# The Circulation of Bohemian Florins in Late Medieval Italy and Germany

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#### Abstract

Although it is generally accepted that Bohemian florins circulated more frequently abroad than in the Czech lands, a more precise study depicting their use in the light of historical sources has been lacking until now. The author examines gold coin hoards in Italy and Germany and compares them with the evidence from written sources (the diaries of Italian merchants, the pilgrim's book of Siena, papal registers relating to the collection of tithes and other papal revenues). The contribution aims to document various ways by which Bohemian florins penetrated abroad and to clarify what circumstances caused them, despite their high quality, to circulate in the Rhineland in larger quantities than in the Apennine Peninsula.

Gold coins represent a specific phenomenon of medieval coinage. Their importance increased during the first half of the 14<sup>th</sup> century when mint issuers in Western and Central Europe began to imitate the *fiorino d'oro*. The growing price of gold was one of the factors of motivation for producing these imitations<sup>1</sup>. The gold specie of John XXII (1316-34), produced since September 1322 in the mint of Avignon popes in Pont de Sorgues<sup>2</sup>, became a precedent for their mass expansion supported by Florentine merchants and bankers involved in trade, papal collections and last but not least in mining and coinage. They were mint-masters who lost their job in connection with the limiting production in Florence in response to decreased demand in coins caused by the insolvency of big debtors to repay loans to Florentine banks. The bankruptcy of the Bardi and Peruzzi bank houses was why some of their members left for the Cisalpine region and participated, among others, in introducing of gold coinage there<sup>3</sup>.

In Western Europe, especially in France and the Rhineland, the imitation of florins reached its climax during the first and second thirds of the 14<sup>th</sup> century. In 1325, John the Blind, King of Bohemia (1310-46), and Charles Robert of Anjou, King of Hungary (1308-42), were the first rulers in Central Europe who began to imitate the *fiorino d'oro*. Their initiative was soon followed by other

<sup>1</sup> In the 1320s the gold-to-silver ratio rose to 1:16, while around 1280 it was only 1:8. See SEJBAL 1997: 145; ČECHURA 1999: 120-125.

<sup>2</sup> Klein 2004.

<sup>3</sup> Štefánik 2007: 96-98; Mäkeler 2010b: 117-118.

Central European sovereigns: Silesian dukes Bolko II (1326-68) and Wenceslas I (1342-64), both of the Piast dynasty, minted their gold coins in Ziębice / Münsterberg (1345-51), Świdnica/Schweidnitz (1351-c.1365), and Legnica/ Liegnitz<sup>4</sup>.

Florins were also struck by the dukes of Austria, starting from Albrecht II (1330-58) who minted the first gold coins of Habsburg hereditary countries in the mint in Judenburg, Styria, around 1350, which were largely used in trade contacts with Venice<sup>5</sup>. The production of all these types in the original weight of the *fiorino d'oro* (around 3.5 grams) was often executed with the participation of Florentine financiers. The reason for the imitation was to integrate new types into circulation immediately.

According to Peter of Zittau, the author of the *Chronicon Aulae Regiae* and the until now underestimated expert in currency and coinage, four new florins exceeded the value of a Prague mark of silver (253.14 grams)<sup>6</sup>, which corresponds with the purchasing power of a Bohemian florin in the amount of 16 Prague *groschen*. However, this rate was not fixed: it changed depending on the gold-to-silver ratio. Gold coins were, in fact, no provincial currency in the true sense of the word since they primarily served the ruler and his payments abroad. To have direct control over gold coinage, King John decided to establish a new mint in Prague and to appoint Jessko, the provost of All Saints Church at Prague Castle, its first mint master. Balbinus Lombardus from Venice was the first die cutter in the Prague Mint<sup>7</sup> and his dies were used at least until 1345<sup>8</sup>.

