

*Alternate currencies, paper instruments and warfare in Trecento Italy*

The topic of alternate currencies in the late medieval Europe is often linked to money supply, which has long been the subject of spirited debate. Scholars have devoted a great deal of study over the years to the late fourteenth and fifteenth century «bullion famine, a discourse stimulated in the first instance by the famous «prosperity versus hard times» debate about the effects of pestilence and «crises» of the era. Monetary historians have cited numerous interrelated factors, including mint production, balance of payments, international trade, money hoards, among others, that reduced the supply of specie and hampered financial transactions.<sup>1</sup>

This essay examines alternate currencies used during the «crises» of the second half of the century in *trecento* Italy to make payments to soldiers. Scholars generally agree that war tightened markets and created *stretzezza* of money supply. But there remains much that we do not know and variables that have not yet been fully investigated, including the fundamental issue of how soldiers were paid (Caferro 2023, 123-146). The lacuna reflects a compartmentalization of study that has separated war into a self-contained category known as military history, which, since Machiavelli and the nationalist writers of the *Risorgimento* who established the field (Ricotti 1844, Canestrini 1851), has focused primarily on moral issues related to the reliance in the *trecento* on mercenary soldiers, often *ultramontane*, from foreign lands, whose *auri sacra fames*, greed for gold coin, replaced native martial spirit and contributed to a dramatic rise in the costs of warfare. The more civic-minded (virtuous) communal period is the subject of excellent essays, and recent works have broadened our understanding of the later period (Maire Vigeur 2004; Settia 1993, 2002, 2008; Varanini 2006, 2007, 2015; Grillo 2009, 2018; Ansani 2019, 2021).<sup>2</sup> But *trecento* Italy remains a species of «negative intermezzo,» «una parentesi,» in an evolutionary account of Italian warfare, dubbed the «age of the *compagnie di ventura*, » characterized by marauding private bands, fueled by the desire for gold, which stood as precursors to the rise of native *condottieri*/lords of the fifteenth century (Mallett 1974, 25-50; Covini 2000, 21; Varanini, 2018, 258).

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<sup>1</sup> Day 1978, 3-54, saw the most acute shortage of gold and silver as occurring during the years 1395 to 1415. Munro 1992, emphasized monetary contraction in England and the Low Countries from about 1370 to the 1470s. Spufford 1988, stressed the effects of a silver famine in Europe during the fourteenth and fifteenth centuries. See also Miskimin 1969, 138-63. For a more positive assessment of money supply in France, see Sussman 1998, 26-54 and 1993, 44-70

<sup>2</sup>The list is not all inclusive.

The lack of communication between scholars on the military side, with their specific studies, and those on monetary side, with their own specific studies, is striking. As the monetary scholar Rory Naismith recently stated the «highly technical studies» of medieval money «sit at a remove from the mainstream of historical and archaeological research» (Naismith 2019, 1-17). Anglophone scholars who have combined the two often highlight the effects of the Hundred Years War, whose very name gives it pride of place in discussions, just as its main protagonists, England and France, have served as focal points of consideration of money supply, from which broader European patterns have often been extrapolated (Mayhew, 1995; Spufford, 1998). Nevertheless, the Hundred Years War, its name notwithstanding, was characterized by long truces and few campaigns in the field. War was far more frequent in *trecento* Italy, owing to numerous contentious states jostling for space on the geographically small peninsula, which, as Jacob Burckhardt famously noted, was connected to the destabilizing «external» political forces of the papacy and empire that lay at the root of much discord. From an economic and monetary perspective, the two should, I believe, be viewed as inputs and outputs into Italy that deserve closer study, alongside the concomitant involvement in the *trecento* of the French and Hungarian Angevin royal houses in the civil war in the Kingdom of Naples – the latter (Hungary) a major source of gold in the fourteenth century (Štefáňik 2011-2012, 11-40). The methodology provides an escape from the evolutionary schema that obscures more than it reveals about the true nature of war.

The present essay takes a closer, albeit necessarily prospective, look at the realities of payments to soldiers, which included in kind compensation as well as the use of paper instruments, most notably the bill of exchange, whose utility as a «flexible friend», to paraphrase an important recent essay, comes into focus on the battlefield. The combination of the need for large sums of money and speedy turnover of them forced states to employ numerous expedients, perhaps more so for war than for any other activity. It is important to note as well the use of *bollette* (Milan) and *apodisse* (Florence, from Greek word, *Ἀπόδειξις*, meaning proof), notarial documents (slips of paper), in payments to soldiers and communal officials more generally, which functioned as receipts and, internally, as an aid in communal accounting to keep track of money spent. Full consideration of these instruments, which morphed into more than mere receipts in the *trecento*, lay beyond the scope of this paper, but show at base that for all the discussion of *auri sacra fames* and warfare, there was a significant contemporary paper trail that remains to be explored and a terminology regarding the instruments that was not yet fixed but polysemic.

