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THE OUTPUT AND PROFITS OF THE CALAIS MINT, 1349–1450

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CALAIS was an English possession from 1347 to 1558. A mint was briefly established in the town in 1349–50 to produce coinage to meet the needs of the local garrison, and the mint was re-established on a much more permanent basis in 1363 to convert the profits of the Calais Staple's wool trade into English coins.¹ From the 1360s to the early years of the fifteenth century the issues of the Calais mint almost entirely consisted of gold coins, and a decline in output during a period of increasingly severe bullion shortages culminated in the temporary closure of the mint in 1403 or 1404.² The mint was reopened in 1422, with silver taking a much greater place in its output, but a decline in bullion supplies from the wool trade resulted in the final closure of the mint in about 1450.³

The construction of a series of mint output figures for the Calais mint between its opening for the production of English coinage in 1363 and its final closure in the mid-fifteenth century has been a long and arduous process since the first work on the subject published by Ruding in the nineteenth century. Ruding found evidence for the size of the Calais mint's outputs of 1363–65 in the Pipe Rolls, and Patent Roll records of pyx trials provided him with the silver outputs of 1428–32.⁴ No further progress was achieved until 1911, when F.A. Walters published figures for 1436 and 1439/40 taken from a third source of evidence, the accounts of the treasurer of Calais.⁵ Two years later the tables of royal mint outputs in the reigns of Edward I, II and III published by C.G. Crump and C. Johnson included the Calais figures of 1363–65 already found by Ruding and a new series of gold outputs from 1365 to 1384.⁶ Unfortunately the survey of outputs from 1377 to 1550 compiled by Ethel Stokes overlooked the Calais mint entirely, although Miss Stokes subsequently made unpublished notes from many of the Calais mint accounts at the request of Christopher Blunt.⁷ There was no further progress until the 1970s, when important monographs on the wool and cloth trades by the economic historians T.H. Lloyd and John Munro provided new figures for 1387–1403 and 1422–36. Lloyd's figures suffer from minor errors of calculation and dating, and Munro's statistics are annual estimates in *marcs de Troyes* of pure silver minted, rather than the original figures from the accounts.⁸ In 1979 Peter Woodhead published a useful survey of the mint outputs published up to that time, including the work of Lloyd and Munro.⁹ Munro subsequently corrected Lloyd's interpretation of the figures in an account of 1387–90 and added an output in 1403/4 missed by Lloyd.¹⁰ Finally, Christopher Challis's comprehensive tables of mint outputs published in 1992 included the Calais figures, going back to the original data provided by the mint accounts and records of pyx trials to calculate the values of gold and silver coins struck.¹¹ This was far from being the last word on the subject, however. Challis did not have access to

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¹ Deschamps de Pas 1883; Walker 1921–22; Spufford 1979; Woodhead 1979.

² Lloyd 1977, 245; Spufford 1979, 176–7; Munro 1981, 92

³ Munro 1973, 106–20; Lloyd 1977, 262–5; Spufford 1979, 171, 176; Woodhead 1979, 189; Woodhead 1996, 27–8; Stewartby 2009, 292–3.

⁴ Ruding 1840, I, 66, 84–5; III, 451–2.

⁵ Walters 1911, 171–3.

⁶ Crump and Johnson 1913, 234–5, 242–5.

⁷ Brooke and Stokes 1929. Manuscripts loaned to the Department of Coins and Medals at the Fitzwilliam Museum by Lord Stewartby include the notes on the Calais mint by Ethel Stokes, accompanied by three related letters of 26 Sept. to 2 Oct. 1935 addressed to Christopher Blunt.

⁸ Lloyd 1977, 240–1, 244–6; Munro 1973, 188, 190–3, 195–6.

⁹ Woodhead 1979, 193–9.

¹⁰ Munro 1981, 72–3.

¹¹ Challis 1992, 680–3.

the Foreign Account Roll data used by Lloyd and Munro in their calculations, apart from the figures in an account of 1387–90 published by Munro.¹² The Foreign Account Roll data of 1390–1404 and 1424–36 are published here for the first time, together with figures from previously unpublished accounts of 1349–50, 1387–91, 1437–39, 1442/3 and 1448–50, and a reassessment of the other evidence for the size of the Calais mint's output.