Bohemia in the 13<sup>th</sup> and 14<sup>th</sup> centuries ranked among the important gold production regions in Europe, but, unlike Hungary, the local deposit conditions were much less advantageous. The panning for gold ongoing until the end of the 13<sup>th</sup> century depleted most rich supplies. In the 14<sup>th</sup> century, there was an impulse for changeover to the underground mining of primary deposits, which reached the largest output growth in Jílové/Eule near Prague and Kašperské Hory/Reichenstein in the Bohemian Forest. Besides that, gold mining went to many other places: 25 Bohemian gold-bearing regions were named especially productive in 1337<sup>9</sup>. The yearly production of all gold panning sites and mines in 14<sup>th</sup>-century Bohemia is appraised to 100 up to 200 kg<sup>10</sup>, which corresponded, according to Blanche's rough estimate, to about 6% of total gold production in Europe at that time<sup>11</sup>.

7 Summa Gebhardi 1882; CASTELIN 1966: 334-336.

<sup>4</sup> Kiersnowski 1976.

<sup>5</sup> Burböck 1987.

<sup>6</sup> CHRONICON AULAE REGIAE 1884: 273: «Instituit quoque tunc rex Prage per quosdam Lombardos monetam auream, de qua denarii quatuor valere debeant plus quam marcam».

<sup>8</sup> Weiller 1972: 161.

<sup>9</sup> Morávek, Litochleb 2002.

<sup>10</sup> Majer 2004.

<sup>11</sup> BLANCHE 1982.

Six types of gold coins<sup>12</sup> were minted in Prague from the mined gold:

**John the Blind** (1310-46), one type equipped with three different mint marks – a crown (1325), a Bohemian lion (1325-36), and a helmet with a visor turned to the left  $(1336-45)^{13}$ 

Charles IV (1346-78)

type I as King of Bohemia (1346-55)

type II as HRE Emperor (1355-78)

Wenceslas IV (1378-1419)

type I with the king frontally on the obverse and the Bohemian lion on the reverse (the 1380s)

type II with a letter w in the triple band on the obverse and the Bohemian lion in the spiral on the reverse (the 1390s)

type III is similar to type II but with considerably bigger letters in legend (the 1400s)

The insufficiently effective control in the period of the initial upswing of mining activity was why local markets in Central Europe were flooded with coins. The overpricing of local production caused most gold and silver to get into the hands of foreign merchants who exported them in exchange for commodities from Western and South Europe<sup>14</sup>. This trade imbalance caused the outflow of gold coins into the most developed regions: South Germany, the Rhineland, Westphalia, Flanders, and Italy. Only a negligible amount of six Bohemian florins found in Bohemia is telling evidence of it<sup>15</sup>. Gold coins came into circulation in connection with the policy of the House of Luxembourg<sup>16</sup>, military and politically motivated payments, long-distance trade, and papal collections<sup>17</sup> in which Regensburg and Nuremberg merchants usually appeared as mediators. The expenses for papal collections amounted to 40,000 florins in

<sup>12</sup> MILITKÝ 2012: 451-454; ZAORAL 2016: 65-67. Authors sometimes refer to the gold florin as a ducat for the period of the 14<sup>th</sup> and 15<sup>th</sup> centuries to distinguish gold coin types with separate iconography from those whose image was dependent on the original design. The fact that the term ducat was associated in the 14<sup>th</sup> century with Venetian mints and types derived from them is often overlooked. In the written sources of that time, the term florin prevails in connection with Bohemian gold coins. That is why I use it as well. See DVOŘÁKOVÁ 2007: 26, no. 47.

<sup>13</sup> Florin with a helmet and visor turned to the right was minted by John of Luxembourg as the Count of Luxembourg and by Wenceslaus I (1354-83) as the Duke of Luxembourg under the mint master Boniface Annelier. See WEILLER 1972.

<sup>14</sup> Hóman 1922: 134, 140.

<sup>15</sup> Nohejlová-Prátová 1965.

<sup>16</sup> For example, Charles IV paid 500,000 florins for the purchase of the Margraviate of Brandenburg and it was not an isolated case. This amount was repaid over many years, not only in Bohemian florins but mostly in Prague *groschen*.

<sup>17</sup> STLOUKAL 1949 pointed out that large sums of money flowed annually to the papal court in Avignon. SKALSKÝ 1950: 51 considers that they were almost always Bohemian florins.