## 1. War, specie and in kind payments

What may be said without hesitation is that war placed burdens on stocks of gold and silver and that supplies in Italy varied from region to region, city to city, becoming tightest in smaller, less commercial centers.<sup>3</sup> Bologna's frequent wars

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<sup>3</sup> Scholars have noted especial shortages in Perugia, Bologna, Lucca, Siena and Naples. See Caferro 2008, 193-4; Bernocchi 1976; Mandich 1994; Cipolla 1982; The state archives of Perugia (ASPe),

involving the papacy and Visconti brought complaints about shortages of specie in 1351-1353, 1360-1364 and for the much of the rest of the century (Sorbelli 1901, 151-152; Borlandi 1970, 391-478). The War of Eight Saints (1375-1378), pitting the papacy against Florence, Milan and much of central Italy, set off noteworthy shortages in Perugia and Siena – the latter resorting to the clipping of coins. The subsequent Genoese/Venetian War of Chioggia (1378-1381) closed eastern trade routes, affecting money supply throughout Italy. Francesco Petrarca condemned the wars between the maritime republics in the 1350s on distinctly economic grounds, as threatening Italian domination of trade at sea (Petrarch 1982 vol 2, 102). Meanwhile, the combined effects of continuous civil war (beginning in 1347) and the Great Schism (1378-1415) in the Kingdom of Naples caused profound shortages of money in the region, such that the French pope Clement VII instructed his military captain Otto of Brunswick in 1387 to take gold and silver from monasteries and churches belonging to the Italian pope in the Kingdom to pay his soldiers (*Cronica Volgare di Anonimo Fiorentino* 1937, 55). During its war against Florence in 1390-2 and the buildup to it in 1389, the city of Siena relied on specie sent to it from its ally Milan and passed legislation mandating the acceptance of Milanese money for rents, purchases and transactions (Favale 1936, 329). As the scale of wars increased in fifteenth century Italy, reports of scarcity of bullion became still more pronounced. Giangaleazzo Visconti of Milan resorted to debasement of his coinage at the turn of the century, while his main enemy, Florence, as Anthony Molho has noted, reported shortages during wars in the 1420s and 1430s (Molho 1971, 133-35, 154-57; Bueno de Mesquita 1941, 294).<sup>4</sup>

To alleviate the strain, states resorted to payments in kind to meet their obligations to soldiers. The practice is well-documented, and, to be sure, not restricted to periods of *stretexxa*. It was, as the papers of this conference show for other periods and contexts, routine practice. Contracts between soldiers and their employers often contained a specific *menda* clause by which employers compensated soldiers for the loss or injury to their horses apart from their salaries (Waley 1975, 340-341; Mallett 1974, 76-87). Soldiers famously paid themselves in the form of plunder and looting, which included the capture of animals (*bestie minute, bestie grosse*), household goods and valuables. Looting was intrinsic to warfare, an alternative means of payment that is difficult to quantify, but was instrumental in sustaining soldiers in the field in the face of uncertain and delayed wages. Nevertheless, the increased rhythm of conflict in our period, the coalescing of demobilized soldiers into marauding companies during times of nominal peace, increased the recourse to in kind payments. In 1370, Siena, a frequent target, sent mule loads of food and drink: wine, wax, chickens and geese, arrows, goblets, dishes and silver utensils, expensive cloth, ceremonial armor, to soldiers in 1364, 1375, 1385 and 1392. It gave 100 *moggia* (roughly 2400 bushels) of grain to a band as well as 2,000 florins worth of horses in 1379 (Cafferro 2008, 167-209). During the War of Chioggia, as Reinhold Mueller has

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Consigli e riformanze, 31 fols. 26v-32v; *Corpus Chronicorum Bononiensium*, 387; Grohman 1988, 77; Borlandi 1970, 391-472; Cafferro 1998, 129, 161.

<sup>4</sup> For Venice's money supply, see Stahl 2000, 47, 63-78, 371-374

shown, the traditionally specie rich Venetians were constrained to pay a part of soldiers' wages in grain (Mueller 1981, 32; Stahl 2000, 69-75).

The most common practice was compensation in cloth, which already functioned more broadly as a means of exchange in international trade, including between the Venetians and the Mongols (Kuroda 2009, 248). The city of Lucca paid the captain Alberigo da Barbiano 400 florins of the 4,400 florins owed him in 1383 in expensive wool cloth, and half of the salary of its captain Braccio da Montone, two decades later, in silk cloth.<sup>5</sup> An inventory of personal possessions of the soldiers captured at the siege of Perugia (1375) included large quantities of silk cloths, silver cups and dishes, ceremonial armor and enameled *barbute*/helmets – items that had value and could be transported in the satchel bags of soldiers' mounts (“Cronaca della Città di Perugia (Diario Del Graziani)” 1850, 547-53; Caferro 2008, 193-94). The personal possessions of the English captain William Gold included silk cloth of various types as well as rubies, sapphires, and diamonds (Thomas 1932, 253-55). Michael Mallett has shown that compensation in cloth became part of the formal contracts (*condotte*) between soldier and employers in the fifteenth century (Mallett 1974, 137, 139; Mallett and Hale 2006, 127). King Alfonso of Aragon, lacking specie for his war in Naples (1420-1458), paid advances (*imprestanze*) to his soldiers in a fixed ratio of coin and cloth (Ryder 1976, 278-79; Ryder 1984, 3). The desire by soldiers for luxury and ornamental items is well known and likely connected to their sense of status and display on the battlefield (Caferro 2008, 194). The extant account books of the mercenary captain Michelotto Attendoli reveal business with Bernardo Bardi of Florence (1432-1433), from whom he purchased silver cups and plates, golden rings, an enameled silver ornamental helmet, and a silver salt cellar.<sup>6</sup> Nadia Covoni has noted that in the fifteenth century Milanese soldiers patronized the luxury market even when they lacked food (Covini 1998, 360-61).