Calais was captured by Edward III on 3 August 1347. On 20 October 1347 William de Salop was appointed as keeper of the dies and assayer at Calais, and an order of 6 February 1348, which named William de Salop as the warden of the mint, provided that the moneyers should make silver coins of the same standard as the English coinage.¹³ This does not seem to have been acted upon, but a writ of 28 May 1349 to the captain of Calais ordering him to strike coins to suit local needs resulted in the production of copies of the current French coinage.¹⁴ Three specimens of a Calais *double tournois* imitating a coin introduced by Philip VI of France in December 1348 have been found, and copies of other French coins may have been issued.¹⁵ An account of the treasurer of Calais for 1 January 1349 to 2 April 1350 records the revenue from two successive masters of the mint during the issue of copies of French coins: Nicholas de Cone had a profit of £21 11s. and John Mascorell had 56s. 11d.¹⁶ There is no indication in this account of what the output might have been and we have no means to estimate it in the complete absence of information about the minting charges and costs involved. Subsequent accounts of the treasurer of Calais between 1350 and 1363 do not mention the mint, which may indicate that the mint closed no later than April 1350.

On 5 May 1350 a syndicate headed by Nicholas de Multoplusane and Thomas de Notynggham obtained an indenture to strike gold, silver and billon coins of the same type, weight and alloy as the current French coinage at the Calais mint, paying the same seigniorage per pound of gold or silver as at the London mint, but this indenture was cancelled without being implemented.¹⁷ Another indenture of the same date between Edward III and the merchants of Calais certifying that the king had ordered gold, silver and billon coins of the same alloy and type as the French coinage was also cancelled.¹⁸

The Calais mint was reopened for the production of a coinage of purely English standards and types in 1363. The first account of the revived mint (for the period from 20 February 1363 to 10 April 1364) does not provide any direct record of outputs, which have to be deduced from the recorded seignorages of £617 10s. 1½d. from gold and £33 9s. 6d. for silver.¹⁹ At the then current rates of 3s. 6d. per Tower pound of gold and 3d. per pound of silver these seignorages indicate outputs of about 3,528.61 pounds of gold and exactly 2,678 pounds of silver, worth some £52,929 and £3,348, respectively.²⁰ The account of 10 April 1364 to 13 April 1365 is more helpful, specifying purchases of £683 3s. 3¾d. of gold and £389 11s. 1d. of silver by weight (dividing the Tower pound into twenty shillings of twelve pennyweights each, as was customary in the mint accounts until the 1420s).²¹ Silver now disappears from the Calais accounts until 1422.

From 13 April 1365 to 13 April 1366 £6,387 1s. 11½d. weight of gold was purchased, worth about £95,806 in new coins.²² The total amount of gold purchased in the account of 13 April 1366 to 20 March 1368 is £7,597 6s. 7½d. by weight, but £447 10s. 0d. of this was received after 8 December 1367, when the seigniorage charged at the Calais mint was increased from 3s. 6d. per Tower pound to 4s.²³ These amounts of gold would have supplied coins

¹² Munro 1981, 72–3.

¹³ Rymer 1739–45, III(i), 140, 150; Ruding 1840, II, 254; Walker 1921–22, 78–9; Woodhead 1979, 185.

¹⁴ Rymer 1739–45, III(i), 185; Ruding 1840, II, 254; Walker 1921–22, 79; Woodhead 1979, 185–6.

¹⁵ Woodhead 1979, 186; Duncan Elias 1984, 147–8; information from Paul and Bente Withers.

¹⁶ TNA: PRO, E 372/194, rot. 47. I owe this reference to the unpublished notes made by Ethel Stokes in 1935 (see n.7).

¹⁷ TNA: PRO, C/47/24/11/3; Walker 1921–22, 79–80.

¹⁸ *Calendar of Close Rolls 1349–1354*, 224; Woodhead 1979, 185.

¹⁹ TNA: PRO, E 101/177/4 and E 372/208, rot. 51.

²⁰ Challis 1992, 705–11, summarizes the provisions of the London and Calais of mint indentures 1363–1459, including the minting charges.

²¹ TNA: PRO, E 372/210, rot. 38d.

²² TNA: PRO, E 364/2, rot. 4.