1355 and this sum still increased after regular tithes had been introduced<sup>18</sup>. Despite all the propaganda against selling indulgencies, in the end, it was Hussite Bohemia, from where various types of fees (*servitia, annates*, and others) flowed into the Papal Treasury until 1422<sup>19</sup>. Pilgrims, diplomatic messengers, and university students represent another specific group where gold coinage found its use<sup>20</sup>.

Italy profited from the fact that many people flew there and many means of payment with them. Among Bohemian coins, they were particularly Prague *groschen*, which penetrated the Italian market<sup>21</sup>; Bohemian florins circulated on a much smaller scale corresponding with the volume of coinage. One of the highest sums in these denominations is contained in the report from 1380 according to which Nuremberg merchants handed 6,000 Bohemian florins from papal collection over to the Medici in Florence<sup>22</sup>. The appreciable supply of money into Italy was provided by pilgrims who were spending them for stay and indulgences, and enriched so a structure of local currency in circulation. A coin metal brought in this way to Rome was able to saturate the economic needs of the city to such an extent that popes minted their coins occasionally only<sup>23</sup>. Especially in the jubilee years 1390 and 1400, the inflow of easily portable coins was extraordinary<sup>24</sup>.

Bohemian florins often got into Italy indirectly, too. Interesting evidence of it is contained in the pilgrim's book of Siena kept by the friars of Dominican monastery in 1382-1446. The pilgrims from the Lands of the Bohemian Crown deposited in Siena Venetian ducats, Florentine, Hungarian, and papal florins but no Bohemian florins. They appear, by contrast, as a part of cash by two depositors from Flanders who visited Siena in the jubilee year 1400: two closer unspecified Bohemian florins were deposited by Gerald, priest of Nijmegen, and two florins of Charles IV named "*fiorini del'omperadore*" by a pilgrim from Bruges<sup>25</sup>. Among pilgrims, gold coins represented frequent means of payment for practical reasons. The Siena pilgrim 's book gives evidence that more than 70% of all deposits have been composed of gold coins. The most common amount of cash, documented by more than 80% of pilgrims, ranged from 1 to

<sup>18</sup> TOMEK 1873; GRAUS 1960: 110, no. 231.

<sup>19</sup> ERŠIL 1959; ERŠIL 1962; POŘÍZKA 2002. The activities of papal collectors in a European context were dealt with by RENOUARD 1941 and SCHUCHARD 2000.

<sup>20</sup> Hledíková 1997: 71-78.

<sup>21</sup> According to the pilgrim's book of Siena, Prague groschen belonged, together with the Flemish groats, to the most widespread types of medium-size silver denominations on the late medie-val Apennine peninsula. See PICCINNI, TRAVAINI 2003.

<sup>22</sup> Stromer 1970: 197.

<sup>23</sup> Systematic coinage did not begin until 1367, when Urban V (1362-70) returned to Rome. See ZAORAL 2006: 215-217.

<sup>24</sup> ZAORAL, HRDINA 2008: 191-192.

<sup>25</sup> PICCINNI, TRAVAINI 2003: 187, no. 195 and 177, no. 124.

10 florins. The higher sums (11-20 fl., 21-40 fl., and 50-78 fl.) occur by pilgrims from far-away places and by old priests who set out for a journey to Rome with their whole belongings, presumably in conviction they will no longer come back<sup>26</sup>.

In the manuals of Italian merchants, mentions of Bohemian florins do not mostly appear until the 15<sup>th</sup> century. A merchant diary that began to be drawn up in 1396 in Genoa by the Florentine Saminiato de' Ricci and continued in 1416 by Antonio di Francesca da Pescia, a factor of the Medici bank, gives one of the oldest evidence of them. In addition to Prague *groschen* of John the Blind, Charles IV, and Wenceslas IV, there is also a reference to gold imperial coins circulating in Venice in 1418: the *imperiali vecchi* in weight of 23 carats and 2.5 grains, and the *imperiali nuovi* in the weight of 19.5 carats<sup>27</sup>. Bohemian florins also occur on the list of coins in the manuscript of the lay confraternity in Arezzo (Tuscany) made in 1420 or 1432 by Guido di Antonio Camaiani. As a basis for assessment of the quality of gold coins, he used a Hungarian florin of Louis I (1342-82) in the fineness of 23 7/8 carats. The king's types of Charles IV's florin (*fiorini di Boemia cioè del re*) were of the same weight, while the emperor's types (*fiorini di Boemia cioè del l'omperatore*) were, according to Camaiani, in 3 pennies worse<sup>28</sup>.