Soldiers also received land in lieu of specie. The papacy, perpetually short of funds, was a leader in this type of compensation in the fourteenth century. During the War of Eight Saints the papacy gave his ally Galeotto Malatesta of Rimini the towns of Santargello and San Sepolcro; his captain of war John Hawkwood the towns of Cotignola and Bagnacavallo, and bestowed a benefice in the English church on the illegitimate son of Hawkwood's co-captain, John Thornbury. The benefice (1377) is historically significant because it had been promised to the church reformer John Wycliff, whose bitter disappointment constituted an important moment in his alienation from the established church (Jones 1974, 97-8; Caferro 2006, 181-182). Queen Giovanna of Naples likewise bestowed lands upon her military captains in lieu of specie. The most egregious example is the Florentine Niccolò Acciaiuoli, who served as grand seneschal of the kingdom, and fought for the queen and her husband. In return, Acciaiuoli received lands throughout southern Italy, from Calabria to Puglia (Terre di Lavoro, Molise, Bari, Matera, Gioia, Capriati, Canosa, Ginosa, Spinazzola, Nocera, Gragnano, Tramonti, Pino and Pimonti), as well as lands in the

<sup>5</sup> The state archives of Lucca (ASL), ATL 571 #1052, 1054

<sup>6</sup> Archivio di Fraternalità dei laici (Arezzo) (AFL) # 3569 (entrata and uscita) fols. 79r-79v; Caferro, 2008, p. 194. For a comprehensive recent study of the workings of the fifteenth-century mercenary company of Attendoli, see Orlandi 2018, 135-161

Greek Peloponnesus (Morea) (Tocco 2001, 86). Many were strategically and economically important.<sup>7</sup>

The recourse to land should not, however, be confused with any broader process of «reifeudation» or «return to land/turn away» from commerce. In *trecento* Italy, grants of land for military service were decidedly *ad hoc*, a contingency best understood as capitalization of land in the absence of specie. This included the pawning by state officials of subject lands to citizens in return for cash and also the outright sale of land to third-party outsiders. The Siense pawned the town of Marsigliana to the powerful local noble lord Ranieri da Baschi for 5,000 florins to help pay for the War of Eight Saints. The maneuver backfired as Ranieri da Baschi used the pawn as a base to attack Siena in alliance with the pope.<sup>8</sup> The reality of *trecento* war is that many of the transfers of land occurred not as the result of capture by enemy armies, but from sales by states seeking money to prosecute war. Queen Giovanna of Naples sold Avignon to Pope Clement VI in 1348 for 80,000 florins in order to pay for the troops who defended the *Regno* against the Hungarian Angevin invasion (Léonard 1932 vol. 2, 125-32, 136-39, 452). Two years later, Robert of Taranto, brother of Giovanna's husband Luigi, sold Achaea (Acaia) to Venice for 66,000 ducats to help raise money for ransoms of hostages taken during the war. Queen Giovanna of Naples in 1351 sold, through Acciaiuoli, the town of Prato to Florence for 17,500 to pay expenses related to the Hungarian invasion (Tocco 2001, 87, 108-117; ASF, Provvisioni, registri 38 fols. 183r-185v).

## 2. Paper instruments and the bill of exchange

Conspicuously absent from studies of *trecento* war is the use of paper instruments to move funds, extend the money supply and compensate soldiers. As noted above, the association of war with mercenaries and mercenaries with greed for gold has limited discussion, despite the fact that Italy, owing to its international merchant banking sector, was the leader in the use of bills of exchange. Indeed, Peter Spufford in his influential *Money and its Uses in the Medieval Europe* stressed the importance of the bill of exchange in transferring funds, particularly for the papacy, to avoid dangerous and uncertain shipment of specie. But he argued pointedly against the use of the bill to transfer relating to war on the grounds that it involved sums that were «too large for the commercial system» and therefore had to be done by actual shipment of gold and silver. The assessment is curious because Spufford, who acknowledged the diversity of available fiscal instruments throughout Europe and the limits of coin as a part of the overall money supply, used as his example a citation from the Florentine chronicler Giovanni Villani, who recorded the physical shipment of a large cargo of specie by the papacy from Avignon to Italy for war in 1328 (Spufford 1988, 1-2, 255). The shipment warranted Villani's attention, however, because it was in fact stolen by thieves (Selzer 2001, 233).