²³ TNA: PRO, E 364/2, rot. 4.

worth about £107,247 up to 8 December 1367 and £6,713 after that date. This division of the accounts in December 1367 unfortunately escaped the attention of Crump and Johnson, and Challis.²⁴ The account of 20 March 1368 to 16 October 1371 is divided into the three periods shown in Table 2 below (pp. 137–8), with gold purchases worth about £9,100, £51,923 and £15,463, respectively.²⁵ The accounts of 1371–75 are relatively straightforward, recording the outputs shown in the table, but there is an apparent contradiction between the accounts of 1375–84 and 1380–3.²⁶ In the mint account of 4 November 1375 to 7 January 1384 there are purchases of £1,983 11s. 11d. by weight of gold with a master's mintage charge of 1s. per pound to 15 May 1381, and a further £5 19s. 10d. by weight at 1s. 6d. per pound after that date.²⁷ An account of the treasurer of Calais for 17 December 1380 to 29 September 1383 seems to contradict this information, because it reports that the master Walter de Barde had stated on oath that there was no minting in the period of the account, but it may be significant that this statement was not supported by written accounts for the period in question.²⁸ It is, however, safe to assume that the Calais mint was effectively closed by the end of the treasurer's account in 1383. The wool trade was brought to a standstill by the French invasion of West Flanders in the autumn of 1382, and from the spring of 1383 English wool exports were sent to a new staple at Middelburg in Zeeland and not to Calais.²⁹ The mint account for 29 September 1383 to 29 September 1384 has no recorded issues, and it was only in 1389 that the Calais mint's activity resumed, after the return of the wool staple to Calais on 2 February 1389.³⁰

An account of 17 January 1387 to 10 November 1391 states that no coinage was struck until 4 February 1389, and that there were purchases of £4,549 14s. 5d. of gold by weight between 4 February 1389 and 10 November 1391.³¹ This account was unknown to Lloyd and Munro, who offered differing interpretations of an account for a partly overlapping period from 17 January 1387 to 17 January 1390, which records a seigniorage of £379 11s. 11½d.³² Lloyd believed that this seigniorage exclusively related to the period ending on 28 February 1388, when a new comptroller of the Calais mint was appointed, but Munro argued that the seigniorage related to the entire three-year period of the account. This was a matter of particular importance to Lloyd and Munro in their debate on the effects the introduction of Flemish imitations of the English gold noble in October 1388.³³ The newly discovered account of 1387–91 shows that the Calais mint's production of gold coins actually resumed no earlier than 4 February 1389, after the issue of Flemish nobles began and presumably as a consequence of the return of staple to Calais. Another account, for 17 January 1390 to 16 January 1393, records a seigniorage of £77 4s. 3d., indicating the issue of about £6,618 in gold.³⁴ This poses a further problem of interpretation. The two accounts of 1387–90 and 1390–93 taken together seem to indicate a total output of some £39,155 of gold in 1387–93, but the account of 1389–91 records an output of £68,246, which is nearly twice as much in a shorter period. The explanation of this apparent contradiction may be that the account of 1390–93, which does not specifically state the period of the output concerned, is reporting activity not already recorded in the account of 1389–91.

²⁴ Crump and Johnson, 1913, 244–5; Challis 1992, 681.

²⁵ TNA: PRO, E 364/6, rot. 4d.

²⁶ TNA: PRO, E 364/7, rot. 5 [16 Oct. 1371 to 4 Nov. 1373]; E 364/8, rot. 6d [4 Nov. 1373 to 4 Nov. 1374]; E 364/10, rot. 4 [4 Nov. 1374 to 4 Nov. 1375]; E 364/19, rot. 4 [4 Nov. 1375 to 7 Jan. 1384]; E 364/17, rot. 4 [17 Dec. 1380 to 29 Sept. 1383].

²⁷ The total minting charges were reduced from 5s. per pound of gold to 4s. per pound from the beginning of this account, which is a change that escaped the notice of Crump and Johnson 1913, 244–5.

²⁸ TNA: PRO, E 364/17, rot. 4.

²⁹ Lloyd 1977, 229–30.

³⁰ TNA: PRO, E 364/17, rot. 3d; Lloyd 1977, 231.