The younger Charles IV's florin (*fiorini dell'Onperio*) is also mentioned by Giovanni di Antonio da Uzzano in his diary from 1419-1442. It appears on a list of 55 types of calibrated gold coins taken at the Florence Mint on 10 September 1425<sup>29</sup>. The long-term circulation of Bohemian florins in Italy is evidenced by references in a manual written in 1458 by Giorgio di Lorenzo Chiarini in the circle of Tuscan merchants in Ragusa/Dubrovnik and printed in Florence in 1481. Chiarini states that the gold coin is minted in Siena from melted high-quality gold denominations, among which, in addition to Italian and Hungarian coins, there are also Bohemian florins (...*buemmi e altri simili fiorini buoni*). The mentioned types of coins formed the raw material reserve of the Siena Mint so they had to be represented in larger quantities there<sup>30</sup>. Among coins that circulated in Rome in the second half of the 15<sup>th</sup> century, Chiarini also mentions the old, heavily cut florins of Wenceslas IV (*fiorini di Vincislagho*) weighing 22 carats<sup>31</sup>.

<sup>26</sup> ZAORAL, HRDINA 2008: 196-197.

<sup>27</sup> SAMINIATO 1963: 143-148; TRAVAINI 2003: 161, 276. Old imperial coins probably mean florins of Charles IV (1355-78), the new ones mean then gold guldens, the fineness of which was gradually reducing from 23 to 19 carats. See SEJBAL 1997: 146 and NORTH 2009: 43.

<sup>28</sup> Archivio di Stato di Arezzo, Documenti diversi 10/B: Lista di monete firmata Simone Guido di Antonio (Camaiani), fol. 66r. See also TRAVAINI 2003: 183-186.

<sup>29</sup> Uzzano 1766: 167-168; Travaini 2003: 177.

<sup>30</sup> Chiarini 1936: 114.

<sup>31</sup> CHIARINI 1936: 149-50; TRAVAINI 2003: 166, 261. Referring to this source, GRAUS 1949: 96, no. 6 states that two types of Bohemian gold coins circulated in Rome in the second half of the

There are earlier references to Bohemian florins in written sources of German and Flemish provenance. In the years 1383-92, the account book of the Regensburg trade firm of the Runtingers mentions Hungarian and Bohemian florins together (*guldein Ungerisch Pechaimisch*) as evidence of the commonly respected value identity of both denominations. An exception is a case recorded in 1383 in Lucca, where Bohemian florins were valued higher than Hungarian ones<sup>32</sup>. In the later period 1392-1407, Bohemian and Hungarian coins are listed separately in the book. The reason was probably the minting of a completely new type of Wenceslas IV's gold coin with the letter w in a triple band on the obverse and with the image of the Bohemian florins in Flanders dates from 1386. It appears in the coin edict of Philip II the Bold (1363-1404), where *florins de Honguerie et de Bohême* are listed without distinction as well<sup>33</sup>.

From the cited written sources, it is clear that in the 14<sup>th</sup>- and 15<sup>th</sup>-centuries Apennine Peninsula Florentine florins, Venetian ducats, and Hungarian florins prevailed among the gold coins as their equivalent. Bohemian florins, most often represented by the imperial type of Charles IV, made up only a small part. It is now time to find out to what extent this image corresponds to the evidence of coin hoards.