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<sup>7</sup> See Tocco 2001, 86, 98. The Venetians made grants of land to their captains in the fifteenth century. Mallett 1974, 76-106

<sup>8</sup> The state archive of Siena (ASS), Consiglio Generale fols. 91r-92v

The distinction between ecclesiastical and secular transfer of funds is artificial. Funds transferred by merchant banks for the papacy throughout Europe were used for both military and pacific purposes. The crusading movement against the infidel remained operative in *trecento* Italy and was a basic aspect of papal policy, for which large, safe transfers of funds were critical. And the pontiff also defined as crusades his wars against Christian enemies, most notably the Visconti of Milan, whom he frequently excommunicated. To oppose the territorial ambitions of Archbishop Giovanni Visconti in Bologna and the Romagna in 1350-1351, the papacy transferred money by bills of exchange drawn on several merchant banks, including the Alberti *antichi*, Alberti *nuovi*, the Rinuccini and Davizzi firms of Florence as well as the Guinigi firm of Lucca. Yves Renouard estimated that of the 184, 500 florins sent from Avignon to Italy, 175,000 florins went through these banks. Giovanni Alberti, a director of the Alberti *nuovi* bank, served as papal treasurer in charge of financing the pope's war in 1350 (Renouard 1941, 251-255). According to Renouard, the Florentine banker Francesco Rinuccini became deeply involved in papal finance with the advent in Italy of the papal legate Cardinal Alborno in 1353, who was tasked with retaking the papal lands. Rinuccini transferred funds from Avignon to Perugia and Florence for the wars. The Alberti, Strozzi, Soderini, Castellani, Ricci and Cocchi banks also helped finance Alborno, who stayed with Alberti in Florence when he first arrived in Italy (Renouard 1941, 112-16, 230-33, 260-67).

The transfer of funds during war was, indeed, riskier than in times of peace, further justifying the recourse to paper transfer. And extant Alberti *nuovi* accounts show that payments related to war in the *Regno* in October 1348 were effected in part by *lettere di pagamento* alternately referred to as *lettere di cambio*, brought by courier and redeemed at the Alberti branch in Naples (Goldthwaite, Settesoldi, and Spallanzani 1995 vol. 1, 187-89, 191-92, 204, 236-37). To be sure, cash remained crucial. The same accounts show payments ranging from 205 to 6200 in gold florins (*contanti*) to various German mercenaries. Interestingly, Niccolò Acciaiuoli, the grand seneschal of the *Regno*, was the intermediary and paid a fee of 15 florins to the Alberti for the «risk» of transporting 2,500 florins in specie to the city of Nocera (Goldthwaite, Settesoldi, and Spallanzani 1995, 188). The sources also show that the transfer of specie from Avignon involved Genoese merchants, with Florence serving as the direct destination, with transport then to the Porto Pisano, where the money was loaded on to armed ship to Naples (Léonard 1932 vol. 2, 457-48). Transfer of specie was in short difficult.

Given the scarcity of surviving account books for our period, it is difficult to make comprehensive judgments. Nevertheless ambassadorial dispatches, which survive in copious number, provide a useful if underemployed source of what was happening on the ground. They show that *paper instruments*, described specifically as bills of exchange, were in fact used directly in the payment of soldiers. A dispatch in the Sienese archive, dated July 1381, sent by the city to its envoy Mino, tasked with paying the English mercenary captain, John Hawkwood, makes clear that the city fulfilled the remaining 1500 florins of its 4,000 florin debt with «*lettere di cambio*.” The dispatch reads as follows.

Ricevemo vostra letara e uno di Mino e con esse sei *lettere di cambio* di fiorini 1500 parte in noi parte nel detto Mino per e quali ne scrivete danno a Messer Giovanni Acuto per lo resto di avere di fiorini 4,000 e che da lui se ne prende carta di quitenza e vero che le lettere so' fate al usanza di due di veduta nondimeno avemo preghato Mino ce ne serva accio che ci potiamo spacciare e credamo ce ne servita si che oggi possiamo fare il paghamento (ASS, Concistoro 1802 #22).