³¹ TNA: PRO, E 364/25, rot. 5d.

³² TNA: PRO, E 364/25, rot. 5.

³³ Lloyd 1977, 246; Munro 1981, 71–2.

³⁴ TNA: PRO, E 364/28, rot. 2.

From 1393 to 1404 there is an unbroken series of treasurers' accounts recording seigniorages, as shown in Table 2.³⁵ The treasurer's account of 25 August 1399 to 30 March 1403 records a seigniorage of £178 19s. 11¾d., and the particulars of account for 29 September 1401 to 30 March 1403 show £30 6s. 1¾d. in seigniorage from purchases of £173 3s. 8½d. weight of gold, implying a seigniorage of £148 13s. 10d. from an output of gold coins worth about £12,745 between 25 August 1399 and 29 September 1401. There was a final seigniorage of £3 10s. 4d. in the twelve months to 30 March 1404, indicating an output of some £301 of gold, after which the Calais mint closed until 1422.³⁶

After the reopening of the Calais mint in 1422 there are two principal sources of evidence for its output: the seigniorages recorded in the accounts of the treasurer of Calais, and records of pyx trials in the Patent Rolls. There is a continuous series of seigniorages in the treasurer's accounts from 1422 to 1436, but they are of limited value as evidence of output because it is never stated whether the seigniorage is derived from gold or silver or from both until the very last account in 1436.³⁷ The Patent Roll records of pyx trials are much more informative, specifying weights of gold and silver struck, but they present some difficult problems of chronology, and they end in 1432.

TABLE 1. Silver in the pyx trial of 14 October 1424

<i>Date</i>	<i>Weight of silver</i>		
	£	s.	d.
20 July 1422	185	11	3
20 Aug. 1422	326	5	10
18 Sept. 1422	447	4	2
21 Oct. 1422	331	5	10
17 Nov. 1422	540	19	4½
19 Dec. 1422	177	17	1
24 Jan. 1423	577	12	6
25 Feb. 1423	424	15	0
20 Mar. 1423	267	0	0
18 Apr. 1423	508	0	0
27 May 1423	415	10	0
28 June 1423	241	0	0
24 July 1423	757	11	8
29 Aug. 1423	210	6	8
28 Sept. 1423	267	13	4
22 Oct. 1423	579	6	8
23 Nov. 1423	150	16	8
28 Dec. 1423	563	10	0
30 Jan. 1424	207	0	0
Total, 20 July 1422 to 30 Jan. 1424 ³⁸	7,172	11	0½

The first recorded pyx trial, held at Westminster on 14 October 1424, examined the pyx samples from £3,635½ 12s. 8½d. of gold and £7,172 11s. 0½d. of silver by weight delivered between 20 July 1422 and 30 January 1424.³⁹ The record of the trial includes a schedule of the deliveries of nineteen dated 'schinches' or bags of silver coins, summarized in Table 1, which shows that the dates covered by the trial are those of the dating and sealing of the schinches

³⁵ TNA: PRO, E 364/28, rot. 2d [16 Jan. 1393 to 16 Jan. 1394]; E 101/184/3 and E 364/30, rot. 6 [17 Jan. 1394 to 17 Oct. 1395]; E 364/34, rot. 8d [18 Oct. 1395 to 18 Oct. 1397]; E 364/36, rot. 4d [18 Oct. 1397 to 25 Aug. 1399]; E 364/37, rot. 6d [25 Aug. 1399 to 30 Mar. 1403]; E 101/184/10, fol. 4 [29 Sept. 1401 to 30 Mar. 1403]; E 364/39, rot. 4 [30 Mar. 1403 to 30 Mar. 1404].

³⁶ TNA: PRO, E 364/39, rot. 4; Munro 1981, 72-3.

³⁷ TNA: PRO, E 101/188/1, E 364/59, rot. 3 [4 Feb. 1422 to 4 Feb. 1424]; E 364/62, rot. 1 [4 Feb. 1424 to 4 Feb. 1426]; E 364/62, rot. 1 [4 Feb. 1426 to 4 Feb. 1428]; E 364/63, rot. 8 [4 Feb. 1428 to 4 Feb. 1429]; E 101/190/7, E 364/65, rot. 4 [4 Feb. 1429 to 4 Feb. 1431]; E 101/190/12, E 364/66, rot. 3 [4 Feb. 1431 to 4 Feb. 1432]; E 364/69, rot. 2 [4 Feb. 1432 to 4 Feb. 1434]; E 364/72, rot. 4d [4 Feb. 1434 to 10 Feb. 1436]; E 364/75, rot. 13d [10 Feb. 1436 to 30 Mar. 1436].

