval Italy goes that far as to stress their role "as determinant of economic growth" and conjectures that they "set the origin of the Great Divergence in the Middle Ages". (Gonzalez de Lara 2018: 1, 83)

[5] DeRoover made several seminal contributions to the field of contractual and financial history of the late medieval period; some of the contracts and instruments he analysed persisted into the

emphasize obvious difference at the expense of the common traits. However it remains much locked in describing the particulars of some European context at some point in time at the expense of common features that persisted and which would help to assess the emergence, adaptation -and migrations- of institutions (*a la* Harris (2020))[6]

On the other hand, attention to the incipient corporate finance of early modern chartered and joint stock companies overshadowed research on private trade finance that remained locked in a multitude of separate, micro studies on the business of individual merchants or merchant houses. Yet respondentia did not disappear and probably even expanded beyond Europe. In fact, trade and economic historians have repeatedly bumped on the contract, without much exploration beyond of what was considered an "anomaly". For American economic historian John J. McCusker "not all is perfectly clear (about the contract) but it was certain there were no bottomry transactions of the usual sort[7]" (McCusker 1978:295).

Given the private nature of the contract, i.e. a one-off, termed, and non-negotiable agreement between private parties, and that deals ended with the conclusion of the journey, little hard evidence remains to assemble data of (any) frequency to quantify longitudinal data on values or trends. As in the case of bills, few traces of its systematic use survive unless there was a dispute recorded or notarial intervention. Institutional lenders were an exception rather than the norm and they notably clustered in the Asia trade, as shown in Ruiz Stovel and Ruiz Moreno

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early modern period. His studies about the premium insurance, sea loans, bills of exchange, dry-exchange and *cambium maritimum* in Europe preceded the period when Europeans intermediated the commerce of Asia with the New World. Cfr DeRoover (1963, 1970).

[6] The articles here instead focus on one of such instruments as it was used by different merchants and trades in the West and East Indies trades. The authors here use various definitions for the instrument and have different interpretation on the nature and purpose of the contract. Those have been maintained to foster a debate and invite further research.

[7] Often mistaken for bottomry, which was a contract collateralized on the hull, the keel or the earning– freight- of the ship; respondentia was collateralized on the goods or merchandise aboard. Authors in English often assimilate both instruments –(Steckley 2001, Ebert 2011, Leonard 2012) (See DeRoover 1963, for the distinction).

contribution below. Evidence is more abundant in records of merchant-brokers and the registers of notaries, which are the most common source for this line of inquiry – like the very well-known study on the Carrera de Indias financing by Miguel Bernal (1992). The role of notaries in maritime commercial contracts was different from that of the 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 that were realised thousands of miles away and took months – often even years- to settle.

Because bottomry loans also consisted of an advance of capital securitised on the ship (bottom), or on freights if taken by shipmasters, trade historians tend to associate both instruments and define respondentia as a 'loan cum insurance' (Van Dyke 2011:45; Carrasco-Gonzalez 1995:81; Haider 1996 fn58). Others have alleged some insurance component built in the premiums or emphasised its suitability to by-pass usury laws restrictions (Lamikiz 2023). They differently interpret the high premiums in the respondentia by a variety of factors; for example as a result of the "high risks" of the transoceanic trade (Boxer 1959, Mesquida 2018), of the scarcity of "indigenous capital" (Van Dyke 2005:153) or at destination (Bernal 1992), of the greater "hazards of coastal navigation" over sailing in open seas (VanDyke 2011:47) and, even, of the "exploitative" nature of the financing (Torri 2018:116-17).

Maritime insurance indeed did not displace these contracts as securitization by pledging the ship to a commercial transaction was common practice still in the eighteenth-century Europe (Bernal 2013:47, Lo Basso 2016b, Weskett 1781:58, Annesley, 1808:173-194). Even after 1720, when the business of marine insurance was finally incorporated in England, lending at respondentia continued in London' private deals in the East Indies (Steckley 2001, Irigoin' contribution to this collection). Leonard recounts how "A good dozen insurers independent and

alternative to Lloyd's appeared in India and China between 1780 and 1810 drawing on Indian capital". These were "multicontinental, multiracial share–holding networks" in West India and later Canton which provided cover for risk-sharing and underwriting to private shipping within Asia (Leonard 2012)[8]. Neither there did the existence of premium insurance in the "tradition of western law merchants" displace respondentia contracts. Apparently, there was a small but profitable outlet for respondentia in Surat and Bombay from at least 1749, where both local and European merchants borrowed from each other to finance trade cargoes (cited in Leonard 2012:988).

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[9]. Only lenders could take insurance in France and England, and London insurers did not cover respondentia because they found "inconvenient to price the risk" as the nature of the assets was controversial; they refrained from issuing policies on "such immaterial asset" (Weskett 1781:461-467). They saw Respondentia like a "wagering o gaming" contract which raised their concerns[10].

Lenders might, and did in some cases, additionally insure their assets or (the value of) capital as Leonor Costa study of the Portuguese *risco* in this collection shows. The Ordenanzas de Bilbao stated that in the case of shipwreck, lenders *a la gruesa*

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[8] Known as *bimä* "insurance was offered on goods in transit and cargo, as well as on hundis, merchants' bills of exchange. Specialised businessmen called *bimäwäläs* traded exclusively in insurance and transport", in addition to moneychangers and bankers. Contrarily to Europe-centred institutional interpretations, the agency of Indians in trade finance and commerce has not always been fully appraised. (Leonard 2012:987)

[9] Total loss was moderated by General Average (Weskett 1781, Fusaro et al 2023). Partial losses from jettison or the captain' proven negligence (barratry) were apportioned according to the "best practice" –i,e. Lex Mercatoria. The mutualisation of the losses -e.g. *averia*- was an earlier practice in Castille; See AM Rivera Medina and M. Garcia Garralon articles in Fusaro (2023); also, Cespedes del Castillo (1945).

[10] Even the Marine Insurance Act of 1906, chapter 4.1 and 2, considered interests by way of "wagering" or "gaming" – called *contrato de apuesta* in Spanish - uninsurable. "The law required the insured should have an interest in the subject matter of the insurance" (Willmore 1846, 748). https://books.google.co.uk/books/about/Commentaries_on_American_Law.html?id=1cxCAAAAYAAJ&redir_esc=y accessed 28.07.2024

(respondentia) had preference to receive insurers' payment in whichever part of the cargo had been recovered (Ordenanzas de Bilbao 1737/1769:217). Creditors of *prets-a- la grosse* in France had prelation over other freighters in the case of damage (Émérigon 1783:241), but borrowers were not allowed to take insurance on the lien – goods or money. In Spain, it would require the loan to be registered with authorities before departure, and surely a precise description of the assets. In England, chief Justice of the King's bench – and an authority in commercial law -Lord Mansfield held that "by the law of England there was neither average nor salvage in bottomry contracts"; however "this point [had] never been decided"[11] (Montefiore 1803" Bottomry and respondentia"). Late eighteenth-century treatises on shipping and insurance recapped the issues that an insurance policy had about "some kind of property" which did not fall "under the general denomination of *goods* in a policy". In this case, the matter was the undefined nature of gold and silver "coined or uncoined and pearls" whether were a commodity or money "for the purposes of commerce, which constitutes part of a cargo". According to Park' *System of the Law of Marine Insurance,* "they were indistinctively insured in London and Hamburg but not in Amsterdam, Konisgberg, Middleburg and other cities whose ordinances declared that money shall not be recovered under the denomination of goods or merchandise; but the insurance must in the policy be expressed to be upon money to render it valid" (Park 1809: 25).

Under respondentia the lender assumed the "sea risk"; that is total losses if the goods or the ship never arrived at destination. Risks were conventionally presented as "the risk of fire, sea and unintentional loss"; everywhere this became a fix clause in all contracts written in a formulaic manner (see examples in the appendix). For instance: a contract in Surat for Batavia in 1749 indicated the risks as "by fire, storm, arrest, war, robbers, or in any other way whatsoever"; one

[11] "The lender on bottomry or respondentia is not liable to contribution in case of general average has been much and justly questioned. It is contrary to the maritime law of France and in Louisiana there is a decision against it ..it seems conclusive that if the lender on bottomry owes the preservation of the security of his money to any sacrifice of ship or cargo (respondentia) he should contribute to the general average" (Smith Homans 1857:1629)

signed in Cadiz for Lima in 1777 defined "risk from the sea, wind, earth, fire, friends, foes and any other wretched events at sea"; while bonds issued in London specified "an utter loss of the said ship by fire, enemies, Men of War or any other casualties shall unavoidable happen". 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" (see details in the appendix to Irigoin' contribution).

Security was placed on the goods on board and eventually on the assets of the person(s), and heirs, who took the goods on lien. Thus, the loan was increasingly void of collateral other than the goods themselves. As the separation between the capital ownership and the management of the investment increased with the scale of trade, bottomry and respondentia became distinct[12]: the latter by a bond or contract by which money was borrowed on the security of goods, and the former the same was done on the security of the ship or its freight. This separation of the security from the principal accelerated with the expansion of overseas commerce in the seventeenth century, by the eighteenth century respondentia was overwhelmingly a lien on the merchandise aboard. Unlike insurance where a premium 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 ex-ante in full. He advanced the principal and lost any claim to repayment if the goods pledged as security failed to reach the destination. Therefore, premium seems to be more an estimation of the expected profit, than a calculation of the risk.

The assumption of very high risks in long distance trade has persuaded historians that the high "interest rates" charged on the principal directly related to such

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[12] *The Universal Cambist and Commercial Instructor…* distinguished both contracts as Respondentia: a bond or contract by which money is borrowed on the security of the goods, the same as in bottomry on the security of ships. (1811, p 305).

hazards. Premium rates of over 40, 50 or even 70 per cent were frequent in the seventeenth century as recorded by trade historians. As rates tend to correlate with the distance, some historians see in it a time dimension of the cost of capital, which reinforced the impression about navigation risks pushing the rates up. However, lacking consistent examination of high frequency data does not warrant this interpretation. An observation of rates for respondentia (*riesgos*) and insurance premiums in Cadiz in 1777 shows a comparison with the level of freight rates- however they do not seem to match this interpretation. Data in the table below does not indicate any strong relation between distance –or hazards- in the premium for insurance and respondentia rates alike. The insurance rate was similar for distances as different as Cadiz-Cartagena route as Cadiz Buenos Aires'; the premium on respondentia does not suggest either a relation with relative hazards or length of the route, as the premium for Veracruz, Lima and Buenos Aires, within a very similar range

	Insurance premium	Respondentia premium (*de los riesgos*)
For Havanna	2.5%	From 9 to 11 %
Cumana & Honduras	3 to 3.5%	From 11 to 12%
Cartagena (*)	3 %	From 11 to 12%
Veracruz	3 %	From 16 to 18%
Lima	7 %	From 16 to 18%
Buenos Ayres	From 3 to 4 %	From 15 to 17%
Manila (~)		33%

Notes: All insurance rates were the same in the return journey, other than from Cartagena (*) where the rate was .5% higher if returns were in goods (*frutos*); (~) the premium corresponds to the period in which the navigation between Spain and Manila was direct from Cadiz.
Source "Precio de los Frutos y Metales de Indias, en la plaza de Cadiz. Corrientes". Campomanes (1775-1777: 145,146)

Ultimately, the commercial risk distinctly fell fully on the borrower. As the rate – indeed, the premium - was established ex-ante with the initial capital outlay, the borrower must have been confident that the ventures would yield even higher returns, or had superior information as Costa and Pinto de Albuquerque argue in their article. Arguably, the premium could also be considered the upper bound rate

at which borrowers were willing to pay for capital rather than an indication of risk or the opportunity cost of capital. Hence, the characterization of respondentia as a high profit / high-risk investment is not persuasive.

Reportedly, premiums rates declined over the eighteenth century; high rates and a falling trend over the century repeat in most cases across long- distance commerce by 1800 as suggested in the articles in this issue. Similarly, everywhere, rates quoted were systematically much higher than the customary interest rates. Confined to the study of individual trades, these high rates are taken pretty much at face value and neither their origins, the trends nor the implications have been sufficiently explored. The papers here offer new explorations on the topic based on some early modern cases of overseas trade studied and offer a comparative look at these rates.

Nevertheless, the qualitative evidence is very abundant, ,as historians have widely recorded its use in the vast scholarship on different, particular trades - but always done separately- with various and disparate interpretations. This segmented approach to the instrument has led to different understandings of the contract. Because its use was waning in the later eighteenth century and a cashless means of remittance replaced it in the 19th century, financial historians are under the impression of the inadequacy and inefficiency of respondentia (Gelderblon De Jonker (2015). This is associated with the shallow development of the financial markets where it was current and where banks, bonds and bills were absent or took the Europeans to take overseas. Thus, the collection of papers here redresses the interpretation of the financial history literature to analyse the contract for private trade finance in a global scope for first time.

Despite the recent revisionist take on the divergent development of the premodern global economy, some major issues remain blurred; namely the monetary nature –and role- of precious metals, the financial aspects of their incorporation in the circulating medium of the European economies, their concurrence with monies of

account and cashless means of payments in the transition to nineteenth century monetary regimes. Indeed, the mechanisms for the European acquisition and re-export of silver coins- money- to the East Indies remain under-researched. There is a relatively better understanding on the broad shipment of silver specie to Asia than about the process through which it circulated through the European economies, beyond its arrival in Spain. It was Europe the "sink for silver in this period", which contributed to the monetization and commercialization in Eurasia (Fynland and O'Rourke 2009: 213). "Playing a monetary role" did not engage trade historians (Williamson and O'Rourke 2002: 421). By account of scholars of the Europeans' East India trade, silver specie in *reales*, *pilaren* (pillar), Mexican and Spanish dollars – e.g. that is mostly silver coins procured in America- made the largest share of all Companies' silver exports to Asia (Pol 1985 *Bijlage* II 132-129; Prakash, 2008 p 86 for the VOC and Chaudhury 1968 and 1978/2010 Ch 8 for the English East India company, Häggqvist (2024) for the Swedish one; and for China imports (Irigoin 2020, fig 4). However, despite the monetary role of those silver exports, scholarship on exchange rates and currencies in Europe have "refrained from discussing the impact of American silver and gold" (Denzel 2010: lxii).

Coinage in Europe had always been short as in the fifteenth century "bullion famine", a scarcity that ceased with the New World supplies. Since the late seventeenth century, growing European imports from America, and exports to Asia were overwhelmingly conformed by coined gold and silver– i.e. money. Notwithstanding the extensive research on endogenous sources of modern economic growth and the timing of the divergence of Europe of the past 20 years, this trade is crucial to understand the Smithian growth process in –and the integration of- the premodern global economy (Irigoin 2018; Zwart & Van Zanden 2018). How did silver and gold reach the European mints? What was the channel by which silver and gold from Iberian America made the way through Northern European to be on board of the Dutch, English, French or Swedish East India companies bound to Asia? Although England did not coin silver throughout the eighteenth century, the re-export of coined silver to the East made the

"supremacy" of the English Company in the eighteenth century (Mayhew 2018, Prakash 2008, ch 7); How did both East India Companies in England and the VOC, or the Swedish Company procured the silver coins for trade with Asia? (Gaastra 1983). The papers in the collection shed a first light on these matters, which deserve proper further examination by monetary and financial historians (Palma 2020 for an exception).

Financial history literature is well acquainted with financial developments in the parts of Europe, "where all began" (Neal 2002). In the rest of the world, where these changes hence 'followed', they did not occur endogenously or did not happen until the nineteenth century – and partially at best. Their trajectory is often explained against the European experience (Carlos & Neal 2011; Atack and Neal 2009); and conventionally seen through the differences with the European counterfactual. This collection - that started in a session at the WECH in Paris 2022, under the title of the "Great Intermediation" -addresses the partial understanding of the financial environment of the extra European world looking at the instruments that featured in European private trade with the rest of the world. These economies remained locked in a cash system of payment and had for long a problematic joining of the international settlement mechanism that emerged on the back of the Gold Standard.

To fill that void, the collection of articles here offers examples of the use of respondentia in the seventeenth and eighteenth century's long-distance trade of Europeans as intermediaries who found it a suitable instrument for these global exchanges. It shows how this contract for private trade finance that linked Europe to the rest of the world coexisted and coevolved in time and space with bills of exchange within Europe. The articles discuss the alleged "inefficiency" – indeed the greater adaptability for the trade in question: the intermediation of American

commodities, sugar and silver to the Old World[13]. As both were only procured in America as return of trade – not extraction, their intermediation involved a significant export and re-export trade of manufactured goods produced elsewhere in Europe and Asia.[14]

The relative efficiency of the instrument was contingent on the nature of the trade – an exchange of goods for silver, and silver (or sugar or diamonds) for other goods – throughout more than two centuries. There was nothing flawed in the design, or failure on their setup - as to make it such "archaic" financial instrument. It lacked the virtues of other instruments -like the bills- in providing liquidity, developing a cashless means of payment, and propitiating a mechanism for settling trade balances away from precious metals. This was precisely the ethos of the European intermediation in such commerce, which needed to "substitute cash" for the continuation of their trade with Asia.

The widespread and persistent use of respondentia by Europeans outside Europe trace its suitability to handle uncertainties and risks inherent to long-distance trade dealing with long waiting time. Two articles approach these aspects from different points of view; Leonor Costa Freire and Pinto de Albuquerque' essay addresses the role of resulting information asymmetries and the risk of moral hazard and the institutional solutions that in their view explain the prevalence and decline of this type of contract to finance long distance Portuguese trade in America and Asia. The other one by Irigoin considers the uncertainty in future prices (currency or exchange rate risk) inherent in overseas transactions that incurred in operations of exchange with foreign currencies. She finds that respondentia as a collateralised loan, was rather an indirect financing vehicle, a

[13] Both commodities in time performed as monies and means of payment in the early Iberian trade in America; sugar in early cash-starved Brazil (Mauro 1960) and silver increasingly in coin form, for the global economy (Irigoin 2018). As trade in diamonds, difference in quality made the pricing of remittances very difficult. See Irigoin article in this collection.
[14] The importance of Cadiz marketplace in the procurement of silver coins for (other) European trade in Asia has been under-researched by Spanish historians see (Konninckx 2011, Von Brescius 2022).

form of debt to acquire foreign exchange without conversion -an advantage the contract offered to such trade over other financial alternatives. In the absence of a centralised financial system, the instrument reduced information costs and ensured future purchasing power; it might also enable to gain from markups and arbitrage in goods and money – although both authors do not entirely agree on that point. Both coincide though that respondentia persisted while the structure of global trade maintained such rationale.

Thus, the papers here offer a revision to the understanding of the early-modern financial history with other counterfactuals, revealing the rationale for financial instruments otherwise considered "inferior", "inadequate", "archaic" in contrast with Europe's trajectory within. They resulted from their adaption to the current economic and monetary circumstances or the navigation system in the global economy. In so doing, the collection helps to qualify the process by which Europe "diverged" adapting their financial institutions and monetary regimes to the – great - intermediation they carried between the Old and the New World.

Two case studies explore its suitability for the Spanish maritime commerce, despite differences in shipping organization in the Atlantic and the Pacific oceans. Both trades converged over the Spanish New World to exchange goods for silver. This trade was organised around fairs – for the most part – where Spanish American importers and large merchants were the real price makers because of their leverage in the silver business. The finance of exporters to Spanish America was organised differently despite the composition of their trade was quite comparable, making them natural competitors. Although their journeys had different duration, and freight was organised very differently, the capital invested in origin had similar rates of return. The trend of the returns over time was different however as result of the competition between the Atlantic and Pacific sources of American imports. Unsurprisingly, a less open and nearly monopsonic route on the Pacific shows stickier rates in comparison. Interestingly, Costa Freire' comparison of rate of return on Portuguese capital in the Atlantic and India

ocean trade shows a similar pattern inviting to expand the comparison between Iberian trade.

The first contribution by Xabier Lamikiz examines the reasons for the use and decline of the instrument – sea loans in his case- in the Spanish Atlantic trade over the three centuries of colonial rule in America. It reveals an organization of maritime trade that was equally distinct from the contemporary Portuguese case than from the better-known chartered companies of other European nations. Lamikiz argues for a "heavily regulated" commerce Spain organized until the late eighteenth century, in which the sail of periodical fleets restricted exchanges to Spaniards' participation. Thus, this Spanish version of mercantilism, like Navigation Acts or *l'Exclusif,* reduced market risk and unpredictability", and "maintained the colonies undersupplied" generating "significant, though volatile, profit margins" for the privileged merchants. In that setup over the Atlantic, Lamikiz argues, the maritime loan became an "appropriate credit instrument" because the lender's sea risk bearing, which characterized the contract, propitiated to charge high interest rates well above the legal limit of usury laws, offering greater returns to capital than otherwise. Lamikiz finds that the "gradual deregulation" of the system and the opening of more ports- in Spain and in Spanish America to colonial trade after 1778 "brought about more competition, unpredictability, and narrower profit margins". This, he argues, made interest rates to drop converging with the standard commercial rate, affecting the qualities that had made the maritime loan the trait of trade finance in the Spanish colonial trade on the Atlantic.