Siena sent six bills of exchange to the mercenary captain to make good the debt and sought a receipt (*quitenza*) from him in return. The nature of the bills is unclear. The letter suggests that some originated with the state, others from the ambassador Mino. No bank is mentioned. The dispatch does, however, indicate that the bills were to be redeemed at usance, a typical feature of bills of exchange, critical to the money market aspect of them, which was here two days and raised concerns for the Sienese, who wanted to pay Hawkwood immediately. It is likely that the bills were in fact made out by bankers to be redeemed at a bank, and likely functioned, whether formally endorsed or not, as a species of check. They were used to satisfy a debt and thus did not serve merely as a credit instrument related to speculation in the international money market, as Raymond de Roover's classic, oft-cited and carefully diagrammed bill of exchange of the fifteenth century, involving two international banks and four related parties. The city of Siena was held responsible for making payment, overseeing the transaction, which probably entailed paying the bankers for the service. This conclusion is strengthened by archival evidence from Florentine communal (camerale) budgets that show that the city paid bankers a fee for exchanges done by them, although it is not entirely clear whether the term *cambio* used in account books refers to bills of exchange or manual exchanges of coin (ASF, balie 6 fol. 57r; Dieci di balia 1 fol. 10r; Dieci di balia 4 fols. 222r-225v; Caferro 2018, 110). What is evident, however, from the budgets is that Florence regularly made such payments to bankers. In 1390, during great war with Siena and Visconti, Nanni Mati, a *famulo* in charge of payments of the *balia* that directed the war effort, is cited as «making exchanges (*cambii*)» to Florentines, who lent money «to the city at the request of the Ten of balia» (ASF, Dieci di balia 4 fol. 225v). The list includes the bankers Francesco Ardinghelli, Benedetto and Nerozzo Alberti, Manetto Davanzati, Giovanni di Piero Baroncelli, all of whom appear to have received modest sums for *cambii*, most likely representing a commission on the transactions.

Although the precise mechanism requires further study, what is clear is that the Florentine banking community, much of which is unknown at this time, was intimately involved in the prosecution of the war. At the same time ambassadorial dispatches give further evidence of the use of bills of exchange in payment of soldiers. A Lucchese dispatch from 1372 instructed representatives of the city in Genoa to pay 500 florins to Genoese crossbowmen in bills of exchange drawn up by a bank in Lucca (Fumi, 1903 vol. 2, 14). In this instance, the bank is mentioned, but it is not clear whether the bills went directly to the soldiers or to another bank in Genoa. As earlier, however, the city itself was responsible for the transaction.

Lucchese dispatches from a decade later show that English soldiers received bills of exchange from the rich Lucchese exile, Alderigo Antelminelli that went unpaid.

The soldiers demanded that the city of Lucca take responsibility for them. The involvement of Alderigo Antelminelli is noteworthy here because he was an exile, who possessed great wealth from his iron and silver mines in the strategically important regions of Lunigiana and Versiglia, took part in a lucrative Lucchese exile trade network in Bruges, but forcibly attempted to seize Lucca in 1369, alongside the same soldiers who now demanded money from him (Galoppini 2006, 195, 198). Close relation between exiles and enemy soldiers was an important feature of *trecento* Italian society that has garnered attention primarily in terms of its juridical and social/political valence. But the connection also warrants scholarly attention for its economic dimension, which corresponds to mounting evidence that prominent exiles maintained lucrative merchant networks, «modeled on political factions» at home, that were often hidden from view, not easy for modern scholars to uncover, but nevertheless crucial to their association with enemy armies, and the mercenaries in them, justifying further the great fear evoked by contemporaries (Apellániz 2015, 125–145).

The case of Alderigo Antelminelli clearly shows that the two sides did business together. The English captain, John Hawkwood, claimed deposits worth 7,300 florins held by Alderigo; his fellow English captain Richard Romsey claimed to have received a bill of exchange from Alderigo, written in Alderigo's own hand, at Città di Castello. The soldiers complained to Lucca and sought restitution directly from city officials, with the threat that they would ride on Lucca with their band of mercenaries and extort a bribe. Prolonged negotiations followed (ASL, ATL 439 #1167, #2119, ATL, 571 #1183-189; Caferro, 2006, 243-46). The talks were formal and legal in nature. Lucchese officials required that both men produce documentation of their transactions with Antelminelli and consulted a prominent local jurist about how to proceed. Richard Romsey sought not only the value of the unpaid bill of exchange, but also interest and damages, amounting to more than 1000 florins on the original sum of 2,000 florins. Lucca ultimately paid the men, and in the case of John Hawkwood, the most feared captain of the day, gave him a lifetime yearly pension soon after.

Further insight into the use of the bill of exchange in the field appears in a letter written by Giovanni Appiano of Pisa to the city of Siena in April 1390 at the beginning of Florence's war with Milan, when money supply was tight and Siena accepted Milanese money to augment its own supply. Appiano complained about bad bills of exchange issued to him by Andrea di Ser Michele that left him and his brigata unpaid (ASS, Concistoro 1827 #14b). Once again the captain held the city responsible for making good the payment. In this case, however, the banking firm from which Appiano sought to redeem his bills – Antonio di ser Bartolomeo and associates (*Antonio Ser Bartholome et sociis cambiatoribus*) – is mentioned although nothing is unfortunately known about them. Interestingly, however, Appiano uses the terms bill of exchange and promissory note as synonyms, suggesting again that modern scholarly terminology that distinguishes carefully among terms did not apply to *trecento* Italy. It is also noteworthy that the issue of these bills to soldiers by the Sienese coincided with local legislation that, as noted above, required the acceptance of Milanese money for transactions, and included the requirement that vendors accept payments of bills of exchange *di lunga scadenza*, those that matured later rather than sooner (Favale 1936, 329).