³⁸ The actual total of the nineteen weights of silver is £7,179 6s. 0½d.

³⁹ TNA: PRO, C 66/419, m. 18; *Calendar of Patent Rolls 1422-1429*, 337-8.

and not necessarily the dates of purchase or minting of the bullion. The supply of dies to Calais was authorized on 16 May 1422, more than two months before the stated starting date of the pyx trial.⁴⁰ Woodhead suggested that the Calais mint may have begun operations some four or five weeks before the sealing of the first schinche on 20 July 1422, because the schinches were subsequently sealed at intervals of about a month apart.⁴¹ There is one schinche for each calendar month between July 1422 and January 1424. Challis used the schedule of schinches to calculate silver outputs of £1,439 from 20 July to 18 September 1422, £7,080 from 31 October 1422 to 28 September 1423, and £2,252 between 22 October 1423 and 30 January 1424, but this relies upon the questionable assumption that there was no minting in the intervals between the dated sealing of schinches in September to October 1422 and September to October 1423.⁴²

At the next pyx trial, held on 7 July 1428, forty-two schinches contained samples from 67,745 lb. 4 oz. 10 dwt. of silver delivered between 25 February 1424 and 31 January 1428.⁴³ This presumably means that the first schinche was sealed on 25 February 1424, holding samples of the silver output since the sealing of the last schinche of the 1424 pyx trial on 30 January 1424. The gold output of £2,134½ 9s. 7d. by weight tried in 1428 is dated in the record from 24 January 1424 to 24 December 1427, and it will be noted that this period begins six days before the stated period of the 1424 trial ended, on 30 January 1424. There may possibly have been an error in the recording of the date of the first of twenty gold schinches. The gold weight is recorded in the £ s. d. notation used in English royal mint accounts until the 1420s, but the silver weight is given in the pound, ounce and pennyweight notation normal in the accounts from 1425–27 onwards.⁴⁴

The pyx trial of 27 October 1432 tested samples from 89,660 lb. 9½ oz. of silver and 361 lb. 4 oz. 10 dwt. of gold issued in 1428–31.⁴⁵ The periods covered by the trial are stated to be from 20 February 1428 to 3 August 1431 for silver and from 20 May 1428 to 2 August 1431 for gold, which presumably means that the first schinche of silver after the closure of the last pyx trial period on 31 January 1428 was delivered on 20 February 1428, and that there was a much greater gap in the dates of gold schinches between 24 December 1427 in the previous trial and 20 May 1428 in the current one.

The Calais mint was closed for a period of probably only a few weeks after the delivery of the gold and silver schinches dated on 2 and 3 August 1431, as a consequence of the death of Bartholomew Goldbeter (alias Bartholomew Seman), the master of the London and Calais mints.⁴⁶ Thomas Hansard, his deputy in Calais, sent a petition to the king's council, saying that he had shut the mint when he received news of his master's death, and asking for authority to reopen it until a new master should be appointed. He reported that a 'grete quantite of monoie uncoigned' was accumulating at the mint 'more and more'.⁴⁷ Thomas Hansard did not have long to wait for the appointment of a new master, because William Rus was appointed as the master of the royal mints by an indenture of 8 September 1431.⁴⁸

The pyx trial of October 1432 examined samples from 26,182 lb. 10½ oz. of silver dated between 31 October 1431 and 30 September 1432, in addition to the samples of 1428–31.⁴⁹ The reference to stocks of unminted bullion in Thomas Hansard's petition suggests that the minting of the silver actually began soon after the appointment of the new master William Rus on 8 September 1431, if it had not started even earlier under the authority requested by Hansard.

⁴⁰ Nicolas 1834–37, II, 332; Walker 1921–22, 91; Woodhead 1979, 189.

⁴¹ Woodhead 1979, 199.

⁴² Challis 1992, 682.