The second article by Rivas Moreno and Ruiz Stovel takes on the use of the contract the Spaniards made in the Pacific trade in the eighteenth century- *correspondencias*. The Pacific trade was the most direct route for the exchange between silver producing regions – Mexico - and the main market, Asia, and China more particularly. The article examines the contractual elements that channelled a large flow of coined silver through Manila, that - they argue - performed as a

very liquid capital market for the larger intra-Asia trade as well. The authors emphasise the role of *correspondencias* – the iteration of respondentia over the Pacific - in "solving the fundamental problem of exchange". They argue for the qualities of the contract that allowed a variegated body of participants in the larger exchange of silver for merchandise that comprised most of Eurasian trade at the time. Hence, *correspondencias*, as a private order solution, provided "security and guarantees" to a truly cross-cultural trade within Asia. Lacking institutional frameworks that organised long-distance capital flows and exchanges, the instrument "enabled individuals to invest, to make claims on future returns, and to adequately apportion risks". The piece, on a relatively under-researched and often mischaracterised subject, is the first systematic exploration of the capital market of Manila and by revealing the backbones of the exchange in the Pacific; it makes a novel contribution to the history of trade finance of the early modern global history.

Leonor Costa Freire' article takes on another yet comparable long-distance commerce where the instrument – i.e. sea loans - dominated: the Portuguese trade on the Atlantic and the Indian oceans in the seventeenth and eighteenth centuries. Comparing the use of sea loans – *riscos do mar* – in both trades Costa Freire argues that the prevalence and obsolescence of the instrument relates to the management of private risk involved in the institutions and organization, and regularity, of shipping in each route. Her study is one rare case of a comparison of private trade finance in the *same* market – Lisbon. Her article makes several important contributions; for one this is also a first systematic analysis of high frequency data from - hard to collect- information drawn from notarial sources that echoes Miguel Bernal' seminal work on the *Carrera del Atlántico*[15]. Costa takes on Bernal untested interpretation of the role of markups in European

[15] The article clarifies also the conventional -and confuse- definition of respondentia as loan-cum-insurance instrument by showing empirically the complementarity between premium insurance and *riscos* that was accessible to lenders in early modern Europe.

maritime trade to make her arguments for the currency of sea loans (respondentia) - in lieu of equity finance - as other legal and institutionalist historians of European trade assert. Her point on the results of the shipping organization and private order institutions in the Portuguese commerce in both Indies mirrors the -different- trends of the respective rates of return on capital vested on *riscos* in the Atlantic and India trades. This contrast arises from differences in the "moral hazard mitigation" for lenders and the "perception of the borrowers' one protection" that a higher "quality of information" that the navigation system in one and another route allowed. This suggests a contrast to the Spanish case, traditionally associated with "highly regulated" and "monopsonic commercial schemes" where competition of "freer trade" brought about lower rates of return; in the Portuguese case – according to Costa Freire- the unorganized (neither privately self -organized or by the crown) sailing of individual "free-entry" ships to Brazil inflicted "capital losses". This alleged difference is worthwhile further exploration. It is impossible – and not the point here- to establish whether this is the result of interpretative or factual differences; so, this is not settled here. On the contrary, it should be an invitation to more reciprocal comparisons between both Iberian trades beyond the conventional wisdom on commercial templates, and to pay more attention to the local procurement (and financing) of the export goods in the place of production and the ultimate destination of such imports in addition to their shipping overseas.

A fourth article complements these institutional aspects of the long-distance Iberian trade using another approach that seeks to explain the widespread use of respondentia in early modern maritime commerce. This last essay highlights the character of respondentia – also known as *cambium maritimum* - as chief instrument for exchange. As silver was "a necessity" for Asia and it had to be procured from trade in Spanish America, Irigoin's article argues that the instrument was key for the continuation of Europeans' global trade. Because imported silver was indeed specie, where multiple means of payments existed and silver was the preferred one, it performed as foreign currency. Lacking a common

standard for metallic monies, and with various monies in circulation, foreign coins created issues for trade, prices and exchange rates that affected trade returns and remittances. After documenting the global scope of the instrument and discussing the nature of the contract, the article emphasizes one feature that was common to all trades, from the Mediterranean to China: the specific denomination of the specie in which capital was to be reimbursed. This, Irigoin argues, offered advantages over alternatives about certainty on future prices and allowed the capture of arbitrage profits. Europeans who separately used bills within Europe, or through European companies, but used respondentia when dealing in Asia and Spanish America; so, instruments coexisted and complemented. Bills as means of remittance were indeed an impossibility since silver specie had a persistent "premium in Asia" and was undervalued in relation to European currencies. The article explains the advantage of European intermediation in the use of monies of account by financial institutions, which regulated the pricing of species and exchange away from private markets as elsewhere attracting foreign species to their realms.

Thus, the four articles here elaborate on the use of instrument for private finance in various cases of the most conspicuous trades in the long-distance commerce of the period, like that of silver, sugar and textiles. All of them offer a slightly different characterization of the instrument for each trade as they focus on the use of the contract in their specific geographical and temporal context. There has been no attempt to standardize features into a canonical definition or to offer a prescription for its understanding. Rather the articles keep the specific details of the authors' interpretation to call attention on to a largely under-researched financial instrument for the finance of trade in the early modern period. Some considers it as a mix of a loan and insurance; others see it as a vehicle for investment like a private equity of today, or a limited partnership, even as a sort of precocious forward-swap. Together they cover various instances of the global intermediation of Europeans and give a comprehensive look at the scope of the instrument and at its rationale in conjunction, or as an alternative, to other better-

known institutions and instruments like the cashless means for payments and remittances that characterize the canonical European case.

A selection of contracts in the appendix serve to illustrate the structure and nature of the instrument.

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Managing exchange risk; foreign monies and private trade finance in pre-modern long-distance trade. (or why did not bills of exchange circulate beyond Europe?)

Alejandra Irigoin

Keywords: Private maritime trade finance; early modern global commerce; exchange risk; monies of account.
JEL N20; F 31; F 65; G23; G14.

Abstract
By specifying the specie on which returns were to be repaid respondentia was a ubiquitous financial instrument to carry international trade in which silver was "essential" for its continuation. Where multiple currencies existed and silver was the preferred money, imported silver species performed as foreign currency. Thus, the import of foreign coins created issues for prices, profits and exchange rates.
Eighteenth century Europeans alternatively used respondentia or bills depending on the monetary context, casting a shade of doubt on the inherent efficiency of a cashless means of payment. Until the 1820s, private bills of exchange did not circulate where cash had a premium. Europeans developed means to regulate the price of foreign coins and exchange rates. Elsewhere respondentia allowed to hedge against exchange risk and propitiated arbitrage profits, giving an advantage over bills.
The article documents the global scope of the instrument; it explains the exchange nature of the contract and explores the issues that respondentia came to solve. It highlights the role of monies of account Europeans used in pricing foreign currencies in international trade.

Although Charles Lockyer – aboard of the *Streatham* of the East India Company (EIC hereafter) in 1710s Madras – advised that "A man of an honest character seldom wants money at *Bottomree,* or Respondentia to what port soever, (as) he is bound, on his own personal security", captains and supercargoes in India borrowed on respondentia from the company for the reminder of the century (IOR/E/107,108,109- see appendix). They used the instrument to transfer profits

and legacies back home and in private deals with South Asian lenders. Ebenezer Blackwell of Lombard St, partner of one successful London banker Martin's Bank ltd (in business since 1563), was still issuing respondentia loans in the 1780s to captains and chief mates of the company ships to the East Indies on their private capacity (Martin's Bank, see appendix). Furthermore, Charles Magniac – the seed of Jardine Matheson & Co. issued respondentia bonds in China until the 1830s (GBR/0012/MS JM/F5/2,5,10,12). Henry Harnett of Calcutta -a company servant- lent at repondentia secured on ship cargoes (Harnett 1725-1729). Lockyer also detailed the rates of returns 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). Apparently, as this essay argues and contracts in the appendix show, the rates had not changed much throughout the century.

The contract was not privy of the English; it was instrumental to subscribe the initial capital of the *Compagnie Francaise des Indes Orientale* in 1700 (*Recueil ou collection des titres* .. 1775) and it was the vehicle to finance early Portuguese trade from Brazil in the seventeenth century, when sugar served as remittance (Strum, 2017, Mauro 1960). In the 1630s, century Dutch "peddlers" dealt rubies for textiles with Indian merchants in Burma (Dijk 2001:15) and private merchants used it for remittances in the diamonds trade through the EIC hundred years later (IOR/M/fs 389-406). It also appeared in the businesses of private Dutch trade as in that of the Danish and Swedish companies, in the East Indies too. It showed up equally in the West Indies trade. Dutch merchants in Curaçao sent "sealed bags of Spanish silver" to Amsterdam via Albany, New York in the 1740s on respondentia with "a 10% agio" (McCusker, 1978 293-295), and North Americans - late comers to the East Indies - used it too in their deals in India and China in the 1800s (Porter 1937). Why would Europeans use this contract instead of bills, which were already dominant in the intra-European trade?

This ubiquity is intriguing. Across national agents and colonial exchanges over the Mediterranean, the three oceans, and the South China Sea: European's long preference for respondentia over bills of exchange when dealing in extra-European markets stands out. This article looks at respondentia and underlines its specific monetary aspects as the rationale for its widespread used. It argues that by prescribing the quality of the monies in the repayment of investments, the contract was convenient for trade finance in maritime commerce involving different currencies and peoples with a long waiting time. Lacking both a cashless means of settlement and a common standard for precious metals across distant markets, maritime trade meant dealing with 'foreign monies'; so, international commerce was susceptible to changes in both the exchange rate and the market values of metallic monies in tandem. Unlike bills that were denominated in domestic currency, respondentia allowed traders to mitigate the uncertainty of exchange. Arguably, it served well to hedge against uncertainty in future prices and to capture arbitrage gains.

The first section of this paper defines respondentia, discusses historians' characterization of the instrument and establishes some differences with bills of exchange used at the same time in Europe. The second section describes the terms and nature of the contract, delving -particularly- into the determinants of the "interest rates" or *praemium*[1] and, it – roughly- compares trends in the rate across the eighteenth-century global commerce. The third section documents the global extent of the contract use in a comparative assessment to shed light on the drivers of this mode of trade finance. The fourth section underlines the exchange character of the instrument looking into crucial issues embedded in long distance trade that performed within a diverse monetary setting. It discusses views of money as commodity – i.e. standardising the intrinsic value of specie – highlighting the role of monies of account built out of the European case, which have limited the understanding of global exchanges in heterogeneous monetary

[1] From latin *praemium*; reward, prize, profit. It needs to be distinguished from the premium as in insurance.

settings. Without common standards for metallic monies – even a standard for coins as in China and public institutions performing with monies of account, trade with foreign coins created significant issues for commerce, e.g. marks-ups, the pricing of species and exchange rates which bills could not solve a similarly low cost; Thus, remittances in gold and silver persisted as respondentia lingered. The conclusions question the alleged inefficiency of respondentia over cashless alternatives that were booming in Europe at that time.

I

As the contract mobilised capital with which procure silver to further trade elsewhere, with a turnover in the order of several months or years, the contract resembles a 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; it dealt with mark-ups, like spot and future prices of goods whose quality was difficult to price – like sugar and diamonds[2]. Irrespectively, the contract clearly was suitable to finance trade among economies performing with different cash means of payment and to obtain silver specie -i.e. money- in Mexico, in Cadiz or Manila. In these regards, it was clearly an "importer" type of finance, that mitigated costs derived from exchange and currency risk and realised profit from arbitrage when dealing foreign specie within private money markets – as discussed below.

Looking into notarised contracts in thirteenth century' Genoa' twelfth and thirteenth centuries trade with pepper in Byzantium, De Roover (1963:54) identified three types of sea loans which superseded the long-established equity partnership *commenda* as maritime commerce expanded: one was the "ordinary" sea loan (*foenus nauticum*). This loan was "unsecured save for a general lien on

[2] The alternative was to wait for the sale of diamonds in London "by accepting a bill at given rate i.e. 162d per pagoda when the book rate was 114d or sending them for sale at probably higher profit" (Saxe 1979: 14). The loss incurred in the exchange was hence 42%. See also Vanneste (2020)

the debtor's property". Another "called in medieval England the *respondentia"* was a loan in which the "principal and increment must be paid even though the ship perishes provided the cargo to be safe"; and a third type was the bottomry loan, which were usually secured by part or the whole of the ships or its freights subsequently. He also highlighted another contract that increasingly replaced the ordinary sea loan and was becoming popular by the thirteenth century: the *cambium maritimum*. In a later piece, De Roover (1969) could not neatly establish whether this was an exchange or a credit transaction. If the latter, he argued, as "transfer instrument it could serve as an international long-distance settlement" (p20); if the former, an operation to disguise a loan, it was then a credit instrument for trade" – although both were probably not mutually exclusive. More importantly for the argument on this essay, as de Roover pointed out, "It anticipates future developments in the money market" (p.22).

Respondentia differed from any other contemporary commercial and financial instruments in one critical aspect, which economic historian often disregard. Insofar there was a change (*permutatio*) of money (*pecunia*) it often hid the interest and true nature of the contract as a loan, so historians alleged that it was favoured to avoid the usury laws. However, the covenant enabled long-distance exchanges on goods for money, by specifically establishing the species with which the capital was to be paid back. Therefore, respondentia, as a version of *cambium maritimum*, always involved an operation of exchange (Lo Basso 2016b)[3]. This made respondentia also very distinct from bills of exchange, which sought to minimize the use of bullion in settling international balances. Creditors' persistent demand for specie (silver cash) in Asia, and in Europe resulting from their intermediation in the world's trade, affected the price and supply of bills. This made the band for the specie point consistently very wide indeed – i.e. little room for arbitrage with bill – so silver continued flowing East from America to Europe and from Europe to

[3] Focused on the Genoese case Zanini is ambiguous about its nature (fn 11). He understands the use of *cambium maritimum* as "a stratagem essentially motivated by the desire to avoid usury laws and the condemnation of this credit tool" (Zanini, 2023:343). He also believes there was no English word for the instrument.

Asia and bills took longer to serve as remittance instead (Flandreau 2004, Nogues 2020, and Irigoin et al, forthcoming). Arguably, this made respondentia purposefully designed to carry an exchange transaction in bullion markets that were not (yet) integrated.

As advance of money or goods, respondentia was a free private arrangement for trade finance among disparate mercantile agents in remote locations that dealt with foreign monies better than otherwise. A bit hesitantly, Denzel describes the *préstamo marítimo* as "not a classic bill of exchange transaction" but rather an «*emprunt contracté*», with a questionable negotiability .. (an instrument) that served (*alone?*) to acquire money" (2010, xlvii; his emphasis). Thus, it was also a collateralized loan though not a direct financing vehicle, which in its form of debt for the full value of the contracts served to acquire foreign exchange. It resembles a modern derivative, the foreign exchange or currency swaps – i.e. two parties exchange currencies at the current spot price and commit to reverse the exchange at some pre-agreed future date and price (the forward rate) in the established foreign currency (usually the USD dollar). It involves an implicit interest payment in the harder of the two currencies -which can be persistent and conform "puzzlingly" large extra expenses, justified by the "dominant currency status" of the foreign money as the preferred international currency of the time (Gopinath et al 2020)[4]. The silver coined in Spanish America enjoyed the status of dominant currency until the 1820s.

Unlike bills, respondentia had no usance (or not always) but a fixed customary period following the arrival to the port for the settlement, beyond which interest rates may be charged[5]. In principle, there was no balance left; lending was settled

[4] Foreign Exchange Swaps are the most heavily traded financial investment today: the outstanding debt in June 2019 amounted to 72Tn dollars equivalent to 84% of global GDP and triple the value of global trade. (McGuire et al 2020). I acknowledge one referee suggestion of a possible parallel with Respondentia.

[5] Although Blackwell's loans in London indicated a maturity after 36 months. Dermigny reports late and large respondentia loans in France for Asia for a first – "interest free"- period of 20 months at 20% premium which would adjust at the "exchange rate of the Bourse de Nantes" (1964, III 761, fn 5)

with the payment as the taker was bound to do it in full –and in cash[6]- after the completion of the journey. There was no room for other transaction as re-change, although some contracts in a round trip over the Atlantic might have involved two distinct bonds with different type of money or rates for each leg[7]. Neither respondentia bonds were negotiable, or discounted, nor were they transferable or endorsed. Therefore, they made no real contribution to enhance liquidity in the market. There was no protest however if the borrower refused to pay, the bond was not sent back to the issuer; it opened the path to execute the guarantee or guarantor agreed. It was a two parties-direct contract so there were no additional costs – i.e. commissions paid for intermediation[8]. Like bills, they were also a foreign exchange transaction that indeed involved different monies, whilst respondentia did not conceive a conversion of currencies.

Bills involved two (or more) different currencies and monies of account as exchanges meant a deal with one another by each buying a bill in the local market and paying a sum denominated in a local money of account for the delivery in another market of an equivalent amount in the respective money of account. They were a draft, order or direction of one person addressed to another person requesting to pay a sum money to a third one. In the case of foreign bills drawn in the currency of one country upon a person residing in another – hence performing with a different currency - to yet pay the third one who might (or might not) be in the same currency regime[9]. The negotiability of the bill involved different currencies and means of payment. That is a conversion of currencies to monies of account and vice versa. The bill was also for the absolute –unconditional- payment of a sum of money and not on goods or stocks "not to depend on any uncertainty or

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[6]Émérigon (1783/1827 vol II:556)

[7] Most Blackewell bonds were for round trips back in London (Martin's Bank). Lamikiz (2023:6) mentions rates of 12-17% for the leg Cadiz-Lima and 30-33% for the return on the same ship and journey in 1779.

[8]However, agency houses in 1830s Calcutta offered services to negotiate them with 2% commission (Willmore 1846, 657)

[9] So, this conversion was in practice another additional exchange transaction -of which the agio was the price namely the exchange rate. Economic historians have not in the past discussed them in these terms.

contingency". It was too for the payment of money, but "it matters not that denomination of money specified has because the value of each kind can be *ascertained*"[10]. Respondentia instead, was a covenant between two parties that allowed the return in cash (specie) to be certain for the lender *ab initio*– less often it established the exchange rate at which the local currency was to be priced in the return; in either case, the contract also reduced the so-called exchange risk.

II

The idea 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. Hence, the characterization of respondentia as a «high profit / high-risk» investment. Rates of over 50 or even 70 per cent were frequent in the seventeenth and early eighteenth century' Spanish trade in Peru or Dutch deals in Burma [Quiroz 1993, Dijk 201:30]. However, the commercial risk distinctly fell on the borrower. As the rate – indeed, the premium or reward- was established ex-ante with the initial capital outlay, the borrower must have been confident that the ventures would yield even higher returns- or enjoyed a much better information as Costa argues in her article in the collection. Arguably, the premium might also be considered the upper bound rate at which borrowers were willing to pay for working capital rather than an indication of risk or the opportunity cost of capital. Everywhere, premiums quoted were systematically much higher than the customary local interest rates (Flandreau et al, 2009, appendix A, table 6A.1)[11].

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[10] According to the editor of The Bankers' Magazine "In England [and the US] negotiable paper ought to be for the payment of money in specie, and not in bank notes. Hence an order to pay money "in good East India bonds", or to pay "in cash or Bank of England notes", or in "foreign bills", or in "goods" [was] not a negotiable bill" Smith Homans (1858: 170). Certain is an adjective i.e. "definite, unquestionable". Ascertain is a verb as in "to be determined", "established", negotiated, it had a lower level of confidence.

[11] Lockyer quoted annual interest rates of 10% in 1710s Madras, and premiums between 16% and 45% for respondentia well under a year term (Lockyer 1711 p 17-18; 70). In 1765 Blackwell' advance of £ 1,000 sum charged a monthly £12.10 for the premium and 5% per annum for the delays beyond the clearing date (Martin's Bond 009-0057 22.11.1765). Another one for £ 500 principal charged 30% premium and 16% for interest rates in 1771 (Martin's Bond 009-0057 14.02.1771)

Historians tend to correlate rates with the distance – so some see in it a time dimension of the cost of capital. Premiums, however, were very similar in the Cadiz-Veracruz and in the Acapulco-Manila voyages, despite different business organization and very different length of time at sea, as shown in the introduction to this special issue. In 1660s Genoa' rates for Lisbon, Smyrna or Athens were 80% higher or double than rates for Alicante or "coast of Spain", despite comparable distances. Moreover, these rates pale before premiums for "New Spain" via Cadiz (Lo Basso 2016a: 155-58). Europeans (non-Spanish) charged 15-16% from Flanders and Amsterdam to Cadiz in the later seventeenth century, but rates jumped to 40 and 60% if capital continued to "the Indies" or the River Plate (Everaert 1971:5; Freeman 2020). The difference persisted in the 1760s in loans from Nimes, which paid 18-20% for Cadiz and 30% for "America" (Chamboredon 2016). In London Blackwell lending charged fixed monthly rates for premium "and in proportion" for a maximum of 36 calendar months; but rates varied between five and 48 pounds a month for bonds of similar amount and terms for the delays to clear after arrival (Martin's Bank 009-0057). Seemingly, premiums did not have a clear time component, and they appear to relate to expected returns at destination.