The evidence supports scholarship that stresses the flexibility of the bill of exchange and its polysemic nature in the fourteenth century, during which it had multiple meanings and uses. Raymond de Roover's classic discussion concerned itself with the role of the bill as a credit instrument used to play the international money market, a subject with modern parallels and utility for comparing the past to the present, a preoccupation of many economic histories. De Roover conspicuously placed his discussion of the bill in a chapter entitled «Banking and the Money Market at the time of the Medici» (De Roover 1966, 110). Recent studies, using the copious documentary evidence in the Datini archives, have demonstrated how the famous merchant of Prato played the international money market, greatly increasing our knowledge of rates in the late *trecento* and early *quattrocento*, and indeed how war at times affected those exchange rates (Bettarini, Bradley and Moore 2020, 14-15; Booth, 2009; 123-144; Bell, Brooks and Moore 2017b, 373-96). Peter Spufford, following the general convention, stressed the evolutionary aspect of the bill, how it grew from the letter of payment (*instrumentum ex causa cambii*) used by Genoese merchants in the thirteenth century at Champagne fairs, and evolved in time as a broader credit instrument, in effect replacing the former altogether (Spufford 1998, 254).

The argument here, as in other papers at this conference, is that medieval terminology was not exact and scholarly attempts at precise definition reflect modernist realities that do not readily map onto the distant past. «Attempts to sort out elements ... in a modern sense runs the risk», to quote Giorgio Chittolini in a different context, «of generating anachronism» because the «line of the demarcation... was not yet drawn». (Chittolini 1995, 46) As M.M. Postan argued already back in 1930 (Postan 1930, 37), the distinction between a bill of exchange, a promissory note and a letter of payment was decidedly unclear in its day. The terms were used interchangeably. Postan's interpretation was supported by the French economic historian Jean Favier, writing from the perspective of the French papacy during the Great Schism. He described the use of the bill of exchange as the same as an assignation or letter of credit (Favier 1966, 461-471). Meanwhile, Yves Renouard, while accepting de Roover's narrow definition for the later period, argued that bills of exchange and promissory notes were «for a long time referred to indifferently under the name of letters of payment» and that the distinct term, bill of exchange, did not emerge with its current meaning until the fifteenth century» (Renouard, 1941, 73). He added that «whether the bill of exchange was created by the companies or drawn on them... or for their benefit, they allowed others to obtain compensation...without the transport of money» (Renouard 1941, 74). Marco Spallanzani, Federigo Melis and Jacques Heers spoke of the bill of exchange used as a check as a feature of fourteenth century and fifteenth century banking; the first based primarily on findings in the Castellani family papers in Florence; the last based on surviving variations of bills of exchange found in the account book of the Genoese banker Giovanni Piccamiglio (Spallanzani 1978; Melis 1972; Heers 1959, 345-356). Melis found bills drawn on a Pisan bank from 1369 and 1374 and a bill from 1394 with instructions on it for payment to a third party, noting that such instructions could also have been made on a separate piece of paper. The number of examples is relatively small, but, as Spallanzani pointed out, there is little reason for

these type of bills to have survived, given their purpose (Spallanzani 1978, 146). The scarcity of surviving account books for our period exacerbates the problem, as does the difficulty, noted by Renouard and Goldthwaite, of interpreting the few extant accounts.

Similarly, Adrian Bell and his co-authors stressed the diversity of non-specie options employed in contemporary England, which lacked a banking system comparable to that of Italy (Bell, Brooks and Moore 2017b, 137-38). They noted how the English lord Humphrey of Bohun, fighting on Crusade in Prussia in 1363, settled a debt by entering into an agreement with Prussian merchants to be repaid in Bruges months later. The repayment was done by a merchant, from profits on the sale of Flemish wool, who was later repaid by Bohun, while the Prussian merchants used their money to buy Flemish wool in Bruges to send back to Prussia. Bell and his co-authors document the concurrent and overlapping use of what they call promissory notes, letters of payment and bills of exchange in late Middle Ages into the Early Modern period, arguing that the development of commercial paper had a similar impact in later medieval England as the «commercial revolution» did in Italy. Richard Goldthwaite, speaking of Florentine merchants, admitted that their use of the bill of exchange in its early incarnation. prior to the later years dealt with by De Roover. «baffles many economic historians... and even specialists find it difficult to explain the various ways it was manipulated other than for straight exchange» (Goldthwaite 2009, 221). Reinhold Mueller called the bill of exchange «many things to many people» and for this reason excused the lack of completeness of his discussion (Mueller 1997, 288). Both scholars referenced Benedetto Cotrugli, the fifteenth century merchant and author of *Libro de l'arte de la mercatura*, who described the bill of exchange as «a condiment of all things mercantile, as necessary to commerce as air is to the human body,» and «a delicate invention» involving «the most subtle of activity».<sup>9</sup> Even Raymond de Roover, in a less cited part of his discussion of the Medici bank, noted the existence of an «adjunct» business bank that included what he called “letters of credit” to pilgrims, travelers and churchmen (De Roover 1966, 135-38).