⁴³ TNA: PRO, C 66/424, m. 18, C 66/433, m. 10–11; *Calendar of Patent Rolls 1422–1429*, 519–20; *Calendar of Patent Rolls 1429–1436*, 256.

⁴⁴ The pound, ounce and pennyweight notation first appears in the London account of 29 Sept. 1425 to 20 Apr. 1427 (TNA: PRO, E 364/60, rot. 7d).

⁴⁵ TNA: PRO, C 66/433, m. 10–11; *Calendar of Patent Rolls 1429–1436*, 256–7.

⁴⁶ Bartholomew Goldbeter made two wills, on 5 and 25 July 1431 (Reddaway and Walker 1975, 306).

⁴⁷ TNA: PRO, SC 8/115/5743.

⁴⁸ *Calendar of Close Rolls 1429–1435*, 173–7.

⁴⁹ TNA: PRO, C 66/433, m. 10–11; *Calendar of Patent Rolls 1429–1436*, 258–9.

The Calais mint's issue of gold coins may have ceased after the delivery of the last schinche of the pyx trial period of 1428–31 on 2 August 1431 and the subsequent temporary closure of the mint. The surviving issues of the Calais mint seem to provide some support for this assumption, because there are no known gold coins of Calais later than Henry VI's Rosette-Masclé issue, which Woodhead has tentatively dated to 1430–31.⁵⁰ The London mint account of 31 March 1430 to 29 September 1431 includes money received from the treasurer of Calais, Richard Buckland, for the supply of groat, halfgroat, penny and halfpenny dies, but he did not buy any new dies for gold coins in this period.⁵¹ In 1435 and 1441 the king's council authorized the treasurer of Calais to obtain specified numbers of dies for particular denominations, and in both cases the dies were for silver coins only.⁵² Thus we can be reasonably certain that the seigniorages in the Calais treasurer's accounts of 4 February 1432 to 4 February 1434 and from that date to 10 February 1436 exclusively refer to silver coinage at the current rate of 3*d.* per Tower pound.⁵³ The treasurer Richard Buckland died in 1436, and the account of his executors for 10 February to 30 March 1436 unambiguously states that the seigniorage of £21 9*s.* 3*d.* came from 1,717 pounds of silver.⁵⁴ The account of John Kempley for the Calais mint from 30 March 1436 to 10 February 1437 reports that no coins had been struck because of the war with Burgundy (Calais was besieged in 1436).⁵⁵

There was a revival in the Calais mint's activity after the conclusion of the war with Burgundy, but in 1439 the duke of Burgundy banned exports of bullion to Calais, causing a sharp decline in output.⁵⁶ Previously unpublished accounts record seigniorages of £2 6*s.* 6¾*d.* in 1437/8 and £39 16*s.* 10¼*d.* in 1438/9, indicating outputs of about £279 and £4,781 of silver, but the seigniorage of £4 17*s.* 5*d.* in 1439/40 found by Walters indicates an output of only some £585.⁵⁷ It has been suggested that the output of 1439/40 may relate to the Calais mint's last coinage, in Henry VI's Trefoil issue.⁵⁸ The documented activity of the Calais mint has, however, been extended to 1442/3 and 1448–50 by the discovery of seigniorages in two account books of Giles Seyntlowe, the comptroller of Calais. The account book for 25 December 1442 to 25 December 1443 has a seigniorage of £66 18*s.* 5¼*d.*⁵⁹ This implies an output of some £8,031 in silver coins, which presumably resulted from the liberalisation of the regulations of the Calais wool staple in October 1442 and the consequent rise in wool exports through Calais.⁶⁰ A seigniorage of £19 1*s.* 3*d.* in the account book of 17 May 1448 to 17 May 1450 indicates an output of about £2,288.⁶¹ In the absence of account books between 1450 and 1457 it is not possible to know whether this was the last period of activity at the Calais mint. The account book of the treasurer for 24 June 1457 to 24 June 1458 records that there was no seigniorage from the mint because no coinage was struck.⁶²

On 29 January 1441 Robert Whittingham, the treasurer of Calais, was authorized to receive twelve obverse dies and ninety-six reverse dies for groats, and three obverse dies and twelve reverse dies for each of the smaller denominations of the silver coinage (the halfgroat, penny, halfpenny and farthing).⁶³ The seigniorages documented in the accounts of 1442/3 and 1448–50 certainly suggest that the treasurer obtained dies for the mint in 1441 or later, but there are no

⁵⁰ Woodhead 1996, 29–30, 80–4.