Additional – with clearly separate and timed structured rates – interest was charged for delays when the clearing went beyond the established time post arrival. Whereas this never applied in the liquid Manila market, surcharge rates appeared later in Cadiz – at a time when returns on the loans were falling. Clearing took longer in bonds to Mexico, once the fleet and the termed fairs ceased by mid-eighteenth century. Individual arrivals carried smaller cargoes so had lower values. They were more irregular but also much more frequent, raising the risk of gluts in the rich but shallow colonial markets for demographic and geographical reasons; selling the goods required a longer time to settle. Thus, sales were often consigned to the next season to hedge against low spot prices and losses from overstocking as flows of similar goods from Acapulco and Cadiz kept pouring over. Postponements of the clearing added interests to the principal and premiums. Elsewhere, where additional interests were charged on

such delays, higher premiums rates bore no relation with the (approximate) current local rates for alternative investments. In Asia these moved around a monthly .75% in Surat and Bombay (Chaudhury 2015:91; Haider 1996), 1.5% in Canton (Van Dyke 2011:45), or an annual 7% to 10% as in Macao (dos Guimaraes 2003, Souza 2004, 186)[12]. In Europe, rates were at a monthly 0.5-1% in Cadiz, 1.25% in Genoa, and 12% per annum in Flanders. Everywhere, much higher premiums seem independent from the local cost of money so they cannot be an indication of its stock available.

Historians point at rates overshooting during wars as foremost risk to trade – however the effects are ambiguous. In some cases, there were proviso for increasing premiums if there was a probable threat - as in the original subscription of the French *Compagnie des Indes* stock (*Recueil …*). A specific clause about «risk of (government) expropriation» appeared in 1640s Dutch bonds for (illegal) journeys to the River Plate; they seem highly unusual and, in this case, the risk passed explicitly on to the borrower (Freeman 2020). It is unclear whether the risk seems more associated with the impact of war in Europe than at sea or overseas. This affected risk -and premiums- differently[13]. Reporting to his clients François Tronchin, a broker based in Geneva, made very clear the direction of trade: prices – and naturally the expected rates of return- were heavily dependent on the relative abundance of silver at destination. Thus, the risk calculation was always to avoid glutting markets in America. War effects are not visible in the case of Manila, shown below in figure 1. Losing the Galleon Covadonga to British Admiral Anson near Manila in 1743 – laden with 1.3-million-peso coins (c. 32 tonnes) and about 35 tonnes more in bars (Cushner 1971) - ought to be a blow to lenders as *correspondencia* returns never arrived,

[12] in 1625-50 annual rates in Surat were at 12% (and 6-9% on 1650-60); whilst they were 18% in the Coromandel Coast, and 15% in Sindhi (Punjab) (Dermigny 1964, III:759 fn1)

[13] For a broker of respondentia, Mr Tronchin, war was also an opportunity to stock and advance goods at Cadiz for re-exports in the future, and to hedge against higher prime costs caused by labour shortages in manufacturing from the war mobilization. In turn, if the 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 1740)

creating a credit crunch[14]. Yet, rates did not change and jumped only once silver laden galleons returned. Therefore, premiums do not exactly capture risk from war incidents; if any, premiums seem *directly* related to the availability of silver.

There were means to mitigate the exposure to risk, however. Throughout, lenders apparently spread the bonds in many ships – even iif sailing in a fleet- and in many small amounts. It was the same among lending to junk merchants in Canton (van Dyke 2011:153), in the Genoese lending in the Mediterranean, as in the Spanish and French deals in the Atlantic (Carrasco-Gonzalez 1995 Appx A-1; Chamboredon 1995:704-707). Clearly, respondentia did not favour economies of scale. Similarly, the contract was non-negotiable nor transferable, so the contribution to liquidity was limited to «acquire money» as Denzel suspected. Without enhancing capital pooling and without increasing returns to scale, the contract does not seem effectively designed to favour productivity improvements.

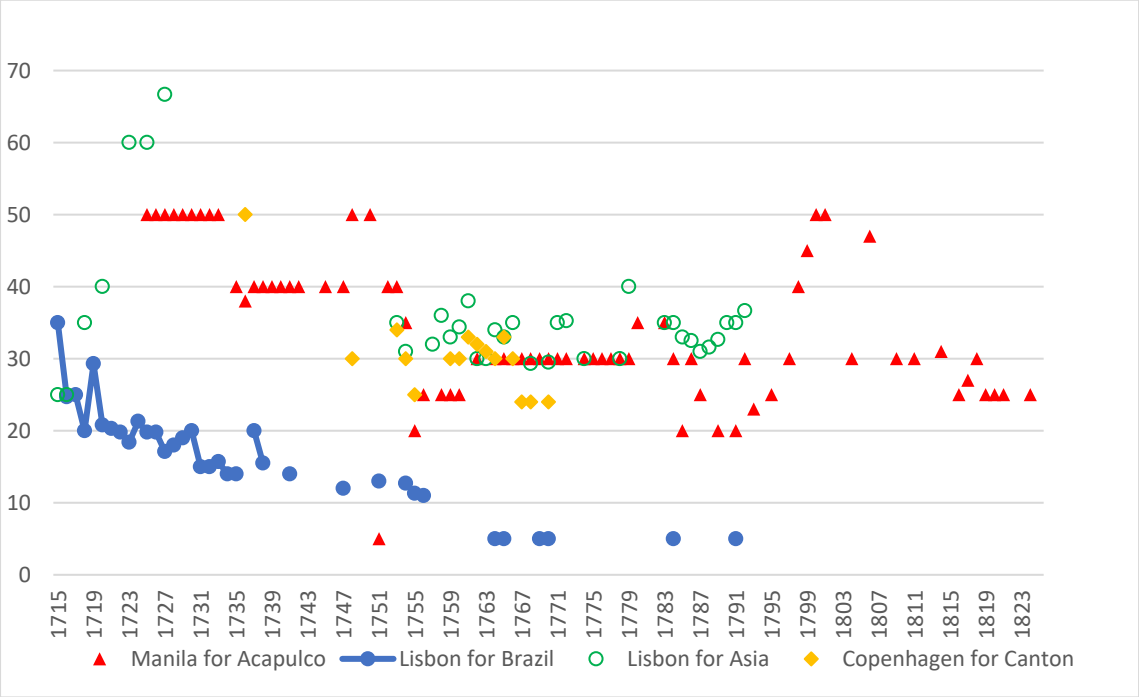
Premiums neither did seem to bear a particular relation to the nationality of borrowers or the organization of the business. Frequently rates even varied for different transactions on board of the *same* ship (Carrasco Gonzalez 1995:94, Lamikiz 2023:5). It is difficult to see a time component in the premiums, as interest were charged separately, so it cannot price the opportunity costs of capital. The round sail from Cadiz to Veracruz in Mexico took roughly six to eight months and twelve to Peru; the Acapulco galleon took over a yearlong, non-stop round trip set by the Monsoon. Yet premium rates for main Mexican ports on the Atlantic and the Pacific – were very similar throughout the eighteenth century (Bernal 1992, Rivas Moreno 2023). Interestingly, both ports were also main outlets for Mexican silver. Lending at respondentia charged a premium ex-ante defined as a fixed rate of return, which being an advance of capital suggests it was directly related to the expected profits from that trade.

[14] This total volume of specie and bullion amounted to half of a representative estimate for Chinese annual imports of silver in the eighteenth century. (Irigoin 2020)

Reportedly, premium declined over the eighteenth century; the falling (non-coeval) trend over the century repeats in all cases of European commerce across the Atlantic by 1800 – other than in trade with Asia through the Indian and Pacific Oceans. It is noteworthy to remember that China's import of silver continued steadily until the mid-1820s (Irigoin 2020). Figure 1 below charts a rare longitudinal data on respondentia rates in different long-distance routes of the time, e.g., the Manila lending for Acapulco, the Portuguese in the Atlantic and India trades, and the Danish trading in Canton - to outline the trend (data is too scattered to satisfactorily compare levels) that premiums followed in the respective routes[15]. As said it is not feasible to reconstruct any robust series of premium rates, however the results are consistent with qualitative impression from the literature.

[15] Levels are not relevant as the composition of the trade is not comparable in the price trends and elasticities of goods; whereas silver flows dominated the routes to Asia over the Pacific and Indian Oceans; sugar and gold made most of the Portuguese returns over the Atlantic and tea made was the chief return for the Danish.

Figure 1. Premiums in Atlantic, Pacific and Indian Oceans and China seas (1715-1823), in percentage.



Sources: for Manila Ruiz Moreno (2023: 227); For Brazil and Asia: Costa Freire, L & A Pinto de Albuquerque, (2022), For Copenhagen: Glamann (1949 Table 6).

Throughout the eighteenth-century, rates remained high in the Indian and Pacific oceans while declined steadily over the Atlantic, clearly the most competitive of these trades (De Vries, 2003; Quiroz 1993, 100). The case of Lisbon confirms that they did not relate to the place where capital originated; rates for both "Indies" started at about the same level but premiums diverged with the destination over time. Arguably, higher and sticky premiums for all contracts in Asia might reflect the persistent premium on silver cash there and the room for arbitrage gains in Asia.[16] Lastly, similar agents contracted capital at different rates depending on the returns of trade involved, somehow independently of the capital endowments available, the business model, the

[16] In this collection, Leonor Costa associates such differences with the particular organization of the Portuguese shipping in each route.

length and hazards of the journeys and even the "national / ethnic" origin of the parties[17].

III

> "For deals with profit in India as in the Levant, it should be done with the silver, either in bars or in coins, which would allow to coin the different species of rupees. Which is to say that the route to India goes through Cadiz". (Dermigny 1960 :124).
> «*Au XVIIIe siècle, au niveau des négociants, grosse aventure (respondentia) signifie, avant tout, Cadix*». (Carriere 1970)

The Japanese word for a similar contract - *nagename* - means (lit.) "trust in silver" because it was the specie involved in the exchange for silk in China in the 17th century. In November 1641, two Dutch VOC agents invested 300 (Spanish) "reals of 48 stuivers each" on a ship owned by a Chinese going from Batavia to Palembang – Sumatra. The loan was termed with the journey duration estimated in 3 months; the premium agreed was 30% plus 2% of interest on total amount (principal and premium) – i.e. 390 reals- for each month in arrears after the arrival[18]. Therefore, the prevalence of respondentia in the Spanish overseas trade should not surprise. There was no larger «fountain of silver» for the world at the time than Spanish America's – replacing Japan as source of China's silver imports after the 1680, and even behind Dutch ventures in Asia. Spaniards used the same instrument in both the Atlantic and the Pacific routes to procure silver in Spanish America. Whether it was on the -allegedly safer - armed fleets on the Atlantic up to the 1740s, on individual ships thereafter, or on the single large galleon that made the Pacific line, *cambio marítimo* or *correspondencia* (as the

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[17] Two bonds (*riesgos*) between Don L.A. and Dn. B.V., J.M. and M.L in Cadiz on 9 November 1769, issued for Buenos Aires for $ 3,201 indicated different monies for the settlement of the principal in each port of arrival. AHPC, Protocolos de Cádiz, leg. 3643; notary Juan Vicente Matheos. I thank Xabier Lamikiz for sharing the contract with me.

[18] From the 5th month – i.e. 2 months delay the premium would rise to 40%. In this case, the collateral was the ship but personal guarantees were frequent. As in Manila in the case of Chinese borrowers, other Chinese merchants guaranteed the payment. I am very grateful for this early example to Freek Loves - who is investigating the businesses of Batavia's Chinese community during the mid-seventeenth century for his doctoral dissertation at the EUI- who kindly shared the information with me.

contract was known respectively) was their mode of trade finance (See appendix). Originally, capital advanced in European or Asian merchandise flowed to America, although by the later seventeenth century domestic capital advanced in bullion and specie flowed from America to Europe bypassing trade fairs at Portobello (Suarez 1995, Quiroz 1993, 101-111). A century later colonial merchants invested in respondentia themselves in Cadiz for Lima (Lamikiz 2023) and for Mexico (Del Valle Pavon 2022). In all cases, deals were notarised to establish claims and cessions. Yet, respondentia was a fully private deal over the Atlantic and the remit of institutional lenders over the Pacific. Spaniards employed other instruments in their Atlantic trade (one-off companies – limited partnerships, book credits, consignments, direct sale by representative agents with powers of attorney, etc.) with foreigners or nationals, but always as second to respondentia which was the «only game in town» in the Pacific run (Rivas Moreno 2023, Mesquida 2018). None of those instruments intended to substitute cash remittance – as indeed cash i.e. coined silver was the main Spanish America export at least until the 1790s, and the most valuable Asian import. Yet there were no fiduciary means of payment or exchange in circulation in Spanish America until very late eighteenth century (Perez Herrero 1988, Lana Berasain 2016); and business with "*riesgo de tierra*" (overland bonds) were rare inside Spanish America[19].

Respondentia – in their own national variation and name - was also the instrument that other Europeans used in the re-export trade through Cadiz. Dutch private merchants used it in the River Plate trade in 1660s (Freeman 2020), Flemish and Genoese did it in Mexico and Peru later (Everaert 1971) and so did the Portuguese in Brazil (Costa 2003). As Cadiz' main trading partners, French houses brokered goods and capital into the Atlantic commerce on respondentia (*grosse*) throughout the eighteenth century. They used it in their

[19] As distribution hub for a more populated interior, muleteers who introduced merchandise inland for remittance in silver bars used the contract in Lima, known *as riesgo de tierra*. Premiums in Lima were much lower than in maritime trade: 5% in 1748 and 6% in 1765; note there was not change of currency in such businesses. (Quiroz 1993, 108)

own direct (and legal) trade to South America Pacific coast at the turn of eighteenth century (1698-1725) (Lespagnol 1992, Malamud 1986), and with India throughout. *Prêt á la grosse* – as the instrument was known in French- served to finance the re-export of linen and silk textiles to the Caribbean and South America (Chamboredon 1995, 2016) where commerce procured *piastres* (silver coins) with which in turn to procure cotton and silk piece goods from India (Dermigny 1960). However, these houses used bills in returns for sales and investments within France[20]. This dual use of respondentia outside Europe and bills within was equally a practice of Catholic (e.g. the Magons of St Malo) and Protestant (e.g. the Forniers of Nimes) merchants alike – which challenges the assumption of the contract' special purpose of avoiding usury laws. More importantly, this stark distinction in the choice of instruments used in one and another trade by the same agents suggests a differentiated financial strategy.

The instrument was not confined to New World' trade. It was also abundantly present in European commerce in Asia specially. Scholars of various trades repeatedly register its use, from the earlier case of Portuguese trade in Nagasaki until the 1630s, to business in Goa, Macao and India in the eighteenth century (Oka 2001, Guimaraes 2003, Souza 2004. European "country traders" and "peddlers" in Burma, India and China (Dijk 2001, Tomlinson 2002, Van Leur 1967, Steensgaard, 1974) too issued respondentia in their own businesses since mid-seventeenth century, as Amoy' merchants did in Siam (Viraphol 1977:126-27). Armenians and Malabari from Madras, at the service of the EIC (Arasaratnam 1979, Watson 1978) or in partnership with Dutch or French merchants, all they traded in Manila under respondentia in the eighteenth century (Quiason 1966). French merchants from 1702, and Danish and Swedish from the 1730s, issued respondentia in their Canton trade (Morse 1926,

[20] A recent article underscoring the importance of joint liability for the circulation of bills of exchange in eighteenth century France builds on Roux Frères archives (Santarosa 2015); similarly, an earlier study on same the company draws on the same source to highlight the relevance of *prêts-à-la grosse* in the Roux Frères business (Carriere, 1970: 221 fn1). Curiously, both studies overlooked the combination of both instruments in the house deals.

II:115,149, Van Dyke 2005). Even Boston' houses with business in India in the 1800s (Porter 1937 I:53, 66, 593, 599, 602, 644, 672, 680, 686; II; 859, 907,929,1137) and British merchants did as late as the 1830s Shanghai. (GBR/0012/MS JM/F5/2,5,10,12).

Allegedly, most of the silver so obtained through the large intra-Asia trade eventually terminated also in China (Cheong 1970). The instrument was particularly suited to procure Spanish dollars at Manila, Mokha or Jeddah (Nadri 2008:67-69) for further deals in India and Canton (Morse 1926, V:73,111, 149). Private merchants in India advanced cash against respondentia bonds "redeemable upon maturity only in cash and only in Canton" (Cheong 1971:90; IOR/L/AG.1). They preferred it as means of remittance over Company bills of exchange on London when the exchange rate was not convenient (Furber 1948) so private bills did not fully replace respondentia (IOR/H/795 fs 14,18,32; Bowen 2010:465) until the 1830s[21].

A few relatively large institutional lenders of respondentia operated in Asia: the Jesuits who early brokered silver from Japanese rulers' trade in China for silk and the EIC itself. The latter lent and borrowed under this contract - between September 1737 and July 1748[22] the company lent about a million-pound sterling at rates between 18 and 35% to her captains (IOR/H/449 fs 84,84vta,101-03,245). In Portuguese Macao an arrangement between the city Senate and the local *Casa de Misericordia* confraternity so funded private commerce in the Indian Ocean and China through the eighteenth century (Guedes Cosme 2020; Subrahmanyan 1995). A similar scheme developed in Manila since the 1680s where legacy funds amassed large sums of coined silver and became, probably,

[21] Even in the 1850s the branches of British Eastern Exchange banks only accepted bills of exchange if they were presented together with the bill of lading (Kobayashi 2018:603), repeating a traditional policy of the English company since the 1760s

[22] The gaps in the EIC records around these years makes impossible to establish whether the end of the contract use is a result of the survival bias of the source or else. In any case, records for transactions with Company bills on London reveal they became far more representative of the business after the 1760s.

the most specialised lender and largest provider of working capital for trade within Asia. There, the local *Misericordia* (House of Mercy) and religious orders to lesser extent, acted as investment funds channelling finance to the Acapulco commerce – and subsidiary trades from China and Coromandel for re-exports to Mexico (Mesquida 2018, Yuste 2019). Chinese traders, Armenians from Madras and even the EIC itself, tapped in such funds (IOR/H/606 1785-1798). Everywhere the legal features of the contract binding lenders and borrowers into a limited partnership of sorts barely differed (see appendix). Likewise, (other than for Acapulco) the sums involved were relatively small, which lured all sort of borrowers. This cross-cultural trade feeding into the intra-Asian commerce had different risks, transaction costs, and mostly different returns, so premiums varied among Asian destinations (Davies 2012:214-15, Prakash 2007). Across trade in Asia rates systematically appear to be higher when lending was for China. Roughly, in 1750s and 1760s' Macao, the rate for China was 20-25% (Guimaraes 2003:50-52) whereas was 16% for Calcutta (IOR/LG/AG.1). In Manila it was 25-30% for Canton or Amoy – for Spanish, Chinese or Danish Swedish borrowers alike (VanDyke 2005:154, 2011:44-45) but was 16% for Java (Ruiz Moreno 2023). These rates were significantly lower than what was paid for Acapulco ventures – in which silver was *the* return. It seems unlikely that premiums reflected the relative local availability of capital, but the expected returns given silver purchasing power in China particularly.

Why would merchants with the same national/ legal origin use dissimilar instruments? Why merchants from different institutional backgrounds would use the same instrument in similar exchanges? Was a cashless system of payments necessarily a more "efficient" means of remittance when trade was in specie (gold/silver coins) as it was in the European trade with America and the East? Was the trade of silver a barter or an exchange transaction? As all cases of such trade share one common feature, namely- the contract stated the specie of the return, next pages will consider these monetary aspects.

IV

Financial historians consider silver as another commodity priced by a standardised weight and fineness –i.e. its intrinsic value (Esteves and Nogues 2021); So, trading coined silver in foreign markets poses the question whether this was a barter of commodities priced according to supply and demand. Like *cambium maritimum* -as was known in the Mediterranean- the contract implied an exchange of currencies. In fact, by design, respondentia was an operation of change as mentioned in the introduction. Although premiums and principal were not always systematically distinguished in the contracts, in all cases there was a clear prescription of the monies or type of specie in the repayment. 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 pagodas", "after the rate of three taels in weight for the pound sterling"*[23] (see Appendix); Whilst pesos minted in Mexico was the default in Manila deeds. Historians of the Spanish Atlantic trade, highlight a feature of the contract that allowed a further "33% (extra) gain" on top of the premiums agreed, as the exchange involved specie as remittance back to Spain. (Bernal 1992, 318-19; 2013). Despite the obvious implications for the balance of payments, and the dissemination of silver beyond Spain, studies confined to national cases have overlooked this issue.

The role of foreign specie for mark-ups in Asia (and the potential for arbitrage) was apparent for the EIC Council at 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 coins] thither direct, to forward them, in the first instance, to Surat, where they might be invested in goods that would *produce 100 per cent profit*

[23] In 1755 "Captain Wilson wanted 1800 Spanish Dollars for the use of the Ship Pitt (the EIC Court) accordingly paid him Taels 1296 or 1800 Spanish Dollars at 7s 6d per Dollar which were £ 675 for which he has given us his Respondentia Bill payable to the Honourable Company". (Morse 1929 V:73) At that exchange rate, the premium was 50% over the Company invoice price of the Spanish coin.