De Roover does not, however, explain what these «letter of credit» looked like, how they functioned or even what the term meant, focused as he was on the fully evolved bill of exchange of the fifteenth and sixteen centuries used to play the money market. Indeed, De Roover's cursory decription of the paper instrument does little to distinguish it from bills of exchange noted above, which may have been one and the same. But the fourteenth bill of exchange did, like its later counterpart, have the capacity to tranfer money internationally. Lucchese archival sources in fact indicate that bills of exchange drawn on the Guinigi bank were used to send the profits of English soldiers back home for investment. Extant evidence shows that the bills were drawn on the Guinigi bank and received by a representative, «Francesco Vinciguerra of London,» as the documents call him, who was part of the Lucchese merchant community in Bruges that had close ties to London (Kaeuper 1993, 9, 81-

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<sup>9</sup> «... condimento di tucte le cose mercantili, senza lo quale, come l'humana compositione senza li elementi essere non puo, cosi la mercantia senza ii cambio...cambio e' gentile trovato... e una induxtria subtilissima». Cotrugli 1992, 165-66.

82; Meek 1978, 195-202, 213; Lambert 2018, 91-93). Vinceguerra, a merchant, is perhaps best known for the business he did with the bishop of Durham, to whom he fell ultimately fell into debt (ASL, ATL 439 #1329 Caferro 2006, 215-16). During this same time, Francesco Vinceguerra appears in English records in 1387 for the purchase of tallies (money paid by royal officials into the kings treasury) on customs, compared by scholars to a «bearer check», which he sent to a broker at Hull, who bought wool (Jenkinson, 1911, 367-80). Vinceguerra thus appears to have had experience in use of both Italian and English alternate currencies.

The money English soldiers sent through the Guinigi bank went first to Bruges, as was the custom, then to England, where relatives or *feofees* of the soldiers, who served as beneficiaries, bought land in soldiers' name. John Hawkwood's feofees included Robert Rykedon. John Sargeant, Robert Lindsay and his older brother with the same name (John Hawkwood), all, like the famous captain, from Essex. They bought numerous manors in Essex, Buckingham, and adjoining counties. They helped build the parish church at Sible Headingham, replete with emblems of Hawkwood, as well as the well-known market place of Leadenhall (Caferro 2006, 323).

The overall degree to which such transfers occurred is again unknown. In his study of German mercenaries in *trecento* Italy, Stephan Seltzer's argued that the men physically brought their earnings home, citing proximity and a relative lack of banking activity in German lands. Nevertheless, Seltzer notes transfers of payments made through the Milanese Del Maino bank to the city of Ulm for the mercenaries Wilhelm and Johann von Reitheim, who fought in Italy in the late *trecento*, and the transfer of funds by the Italian Pope Urban VI from the dioceses of Cologne, Salzburg and Lutlich to pay two German soldiers, who fought for him in Italy during the schism (Seltzer 2001, 263-64).

The evidence from the fifteenth century is still more compelling, and it is a statement on the unfortunate scholarly status quo that this material remains largely unintegrated with that of the *trecento*, and with monetary history more generally. In a little-cited but important study of the Milanese army under Muzio Attendoli Sforza and his son Francesco, Peter Blastenbrei noted that in the absence of specie in the fifteenth century, soldiers received payments in kind, including grain, wine, iron, wax and cloth, as well as in bills of exchange (*Wechselbriefen*). (Blastenbrei 1987, 207-08). Alan Ryder's study of Aragonese finance of King Alfonso's war in the Kingdom of Naples (1420-1458) speaks of profound shortages of specie that required payments in cloth purchased primarily from Florentine merchants in return for bills of exchange. Ryder refers to the measures taken by the crown of Aragon as «radical new techniques» derived from dire necessity (Ryder 1984, 13). As is clear from our foregoing discussion the measures were not so radical. King Alfonso appears to have used bills drawn on commercial centers such as Valencia, Barcelona and Palermo, sometimes underwritten by prominent government officials or citizens, who took partial financial responsibility for them. Some offered high interest rates, but the bills were reluctantly accepted by merchants, who feared lack of payment. Using documentary evidence in the archives of the crown of Aragon, Ryder describes a complex system that involved merchants in Naples, Aragon, and Sicily, but does not clarify how the bills of exchange actually functioned. He found in the archive bills

that appear to have been issued by the crown itself as well as bills received by the crown from merchants. Ryder discusses the bills alongside mention of promissory notes, but makes no distinction between the two.

The evidence relating to war corresponds at base to John Bolton and Francesco Guidi-Bruscoli's careful examination of fifteenth century bills of exchange employed by the Borromei bank that had flexible uses, which in the case of the Borromei, included changing dates of maturity contrary to the rules of *usance*.<sup>10</sup> In opposition to the scholarly orthodoxy established by Spufford and De Roover, the flexibility of the bill of exchange included use for payments relating to war, which has been associated so closely with gold and specie.