⁵¹ TNA: PRO, E 364/65, rot. 9*d.*; Allen 2007, 197–8.

⁵² Nicolas 1834–37, IV, 130–1, 306–7; Walker 1921–22, 92–3; Allen 2007, 197–8.

⁵³ TNA: PRO, E 364/69, rot. 2 [4 Feb. 1432 to 4 Feb. 1434]; E 364/72, rot. 4*d.* [4 Feb. 1434 to 10 Feb. 1436].

⁵⁴ TNA: PRO, E 364/75, rot. 13*d.*

⁵⁵ TNA: PRO, E 101/192/4.

⁵⁶ Munro 1973, 120, 124–6; Spufford 1970, 101–5; Spufford 1979, 176.

⁵⁷ TNA: PRO, E 101/192/12, fol. 10^v, E 101/192/13, fol. 12^v [10 Feb. 1437 to 10 Feb. 1438]; E 101/192/17, fol. 13^v [10 Feb. 1438 to 10 Feb. 1439]; TNA: PRO, E 101/192/20, fol. 17^v [10 Feb. 1439 to 10 Feb. 1440]; Walters 1911, 173.

⁵⁸ TNA: PRO, E 101/192/20, fol. 17^v; Walters 1911, 173; Stewartby 2009, 293.

⁵⁹ TNA: PRO, E 101/194/1, fol. 20^v.

⁶⁰ Munro 1973, 124–6; Lloyd 1977, 264, 268–9.

⁶¹ TNA: PRO, E 101/194/18, fol. 20^v.

⁶² TNA: PRO, E 101/195/7, fol. 28^v.

⁶³ Nicolas 1834–37, V, 130–1; Walker 1921–22, 93; Allen 2007, 197–8.

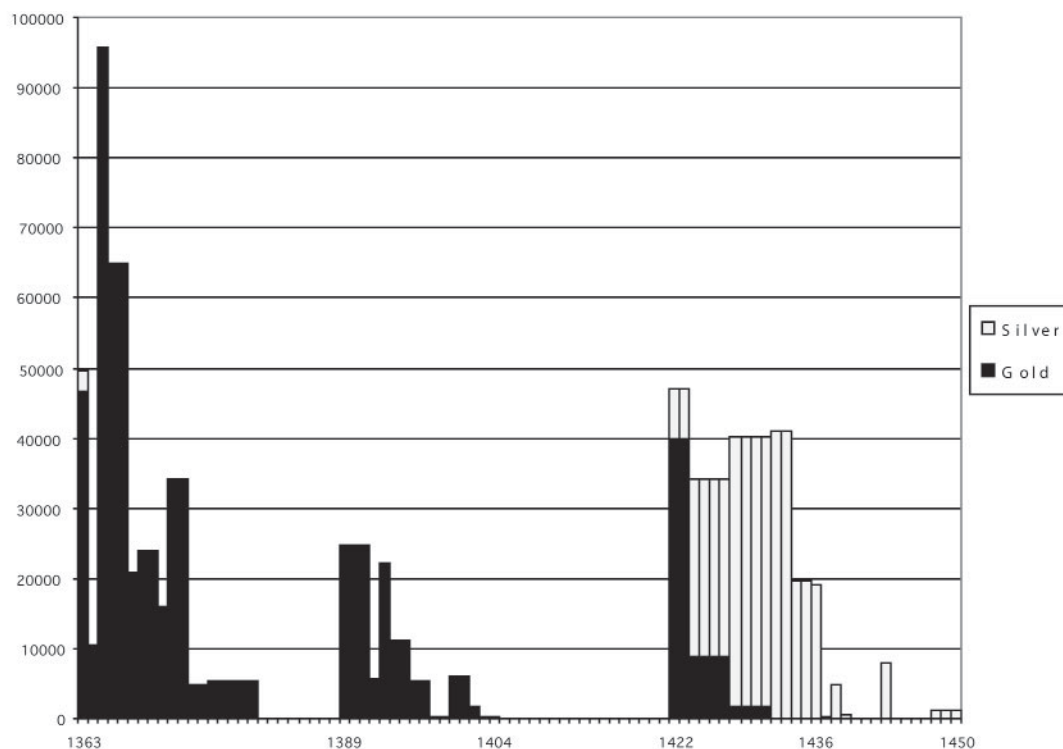


Fig. 1. Mint output (£ per annum), 1363–1450.

coins of Calais from dies that might be dated after the early 1440s.⁶⁴ The output of 1448–50 presumably used dies supplied earlier and held in reserve.