> 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. My emphasis]

The excerpt -one of many- showcases deals with foreign silver monies in India, and in Asia more generally, and the opportunities for arbitrage. Procurement of Chinese goods in Canton were a privilege of the Hong (guild of merchants) until the 1840s. 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 p 41 my emphasis). Prices clearly depended on the money of the advancement. Still in the 1800s, US merchant and Consul in Canton, Sullivan Dorr, reported that deals with silver coins would improve by 20% 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". Therefore, the correspondent advised: "loading ships only with (Spanish) dollars". At the turn of the 19th 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 20th century William Tate*' Modern Cambist* reports that in China's interior, principally in the tea districts where foreign (Mexican) dollars "formed a favourite medium of exchange", they "circulated with a premium well above their intrinsic value" (Tate 1908:184-86). Hence, western nations coined their own "trade dollar" on the specifics of the Mexican coin to keep up trade with China between 1870s and the 1900s (Irigoin et al forthcoming).

As foreign silver specie improved the terms of trade of Europeans in Asia, most of deals involved cash. Asian economies performed with currencies of various metals, gold, silver, brass, or copper, which traded freely in markets and bazaars. Mughal India had free coinage and debasements were rare – at least through the seventeenth century- but recoinage was frequent. Multiple mints produced coins quite independently from each other, without coordination and

with large differences in their output size[24]. Thus, the rate of exchange between currencies was sensitive to price tradable goods and returns. The intense intra-Asian commerce increased the variety of foreign coins in circulation further creating uncertainties about future prices to price-taking European merchants (Deyell 1987, Haider 1996).

Paper instruments (hundis) long existed in Mughal India issued by *sarrafs* - money changers/lenders- and 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* - who "specialised in respondentia" (Haider 1996, 299), regulated it by changing the rate accordingly. Factors of the EIC and the VOIC borrowed from *sarrafs* too as they were mostly remitters because of their balance of trade with India was largely negative. Europeans were thus also «takers» in the exchange rate (Habib 1971:294). Hundis worked fairly well as means of payment and contributed to other means of settlement like book credit although it is not clear to what extent they substituted coins in remittances within India (Habib 1971, 300)[25]. A study on the business of one of the largest Bengal bankers by mid-eighteenth century – and main lender to European Companies – shows that respondentia lending still generated more than a third of his earnings from financial assets, that included re-coinage*, batta* (currency exchange), tax farming, and other lending (Chaudhury 2015:91 table 1). Equally, merchants of Surat chose between bills and respondentia in lending to the English in the mid-1780s, according the (current) "advantages of favourable exchange between Surat rupees and Spanish dollars needed for investment at Mokha". (Nadri 2008:68).

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[24] Pure silver coinage stared in the 1540s and mints expanded with Mughal; they counted 12 in Northern India, 23 inland and 11 in Eastern India. In the sixteenth and seventeenth centuries, there were at least an additional 23 mints as work in Deccan and South India only (Aziza 1967).
[25] Nadri persuasively considers the large money market they organised as "open and competitive" (2008:71). Apparently, hundis confined to exchange between two points by reverse remittance - it is not clear whether re-cambium and endorsement were used so hundis could have developed into a cashless means of settlement -as in Europe.

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

> .. for the difference between the real exchange of rupees at the settlement and the price at which they are invoiced … the difference between these two exchanges is wrote off to Batta .. so that a gain is made here of 68 rupees every 100 pagodas which is near 22 per cent. [26]

Thus, in a trade where differences between exchange rates and current cash maybe large, pricing and returns faced additional costs from currency risk.

In the sixteenth century, Mughal tried to standardize the silver in circulation with the sicca rupee, but this was not complete as it entirely depended on imported silver. Along with cowrie shells and other commodity monies in Gujarat and Bengal for instance, foreign silver coins like Shahis from Iran, Larins from Hurmuz and Basra, and Persian Abassi circulated with premium. Regional chieftains had also access to coinage, so Gujarat remained using their Mahmudi (88 grains of silver) and even issued inferior coins under Mughal names (between 75 and 87 grains) (Haider 1999; 1996,345). With European trade at Surat, by mid-seventeenth century, the Spanish real – the piece of eight- became the preferred silver coin from Mokha to Canton. Increasingly from the 1630s, Asia imported from Europe silver mostly coined in the shape of reals and pesos, while Dutch Ducatoons were relatively more significant in their East Indies. (Chaudhuri 1963, 1968 table 1, Glamann 1949, Dermigny 1964)[27]. This supply of

[26] "Records of Fort St George Diary and Consultation Book" May 1756, vol 85 (1943) p 130.
[27] Dermigny estimated that between 1726-1769 72% of the 460 million *livres tournois* France exported were in Spanish silver coins"; and the total European exports to Asia 1708-1801 equalled France' money circulation c. 1,282 million of *livre tournois* (1960:112, 124)

foreign coins expanded together with the extraordinary growth in Spanish America silver coinage after the 1730s [28].

Within the great variety in Asian monetary setting (see table in the appendix 2 for a sample), the case of China stands out. Because China used units of account for both silver- i.e. the tael that was a weight measure 37.565 (grams) which varied locally and with the purpose, and for copper - i.e. (weng) a string of 1,000 coins of theoretically the same quality. Because they held a notional fixed (and invariant) ratio of 1 silver tael to 1,000 *weng,* historians have assumed a bimetallic monetary system in place. However, copper was a provincial and private coinage prone to debasements and counterfeit (King 1965, Vogel 1987) so string collated any kind of coin[29]. On the other hand, the empire never minted silver (or gold) thus China had no standard, mint parity or a par value, for silver. Moreover, China suffered a chronic shortage of means of payment of higher denomination, and from mid-eighteenth century increasingly relied on the 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 my addition); and China had no bimetallic but a multiple monetary system

This establishes a first difference of Asian monetary regimes with that of Europe; there gold and silver circulated by tale and sovereigns' control over mintage was limited[30]; neither money markets nor coinage was centralized, and they relied on imported silver for their own coinage or on foreign coins as means of payment in domestic transactions. Without an official par or mint values, even

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[28] Reals were hammered coins whereas pesos were cut (rimmed) by mechanical presses – after the 1730s, for the specifics of silver coinage and its implications see (Irigoin 2020)

[29] Cash circulated in strings of 1000 pieces that mixed good and bad copper coins of different quality, so strings had different value locally. The copper/silver exchange rate varied accordingly at any proportion to the local tael of silver, which became too a unit of account independent of the weight and fineness of the metals.

[30] Lockyer (1711) indicated foreign coins taken by count in Canton (pp. 134-138) and in Madras (pp. 262-64); he explained the mechanisms for conversion with most foreign coins in China pp 160-161. See also Haider (1996, 328-29, 333-34, 351-51, for Spanish coin specially 332, fn 145) and Habib (1982 361) though references for foreign silver cover the late sixteen and early seventeenth century only.

without a mint to where individuals could bring the silver, there was no way nor standard to trade silver weight for silver weight (or gold) in China, but coin for coin whichever the metal. Thus, high quality most abundant Spanish American coins enjoyed a growing premium over its content in China. As measured in sterling and recorded by the High Admiralty Courts in the Mediterranean: in the 1640s the coin was priced at 52-54d in Alicante, 54-57d in Malaga, 54-60d in Livorno, 56d Genova, between 48 and 57d in Venice and 57d to 66d in Smyrna; it was worth 48d in Cadiz and between 48d and 52d in London (Blakemore 2017). Still in the 1780s' Asia the silver peso quoted at 62d in Basra, $63^{1/2}$ in Bombay and 50d in Batavia, at 57d in Malacca and $64^{1/2}$d in Surat (*An account of monies* .. 1789) – a range that meant 28% difference between Batavia and Surat and a similar premium over the intrinsic value of the coin.

Monetary historians considering metallic currencies as commodity monies – units of metal weight by the fineness - owe a lot to models conceived in the bimetallism of Europe (Velde, Weber and Wright, 1999 Flandreau 2004; for a nuance Bignon and Dutu 2014), but their assumptions do not help to appraise monetary developments in extra-European economies. It does not help to understand Spanish America's either. The assumption that silver and gold as commodities were minted in 'relatively small' volumes - as in Europe - does not hold considering that between 1772 and 1800 (when reliable population data are first available) Mexico alone minted 110 grams of silver of .916 thousands fine- i.e. about 4 pesos per capita[31] - every year of the world's "dominant currency" and most current coin (Irigoin 2020).

Although Indian rulers also cut coins -mostly of silver- they sourced the silver as return from exports. Rupees had a varying market value according to the year and mint of issue and their fineness varied greatly, including the coinage at the

[31] In standard silver grains, this was equivalent to the earnings of 10 days of work of an unskilled labourer in London (Allen 2001 table 2) and 40 days of a Beijing wage (Allen et al 2011 Table 1). However, Allen's calculation disregard differences in the local price of silver for its monetary value.

three ports controlled by the Company (see appendix 2, *The Madras Commercial,* 1818:129-133; 1833: 169-172). There was not even consistency among these rupees - and it was hard for the Company to keep the relation between their own gold pagoda with the gold mohur of Bengal within the gold/silver ratio in balance (Furber 1948:350). Foreign coins could be converted into rupees at the imperial mints but in fact, the *sarraf* (money changers) established their value in open money markets. So, there was not a silver standard in India for foreign trade either until 1835, when a new Company rupee was based on the pound sterling[32]. In China, foreign coins were priced by private shroffs (money changers) too according to their assay of weight *and touch* (fineness) [33]. So, Europeans were also «takers» in the price of silver - until the Bogue (1843) and Tientsin (1858) treaties gave them a word on the rate at which foreign coins were converted in China (Irigoin et al forthcoming). Thus, in China instead of bimetallism, a complementary regime of metallic monies and a substitution of heterogeneous silver coins could well happen at the same time (Kuroda 2020, 2008).

There were no "foreign coins" in Spain or Spanish America until the 19th century; and if at all, they were considered bullion. Until 1686, both metropolis and colonies performed with the same monetary unit with similar name and denomination. Following wild debasement of copper (billon) in the 1640s, which brought considerable disorder to money markets, in the 1680s Spain added a new lighter silver coin to the piece of eight -*peso de 8 reals*- minted in America. This debasement made the peso cut in Spain distinct from the "old" one minted in Spanish America; it was worth 10 silver reals or 15 reals 2 maravedis of billon, which depreciated the new coin in Spain by $33^{1/3}$% to the old one. This gave way to a distinction of monies -physical and of account (or *de cambio*) in Spain and the colonies.

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[32] Contrarily, the VOC very rarely minted coins in Asia. At a request of their agents in Batavia, since the 1730s the VOC coined copper *duiten* (small change) in the Netherlands and regularly shipped them from there. (Feenstra 2020)

[33] That made a 0.77-0.74 to the liang – a notional tael of the finest silver- by the late 18th century. The price changed after 1790s with the market demand and supply of the coins.

This separation of the monies in the metropolis and colonies ended with the specifications of gold, silver and monies of account -maravedis- established in the 1497's royal Pragmática. Maravedis – an "imaginary money[34]"- was the basic unit of account; 34 of which made a real, and as eight reals made the peso thus the (old) silver peso was worth 272 maravedis until 1686. In Spain, merchants and the Treasury used it in their accounts so everything there was valued as a compound of maravedis; but they were unknown in Spanish America where peso and reals maintained its intrinsic content steady - and remained the unit of account and only physical coin until the 1820s. Whilst the Spanish Indies never issued small change of copper.

On the other hand, commercial transactions inside Spain (and with Europe) used gold and silver units of account and exchange that were not linked to a physical coin, e.g. the *doblon* for gold, and the *ducado* of 375 maravedis[35] and, the *peso of 128 cuartos* of 512 maravedis for silver. The later became the *peso de cambio* as unit of exchange in bills. Its value declined relative to the base coin -of eight reals per peso (old silver) minted in America as more reals made a peso in Spain[36]. This difference between the price of the coin and that of the money of account permeated in foreign trade; with England for instance, whereas the par exchange value of the *peso de cambio* oscillated around 40d, the mint par value of the coin was 54d– making too a 33% per cent premium on the coin in London. This difference in the valuation of the exchange: with the price of the coin

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[34] There are various definitions depending on whether or not imaginary monies had "substance" i.e. a relation with any physical coin. It was a "*unité numérique*" for Marc Bloch (cited by Spufford, 1986). Einaudi (1953) did not see such relation – more like a "fictional unit". McCusker (1978:6-7) called it a "notional device" to "reconcile disparate coins into national monetary systems" and quoted the (inexistent) pound as one example; Spufford considered it a "misnomer" (1986:411-13). More recently, Kuroda (2008) does not see any substance in China' silver taels and agrees with Einaudi that should "not be "considered money". Fantacci (2008) argues it was a standard unit of account (though not a metallic one) rather a measure of value (pp 58-59). Chalmers recorded their use in most of British colonies and always as an expression of the local value of the Spanish coin (1893: 183, 213, 297, 334,382)

[35] The exchange with Amsterdam quoted in the ("imaginary)" *Ducado de cambio* (ducat) at 375 maravedis in the 1760s. (*Itinerario* 1761:9-10)

[36] In 1761, the market price of the old coin minted in America was equal to 20 reales or 680 maravedis. (*Itinerario* 1761:9-10).

repeated in the European money markets after the 1640s and should be considered in the research on silver flows in and out of each European economy of the time.

In these regards, it is interesting to recall two features of the *cambium maritimum* as was used in thirteenth century Genoa according to De Roover (1969), which fittingly apply to respondentia[37]. First, De Roover says, the lender's profit was determined by "undervaluing the foreign currency in which the loan was repayable" (p17) and "overvaluing it at the fair" (p20) or "determined by manipulating the exchange rates and setting arbitrary values" (p24). Second, being conditional on the ship arrival, the instrument "was rarely, if ever, used for the purpose of *remitting funds to another country*" (p23 my emphasis). Therefore, respondentia was indeed a means to *bring in* foreign money. In the eighteenth century, placing higher values on their own local currency than on the foreign one was only possible in some European countries – crucially this overvaluation drew silver money from the "first" to the "second receivers".[38]

Europeans had struggled to establish a uniform coinage throughout the seventeenth century (Van der Wee, 1977), as they were caught between the need to import precious metals for coinage and the increasing demand for silver to trade in the Baltic, the Levant and Asia at large. They had however, different means to manage the monetary system away from private agents; Europeans "standardized" money and "centralised" money markets (Neal 2000) from a

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[37] De Roover found that it was a "hybrid contract" which differed from the sea loans as the cambium maritimum "always involved an exchange transaction" (1959, 17). "German specialist on the history of commercial law" were divided between those who understood the contract as a "transfer instrument to effect international settlements" and others who saw it "a cover up of a loan" – i.e. credit. De Roover (1969:18)

[38] Nuno Palma and coauthors have extensively researched the impact (effects) of American silver inflows to Europe and have established differences between "first", "second" and "third receivers". However, none of their articles has identified the mechanism by which some countries attracted silver to their domestic markets and further re-exported it to Asia. (Palma 2020 and several years)

medieval multidenominational currency minted in different metals[39]. Along with their own coins, they developed monies of account (Spufford 1986, Supple 1957) – i.e. a unit of measurement for metallic monies or an assigned quantity of weight of certain fineness like sterling- whose value tried to follow the market price of gold and silver, fixing the exchange rate in an «adjustable» number of their current monies. «Imaginary» monies (e.g. Venetian' *scudi d'or*, 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. As a rule of thumb, current monies denominated in monies of account, tended to deliberately" overvalue certain coins at home to avoid the melting of their own silver -already scarce – and to attract precious metals to their mints (Van der Wee 1977:297,308)[40].

In the 1640s *Amsterdamse Wisselbank'* managed the supply of bullion to Dutch mints and to money markets. It used bank money as money of account and centralized transactions with shorter and more regular turnover of bills fostering a cashless system of payment (Quinn Roberds, 2012, 2024). Thereby, public banks replaced the Genoese fairs which traded in their own monies of account (Van der Wee 1977/1988:290-300)[41] – expanding the international system of transfer payments that matured in the eighteenth century (Nogues 2020). Its bank guilder became a unit of exchange for international deals within Europe and both Dutch Indies, trading in precious metals i.e. buying it from West Indies and Europe and selling it to mints, and for exports to the East (Van Dillen 1934; Guillard 2004). Amsterdam became the chief money market in Europe and the marketplace for American silver (Morineau, 1985). Monies of account helped to

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[39] "Eight hundred foreign coins were officially (legally) recognised (in the Dutch republic) by the end of the sixteenth century". (Quinn and Roberds, 2009:33 fn1). "In 1614 it was claimed that 400 types circulated in the Low Countries and 82 in France" (Supple 1957:240, fn1).

[40] Admittedly in his Handbook of World Exchange rates, Denzel refrained from discussing the impact of American silver (2010: lxii)

[41] Monies of account did not start with the Bank; Fairs also performed with them: e.g. the *Ecu de Marc*, at Lyon and Piacenza and *Scudo di Marche* at Bezançon fairs, In Genoa the gold ducat and "old pound system" remained from the metal content of the silver basic coin. The Dutch bank guilder being "the most illustrious example" (p294). From 1549 France' *livre tournois* – formerly a medieval coin- had not identical coin representing its value until the Revolution.

moderate the swings in the value (quality) of foreign coinage prone to debasements or enhancements in the seventeenth century; this intermediation allowed the domestic economy to decouple from uncertainties in international markets. Other banks -subsequently in London and Hamburg, too offered a cashless means to settle balances in an overseas trade that coevolved with the financial development. This "ledger money" became quasi fiduciary (Quinn Roberds 2024) and the *agio*[42] worked as a "sluice gate" (Neal 2000) that allowed a flexible exchange rate to fend it off from withdrawal of coins in reserve. In Amsterdam, the *agio*, the premium between bank money over the currency, oscillated around three and half and five percent between 1640 and 1775 (McCusker 1978:43, 44, 62, Quinn Roberds 2012:20) while Hamburg' bank offered 20-30 per cent premium for their *reichsthaler* banco (Pfister 2017). In 1761, for example, the *agio* was 25% in Genoa, 18% in Venice, 22% in Frankfurt am Main and Hamburg (*Itinerario* 1761:19, 29,40,43).

However, while exchanges were priced in bank money or monies of account, even in Europe commodities and merchandise were transacted in current monies, and different commodities were priced in different currencies in the same market. (Posthumus, 1943:LX; McCusker 1978: 44 for Amsterdam, 62 for Hamburg). 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 eight standard) and used it as numeraire and unit of account. Even French and English merchants in the Caribbean negotiated among themselves on the Spanish American peso (McCusker 1978:287). According to Denzel (2010: xlvii), bills were ultimately "credit instruments for metropolitan merchants" only. In North America, local assemblies set and repeatedly "cried up" their monies value -and did it separately- so exchange rates in sterling diverged wildly (McCusker 1978:125-229, 234-256; Mossman 1993:48-50, 62-63). Eventually

[42] From the Italian *vantaggio*. Flandreau et al define "agio" as the "market swap rate" between current coins and deposit balances at the Bank of Amsterdam. (Flandreau 2009 fn 52). In 1650, Antwerp the *agio* (premium) in the market for the Seville and Mexican coins was 60% and 40% with the Peruvian one (Baetens 1976:251).

Queen Anne' Act of 1704 (Parliament' Act of 1707) undervalued the Spanish coin in the colonies at 72sd – the "Proclamation Money" - a third below the mint par value the peso coin had in Britain (54d)[43]. So did the French in their Caribbean colonies – and for the same 33 ½% (McCusker 1978, 282) and in Canadian settlements (Chalmers, 1893 14); in Brazil the Portuguese "cried up" their current money too by 33% and more during the gold boom and the renewal of minting there in the 1710s (Cerqueira Lima 2017)[44]. Even English coins were valued higher in the colonies: the silver crown was worth 60 pence in England, but it was rated at 75d by the Virginia Act of 1727 (Chalmers 1893, 13), 90d in 1759 Philadelphia and 96d in New York (Mossman 1993, table p 75) and 81 in Massachusetts[45].

Monies of account were unknown in the Spanish Indies, her peso coin -called dollar in English in lieu of the *(real)* after the 1680s changes- was the currency and unit of account that served to price goods and exchange. 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 (enhancements) in the metropolitan monies of account. It was Spain -with a much less centralized coinage- that in the later eighteenth century counted twenty different types of "physical current" coins of silver, gold, and copper and various «imaginary currencies»– or monies of account – (Larruga

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[43] Ratified by the Parliament' "Act Ascertaining the rate of Foreign coins in her Majesties Plantations in America of 1707 .. ensuing the date hereof no Seville, Pillar or Mexico pieces of eight shall be accounted, received, taken or paid within oy of our colonies or plantations, as well those under proprietors and charters, as under our immediate commission and government at above the rate of six shillings per piece current money for the discharge of any contract and bargaining .. –with the punishment of six-month imprisonment without bail or mainprize .." (Chalmers 1893, App B 414).

[44] The Dutch (and Danish) used a different exchange rate that overvalued the silver coin in Europe – it was worth 48 stuivers there versus the 38 it was in Amsterdam in 1740 [McCusker 1978:292]. Coins had a 10-15% premium in the Dutch and Danish West Indies (297) *vestindik* and Danish current monies.

[45] Thomas Jefferson wondered: "Our weights and measures are the same which are fixed by acts of parliament in England. How it has happened that in this as well as the other American states the nominal value of coin was made to differ from what it was in the country we had left, and to differ among ourselves too, I am not able to say with certainty" *Notes on the state of Virginia.* http://www.loc.gov/resource/lhbcb Query XXI:180-182. Accessed 02/02/2024.