When interpreting gold coin hoards, it should be taken into account that the transfer of cash was dangerous and that money was often flowing to Italy in the form of expensive but convenient non-cash credit realized through bills of exchange. Concealed depots therefore reflect only a small part of the total volume of financial transactions. Nevertheless, in their summary, they are a valuable source of information, which, in combination with the evidence of written sources, makes it possible to get at least a general idea of what the share of particular denominations was in the overall composition of circulation. Bohemian florins occur in five of the 31 published gold coin finds documented in the territory of today's Italy<sup>34</sup>.Of the total number of more than 3,400 gold coins contained in these hoards, only 18 pieces come from Bohemia. These are exclusively the florins of John the Blind and Charles IV. Although in some depots, together with gold coins, silver coins are also documented, Prague *groschen* is missing among them<sup>35</sup>.

<sup>15</sup>th century, and assumes that they were the florins of John the Blind and Wenceslas IV.

<sup>32</sup> BASTIAN 1935: 47.

<sup>33</sup> Graus 1949: 95.

<sup>34</sup> BROGGINI 2012-13: 205-28 published a list of gold coin hoards from Italy in the appendix of his thesis. I express my sincere thanks to the author for providing it. See also TRAVAINI, BROGGINI 2016: 139-142.

<sup>35</sup> In Italy, Prague groschen became the object of hoarding only exceptionally, but they are often mentioned in the records of merchants and church institutions. See, for example, a small deposit with twelve Prague groschen found on May 13<sup>th</sup>, 1409 in the garden of the Siena hospital.

It is clear from the geographical distribution of the hoards that gold coins in general, including the Bohemian ones, circulated throughout the Apennine Peninsula (Fig. 1). While written accounts of Bohemian gold mints in Italy mostly date from the 15<sup>th</sup> century, coins were concealed in the ground for a relatively short period in the last four decades of the 14<sup>th</sup> century (about 1360-1400). The temporal disparity in the statement of material and written sources indicates that Bohemian florins reached Italy in larger quantities shortly after their creation. While their smaller part was soon hoarded together with other gold denominations, the larger part remained in the local monetary circulation for a relatively long time. Bohemian florins of various types circulated in Italy for more than 150 years – from the middle of the 14<sup>th</sup> to the end of the 15<sup>th</sup> century. At the same time, written reports expand the spectrum of circulating coin types to include mints of Wenceslas IV.

An overview of the types and numbers of Bohemian florins represented in the Italian finds is provided by the following list arranged in chronological order according to the time of hoarding (see Table 1 and Fig. 1):



Fig. 1. Bohemian florins in the hoards (circle) and written sources (triangle) in Italy.

Archivio di Stato di Siena, Ospedale 517, fol. 344. Cited according to PICCINNI, TRAVAINI 2003: 88, no. 15.

Place of hoarding	Time of hoarding	Total number of coins	Number of Bohemian florins
Carignano (Turin), Piedmont	around 1360	63 AV	10
Montella (Naples), Campania	1360s	208 AV	4
Veneto region	1360s	more than 700 AV (382 AV registered)	2
Faenza (Ravenna), Emilia Romagna	1380s	48 AV	1
Chignolo Po (Pavia), Lombardy	1390s	55 AV + 27 AR	1

Table 1. Coin hoards with Bohemian florins in Italy.

#### 1. Carignano (Turin), Piedmont

Found on 16<sup>th</sup> August 1915 in a hole in the wall about a meter deep. The hoard is not complete. Of the coins found during the excavation work, 63 pieces were salvaged, and the rest were stolen.

Hoarded: around 1360

Composition: 23 Florentine florins, 2 Venetian ducats and 38 imitation florins Lit.: RODOLFO 1915: 347-364

#### Bohemia, John the Blind (1310-46), mint: Prague, AV florin (10);

Florence (23 AV); Vienne (6 AV); Hungary (6 AV); Orange (3 AV); Venice (2 AV); Austria (2 AV); Aragon (2 AV); San Paolo (2 AV); Arles (2 AV); Flanders (1 AV); Pont-de-Sorgues (1 AV); Rodi (1 AV); Legnica/Liegnitz-Brzeg/Brieg (1 AV); Valkenburg (1 AV)

### 2. Montella (Naples), Campania

Found in March 1954 while working in a garden in the city's Fontana district. The hoard was concealed in a ceramic vessel about 70 cm below the surface. Of the 212 coins originally found, the financial guard recovered 210 pieces.