### 3. Conclusions

The need to better integrate the study of war with study of monetary history is manifest. Soldiers received compensation in a number of ways. The bill of exchange was used in the field in *trecento* Italy, and, Spufford notwithstanding, used to transfer funds relating to war. The degree to which this was done awaits further research, which will require systematic and interdisciplinary study of the economy of war in terms of overall economic history, to which it was intrinsically connected, especially for *trecento* Italy, for which pandemic has too often obscured concurrent contemporary phenomena. Given the enormous expenditure attendant warfare, we may rightly imagine that the sums were significant. The bill to the soldier represented, like cloth and in kind payment, a value that could be redeemed. Accompanied perhaps by verbal or written orders clarifying its use, the bill helped expand money supply and had the advantage that the soldier alone, or his representative, would receive value for the bill, making it function, whatever the details, like a check and thus safe from theft by another, an occupational hazard during war. War required not only enormous expenditure but rapid turnover of funds, as an unpaid soldier was invariably an unreliable one. The need for speedy turnover rendered still more likely the recourse to all available fiscal instruments – from in kind payments, to bills of exchange and other paper or even verbal instruments. The fiscal confusion attendant warfare cannot be stressed enough.

Meanwhile, as this preliminary investigation has hopefully shown, future study will need to measure the recourse to such expedients in terms of additional measures, including the use of notarial documents, *apodisse* and *bollette*, whose precise function in *trecento* Italy remains to be studied. The former (*apodixa* in Latin) appears in an ordinance issued by Charles of Anjou of Naples in the thirteenth century (1277) as a «written order» used by his treasurers to make payments, coupled with an *antapocha*, from the recipient to show that the payment was actually made (Del Giudice, 1869, 163; Durrieu, 1883, 3-33). Anjou's ordinance received scholarly attention because it required that the document be made out in French (his native tongue) rather than in Latin, the official language of his kingdom, a decision with linguistic implications that appealed to scholars of language. In fourteenth century Florence, according to the

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<sup>10</sup> Bolton, Guidi-Bruscoli 2021, 1-19. For cashless payments in the Low Countries, see Puttevils 2015, 337-61; Gelderblom and Jonker 2018, 224-27

operative definition, the *apodissa* was a receipt, quittance (*ricevuta*, *quietanza*), coupon (*cedola*) used to approve payment and received by soldiers and government workers (Biscione 2009, 46). Tommaso Zerbi, in his important but much overlooked study of the Guissano bank in the Anglophone academy, gave detailed attention to the practice by the Visconti of issuing *bollette* (bills) as receipts to pay their soldiers and communal officials through the Guissano of Piacenza, which served as one of the Visconti's treasurers. Zerbi's close reading of the surviving account books (1356-1359) shows that soldiers, who had received advance loans, had that money and additional sums deducted from their *bollette*, when they redeemed them at the «sportello» of the Guissano bank. In Zerbi's rendering, the deductions constituted disguised interest charges on loans, which ran as high as 31 percent for the bank (Zerbi 1935, 238-39; Mainoni 1980).

Thus, for all the discussion of the nexus between war and gold, soldiers dealt routinely with paper instruments – the precise extent and nature of which requires more detailed inquiry. The bill of exchange, as our examples suggest, was an unpopular expedient, as soldiers often protested them to city authorities, who in turn used them in cases of serious lack of funds.<sup>11</sup> Specie remained the preferred means of making military payments, and it was the ability of states like Florence in the *trecento*, through institutions like the public debt (*monte*), outside investment and an international merchant network, to amass the liquidity that allowed it to achieve military and political hegemony over its cash strapped neighbors.

The example of *trecento* Florence raises a final question relating to war, economy and monetary history, with which it seems suitable to end our discussion. Florence has long stood as an example of how the steadily rising costs of *trecento* war served as a prime mover in the development of the territorial state, which corresponded with the city's cultural rise as the home of the Renaissance and the attendant scholarly debate over the nature of the economy. Nevertheless, the monetary historian Carlo M. Cipolla remarked, that «a student of history who limited himself to the documents of the mint» for the city in the *trecento* would find little trace of war, and in fact would «be under the impression that nothing happened» (Cipolla 1982, 88). Cipolla's conclusion coincides with anecdotal evidence from the contemporary chroniclers like Matteo Villani, who pointed proudly to Florence's ability to make large timely monetary in cash payments, such as the 40,000 florins demanded by Emperor Charles IV in March 1355, while its neighboring cities defaulted on their obligations (Villani, 1995, 594-5). The boast matches scholarly claims that Florence possessed significant amounts of bullion at this time (Goldthwaite 1982, 54, 55, 304-305). Nevertheless, Florentine mint production of the gold florin declined precipitously after 1351, mirroring declines in overall mint production in contemporary France and England, which monetary historians have attributed to negative balance of payments and a downturn in their economies (Bernocchi 1976 vol. 3, 67, 75; De La Ronciere 1982, 500-502). The evidence begs consideration, basic to this essay, of how the city met its military payments, and more broadly, how money supply was related to mint production. It is clear, as the foregoing discussion has hopefully showed, that there is

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<sup>11</sup> Blastenbrei also makes the case for the dislike among soldiers for bills of exchange in the fifteenth century. See Blastenbrei 1987, 207

much more to be learned about the economy of war and its intersection with the economic circumstances of *trecento* Italy more generally.

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