1787 I:73) Spain was the only one with an undervalued domestic rate of exchange with her colonies currency.

The European companies in East Indies performed mostly with coins; the VOC largely shipped their own coins -even the small change- to Java and Batavia (Feenstra 2020)[46] - whereas the English, who coined nearly no silver at home and run three mints in India, consistently re-exported foreign silver coins to Asia since the mid seventeenth century (Chaudhuri 1963, 1968). Behind this difference however, both companies alike undervalued the foreign coin in Asia to procure silver there and reduced shipments from Europe[47]. From 1664 to 1734, the Dutch company issued *assignaties* for 237 million florins -i.e. 4% interest bearing bills (Pol 1985, 90). They were denominated in monies that priced lower the silver *ducatoon* in Asia – e.g. at 78 stivers in Batavia (it went to 72 between 1732 and 1782) against 63 that was in Amsterdam (Gaastra 1994). These bills helped to mobilise private capital in financing further imports of Asian goods - although did not fully substitute the export of silver (Gaastra 1994 fn5). This also afforded a 24% profit to private agents in the exchange rate difference between Batavia and Holland (Pol 1985:141). Historians have thus underestimated the silver share of Dutch exports – particularly from within Asia - because coins were reckoned at a premium in money of account (Haider 1996:321, Prakash 1988:88-89).

Having traded the Spanish American silver in Asia at 54d since 1619, over a mint par in London of 50d, from 1681 the East India Company invoiced the dollar coin at 60d per ounce sterling in their bills in Asia, adding transaction and transportation costs to the coins prime cost in London - at 54d after 1720 (Morse 1926 I:47). In the 1770s, EIC bills on Canton denominated in Spanish dollars

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[46] Yet most of the specie shipped to the East Indies in the eighteenth century was - in order of importance: silver bars, Spanish and Mexican silver coins and gold bars. (Pol 1985, Feenstra 2020 tables 2,3).

[47] "At Batavia the rix-dollar is valued at 60 stuivers, which is worth but 48; and at Policat the pagoda is valued at $5^{1/2}$ guilders, which is really worth but $4^{1/2}$ this is in a way of regulation as they say, upon complaint of it to the state-holders" (Lockyer 1711:316).

now “at the exchange of the season” - a fixed but «adjustable» exchange rate- sought to procure specie in Asia for the China trade. Competition pushed up the exchange rates: the EIC further increased it to 62d and 66d but the Danish and Swedish were offering both higher rates and shorter sight (Glamann, 1949). In 1787 EIC started issuing 30 days 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 in Spanish dollars went up to 66-68d after 1797’ suspension of the pound convertibility in England and during the French Wars jumped to 84d; the rate for rupee bills climbed to 42-43 per 100 dollars (Morse 1926, II:358,388) and 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, i.e. London imported silver dollars from China and India.

As in the Caribbean (McCusker 1978:280,281), in Asia the dollar/peso coin was too the “measure of all money, [the] universal basis for the exchange quotations”. However, the exchange par was determined by the purchasing power in private markets «free of regulations». As pointed by Quinn y Roberds, the market price of coins commonly exceeded their legal value (Quinn and Roberds, 2009:36)[48] Thus, neither in the East or in West Indies, the ordinance value on the piece of eight / dollar did ever reflect the actual par of exchange at the commercial rate and far less the intrinsic value. As Roover pointed “the manipulation of exchange rates and setting arbitrary values” to coins at home and abroad conceived in the *cambium maritimum* - and the respondentia – ultimately affected the flow of silver. Thus, bills did not circulate outside the companies (and without the bill of

[48] The authors consider changes in the nominal value of coins or monies of account “as (another) regulatory approach” (Quinn and Roberds, 2009:33). They point out that “laws assigned coin values were enacted early and often but these did not solve the problem of debasement” p 32; Focusing on the role of debasements only they underplayed the use of bank money as monetary policy mechanism – i.e. In the outcome rather than on the means.

lading), other than as remittance of profits or for coins procured throughout Southeast Asia rather than of credit, and at a «certain» exchange rate [49].

Contrarily, respondentia contracts 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. – Sound coins were short, so the bills rate was at more favourable from 65-66s in the 1800s it went down to 51d in 1825 and further to 46d in 1828 (Greenberg 1951, 160) when Chinese imports of silver nearly abated. They appeared in the Canton trade in the 1820s mostly via US merchants drawing on London and British houses in India (Irigoin et al forthcoming)[50].

As late as 1832, Mr Palmer, then governor of 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 (p 107) "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 to set and regulate the value to the foreign coins. In most of Europe, foreign silver coins were received by count and were priced in monies of account that tended to overvalue them. In Britain, however they were priced by weight (e.g. in ounces) (Tate 1908:318) at the ratio of the sterling standard – i.e. the mint par

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[49] The Company "notice each settlement in India and Supercargoes in China that this Company's *exchange at China shall be fixed for three years* at 63d per Old dollar payable at 12 months sight and at 67d per Old Dollar payable at 24 months sight" (IOR/L/A/G1/1/124 f.43). (my emphasis)

[50] In 1801s Dorr instructed his partners "For return: take bills in London, buy dollars and take freight home but if possible, buy dollars in Hamburg .. Young Hyson, Gunpowder and Hyson teas because they are "cash articles". "I had rather have and do the business of a ship with dollars for nothing, than meddle with skin ships" (Door/ Corning 1945:224).

established in 1604 and restored in 1702 by Newton assay[51]. By 1779 in Canton, the Spanish dollar had already become current 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 imports of silver, including gold coins, in Spanish dollars. In 1796, the EIC followed suit. By then the specie was already trading at 9% premium over its intrinsic value (Morse 1926 II:41, 313). Still in the mid-1830s the *Canton General Price Current* quoted prices of exports and imports in Spanish dollars. Within Europe, this monetary anchor enabled bills' substitution of precious metals for a cashless means of payments -when prices fell within import/export bullion prices) (Sperling 1962; Irigoin at al. forthcoming for the data). This was impossible in Asia where cash had a premium determined by the demand – which moreover was increasing after the 1790s. Same as in America, that as the source of the cash had an overvalued currency driven by the very large Asian demand. In this context, Roberds argument for an exceptional monetary capacity of Europeans is more persuasive than those grounded on her political institutions (Roberds, 2016:219; Karaman et al 2020) [52]. Thus, Europeans chose respondentia to settle exports to the New World and to pay for their imports in Asia, while used bills in more "certain" money markets inside Europe only – or in exchanges within a "more convenient" rate the Companies occasionally offered, as Governor Palmer attested above.

IV

The paper shows the global dimension of respondentia as instrument of private trade finance in early modern global trade. Although bills of exchange were known in Europe for long already, the contract -that established the specie

[51] A Proclamation of 1825 failed to centralize the coinage in the British possessions. They maintained their own currency regime until late in the 19th century (Shannon 1951). Hong Kong used the (extinct) Spanish dollar as unit of account until the 1860s.

[52] Discussing Christine Desan's *Making Money: Coin, Currency and Capitalism* Will Roberds highlights "the development of legal and conceptual frameworks that allowed (Europeans) to seem sufficient money-like" (2016:919).

(currency) of the return- was preferred in commerce outside Europe. The instrument known in the early Mediterranean moved to the Atlantic and the Pacific to finance the procurement – i.e. «bring in»- of American silver. Asian and European economies depended on silver and gold imports for their coinage at home and further international trade. The former also lacked institutions to set the legal value of foreign coins or to establish a standard to their own coinage; their money markets were not centralised, they relied on foreign specie and performed with a huge diversity of currencies. Originally, the contract allowed a mitigation of the uncertainty in future returns of investments in contexts lacking common standards for metallic monies. With growing maritime trade that intermediated American silver to Asia respondentia developed – in addition- as instrument for exchange over time. In so doing, it also allowed the capture of arbitrage profits.

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 resulting issues in prices and exchange rates. They designed (or adapted) instruments and institutions to manage variations in the international supply and demand of precious metals and buffered their own currencies from such changes. By using monies of account applied to prices, contracts, and accounting, Europeans economies decoupled their foreign exchange from the uncertainties of international trade. Furthermore, they set different prices and rates (or currencies) for their colonies than at home and managed exchange rates according to their international trade position. Whereas Spain uniquely undervalued her own currency against the stronger silver coin from her colonies; other Europeans intervened overvaluing their currencies at home by enhancing the value of their monies of account; they too had a dual monetary system in the metropolis and colonies with different valuations for the silver coin in one and another – with different capabilities and results. All this points at the respective monetary capacities, naturally a political economic aspect, which is well outside the scope of this paper.

Monetary historians have considered silver as a commodity – probably as Britain priced foreign silver and gold as a weight proportion of the sterling standard of fineness re-established in 1702 by Newton. However, monies of account developed in Europe allowed the exchange of silver (and gold) by count. They set a price for foreign coins in current monies that was not directly affected by the results of trade and overvalued local monies to attract silver for coinage and for imports from Asia. Their use in exchange fairs and later by public banks, worked well to clear international balances and to substitute the use of cash in Europe. Even Britain had one in the guinea of 21 shilling that did not agree with the unit of account worth 20s (and which lasted until 1816 when silver was finally demonetized). Monies of account allowed to trade gold and silver by count and avoided assaying the coins. As Supple put it, monies of account solved the "confusing abundance of coins" (1957:240); in so doing they also standardise their values and posed an intervention of sorts in money markets. Decoupling the price of precious metals from the market with institutions that could control the flows allowed a crucial tool of monetary policy. 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 the supply of high-quality coins continued flowing out of Spanish America it 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, so respondentia lingered. Intermediaries could not keep the pace; the glut of American markets affected returns on capital under respondentia and premiums started to fall increasing the risks of overpricing the exchange. Similarly, greater competition for silver in Asia raised the exchange rate at which monopolistic intermediaries used to trade, eroding their rate of return. As trade grew over the eighteenth century, the worldwide currency of the Spanish American silver coin conformed an incipient system for international settlement so respondentia moved from an instrument of exchange and trade finance to a vehicle for rent seeking. The Smithian growth so created brought competition to established intermediaries, reducing their rents; premiums fell steadily and the exchange rates the companies paid for the silver increased with

the commercial expansion, by the 1820s-1830s the intermediation and the intermediaries had ended

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Appendix 1: Sample of respondentia contracts

1. Macao for Nagasaki 17C

Summary of a contract *a risco*; Rodrigo Sanchez de Paredes, 7,500 taels of silver for Macao. Nagasaki. 17th century.

"I say that, I Rodrigo Sanchez de Paredes, married and resident of Macao, I took the respondentia from Mr. Suyetçugu Sotucu resident in Facata (Hakata / Fukuoka? In Japan) **seven thousand five hundred taels of silver bars** for the premium of thirty per cent**,** which will run from here to Macao, (as) the risk on the ship (*capitana*) *Nossa Senhora da Guia* being half, and the other half on the ship *Conceição* on board of which the *Feitor do Povo* (People's Factor) travels, divided equally, and from Macao to this city of Nagasaki the risk will be divided equally on all the ships which the subsequent voyage will be made, and that several will depart from the port of Macao one day, and i will make or order to make prompt payment of the same and the respondentia; if he does not arrive because he is carrying me property and stores, and there is no voyage during the year due to some event i will pay him and additional one ten percent asi s customary and i declare that this silver will be delivered to the City (of Macao Senado) by way of *feizodono* (a factor named Suetsugu Heizo) and that if she takes it, order this payment to be made by the People's factor with due punctuality, and the goods remaining in my possession, as such bind myself in faith of what i signed in this Nagasaqui today, five of November of 1627.

Ro. Sanchez de Paredes
S.20 Of seven thousand five hundred taes that Ro. Sanchez took to answer (Respondentia) *Suyetcugu* at a rate of Thirty Percent".

Source Oka (2001) Mihoko Oka "A great merchant in Nagasaki in 17th century. Suetsugu Heizô II and the System of Respondência" Bulletin *of Portuguese - Japanese Studies*, no. 2, june, 2001, pp. 37-56p 41

2. Genoa 17th century.

Template of a contract – "Form of this *Cambium Maritimum*, according to the current use Genoa late 17th century"

"In Genoa à ... [blank] days of the month of .... [blank]of this present year of .... [blank] the Skipper B., owner of the boat called N., of the size [burden] of .... [blank] which is now in the present Port, voluntarily declares by this Instrument, that it shall be valid as if it were a Public Deed, [notarized] which he has **received in cash money** from F. herein present, and in the presence of the undersigned witnesses. **[sum of]... [blank]** ***scuddi***, which he receives from the said F. by title, or cause of Cambium Maritimum, on the body, freight, harness, armament, and accoutrements of the said Boat, for the term of one year, which is to commence to run on .... [blank] in which term, and with the said money, will to be able to sail on the said Boat to any part of the world, at the discretion, risk, and danger of the express F. by which the said party, that is, of Sea, Corsairs, and Fire, to the exclusion of damage (*avaria)* and jettison and leaving any other risk on account of the said master Skipper B., who promises to the said F. at the end of the year, provided that he is not on voyage, and if he is not, once the voyage is finished, and arriving at this Port, upon which he refers to the oath of the said F. **to restore the capital** to him, and also to pay him the premium of the *Cambium Maritimum,* which is agreed at .... [blank] per cent as the rate for one year, and at the pro rata, for the length of time he takes to return, and this for his share of the profit in the employment, and cost of the risks he undertakes, and of any other thing that may belong to him, deducting any damages and expense which he may be incurred: from which profits the said F. promises, and agrees to earn the third part of four in four months, from when the risk shall be no longer on his account, but that of the said Patron B. who promises to fulfil what has been expressed, without contravening it, to which he binds himself to his person, hypothecating his present and future assets, and especially the said Boat, which he has, and possesses, on the name, and account of the said F. until he has fully complied with the foregoing, in return of which he shall sign this by his own hand his and others of the same kind, being witnesses P. A. and D. who shall sign the same. God keep her.
By offering to make such a notarial deed on clothes, or merchandise, or adding other covenants, this method shall be observed *mutatis mutandis*; and in order to avoid disputes, the covenant shall always be made, that in the event of misfortune (which God forbids) shall be made in regard to the existence of the merchandize, the said Master shall abide by oath of him who gave the money".

Translation of the original in Italian *Ponderazioni* sopra la *contrattazione marittima*, Stamperia della Libertà, Génova, (first edition in Italian: 1692). Reproduced in **Source: Carlo Tarda, *Reflexiones sobre los contratos marítimos sacadas del derecho civil, y canónico, del Consultado del mar, y de los usos marítimos, con las fórmulas de los tales contratos*, (Madrid, Imprenta de Francisco Xavier Garcia, 1753), fol. 106-108.**

3. Surat for Batavia, Patta and Mombassa, 1749

"Prepared for me C.L. Senff (sub-coopman) in the service of the General Inspected East Indian Comp: of the United Netherlands and as such secretary of the Board of Police of the Suart Directorate, expressly qualified for this purpose, present the following witnesses, Johannes Floeneus captain and Jacob chief mate of the *gourab* (vessel) *De Hoop*, who confessed and declared, do as they do, of the under 'S E. Comp:s protection *sijnde* native *cooppmen* Mantjerje Gorseedje and Lala Chieuw Naran on *Bodemerij* and the right of Aventure of the Sea on the said bottom, for the risk of here after and of Barava, Patta and Mombaza, to have received in cash, a principal sum of three hundred **Souratse silver ropijen (rupee coins) (128) of 30 heavy stuivers each**, plus/ at a premium for the Aventure of the Sea of 15 1/4 per cent and under the following conditions, as follows:

1, That the risk will commence from the day that she anchor here on the dock/ road, and that in the event she will go under the aforesaid keel, and that this will last until the day that they will drop it again here at the dock..

2, That the 15 1/4 per cent of the *bodemerij* was taken for a period of four months, and that the said *gourab* (vessel) should remain longer than the proviso agreed period of: time, they will then pay three quarts per cent of interest for the remainder.

3, That they accept and promise 33 days after their return with the aforesaid *gourab De Hoop*, to return and pay the prescribed sum of 300 rupees with the premium and interest that may sometimes accrue thereon, to be repaid in the prescribed currency to the said creditors, order or heirs, and

4, off Last: That they submit to the custom of the European nations in view of the law of the sea as it is customary in this city.

For/To which the parties/ persons appearing optimally bind their persons and property, subjecting them to all rights and judge / judgements rights.

Thus done and passed in the Dutch Comptoir Souratta on the day, month and year mentioned above, in the presence of the Bookkeeper / accountant Willem Honingman and p[rincipa]l assistant Jan van der Does sworn clerk in this secretarial office as witness".

Source Tamil Nadu State Archive, Chennai, India
No. 1644, doc.no. 32/pp. 127-129 Surat , 10 February 1749
Thanks Prof. Gulham A. Nadri for kindly sharing these sources with me.

4. France for Lima, 1755

Account of the Interest taken on a Vessel destined for Lima, the capital of Peru in the South Sea

"This count and the one against me have been communicated to my in original by one of my relatives at Montpellier.
MESSRS. G.1. F. de MONTPELLIER, owe to G.F. C. de CADIZ-Rx. 12301 – For the amount and expenses of 1500 piastres that we have placed at *risqué maritime* on his order and on his account, in favour of Don CRISTOVAL RODRIGUEZ PICON, D. SANTOS ANTON MATHEY, Y D. JACOME JACOMINI PORATA, PORATA, jointly and mutually bound the Spanish Vessel the *St. John the Baptist St. Anthony of Padua*, formerly *the Tuscan*, of 409 tons burden, 30 guns and 200 of crew, captain led. D. SANTOS ANTON MATHEY Master ESTEVAN PENA; destined for the South Sea, **making on 1000 Piastres at 70 per cent 1700 Piastres & on 500 at 75 Piastres 875, together Piastres 2575**, included in a Contract of Piastres 1,061,464, which the said Messrs. granted on 24th of December last, in the presence of D. LORENSO PISSON, at the the Register of D. JUAN Luis de VERGARA, Notary Public of this City, in the name of D. JUAN ALONSO GARCIA, payable in the City of Lima four months after the arrival of the said vessel, by the aforesaid, and in their absence by D. JUAN CALISTO de ALARÇON, in second by D. DOMINGO GRANADOS & in third by D. JUAN ANTONIO TAGLE, in **Actual Piastres, or Pistoles de *Poids* [*fuertes?*]**, to D. PEDRO de ARIAGA, D. ANTONIO MIGUEL de ARIAGO Y D. MIGUEL de SARRALDE, jointly with D. CELEDONIO MARTINEZ de JONQUERA in his absence with D. JUAN de ECHEVERICA Y URIA & ANTONIO MIGUEL de ARIAGA, and in default of the three, with D, PEDRO DEL VILLAO Y ZUBIAUR; the risk indicated on all the Effects which they have loaded on the said Vessel included in two Invoices marked A. & B which are in the power of D. CRISTOVAL RODRIGUEZ PICON, with the exception of 95 bales (bundles?) 499 Wax Marquettes, and 8 Boxes and 39 Cinnamon Boxes [*churlas*] of various marks, with order to the said Messrs. Commissionaires, to deliver the net proceeds of the said contract, under register in the aforesaid species, in the name of the said D. JUAN ALONzo GARCIA, by the first Vessel, or Trusted Vessels, which shall present themselves and in default of the next opportunity by the return of the aforesaid. Vessel, TO KNOW

5. For the said 500 Piastres .... to 8 Rs. RX 12,000
6. Expenses
7. For the Prorated Contract Fee..... Rs 1
8. Half Percent Brokerage .... Rs 60
9. Commission at 2 per cent Rs 240
10. (sum) Rs 301
11. Total Rs 12,301

Which make 1537 Piastres Current of 8 Rs of Platte, in CADIZ on ..... January 1749-
Signed G. F. C..