Hoarded: 1360s

Composition: 87 Florentine florins, 61 Venetian ducats, 59 imitation florins, and 1counterfeit Florentine florin

Lit.: Broggini 2012-13; Travaini, Broggini 2016

### Bohemia, John the Blind (1310-46), mint: Prague, AV florin (4);

Florence (87 AV + 1 counterfeit); Venice (61 AV); Hungary (31 AV); Dauphiné (7 AV); Cambrai (3 AV); Austria (3 AV); Luxembourg (2 AV); Orange (2 AV); Burgundy (1 AV); Flanders (1 AV); Hainaut (1 AV); Venaissin (1 AV); Legnica/Liegnitz-Brzeg/Brieg (1 AV); Mainz (1 AV); Świdnica/Schweidnitz (1 AV)

#### 3. Veneto region

Uncovered during the First World War at an unknown place.

Hoarded: 1360s

Composition: originally more than 700 gold coins, of which only a part has been examined in detail. A total of 382 pieces are registered. The hoard's core consists of gold coins of Italian provenance.

Lit.: Orlandoni, Martin 1973: 77-107

Bohemia, John the Blind (1310-46), mint: Prague, AV florin (1); Charles IV (1346-78), mint: Prague, AV florin (1);

Venice (100 AV); Florence (90 AV); Genoa (82 AV); Milan (65 AV); Hungary (5 AV); Luxembourg (4 AV); Savoy (4 AV); Avignon (3 AV); Dauphiné (3 AV); Flanders (2 AV); Rhineland Palatinate (2 AV); Trier (2 AV); Arles (2 AV); Barle-Duc (2 AV); Austria (2 AV); Burgundy (1 AV); Lorraine (1 AV); Montelimar (1 AV); Orange (1 AV); Provence (1 AV); Mainz (1 AV); Julich (1 AV); Eppstein (1 AV); Lübeck (1 AV); Heide (1 AV); Horn (1 AV); Gorizia (1 AV); Legnica/ Liegnitz-Brzeg/Brieg (1 AV); Świdnica/Schweidnitz (1 AV)

**4. Faenza** (Ravenna), Emilia Romagna Uncovered: in September 1972 in a soldier's grave. Hoarded: 1380s Lit.: LIVERANI 1973: 213-219

**Bohemia, Charles IV** (1346-78), mint: Prague, AV florin (1); Florence (26 AV); Venice (9 AV); Genoa (8 AV); Pont-de-Sorgues (2 AV); Milan (1 AV); France (1 AV); Lorraine (1 AV)

**5. Chignolo Po** (Pavia), Lombardy Uncovered: around 1897 Hoarded: 1390s Lit.: AMBROSOLI 1897: 539

**Bohemia, Charles IV** (1346-78), mint: Prague, AV florin (1); Venice (19 AV); Genoa (12 AV); Milan (7 AV + 27 AR); Bologna (7 AV); Florence (3 AV); Rome (3 AV); Pavia (2 AR); Avignon (1 AV); Hungary (1 AV)

According to the evidence of coin hoards, Bohemian florins were most available in the 1360s, when three of the total number of five depots are dated. In addition to trade, the second expedition of Charles IV to Rome in 1367 may have contributed to the increase in the number of imperial types in circulation. The largest number of Bohemian gold coins (10 florins of John the Blind) is contained in the hoard from Carignano in Piedmont, a city located near Turin at the crossroads of the roads connecting northern Italy with France. In contrast to written sources, the gold coins of Wenceslas IV are not at all documented in the finds. The presence of Bohemian florins in the depot from Veneto can be explained by the lively trade contacts between Bohemia and this region. The absence of finds from Rome and the Tuscan cities of Florence, Siena, Arezzo, and Lucca, which are mentioned in merchant diaries, pilgrim's books, and in the records of the Papal Treasury, is more surprising. Of the Lombard cities that John the Blind controlled as his *signoria* in the years 1331-35 (Brescia, Bergamo, Parma, Cremona, Pavia, Reggio, and Modena), the only known hoard comes from Chignolo Po near Pavia with one florin of Charles IV. This picture of the find situation is certainly partly influenced by the factor of randomness, but at the same time, it testifies to the insufficient registration of depots in Italian museums. On the other hand, the hoards provide material evidence of the presence of Bohemian florins also in Piedmont, Emilia Romagna, and Campania.