Source P. Giraudeau (1769) *Traité de l'achat des matières & espèces d'or & d'argent... in La Banque rendue facile aux principales nations de l'Europe . A la suite de quelle on trouve le .. La Banque rendue facile aux principales nations de l'Europe*. Troisième édition. (Lyon/Geneva 1769/1770) P 82

5. Cadiz for the Indies 1764 – France.
Une note d'un contrat à la grosse aventure enregistré à la Chancellerie du Consulat de France à Cadix en 1764

"On the day of today, the twelfth day of November, one thousand seven sixty-four, before noon, we, Jean-Baptiste Poirel, acting Chancellor of the Consulate of France in Cadiz,and resident in here (Cadiz), certify that at the request of Messrs Garnier Bonneval et Cie, French merchants established and resident in this city, rue de la Carne, parish of Sainte-Croix, and by virtue of the order from M. de Puyabri, consul of France in this said city, from the tenth of the current month, following the request of the said Messrs Garnier Bonneval et Cie on the same day, we being transported to the business house and domicile of the said Messrs Garnier Bonneval et Cie to proceed there to the verification of parts of several of the commercial books of the previous house of Garnier Mollet Dumas, one of the said books entitled "Loading Accounts and Returns of the Registers (*navios de registro*) for the Indies, Contracts *a la grosse* No. 1, marked CMD, from which we have extracted and copied literally *"a la lettre"* the leaflets on page 240; the following article

On the margin "extract from the book titled Loading Accounts and Returns of the Registers (*navios de registro*) for the Indies, Contracts *a la grosse* No. 1:

"1750

Don Nicolás and Don Pedro de Cañas

Note of a contract of Ps (piastres) 28860 as principal given *a la grosse* to Don Nicolás Francisco and Don Pedro Joseph de Cañas Trujillo to pay to themselves and in their absence to Don Francisco Bordas or Don Anselmo Paulé, eight months after the arrival at the port of Callao upon Lima of the vessel named *La Conception*, alias the *Victorioso*, master Don Isidoro Comin, on the risk assigned to 18 boxes n° 9 (numbered) 33 to 43, 50 to 54 and AB and to 6 bales n° 44 to 49, marked RS, containing various merchandise loaded onto the said vessel by the above mentioned Don Nicolas, whose debtors have half and interest according to the contract signed before Mathias Rodríguez, notary, on the 22nd of October, 1750, in favour of Don Pedro Nicolas Tardy, our figurehead, and they are obliged to load the said sum free of all expenses in the Indies on the same vessel or, failing that, on the one which will return in its place as part of the Register (*Navio de Registro*) and on the consignment of the said Tardy, namely:

> **Piastres 28860 ... principal[1] ... to reals of 8 [*Real de Plata*] ... Rte 230 880 [reals]**
> Piastres 14430 ... 50% fee-free premium
> **Piastres 43290 ... total receivable in Lima in physical (cash) Piastres**
> Freight**;** Brokerage... at 1/2% ... Rte 1154 3/8;
> Contract fees ... 20

[1] Note of the translator: Supplement of the contract interested parties in the above mentioned contract taken from folio book 240. Total 26 parties – individuals and firms - from Strasbourg, Geneva, Nantes, London, Nimes, Berne, Paris, Carcassonne, Valence, Haarlem, Liege, Amiens, for a amount of piasters 29,172.5 ½ of principal, total piastres 43,759 received – i.e. at 50% premium. Participation ranged 420 (min) – that of Mr J. Durade from Geneva to that of Mr Duclos & freres from Valence for 2,000 piastres.

[truncated document]“ ...
Loading Accounts and Returns of the Registers for the Indies and Wholesale Contract No. 1 marked RD, is in conformity with the original article which is put in writing therein on the aforesaid sheet 240, by us initialled *ne varietur*, to which we have well and duly collated it and found it conforme in all respects, according to the same form and tenor, On the strength of which we have drawn up the present minutes for the purpose of serving and validating in so far as reason. In Cádiz, on the day and year aforesaid. Signed Poirel“

Source : CADN, Cadix, Registres de la Chancellerie, 12 novembre 1764, 136PO, carton 397
A note from a contract *a la grosse aventure* registered at the chancery of the consulate of France in Cadiz in 1764
Thanks to Arnaud Bartholomei for sharing this document with me.

6. London for China 1764

Copy of letter enclosed to the bond of Capt. Saunders Bond dated 20th December 1764 payable in China on account of Chris. Baron, esq. and E.C.

London 24 Dec 1764

"To Messrs Fritzhugh, Garland and Mackenzie[2]
Gentlemen
I wrote you the 22 of last month by the *Dutton* Cap' David Rice, and enclosed you his bond to me for **£500,** lent him at respondentia at 12 percent payable in 30 days after said ships arrival in China, **at three Tales in weight: for each pound sterling** duplicate of which letter, inclosing a second bond; I sent you by the *Essex* Capt. Read, one of which bonds being paid the other to be void. I now take the liberty to enclose you Capt. Of the *Albions* W. Larkins **bond for £1500, also lent at respondentia at 12 percent: payable in 60 days after said ships** arrival in China, to you, after the same rate as the former, which bond, you will find is for the joint account of Ebenezer Blackwell, and me.
I also send you Cap. David Saunders, of the *Grosvenor* **bond to us for £1000**, on the same terms of the last mentioned, which I must beg the favour of you to receive for us, and please **to remit bills for the amount of both the last mentioned bonds, on the India Company in our Joint names at 90 days sight, and after the rate of 5s6d for the value of each Spanish milled dollar.**
I also send you Cap. W. Larkins bond to me f**or £500 on the same terms, & conditions of the above mentioned**, and before I close this I shall send you Cap. And: Rolfs, of the *Ankerwick*'s bond to me for £500, also on the same terms, conditions, as will be expressed in the several bonds, duplicate of this letter& the second bonds, will be sent you by different conveniences. The amount of those bonds in my names, you will please to send me bills for on the company, as before directed.
I hope you will excuse the trouble that I give you, in transacting this affaire for me, and be assured I shall be glad of an opportunity of returning the favour, with any thing in the power of
Gent
You most obed' humble serv'
E. B. (Ebenzer Blackwell)
Copy, by the Albion, captain Larkins"

Source: Barclays Group Archives; Martin's Bank Limited , 1563-1918 London, Liverpool, England Wales private bankers, joint stock bankers GB2044 BB25/3 - leg 0009-0057 Enclosed to Bond of Captain David Saunders to be paid to Christopher Baron of Southampton Street Covent Garden and Ebenezer Blackwell

[2] Agents for Baron and Blackwell in Canton

7. London for India, 1758

Interest on a respondentia issued by East India Company to James Ekington and William Tyson in 1758

"/To the Honourable Directors of the United Company of Merchants of England trading to the East Indies, honoured Sirs

By bond or respondentia dated on 13th December 1758 James Elkington 3rd mate of the ship *Denha*, William Tyson commander, outward bound for East India Co in your service, became bound with another surety **to me in £ 300 penalty with condition for payment to me of £ 198 (being the principal sum of £ 150, lent with £ 48,** interest thereof added for 20 months certain and pro-rato to the end of 36 months or return of said ship to the port of London (First happening) which bond was to be void in case of utter loss of said ship in said voyage and time, and according to the usual form of such bonds: Now as the said ship was by order of the Company's governor of Bencolen and burnt there; the said bond became void, according to the tenor of the Condition, I am therefore advised to apply to your Honours for payment of **the said sum of £ 198 with interest** from the end of the 20 months certain which according to the legal rate of 5%, but as to that interest bill paid I shall be content with 3% in like manner as if the **said £198 had lain in India Bonds**. I am with all due respects, your honours most humble and obedient servant, John Consoe/ Consae?? 12/08/ 1767 Memol .. John Pensoe to be paid £198 with interests thereon being the amount of a respondentia bond. Committee of Lawsuits, head in CO(?) with Mr Mulhall 12/08/1767"

Source IOR/ D: East India Company: Minutes and Memoranda of General Committees 1700-1858 IOR/D/148 Ff 213-214

8. Cadiz for Lima 1777 – Spain
Risk 6 Don Josef Retortillo vs. Don Juan Josef Espeleta
Seal Quarto, twenty maravedis, in the year one thousand seven hundred and seventy seven

"/1 Let Don Juan Josef Espeleta, a citizen and resident of this city of Cadiz, be known as I, Captain of the ship named the *El Buen Consejo* that is moored in this bay, and with a register [load] of clothes is suddenly ready to continue voyage to the port of Callao in Lima; I grant that I owe Don Josef Retortillo, merchant of this place, **seven thousand and eighty pesos escudos of Old silver at one hundred and twenty-eight quarters each**, which he has supplied to and lent me to make benefit][lit, to profit], and of the aforesaid I confess to have received in cash before this bestowal. Included in them [is] the premium [for] the risk he will run in the way expressed below here, which I declare are moderate according to those that at present are carried in this trade, the proof of which and of what they have become I release him [from declaring], and of the said amount, for the sake of *abundamiento* [plenty], I consider myself content and according to my will, at his risk
[2r] As it is I hereby waived the exception of the *non numerata pecunia* laws of the delivery.
If... deception (...) of the two years and more in this case as contained therein, of which I give a receipt in form, and of these **seven thousand and eighty pesos**, the said Don Josef Retortillo, and with his will and consent, must run at risk from the bay of this city to the said port of Callao in the named vessel, on seventeen bundles numbered forty-three to fifty-nine, which with the mark of the margin, of my account and risk and to my consignment to deliver to me in the first place, to my brother Don Juan Francisco Espeleta in the second place, and to Don Juan Antonio Mergelin in the third place; which [bundles] I have put on board, the content of which I assure is of more [higher] value than that of this deed**,** and the risk must be of sea, wind, earth, fire, friends, enemies, and other unfortunate maritime events, (except barratry or change of route) that may befall the said vessel, with which (His Divine Majesty forbids) the said bundles maybe lost, that as the loss being in the whole the debt should be [illegible - considered paid]
[2v]
/1 (...) pays this debt, and is … (illegible - the covenant?) broken and (...) in case they come to safety without any loss or damage to the contents I am to pay it in its entirety, and if the vessel where anything it were saved in part, my creditor is to enter into the participation for the amount of this entry and, I for amounts worth the costs and expenses made on his benefit, and what may remain liquid is to be divided prorate according to the covenant account [agreement] on which the person in charge [of the clearance] is to be trusted by his oath alone without any other justification that he will be relieved, and the risk began on the eleventh day [after] and that the aforesaid bundles were placed on the wharf of this city; and from there they were carried on board the said vessel, stayed in the bay and for the whole course of the navigation, entering, being, and leaving, to any port, parts and bars with or without cause, until it arrives at the said Callao and enters it and [the bundles] were put ashore safely, after which the risk of account of the said Don Josef Retortillo expires, and from that time I must

remain, and constitute myself, liquid and plain debtor *of these seven thousand and eighty pesos* to pay as I will pay them, and without his power, order, or any other requirement than the copy of this entry and by virtue of giving the letter of payment as may be convenient , and to appear in court by reason of its collection, until I obtain all the requests, executions, *apremio*s [obligations], writs and judicial and extrajudicial proceedings that may be required, to Don Manuel Ramos in the first place and with preference in his absence, death or other legitimate impediment, to Don Francisco Cortes in the second place, and by that of both to Don Juan García de Ponte in the third [place], all neighbours and residents in the said port of Callao, or to whom by this order has the power and right to [the same above] represent within the first six months following the arrival of said ship to the said port of Callao in the city of Lima, [to] under its jurisdiction and privileges, and in any other place wherever I may be asked for the title on my goods found [valued] in as **many seven thousand and eighty double pesos of a new Peruvian stamp cash, or in gold doubloons of *Cordoncillo*[3]** that compose them of all goodness and law: that being punctual in the satisfaction I must be able to execute and [3r illegible] of the said my creditor, or of the (...illegible) 11 maybe (...) and were a legitimate party (...) deferred the proof of what has been said in compliance (...) and the term of the payment, which I did not make it even I left (...) and everything else that must be liquidated so that it is (... illegible) possible and has a prepared execution; without any other justification, even if by dominion it is required what I release him from. It is a condition and express covenant of this deed, by which the contract thereof has taken effect, that in the event of war, or hostilities being declared between this Crown, and any other maritime power of those which are now at peace, (except with Portugal) during the entry of the said vessel into this bay, or in the course of the journey, until reaching its destination, I am to be and am obliged to pay to the said Don Josef Retortillo, **twenty per cent more than the six thousand pesos principal** of this debt, but if the outbreak of war should occur during the period of six months indicated for payment, after the arrival at the said port of Callao, I **am to pay the said twenty per cent in the part or the whole** of the seventeen bundles which may remain without having been sold, this by reason [lit because] the insurance [cost] may rise in such a case, which I declare is moderate, usual and current in this commerce, taking [*entendiéndome]* that amount as the principal [as well] so that for it I can also be executed. To whose firmness and fulfilment I bind my person and present and future assets, and I give power to His Majesty justices of this city, to those of Callao de Lima, and any other parties who are with submission to all according to law, renunciation of my jurisdiction (...) of the law if *Combenerit de Iurisdiccio ne Omnium Iudicum*, the last pragmatics of submissions so that to all what is said [here] is compelling and compels me as by a judgment passed in res judicata, I renounce to the laws of my general favour and rights thereof, I give consent to the (...illegible) fulfilled the others are not valid, and so (...)
[4v]/1 granted in the city of Cadiz on the twentieth day of the month of December of one thousand seven hundred and seventy-seven years, and the grantor (to whom I, the Public Notary public, give faith I do know) signed it as witnesses " Mr. Joseph Pérez, Mr. Manuel Cabal and Mr. Manuel Sáenz residents of Cadiz.

[3] Rimmed coin minted in Lima after 1750 and in Mexico since 1730

Juan Joseph de Espeleta.

Before me in this record
Antonio De Torres

Source: Archivo Histórico Provincial de Cádiz, Protocolos de Cádiz, leg. 3643, escribano Antonio de Torres (n/p)
Thanks to Xabier Lamixiz for sharing this document with me.

9. London for East India 1780

John. J. Prince of London to Ebenezer Blackwell of Lombard St, London 1st December 1780

"KNOWN TO ALL MEN by these presents, That J. John Prince of London, Commander of the ship Latham in the service of the Hon. United East India Company

And held and firmly bound to Ebenezer Blackwell of Lombard Street, banker of London, the sum or penalty of **One Thousand Pounds in LEGAL TENDER OF GREAT BRITAIN**, to be paid to the said Ebenezer Blackwell or his certain Attorney, Executors, Administrators or Assigns; to which Payment well and truly I bind myself and any of my administrator firmly by these presents hereby. Sealed with my Seal dated the First Day of December, One thousand seven hundred and eighty, the Twenty-first Year of the Reign of our Sovereign Lord King George III.

WHEREAS, the aforesaid Ebenezer Blackwell hath, on the Day of the Date hereof, advanced and lent to the above bound John Prince, the Sum of Five Hundred Pounds upon Goods, Merchandizes, and Effects of that Value, laden or to be laden on board the said Ship or Vessel called Latham, burthen Five Hundred Tons, or thereabouts, now in the River Thames; now the condition of this obligation is such, that if the said Ship or Vessel do and shall with all convenient speed proceed and sail from and out of the said River Thames, on a Voyage to China or any other Port or Ports, Place or Places, in East India, Persia, China, or elsewhere beyond the Cape of Good Hope, and back to the said River Thames within the Thirty-six Calendar Months, to be accounted from the Date hereof, and that without Deviation (the Danger and Casualties of the Seas excepted) and if the above bounden John Prince and his Heirs, Executors, or Administrators, do and shall within Thirty Days next after the Arrival of the said Ship or Vessel in the River Thames from the intended Voyage, or at the End and Expiration of the Thirty-six Calendar Months, to be accounted as aforesaid, which of the said Terms shall first and next happen, wee and truly pay, or cause to be paid to the above named Ebenezer Blackwell, his Executors, Administrators, or Assigns, **the Sum of Seven Hundred and Sixty-five Pounds of good and lawful money of Great Britain, together with Thirteen Pounds five Shillings of the like lawful money for every Calendar Month the said Ship shall be out of the said Voyage over** and **above Twenty Calendar Months to the expiration of thirty six calendar months, to be accounted as aforesaid**; and so in proportion for a less time than a month, or if in the said Voyage, and within the said Thirty-six Calendar Months, to be accounted as aforesaid, an utter loss of the said Ship or Vessel by Fire, Enemies, or any other Casualty, shall unavoidably happen, and above bounden John Prince and his Heirs, Executors or Administrators shall, within Six Calendar Months after such Losses, do and shall within six calendar months next after such loss, pay and satisfy to the said Ebenezer Blackwell, his Executors, Administrators or Assigns a just and proportionate Average on all Goods, Merchandise and Effects, which the said John Prince shall carry out from England on board the said Ship or Vessel, and on all other Goods, Merchandizes, and Effects, which he may acquire during the said Voyage, and which shall not be unavoidably lost; then this Obligation shall be void, or else remain in full force.

Signed John Prince
Sealed and delivered, first duly stamped, in the Presence of [Below are two signatures reading: "Simson Levy" and "Wm Curtis"].
[On the right, a signature reads "John Prince"]. “

Source: Barclays Group Archives; Martin’s Bank Limited , 1563-1918 London, Liverpool, England Wales private bankers, joint stock bankers GB2044 BB25/3 - leg 009-0057 f.1

10. Surat for Batavia, 1790

"Prepared for me Carolus Zijnis sub-merchant and secretaries of police of this Directorate hereby qualifies/ qualified for this purpose / present the following witnesses, by a handy missive of the [*manhaften*] Mr. Ditmer Smith Captain Lieutenant *der Zee* (of the Sea) in the service of the VOC Ed. Comp: now on board the (VOC) Comps' ship *Berkhout*, and standing there after leaving Batavia, confesses to me, to have received from the hands of the bookkeeper and sworn clerk here Johannes Kuper, and to owe him the sum of **five thousand, five hundred, and five rupees of thirty heavy stuivers each**, which funds the *comparant* [taker] declared not to have engaged in trade with the E[nglish East India] Comp:, therefore reneging on the objection of uncounted money, and the same for the benefit of the bottom, and right adventure of the sea, on the keel of the aforesaid ship *Berkhout* for the outward voyage, which risk and adventure of the sea shall come to end as soon as they [lies anchor] at its destination, without the holder of this bottoming letter being subject, the damage which the *bodem in due* by fire, storm, arrest, war, robbers, or in any other way whatsoever may be befallen or inflicted,

He promises [the *comparant* (taker)] proviso: sum of rupees 5505 with that premium or buyer's premium for the risk and adventure of the sea, at nine per cent in return making together the amounts of rupees 6000, to be deposited / and paid to the good Ed. Lord Andrus Cantebeen, chief merchant and head of surgeons in Batavia, having obtained his right, and that three weeks after his arrival there under the condition, that these pennies will be paid to the *comparant* Gen Kuper, here free of charge // in the month of August next, when the same should leave again after Souratta, so that the same will be paid to Gen Kuper here at cost and without compensation, **in cash silver usual Sourat rupees** are made, in case the *comparant* should remain in default, in order to pay the above: sum of rupees 6000 at the departure of the first ship or ships, from Batavia after/ to Souratta to [illegible] to reimburse Kuper free of charge cost and indemnify without compensation he undertakes to pay to the *comparant* f then to the said Cantebeen to make twenty-five per cents on the said six thousand rupees, **making the sum of fifteen hundred rupees** due to exchange loss of the funds that Gen. Kuper if then on Souratta will have to negotiate in payment of the land;

In order to comply with the prescribed condition, the person/ partner first firstly binds his merchants to be embarked commits his merchants to be shipped, and secondly / furthermore generally, his person and other goods as follows".

Source Tamil Nadu State Archive, Chennai, India
No. 1665
Doc.no. 123/ pp. 315-17. Surat, 16 Jan. 1790
I acknowledge Prof Gulham Nadri for kindly sharing this source with me.

11. Manila for Acapulco, 1795.

Transcription of Correspondencia contract: between Juan de Zúñiga and his guarantors, receiving 7,000 pesos from the VOT of Saint Dominic,

"Deed for 7,000 pesos in *correspondencia* for the harbour of Acapulco in the kingdom of New Spain with the premia to be published by the Misericordia and the *Venerable Orden Tercera* [Venerable Third Order, VOT hereafter] of Saint Francis. Given By Don Juan de Zúñiga and his guarantors. In favour of the VOT of Saint Dominic" 11th March 1795.

"In the city of Manila on the 11th of March of 1795, in my presence the Most Excellent [notary public] and the below named witnesses, D. Juan de Zúñiga as principal, and D. Felipe Vélez Escalante, Juan Pablo Infante, and D. Vicente Vélez Escalante as his guarantors, all members of this citizenry [*vecindad*] and belonging to this commerce, [the "Ciudad y Comercio" of Manila] whom I certify are of my acquaintance, all together with one voice, and each for himself and for all *in solidum*, refusing as they expressly refused [to be placed under] the law *de duobus rei debendi*, and the present *hoc ita codui de fide usuribus*, and the benefits of the division, commonwealth, and bonds of whose effects they were informed, said = that they confirm and confess having received, as in fact they did, the quantity of **7,000 pesos** counted to their satisfaction from the Most Reverend Father the Prior and the other members of the *mesa* (board) of the VTO of our Holy Father Saint Dominic, from the hand of its attorney, which quantity, not having been received in my presence, they [the principal and guarantors] renounced the exception of the *non numerata pecunia*, the laws of the delivery, proof, and settlement as expressed within it [the law *non numerata pecunia*]. The said quantity they have taken in *correspondencia* to the harbour of Acapulco, kingdom of New Spain, with the premium that may come out of the (Holy House of) Misericordia and VOT of Saint Francis, and in case they [the takers] are not satisfied, the average between the two numbers that they propose shall be **taken [as the premium], the same [quantity of 7,000 pesos]** shall be loaded in the Frigate *San Andrés* that will be despatched [to Acapulco] this present year to collect the *situado* for these islands, with leave of this citizenry [*vecindario*], and that is presently in the harbour of Cavite, from where it shall set sail for the said port of Acapulco under its captain Don Marcelo Ayanza, whose [the 7,000 pesos] risks on keel, sideboards, and general loss will be underwritten by the said VOT, and must be understood to be valid from the shore of the harbour in which the said frigate is anchored for its lading, until the shore of the water in the aforementioned harbour of Acapulco or any other harbour in which the said frigate may anchor to unload its cargo, then shall the risks of the departure trip be considered expired. And the risks of the return will likewise be considered as imposed on the same Frigate or whichever vessel that may return in its place in the same terms that applied to the departure trip, understood as running from the shore of the water in which the said frigate may be anchored until the shore of the water of the harbour of Cavite, or any other harbours of these islands where the said frigate *San Andrés* shall anchor, or any other vessel that may come in its place, [after] verifying the location of its unloading, and then shall the risks of the departure and the return trips be considered expired as declared by the *Real Cédula* of His

Majesty of 9th July of the year of 1789, and confirmed by the *Real Cédula* of His Majesty signed in San Lorenzo on 6th October of 1792.
And fifteen days after its [the 7,000 pesos of *correspondencia* and the returns] arrival, shall the takers give and pay the said **quantity of 7,000 pesos along with the amount of its due premium** to the abovementioned VOT of Saint Dominic, or to whomever they legitimately assign, with simplicity and ease, without any litigation, together with the expenses of its collection in case of litigation. For which compliance they bounded their persons and their goods, with power and submission to the judges and justiciars of His Majesty [illegible].
Thus they agree and sign it, in the presence of the witnesses D. Pedro Alejandrino Flores, Francisco Bartolomé, y Juan Nepomuceno, of which I bear testimony.
1795
[Signatures of the principals and of the notary]"

Source: Escribano Miguel José Flores, 1795, National Archives of the Philippines (NAP), Protocolos de Manila, SDS-19789 (1795), ff. 47a-48b.
Thanks to Juan Jose Rivas Moreno for sharing this document with me.

12. Madras for Penang, 1818.

FORM (template) OF RESPONDENTIA BOND

"Known all men by these presents, that I, A.B. of Madras Inhabitant, am held and firmly bound unto Capitan G.W. of the Hono'ble Company Ship Roe, in the penal sum of two thousand Sta Pagodas Current Money of Madras, to the true and lawful Payment whereof I do hereby bind myself, Heirs, Executors, Administrators and Assigns, firmly by these Presents. IN WITNESS whereof I have hereunto set my Hand and Seal in Madras, this twenty fifth day of March, in the Year of our Lord One Thousand Eight Hundred and Eighteen. WHEREAS the above bound A.B. hath taken up and received of the aforesaid Capt. G.W. the full and just **sum of One Thousand Star Pagodas**, which sum is to run at Respondentia on Goods on board the H.C. Ship Rosa, whereof Captain G.W. is now Master of Commander from this Port of Road of Madras to Penang, with liberty to touch at the intermediate Ports at a Premium of Eight per Cent for this voyage the principal and Premium to be paid at Penang by Messrs J.H. and C.H. my Agents **at the Exchange of one hundred and sixty Spanish Dollars per Hundred Star Pagodas** in consideration of which the usual Risk of the Seas, Rivers, Enemies, Fires, Pirates, &C. to be on account of the said Captain G.W. and for the further Security of the said Captain G.W. the said A.B. do hereby consent and agree for himself his Heirs, Executors, Administrators or Assigns to Mortgage and Assign over to him the said Captain G.W. the several Ware and Merchandize laden or to be laden on the said Ship Rose now riding in the Roads at Madras, as per margin, which said Goods, Wares and Merchandize, with their produce, are thus mortgaged and assigned over, and are to be delivered to no other use or purpose whatever, till payment of this Bond is made, with the Premium that may become due thereon.

BOTH the condition of this obligation is such, that if the above bound A.B. shall well and truly pay or cause to be paid unto the said Captain G.W. his Heir, Executors, Administrators, or Assigns, the full amount of this Bond, and the Premium due thereon, at the expiration of this Voyage, from Madras to Penang, after five days to be paid at Penang, by Messrs. J.H. and C.H. or in case of the loss of the said Vessel (which God forbid), such an average as by custom shall become due on the Salvage, then this obligation to be void & to no effect, otherwise to remain in full force and virtue. Having signed to two of the same tenor and date, one being accomplished the other stand void.

Signed, Sealed and Delivered, A.B.
(where no Stamp'd Paper is to be had) in the presence of
F.M and E.R. Witnesses"

Source: *The Madras Commercial Ready Assistant* [printed] (Madras 1818) p 204

IX

TABLE VII.— SILVER COINS OF INDIA.

[To find the value in *Sicca Rupees*, deduct one-sixteenth from the value in *Furukhabad Rupees*: the latter are the same as *Madras* and *Bombay Rs*. For the value in £ sterling, divide by 10.]

Name.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100	Remarks.
	grains.	dwts.		grains.	Fd. Rs.	
Agra rupee,....	171.62	Br. 7	94.5	162.33	98.381	Struck at Agra by ?
Ahmedabad old	178.00	Wo. 4.5	89.8	159.83	96.864	Gujrat and Cutch.
old,	179.92	Wo. 17.5	84.4	151.81	92·004	Formerly coined.
new,	180.75	Wo. 15	85.4	154.39	93.568	Present currency.
hály,	174.77	Br. 12	96.7	168.94	102.390	Coinedfor city currency.
Ahmed Shah,..	177.25	Br. 15	98.0	173.70	105.272	(Equal to Delhi standard, 1750.)
Ahmednugur,old	174.50	Br. 14.5	97.7	170.57	103.376	Same as Delhi Rupee.
Ajmeer, old ? ..	168.60	Wo. 11	87.1	146.82	88.982	Srisahy, cnin. curncy. introduced by Tantia.
Sri-sahy, .	168.17	Wo. 27.5	80.2	134.89	81.751	or Bapoosahy?
32nd sun, .	168.00	Wo. 21	82.9	139.30	84.428	Coined in 1792.
Allahabad, ...	172.03	Stand,	91.7	157.70	95.573	Suns 18, 21, and 26, (1778-86.)
AlumgírII.1759,	179.50	Br. 16	98.5	176.51	106.974	Equal to the Sa. rupee.
Anasahy,.....	176.25	Wo. 7.5	88.5	156.05	94.578	Coined at Kaira,Gujrat.
Ditto, ...	177.25	Wo. 14.5	85.6	151.77	91.982	Coined at Pitlad, do.
Ankosy, old, ..	172.00	Br. 3.5	93.1	160.17	97.075	Standard of Poona, also called Chinsory.
new,....	173.50	Br. 2.5	92.7	160.85	97.484	
Aracan, (Mug,)	162.38	Wo. 81.5	57.7	93.71	56.793	
Arcot,(Compys)	176.40	Br. 7.5	94.8	167.26	101.340	Coined in Calcutta for
1759,	177.25	Br. 10	95.8	169.86	102.948	theDacca andCuttack
1782,	174.00	Br. 11	96.2	167.47	101.500	Districts, also the old
1788,	177.25	Br. 11	96.2	170.60	103.396	currency of Madras.
old,.	172.39	Br. 4.5	93.5	161.25	97.729	The Surat arcot, men-
1766,	171.47	Br. 3.5	93.1	159.68	96.775	tioned in Reg. XXXV. 1793.
new,	188.00	Wo. 4.0	93.3	169.20	102.545	TheMadras dollar rupee.
Cuttack, ..	173.89	Br. 9.0	95.4	165.92	100.556	Formerly current here.
French, ..	173.13	Br. 9.5	95.6	165.55	100.334	Coined at Pondicherry ?
Gurnály, .	172.20	Br. 7	94.6	162.88	98.716	Uncertain,(from Chitagong.)
Phurshy,..	172.78	Br. 7.5	94.8	163.78	99.258	Forshí of Reg. XXXV. 1793.
Uncertain,.	169.33	Wo. 17.5	80.2	142.88	86.592	Probably forged.
Jeházy, ..	173.573	Br. 7.5	94.8	164.53	99.716	Brought to Chitagong by sea.
Asam, mixed,..	174.05	Br. 8	95.0	165.35	100.215	Current in the valley
Rudra,Sinh	173.20	Br. 15	98.0	169.59	102.782	of Assam and the
Siva, ...	173.40	Br. 13	97.1	168.34	102.025	neighbouring districts:
Pramatta,..	169.90	Br. 12	96.7	164.24	99.537	coined at Rungpoor
Rajendra,..	173.90	Br. 12.5	96.9	168.47	102.100	and Jorhat.
Lakhsmi, ..	173.50	Br. 13	97.1	168.44	102.084	
Gourinâth,	174.20	Br. 10	95.8	166.94	101.177	Restored to throne in
Ditto, ...	174.00	Br. 6	94.1	163.83	99.303	1793.
Bharat, ..	174.75	Br. 11.5	96.5	168.56	102.159	
Ashasahy, ...	176.50	Wo. 11	87.1	153.70	93.153	Anasahy ? Gujrat, Baroda, Kaira, &c.
Aurungabad, ..	170.86	Wo. 23.5	81.9	139.89	84.787	Coined by Govind Bukshy,(Hyderabad,)see Govind Bukshy.
Babasahy, ...	177.00	Wo. 14.5	85.6	151.56	91.849	Coined at Baroda, from sun 4 to 18.

Name.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	grains.	dwts.		grains.	Fd. Rs.	
Bagalkota, ...	172.30	Wo. 5	89.6	154.35	93.546	Mulharsahy, (Holkar.)
Balasahy,.. ..	169.21	Wo. 8.5	88.1	149.12	90.426	Old coinage of Ságur,
	162.14	Wo. 5.5	89.4	144.92	87.828	current in Gurrah
	169.00	Wo. 6	89.2	150.69	91.328	and Bundelkhand.
Barelly, ...	171.90	Br. 4.5	93.5	160.80	97.453	Current in Rohilkhund.
	169.28	Br. 5.0	93.7	158.61	95.945	Average of 4 lakhs.
Baroach, old, ..	177.06	Br. 7.5	94.7	167.84	101.720	Now disappearing.
new,..	177.50	Wo. 8.5	88.1	156.42	94.801	Present currency(1821.)
Baroda, ...						See Babasahy.
Batavia, 1763,..	199.00	Wo. 20.5	83.1	165.41	100254	Coined by the Dutch
1803..	204.00	Wo. 30.5	79.0	161.07	97621	East India Company.
Bhatore, ...	171.30	Wo. 10.0	87.5	149.89	90.841	Near Ahmednugur.
Belapoor, ...	171.82	Wo. 14.5	85.6	147.12	89165	Current at Poona, in Concan, &c.
Benares, old,	175.00	Br. 12	96.7	169.17	102.525	Under native daroga.
old stand.	175.00	Br. 11.6	96.5	168.875	102.348	By Reg. II. 1812, oblique-milling.
since 1800,	174.76	Br. 9.5	95.6	167.00	101.285	Average of rs. brought for recoinage.
1819—1829,	180.234	Stand.	91.7	165.21	100.134	The late Furukhabad rupee: mint abolished in 1830.
Bhikaneer, ...	174.00	Br. 11	96.2	167.47	101.500	
Bhilára, ...	168.90	Wo. 21.5	82.7	139.69	84.663	Current in Ajmeer.
Bhilsa, old,....	169.62	Wo. 12.5	86.5	146.65	88.882	Mint under Bhopal
another,..	169.01	Wo. 16.5	84.8	143.31	86.901	Nuwab.
new, ...	173.61	Br. 6.5	94.4	163.47	99.299	Reformed in 1827.
Bhopal, ...	171.38	Wo. 6	89.2	152.82	92.616	Coined at Bhopal.
another,..	169.25	Wo. 6.5	89.0	150.56	91.249	(Reformed in 1827, see Bhilsa.)
Bhurtpoor, ...	171.86	Br. 10	95.8	164.70	99.819	Average of many lakhs.
Bindrabun, ...	156.67	Wo. 19.5	83.5	130.89	79.325	
Bombay, old, .	178.33	Br. 12	96.7	172.39	104.282	Old Surat rupee.
	178.75	Wo. 2.5	90.7	161.99	98.176	Ditto debased.
1800,	179.00	Br. 0.5	92.0	164.68	99.200	Coined at Bombay and at Calcutta.
1829,	180.00	Stand.	91.7	165.00	100.000	Present standard.
Boondee, 1819,	171.56	Wo. 7	88.8	152.26	92.273	Current in Ajmeer
1825,	172.82	Br. 7	94.6	163.46	98.622	and Bundelkhund.
Brazil, Pataka,	407.99	Wo. 5	89.6	365.49	221.514	Brazilian dollar.
Brodera, old, ..	178.50	Wo. 1.5	91.1	162.51	98.490	
new, .	178.50	Wo. 7	88.8	158.42	96.011	
Bulubsahy,....	175.56	Wo. 15	85.4	149.957	90.880	Coined at Baroda.
Bunder, tuksal,	163.79	Br. 85	95.2	155.93	94.502	
Gurnalí,	174.66	Br. 9	95.4	166.66	101.005	
Burhanpoor, ..	178.80	Br. 8.5	95.2	170.23	103.171	Also called " Purkee," coined by Sindea in Khandésh.
Bussorah, ...	280.00	Wo. 11.7	42.9	120.17	72.828	Persian Gulph.
Calcutta, old,	179.666	Br. 15	98.0	175.923	106.620	The old Moorshedabad 19th sun sicca rupee.
new,	191.916	Stand.	91.7	175.923	106.620	By Reg. XIV. 1818*.
present,	192.00	Stand.	91.7	176.00	106.666	By Reg. VII. 1833, all receivable at par.

* The standard of 1818-1830 was really a pennyweight too fine, in consequence of an error in the old standard plate of England, to which the assays of India were referred.

Names.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	grains.	dwts.		grains.	Fd. Rs.	
Cambay, ...	178.00	Wo. 15	85.4	152.04	92.167	Current in Nuwab's district.
Calány, ...	172.66	Wo. 24	81.7	141.01	85.460	
Ceylon, ...	134.00	Wo. 24	81.7	109.43	66.323	The rix-dollar, of 1s. 9d?
	138.32	Wo. 5	89.6	123.91	75.074	
Chambagondy,	171.00	Wo. 15	85.4	146.06	87.917	Discount of 2 per cent. with Ankosy rupee.
Chanda, ...	166.42	Wo. 13	86.3	143.54	86.991	Current in Nagpoor and
1819-24,	169.70	Wo. 4	90.0	152.7S	92.563	the Nerbudda.
1825, ..	165.15	Wo. 16.5	84.8	152.72	92.559	
Chandéry, ...	173.00	Br. 1.5	92.3	159.66	96.766	One of Sindia's mints.
Chandoly, ...	170.15	Wo. 14.5	85.6	145.69	88.299	Gwalior rupee.
Chandoory, ..	172.00	Br. 1	92.1	158.38	95.989	Khandesh standard,
another,..	168.70	Wo. 2.5	90.7	152.88	92.656	current in N. Con-
another,..	169.70	Wo. 1	91.3	154.85	93.849	can, at par with Ankosee rupee.
Chandrapoor,..	163.00	Wo. 19	83.8	136.51	82.735	Average.
	166.50	Wo. 5	89.6	149.16	90.397	
Chinsory, ...	172.50	Br. 3	92.9	160.28	97.140	Same as Ankosy of Poona.
Chitore, ...	169.57	Wo. 28.5	79.8	135.31	82.004	Current in Ajmeer.
Chourasy, ...	171.75	Wo. 3.5	90.3	154.94	93.901	Ikery.
Chounda, ...	164.85	Wo. 13	86.3	142.18	86.171	Same as Chanda?
Chundousy, sun 29, ...	171.10	Wo. 9.5	95.6	160.57	95.497	Coined by Zabitakhan in Rohilkhund.
Chuluny, ...	160.71	Wo. 27	80.4	129.23	78.324	Hyderabad?
Suluky,	169.47	Wo. 28.5	79.8	135.22	81.954	
Chuppa, ...	172.50	Br. 6	94.1	162.44	98.447	
Cuttack, ...	172.18	Br. 6.5	94.3	162.33	98.380	Arcot rupee coined at Calcutta.
Culpee, ...	169.07	Wo. 11.5	86.9	146.88	89.021	Bundelkhund.
Chutrpoor, ...	169.00	Wo. 8.5	88.1	148.93	90.261	Raja Pertab Singh, Bundelkhund.
Dacca,..	179.30	Br. 12	96.7	173.32	105.044	Same as the sicca rupee.
Deeg, ...	169.70	Wo. 7.5	88.5	150.25	91.064	Near Bhurtpoor.
Delhi, ...	172.40	Br. 13	97.1	167.37	101.437	See Sonat, and the va-
Mohamed Sh.	173.30	Br. 12.5	96.9	167.88	101.806	rious soubahs?
38th sun,	172.80	Br. 3	92.9	160.56	97.309	
	173.00	Br. 6.5	94.4	163.27	98.951	
Dollar*, Spanish	417.60	Wo. 4.6	89.7	374.87	227.194	Since 1772, by law.
	415.68	Wo. 4.5	89.8	374.27	226.830	Average in England.
	415.00	Wo. 5	89.6	372.21	225.584	Since 1812, average of Calcutta assays.
N. American,	416.00	Wo. 6	89.2	371.25	225.000	By United States law.
Dutch, guilder,	161.00	Wo. 1.5	91.1	144.53	87.503	By law, 162 grs.
English, shilling,	87.25	Br. 2	92.5	80.70	48.909	(Previous to 1830 near-
crown,	436.36	Br. 2	92.5	403.63	244.624	ly 3 dwts. Br.)
Etáwah, ...	171.80	Br. 1.5	92.3	158.56	96.095	In the Doab.
French 5 franc,	385.85	Wo. 4	90.0	347.26	214.360	By French law.
	384.50	Wo. 4.5	89.8	345.25	209.242	By Calcutta assays.

The proper correction has now been introduced in both countries: ~~and~~ it has been *applied* to the assays in this table made prior to 1830.

* The Dollars of the Independent States of Mexico, Bolivia, Chili, and Peru, are of the same weight and value as the Spanish Dollar: they varied during the revolutionary period.

Names.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	grains.	dwts.		grains.	Fd. Rs.	
Futteh Ali sahy,	157.71	Br. 7	945	149.17	90.406	Late king of Persia :
another,	143.39	Br. 9.5	95.6	137.12	83.100	died in 1833.
A. H. 1244,	105.50	Br. 4.5	93.5	98.64	59.810	Struck at Hamadan*.
1245-48	105.12	Stand.	91.7	96.36	58.400	Struck at Shiráz.
Furukhabad 39 sun,	169.40	Br. 6	94.1	153.23	97.073	Old native currency, average.
Company's,	173.00	Br. 9.2	95.5	165.215	100.144	45th sun Lukhnow rs. of Reg. XLV. 1803.
new. std.	180.234	Stand.	91.7	165.215	100.144	By Reg. XI. 1819.
present,	180.00	Stand.	91 7	165.00	100.000	By Reg. VII. 1833.
Generally,	167.20	Wo. 8.	88 3	147.69	89.511	Gurnaly Arcot ?
German Crown,	433.00	Wo. 20.	83.3	360.84	218.691	Legal value by convention of 1763.
	430.45	Wo. 20.5	83.1	357.81	216.855	By Calcutta assays.
Ghutsun rupee,	173.31	Br. 9	95.4	165.37	100.222	29th sun Reg. III. 1806.
Goa,	168.50	Wo. 12	86.4	145.58	88.230	Imported at Bombay as Bullion.
Gohursahy, 1 to 15 sun choura,	174.43	Br. 11.5	96.5	168.25	101.971	Shah Aulum ? Benares mint ; *choura*, broad.
thoomka,	174.18	Br. 7	94.5	164.74	99.833	*Thoomka*, stumpy or broad ; all current in
16th sun,	174.52	Br. 8.5	95.2	166.16	100.702	Ghazeepoor district
trisooly,	173.05	Br. 4.5	93.5	161.87	98.110	at par with Benares
Gokul rupee,	172.80	Br. 3	92.9	160.56	97.309	rupees.
Gomansahy1819	171.25	Stand.	91.7	156.98	95.139	See Boondee.
1825	172.98	Br. 5	93.7	162.17	98.283	Equalized to the Indore stand.
Gopal sahy,	172.50	Br. 3	92.9	160.28	97.140	Madras.
Gooroomutkul,1	172.30	Wo. 24.5	81.5	140.35	85.063	Hyderabad Bagh chuluny.
2	172.00	Wo. 18.5	94.0	144.41	87.520	Do. Shuhr chuluny.
3	170.00	Wo. 39.5	75.2	127.85	77.487	Do. Hookm chuluny.
Govind bukshy,	170.80	Wo. 20	83.3	142.33	86.262	Aurungabad Bagh chuluny.
2	171.50	Wo. 25	81 2	139.34	84.451	Do. Shuhr chuluny.
3	170.50	Wo. 19	83.7	142.79	86.542	Do. Hookm chuluny.
1832	169.38	Wo. 25	81.2	137.62	83.406	See Shumshéry, paid to troops at 120 per 100 Fd. or By Rs.
Gualior,	171.30	Br. 6,	94.1	161.31	97.763	The best of Sindeea's coins.
Gurrahkota,						Debased Balasahy.
Haly,						See Poona, Oujein, &c.
Hatras,	171.60	Br. 9	95.4	163.73	99.27	
Holkar sahy,	168.60	Wo. 1	91.3	153.84	93.240	Coined by Holkar at Indore ?
Hukaree,	172.60	Wo. 22.5	82.3	142.03	86.082	Coined at Maréch.
Hurda,	172.59	Stand,	91.7	158.20	95.881	Called Halee, in Malwa.
Hyderabad, 1,	174.10	Wo. 17	84.6	147.03	89.106	Bagh chuluny, (palace currency.)