Material and written sources confirm the significant superiority of Italian gold coins over foreign ones. The data of the published hoards prove that the Italian types exceed the non-Italian ones in the number of 3,209:240, i.e. more than thirteen times. The unequivocal dominance of Florentine florins (fiorino d'oro) over Venetian ducats (zecchino), Genoese genovines, and papal and Milanese florins (Fig. 2) is related to the volume of their production. During the period of considerable minting activity in Florence between 1 May 1347 and 30 April 1351, the production of florins increased at the expense of small coins, reflecting the economic situation following the plague when prices and wages rose in parallel. The Florence Mint struck more than 865,000 florins during the four years mentioned, which corresponds to an average annual production of 216,250 pieces<sup>36</sup>. Among foreign gold coin types, the Hungarian florin played a relevant role, although its amount in the hoards is negligible (94 pieces in total + an unknown number). Despite this fact, the best quality Hungarian florins, like that of Louis I, served, as mentioned, as a model for Tuscan merchants when determining the quality of gold coins.

<sup>36</sup> BERNOCCHI 1976: 67, 252. TRAVAINI 2007: 54, taking the general ledger of the Florence Mint (*Libro della Zecca*) into account, gave accuracy to Bernocchi's data. According to the semi-annual records of this book, production reached its peak in the period from November 1<sup>st</sup>, 1350 to April 30<sup>th</sup>, 1351, when it crossed 200,000 florins. In the other semi-annual intervals between May 1<sup>st</sup>, 1347, and April 30<sup>th</sup>, 1351 the number of gold coins, which left the mint, was mostly around 100,000 and in the period from November 1<sup>st</sup>, 1349 to April 30<sup>th</sup>, 1350, it did not even reach 60,000 florins.

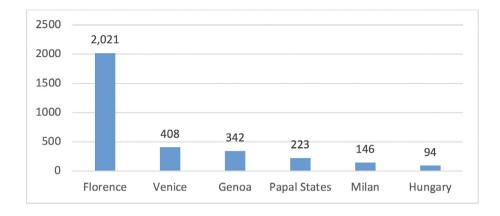


Fig. 2. The most frequent gold coin types in the late medieval hoards from Italy.

Unlike Bohemian gold coins, Hungarian florins are documented in 15 hoards in Italy and their circulation period was longer (they were hoarded between 1360 and 1550). Since they exceeded the production of the *fiorino d'oro* in volume<sup>37</sup>, they largely covered the trade in Italian, Levantine, and Oriental products. However, although they were of the same weight and fineness as the Venetian ducats, the commercial wars (1412-33) of the Hungarian king Sigismund of Luxemburg (1387-1437) with the Republic of Venice caused the supply of gold from Hungary to the territory controlled by Venice was greatly restricted<sup>38</sup>. As a result, in 1417-23 the Venice Mint even had to stop minting coins<sup>39</sup>. By contrast, the Kingdom of Naples was the area connected with Hungary by family ties of the Anjou dynasty where it was transferred 6,630 kg of silver and 5,156 kg of gold in the 1440s by order of the Hungarian king Louis I<sup>40</sup>. Hoards might

40 Budaj 2010: 196-197.

<sup>37</sup> Data on the production of Hungarian mints vary widely in the literature. PAULÍNYI 1936 and PROBSZT 1963: 251 estimate the average annual production according to the written reports of the chambers in Kremnica/Kremnitz, Baia Mare/Nagybánya and Sibiu/Hermannstadt at 400,000-450,000 florins in 1326-1525. KAZIMÍR, HLINKA 1978: 44 even assume that the Kremnica/Kremnitz Mint itself produced annually up to 500,000 florins in some years of the second half of the 14<sup>th</sup> century. MÁLYUSZ 1985: 33 is more realistic in his calculations. Based on different data on the amount of sovereign's profit share in mining (the so-called *urbura*) from 1427, he got to the figure of 110,000 florins, i.e. about 391.5 kg of minted gold, which is roughly a quarter of the assumed amount. However, Mályusz points out that this is the lowest possible amount that we can securely take into account for the year 1427.