* Average of 1680, melted, in 1833. The Persian coins are struck in many different towns, the principal mint being at Shiraz.

Names.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	grains.	dwts.		grains.	Fd. Rs.	
Hyderabad,.. 2	173.50	Wo. 17	84.6	146.75	88.942	Shuhr chuluny, (city currency.) see p. 25.
3	170.50	Wo. 18.5	84.0	143.15	86.757	Hookm chuluny, (ordered currency.)
1823,	173.38	Wo. 18	84.2	145.93	88.440	Coined at Calcutta.
1832,	172.66	Wo. 21	82.9	143.16	86.765	Bagh chuluny.
,,..	170.20	Wo. 35	77.0	131.19	79.511	Shuhr chuluny.
Imámy, ...	175.24	Br. 10.5	96.0	168.31	102.003	Struck by Tippoo Sultan, rare.
Indore, ..1819,	172.00	Br. 7.5	94.8	163.04	98.813	Proper weight 174.5, current throughout Malwa at par with English rupee. See Salemsahy.
1832,	172.90	Br. 6	94.1	162.81	98.674	
Jaloun, ...	168.80	Wo. 12	86.6	146.29	88.662	Raja Pertab Singh of Srinugur, estab. 1809, abolished in 1826.
Jhánsi,..	170.00	Wo. 15.5	85.2	144.85	87.790	Bundelkhund, ab. ditto.
Jheend, ...	168.50	Wo. 19	83.8	141.12	85.526	Doab.
Jodhpoor, ...	174.00	Br. 9.5	95.6	166.39	100.841	Current in Malwa.
	168.30	Wo. 26	80.8	136.04	82.450	Similar to Srisahy.
Jumkundee, ..	175.00	Br. 2	92.5	161.87	98.104	Exchange 2 pr. ct. under Ankoosy.
Jubulpoor, ...	167.38	Wo. 6	89.2	149.25	90.455	In 1800, 11 mashas; 1803, 10 mashas; 1813, 9 m. 6 r.: at par with Nagpore.
Jugádhuree, ..	165.30	Wo. 12.5	86.4	142.92	86.615	Coined at Nasuk, Khandèsh.
Jureeputka, ..	171.60	Wo. 1	91.2	156.58	94.896	
Jydur,.....	173.50	Br. 6	94.1	163.38	99.017	Jygurh? Delhi district.
	172.00	Br. 5.5	93.9	161.61	97.944	
Jynugury, ...	172.68	Wo. 3	90.4	156.10	94.608	Current in Ahmednugur, and Gujerat.
Jypoor, ...	174.00	Br. 12	96.7	168.20	101.939	Present currency.
Kachar, ...	.....	.....	....	.....	.....	See Naráyuny.
Karhána,.....	172.80	Wo. 18	84.2	145.44	88.145	
Keroulee, ...	171.37	Br. 8.5	95.2	163.16	98.887	
Kittore-shapoory,	174.00	Wo. 12.5	86.5	150 44	91.175	Original Shapoory, q. v.
Kochamun, ..	.....	.....	....	.....	.....	Jodhpoor, Bapoosahy.
Kora, sun 8,..	168.76	Wo. 5	89.6	151.18	91.623	1769, full wt. 170.5 current in Allahabad: mostly melted up and recoined.
sun 12,	168.73	Wo. 10.5	87.3	147.29	89.269	
sun 20,	168.36	Wo. 14	85.8	144.51	87.581	
Kosee,.....	167.05	Wo. 18	84.2	140.60	85.212	
Kosa, ...	171.64	Wo. 32	78.3	134.45	81.485	Hyderabad, (1832.)
Koomheer,....	171.00	Br. 8	95.0	162.45	98.454	Near Bhurtpoor.
Kota, old, ...	172.65	Br. 13.5	97.3	167.97	101.803	Kota Raja has mints also at Jatraputun and Gagroun.
1825,	174.02	Br. 14	97.5	169.67	102.830	
Kutch kouree,	72.15	Wo. 73.5	61.0	43.56	26.400	Coined at Anjar, Cutch.
Lalagora, ...	171.50	Wo. 6.5	89.0	152.15	92.210	Coined by Gen. Lally?
Larin, ...	74.50	Br. 11.5	96.5	71.86	43.553	Of Persia and Arabia.
Lassa, ...	58.00	Wo. 30.5	79.2	45.91	27.827	Chah Chhin coin or Tsang-pahu.

Names.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	grains.	dwts.		grains.	Fd. Rs.	
Lucknow, old,	172.33	Br. 12	96.7	166.58	100.957	Coined by the Nuwab Vizir.
45th sun,	173.00	Br. 9.2	95.5	165.21	100.127	Called Muchlee sahy.
sher-shahy,	172.12	Br. 11	96.2	165.67	100.405	By king
1824,	172.12	Br. 6	94.1	162.08	98.231	This year's coinage; inferior. (A.H. 1239-40.)
1831,	172.10	Br. 11	96.2	165.69	100.413	
Madipoor, ...	173.75	Wo. 6	89.2	154.93	93.895	Or Nousee; Kelly.
Madairy, ...	174.28	Br. 5.5	94.0	163.75	99.240	
MADRAS, old,..	176.40	Br. 6.5	94.4	166.48	100.895	Old Arcot rupee by law.
Rajapoory, ..	175.00	Br. 7	94.6	165.52	100.315	Coined at Rajapoor.
rupee of 1811,	186.70	Wo. 5.5	89.4	166.48	100.895	Coined from Spanish dollars.
half pagoda,	326.73	Wo. 5.5	89.4	291.34	176.570	=1¾ Arcot rupee.
5 fanam, ...	71.51	Wo. 4	90.	64.36	39.008	By Calcutta assay.
2 fanam, ...	28.75	Wo. 5	89.6	25.76	15,609	Ditto.
1 fanam, ...	14.31	Wo. 4.5	89.8	12.85	7.785	Ditto.
double rupee,	370.89	Wo. 4.5	89.8	333.03	201.834	Ditto.
rupee, ...	187.48	Wo. 4.5	89.8	168.34	102.024	Ditto.
new standard,	180.00	Stand.	91.7	165.00	100.000	1818; present currency.
Madhosahy, ..	174.05	Br. 12.5	96.9	168.61	102.188	New Holkar, Indore.
Maheswury, ..	173.25	Br. 7.5	94.8	164.23	99.530	Coined at Maheswur, by Holkar; same as Oujein and Indore.
Mahomedshahy,	173.30	Br. 8.5	95.2	165.00	100.000	DelhiMahomed shahy?
Mamooshahy	177.75	Wo. 5.5	89.4	158.86	96.281	? Baroda
Malabar, ...	172.84	Br. 3.5	93.1	160.96	97.549	
Mamasahy,....	169.50	Wo. 2.5	90.7	153.61	93.096	Current in Ahmednuggur and Gujerat.
Mashirabad, ..	171.40	Wo. 6.5	89.0	152.47	92.409	(Old) from Madras.
New, ..	168.20	Wo. 2.5	90.6	152.43	92.382	
Merech hukary,	172.60	Wo. 17.5	84.4	145.67	88.287	Coined at Mereitch, Bejapoor.
Moollasahy, ..	172.40	Br. 8	95.0	163.78	99.260	Surat?
Mulhasahy, ..	165.87	Wo. 6.5	89.0	147.55	89.425	Surat, (Noton.)
	165.88	Wo. 6	89.2	147.91	89.642	Current in Malwa.
Moodhôl,.....	173.00	Wo. 82	57.5	99.47	60.284	Coined by Malijee Rao in 1790.
Moorshedabad,	179.666	Br. 15	98.0	175.923	106.620	Old sicca rupee. See Calcutta.
Mug rupee, ...	152.80	Wo. 149	29.6	49.31	29.886	Average of 1400, assayed in 1833.
Mukunsahy, ..	176.62	Wo. 10.5	87.3	154.17	93.439	Coined at Baroda.
Mulharsahy, ..	172.30	Wo. 5	89.6	154.35	93.546	Coined at Bagulcota. (Holkar.)
Mulkapoor,....	173.20	Wo. 46.5	72.3	125.21	75.884	Near Boorhanpoor.
Mungulsahy, ..	178.50	Wo. 7	88.8	158.41	96.012	(Kelly.)
Mutysahy, ...	173.30	Br. 8	95.0	164.73	99,833	Achmuty collector, Allahabad.
Muttra, ...	167.30	Wo. 13.5	86.0	143.95	87.241	
Mysore, ...	174.28	Br. 7.5	94.8	165.20	100.125	Maheswur? Holkar's.
Nagpoor, old, ..	168.65	Wo. 0.5	91.5	154.24	93.481	Nishandar, before 1817.
new,..	166.53	Wo. 13.5	86.0	143.28	86.838	Naldar, after 1817.
1824,	166.53	Wo. 28.5	79.8	132.87	80.530	Debased until 1824.
present,	166.20	Wo. 17.5	84.4	140.23	84.988	Reformed in 1824.
Naráyuny, ...	142.23	Wo. 22	86.7	117.34	71.116	The Kachár rupee; current in Rungpoor &c. assayed in 1832.
	143.17	Wo. 30	79.2	113.34	68.690	
	137.15	Wo. 25.5	81.0	111.15	67.364	

Names.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	grains.	dwts.		grains.	Fd. Rs.	
Narainpèt, ...	170.00	Wo. 32	78.3	133.17	80.707	Hyderabad rupee, coined at Narainpét.
ditto,....	172.50	Wo. 26	80.9	139.55	84.577	By Noton full weight.
Narwar, ...	170.00	Wo. 95	87.7	149.10	90.366	
Nepanee,.....	173.00	Wo. 38.5	75.7	130.96	79.383	A Marhatta coin, 1803, Padshapoor.
Nepal, ..Saka,						
A.D. 1808, 1731,	85.00	Wo. 21	82.9	70.48	42.714	These are coins of the
1810, 1733,	83.75	Wo. 32	78.3	65.60	39.760	Gorkha dynasty of
1811, 1734,	84.67	Wo. 28	80.0	67.73	41.050	Nipal princes, Girvan
1813, 1736,	84.40	Wo. 37	75.1	64.35	39.003	Yudh and the present
1815, 1738,	84.58	Wo. 50	70.9	59.92	36.316	Raja Rajendra Bi-
1817, 1740,	85.05	Wo. 43	73.7	62.72	38.014	krama Sah. They are
1818, 1741,	84.96	Wo. 43	73.7	62.65	37.973	the average of a num-
1819, 1742,	83.77	Wo. 55.5	68.5	57.42	34.799	ber assayed in 1832.
1820, 1743,	84.66	Wo. 33	77.9	65.96	39.977	The coins of the old
1822, 1745,	85.57	Wo. 26	80.8	69.17	41.922	or Newar dynasty
1823, 1746,	85.23	Wo. 24.5	81.5	69.43	42.078	are of the same stand-
1824, 1747,	85.47	Wo. 31	78.7	67.30	40.790	ard. They are called
Average,	84.76	Wo. 35.3	76.8	65.23	39.522	*mohurs*, see page 28.
Nujeebabad, ..	173.00	Br. 12	96.7	167.23	101.353	Current in Rohilkhund
sun, 20 to 29,						and Moradabad. Re-
30 to 40,	171.00	Br. 6	94.1	161.02	97.591	ceived at 106 per 100
41 to 43,	169.30	Br. 1	92.1	155.90	94.483	Fd. Rs. see page 28.
Nuseerabad, ..	170.20	Br. 6	94.1	160.27	97.134	
Oodipoor, ...	167.45	Wo. 32.5	78.1	130.82	79.285	Sindeeasahy ? Mewár.
Oujein, 1832,..	174.64	Br. 4	93.3	162.99	98.783	Average of100. See Maheswur. Struck by Sindeea.
Oukeree,.....	175.00	Wo. 17	84.6	148.02	89.710	(Kelly's Cambist.) Ikeree?
Panálee, old, ..	170.60	Wo. 68	63.4	108.16	65.552	1760. Struck by Raja Karwikur.
Pániput, ...	171 20	Br. 0.5	91.9	157.29	95.327	Delhi district.
Patna, ...	177.50	Br. 11.5	96.5	161.21	97.705	Company's mint, 1793.
Perkanee, Nepanee, ...	173.00	Wo. 38.5	75.7	130.96	79.384	By Sidhojee naik,1803.
Sembho, ...	172.75	Wo. 28.5	79.7	137.76	83.491	Current in S. Marhatta states.
Old ditto, ..	174.00	Wo. 4.5	89.7	156.16	94.646	By Bhoosla family, 200 years ago.
Moodhol, ..	173.00	Wo. 8.2	57.5	99.47	60.284	By Malajee Rao, 1790. Rare.
newest, ...	177.90	Wo. 7	88.7	157.88	95.684	Coined in the Sáwant state.
Persian rupee,	177.25	Br. 16	98.4	174.30	105.634	See Futteh Ali.
	178.00	Br. 15.5	98.2	174.66	105.856	
Pertabgurh, ..	170.40	Wo. 9 5	87.6	149.27	90.466	Noton. See Salimsahy.
Phoolchehry, ..	174.81	Br. 9.5	95.6	167.58	101.565	Phoolshehry?
Phoolshuhry, ..	171.70	Br. 1.5	92.3	158.46	96.039	Ankoosy rupee struck at Phoolshuhr.
Pondicherry, ..	175.35	Br. 9.5	95.6	167.68	101.625	French Arcot.
	173.98	Br. 10	95.8	166.73	101.048	
old, ...	173.61	Br. 11	96.2	167.09	101.269	
Raja, ...	176.16	Br. 8	95.0	167.30	101.390	Struck at Mysore under
Pooltee fanam,	5.60	Br. 5.5	94.0	5.26	3.190	Poornya.

Names.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	grains.	dwts.		grains.	Fd. Rs.	
Poona, old,.....	176.00	Br. 12.5	96.9	170.50	103.333	Old currency, see Ankosy.
sri sicca, ..	172.50	Br. 1.5	92.3	159.20	96.486	For present standard.
hály, ...	174.75	Br. 11.5	96.4	168.46	102.096	Coined for mercantile purposes.
Porebunder kouree, ..	74.50	Wo. 52	70.0	52.15	31.606	Coined at Porebunder Cutch.
Rajgurh, ...	173.75	Br. 11	96.2	167.23	101.353	
Raj-mohury, ..	.....	.....	....	.....	.....	See Asam rupee.
Rajsahy, ...	169.73	Wo. 14	85.8	145.69	88.295	
Raychore, 1, ..	173.00	Wo. 4.5	89.8	155.34	94.144	(Madras table.)
2, ..	175.00	Wo. 5.5	89.4	156.41	94.792	
Rathgurh, ...	168.35	Wo 11	87.1	146·60	88.851	One of Sindeea's mints.
Rikaby, ...	172.00	Wo 10	87.5	150.50	91.212	
	172.00	Wo 12	86.6	149.07	90.343	
Sagur,.. 1815,	170.10	Wo. 8.5	88.1	149.90	90.849	See Balasahy; std. 80 rut. silver, 10 r. alloy; established in 1782; received at 120 per 100 Fd. Rs.
1819,	170.48	Wo. 95	87.7	149.52	90.624	
new, 1824,	180.00	Stand.	91.7	165.00	100.000	The Furukhabad rupee.
Sahárunpoor,..	171.00	Br. 4.5	93.5	159.96	96.943	Mint abolished in 1806.
Salemsahy, 29,	168.11	Wo. 34.5	77.3	129.93	78.748	Struck at Pertabgurh, Ajmeer, and current throughout Malwa.
sun 45,	168.55	Wo. 27	80.4	135.54	82.148	
oldest,..	168.50	Wo. 6.5	89.0	150.00	90.909	Joormooria, (Macdonald's report, 1823.)
1810,	168.50	Wo. 13.5	86.0	145.00	87.878	Moormooria, ditto.
1820,	168.50	Wo. 25.0	81.3	137.00	83.030	Melah, ditto.
Samlee, ...	170.10	Wo. 1.5	91.1	154.86	93.855	Delhi district.
Sandoara, ...	171.30	Br. 1	92.1	157.74	95.599	
Sarura, ...	165.00	Wo. 22	82.5	136.12	82.500	Sarowee of Ajmeer.
Serdhana, ...	171.20	Br. 2	92.5	158.36	95.975	Begum Sumroo ?
Seronj, ...	168.35	Wo. 16.5	84.8	142.75	86.516	Malwa.
	170.91	Wo. 4	90.0	153.82	93.226	
Shapoory, ...	174.00	Wo. 10	87.4	151.98	92.118	Current in Belgaom, Ajmeer, &c.
Shumshcree, 15,	172.37	Wo. 26.5	80.6	138.89	84.130	Current in Aurungabad
sun 20,	17.151	Wo. 31.5	78.5	134.80	81.693	Assayed in 1833, see
sun 28,	172.00	Wo. 28	80.0	137.60	83.395	Govind bukshee and Hyderabad.
Sindeea sahy,						See Oodipoor.
Sohagpoor,.. ..	166.90	Wo. 24	81.7	136.30	82.607	Established 1810, current in Nerbudda.
Sonats, Delhi,..	178.77	Br. 15.5	981	175.41	106.313	The years 1 to 19 in-
sabik,.....	177.57	Br. 10.5	960	170.54	103.358	clusive.
sun 1 to 19,	179.12	Br. 16	8.3	176.13	106.747	Same as Sicca rupee.
Srí sicca, ...	.....	....		.....	.....	See Poona.
Srí sahy,.....	.....	.....		.....	.....	See Ajmeer, 1815.
Srinugur, ...	170.06	Wo. 6.5	89.0	151.28	91.686	In Nana Govind's state.
old, ...	167.50	Wo. 16	85.0	142.37	86.289	est. 1794, principal currency of Bundelkhund. See Jaloun.
Sunamulla, ...	173.54	Br. 0.5	91.9	159.44	96.632	Surat.
Surat,..	174,50	Br. 5.5	93.9	163.96	99.367	Under the Nawab.

Names.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	grains.	dwts.		grains.	Fd. Rs.	
Surat, old, ...	176.60	Br. 16	98.4	173.66	105.246	Old Delhi standard.
	176.25	Br. 1	92.1	162.30	98.363	Depreciated, see p. 19.
1800,	178.32	Br. 2	92.5	164.94	99.966	Chosen as Bombay R.
Tambasahy, ..	169.90	Wo. 8.5	88.1	149.72	90.742	Nickname from copper?
Thanna, ...	170.80	Wo. 2	90.8	155.14	94.026	
Timasha, or ... (three mashas,)	34.30	Br. 3	92.9	31.87	19.315	Coined in Nepal? current in Srinugur.
	28.10	Wo. 51		15.62	9.467	Ditto, debased.
of Ladakh, ..	40.00	Br. 12.5	96.9	38.75	23.484	Coined at Lassa.
Topeesahy, ..	165.12	Wo. 22.5	82.3	135.88	82.354	
Toragul,Nilkant,	170.00	Wo. 71	62.0	105.40	63.873	Struck by Bala Saheb, 1788. B.
Toka, ...	172.24	Wo. 27	80.4	138.51	83.944	Aurungabad, (1832.)
Tukasahy, ...	173.16	Br. 5.5	94.0	162.77	98.648	Current in Ahmednugur, (Noton).
Trinamaly, ...	176.50	Br. 8	95.0	167.67	101.618	Carnatic.
Venkatapaty, ..	172.72	Br. 11	96.2	166.25	100.756	Ditto.
Viziree, ...	168.62	Wo. 11.5	86.9	146.49	88.783	Sohagpoor, in hilly tract E. of Jubulpoor.
Vizirshahee, .	170.00	Wo. 13	86.3	146.62	88.864	
Wabgaum, ...	172.55	Wo. 0.5	91.5	157.88	95.684	Current in the Dukhun, (Noton.)
Yeswunty, ...	174.95	Br. 7.5	94.8	165.84	100.500	Struck by Jeswunt Rao Holkar, 1806*.
Zoolficar, ...	174.10	Wo. 17.5	84.4	147.03	891 06	See Hyderabad.

[To convert the decimals of the last column into annas and pie, see Table V. page 10. For explanation of the present table, see page 32.]

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* This curious and handsome coin (for a specimen of which I am indebted to Major Stacy), might be mistaken for an antique from its bearing the following Sanscrit inscription in well-cut Nagaree characters, on the obverse and reverse respectively:

श्री इन्द्रप्रस्थ स्थितोराजा चक्रवर्त्तीभ्मण्डले।
तत्प्रसादात्कृता मुद्रालोकेस्मिन्वैविराजिते।
श्री लक्ष्मीकांत पदांभोज भ्रमरायित चेतसः।
येशवंतस्य विख्याता मुद्रैषाष्टथिवीतले।
शक १७२८

Sri. Indraprestha sthito rájá chakravartti bhumandalé,
Tatprasádát krita mudrá lokésmin vy virájité,
Sri. Lakhsmí kánt padámbhoja bhramará yita chétasa,
Yeshawantashya vikhyátá mudry kha prithivi talé.

"By the permission of the raja of Indraprestha, (the king of Delhi,) the Emperor of the world, this coin has been struck by the renowned Yeswant, (Jeswunt Rao Holkar,) whose heart is as the black bee of the lotus foot of Lakshmíkant,—to circulate throughout the earth. Au. Sacæ 1728" (=A. D. 1806).