<sup>38</sup> Spufford 1988: 344.

<sup>39</sup> Stromer 1986: 68-69, 82; Štefánik 2004: 50.

reflect these circumstances: only five Hungarian florins are known in the hoard from Veneto, while the hoard from Montella near Naples contains 31 pieces<sup>41</sup>.

Unlike Italy, Bohemian florins in the German territories were hoarded for a longer time (1338-1402) and in a bigger amount (Table 2 and Fig. 3). Their number is particularly high in the depots from Marbach am Neckar and Mainz-Bretzenheim which represent the two largest 14<sup>th</sup>-century gold hoards found in Germany containing more than 1,000 gold coins each. It was first of all the Florence Mint, which strived to minimize the circulation of foreign gold coins in Italy with its high production. That is why Bohemian and particularly Hungarian florins found greater use in the Holy Roman Empire.

Place of hoarding	Time of hoarding	Total number of coins	Number of Bohemian florins	Literature
Limburg a.d. Hahn, Hesse	after 1338	136 AV + 1 AV ingot	12	Berghaus 1961
Cologne, North Rhine-Westphalia	after 1349	38 AV + 249 AR	11	Mäkeler 2010a
Unna, North Rhine-Westphalia	around 1379	255 AV (230 AV registered)	2	Mäkeler 2010b
Mainz- Bretzenheim, Rhineland- Palatinate	after 1386	1005 AV	60	Joseph 1883
Wittlich, Rhineland- Palatinate	after 1387	109 AV	2	Petry 1992
Regensburg, Bavaria	1388	624 AV	26	Stumpf, Codreanu-Windauer, Wanderwitz 1997
Marbach am Neckar, Baden-Württem- berg	after 1395	1004 AV	76	Klein, Schäfer 1987
Sötenich, North Rhine-Westphalia	after 1402	121 AV	2	Kluge 1981

Table 2. Coin hoards with Bohemian florins on the territory of Germany.

<sup>41</sup> TRAVAINI, BROGGINI 2016: 142.



Fig. 3. Bohemian florins in the hoards on the territory of Germany.

For comparison (Table 3), the share of Bohemian florins in the hoards documented in the territory of today's Germany was almost eleven times higher than in Italy, and Hungarian florins were even represented there in more than fourteen times the number<sup>42</sup>. The role of Bohemian and especially Hungarian florins will increase markedly if we compare their share in the total number of gold coins found. In Italian hoards, the share of Bohemian florins is 0.006%, while in German hoards it is 5.81%; in the case of Hungarian florins, the difference is even greater: 0.03% versus 41.00%. The concentration of Hungarian florins in the Rhineland was really large, so they functioned not only as currency in circulation but also in the molten form ("*pagament*"), from which they were reminted into Rhinegulden since 1386.

Type of denomination	Number of hoards (Italy)	Number of pieces (Italy)	Number of hoards (Germany)	Number of pieces (Germany)
Bohemian florins	5	18	8	191
Hungarian florins	15	94 + UN	23	1,347

\* UN = unknown number

Table 3. Bohemian and Hungarian florins in the published hoards.

<sup>42</sup> Mäkeler 2010b: 114-129; Budaj 2010: 214-215.

From the analysis, it is evident that the total number of Bohemian florins documented in late medieval hoards was in Italy smaller than in Germany. Despite their negligible amount, they often circulated together with Hungarian florins. The long-term high quality was the reason why Bohemian florins, likewise Prague groschen, were not missing in almost any merchant or pilgrim book nor the papal registers.

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