The chart of mint output in Figure 1 shows that annual output reached a peak of nearly £100,000 in the 1360s (£95,806 of gold in 1365/6), falling to about £5,000 or less in 1374–81 and a negligible amount (£38) in the last period before the closure of the mint in the 1380s (1381–83).⁶⁵ After the reopening of the mint in 1389 the output declined from £24,688 per annum in 1389–91 to only £301 in the last accounting year before the second closure of the mint, 1403/4. Between 1422 and 1434 output was about £40,000 per annum, but silver constituted most of this from 1424 and probably all of it after the brief closure of the mint in 1431. In 1434–36 the annual output was nearly £20,000, but after the Burgundian siege of Calais in 1436 and the closure of the mint in 1436–37 output fell to only £279 in 1437/8, and the highest recorded annual output between 1437 and 1450 is only £8,031, in 1442/3.

TABLE 2. Bullion purchases, seigniorage and mint output

<i>Period</i>	<i>Weight of gold purchased</i>	<i>Weight of silver purchased</i>	<i>Seigniorage</i>	<i>Value of gold output</i>	<i>Value of silver output</i>
20 Feb. 1363–10 Apr. 1364	[3,528.61 lb.]	[2,678 lb.]		£52,929	£3,348
10 Apr. 1364–13 Apr. 1365	£683 3s. 3¼d.	£389 11s. 1d.		£10,247	£487
13 Apr. 1365–13 Apr. 1366	£6,387 1s. 11½d.			£95,806	–
14 Apr. 1366–8 Dec. 1367	£7,149 16s. 7½d.			£107,247	–

⁶⁴ Stewartby 2009, 293.

⁶⁵ The chart of annual output is based upon the data in Table 1. The annual outputs derived from the pyx trial data of 1422–31 have been calculated for the periods from 20 July 1422 to 30 Jan. 1424, from 30 Jan. 1424 to 31 Jan. 1428, and from that date to 3 August 1431.

OUTPUT AND PROFITS OF THE CALAIS MINT

<i>Period</i>	<i>Weight of gold purchased</i>	<i>Weight of silver purchased</i>	<i>Seigniorage</i>	<i>Value of gold output</i>	<i>Value of silver output</i>
8 Dec. 1367–20 Mar. 1368	£447 10s. 0d.			£6,713	–
20 Mar. 1368–27 Aug. 1368	£606 13s. 6¼d.			£9,100	–
27 Aug. 1368–26 Oct. 1370	£3,461 10s. 5¾d.			£51,923	–
26 Oct. 1370–16 Oct. 1371	£1,030 17s. 3½d.			£15,463	–
16 Oct. 1371–4 Nov. 1373	£4,672 7s. 9d.			£70,086	–
4 Nov. 1373–16 June 1374	£608 10s. 11d.			£9,128	–
16 June 1374–4 Nov. 1374	£123 12s. 7½d.			£1,854	–
4 Nov. 1374–14 July 1375	£110 4s. 7¼d.			£1,653	–
14 July 1375–4 Nov. 1375	£97 19s. 0d.			£1,469	–
4 Nov. 1375–15 May 1381 ⁶⁶	£1,983 11s. 11d.			£29,754	–
15 May 1381–29 Sept. 1383	£5 19s. 10d.			£90	–
1382/3–1389			MINT CLOSED		
4 Feb. 1389–17 Jan. 1390			£379 11s. 11½d.	£32,537	–
4 Feb. 1389–10 Nov. 1391	£4,549 14s. 5d.		£796 4s. 0½d.	£68,246	–
17 Jan. 1390–16 Jan. 1393			£77 4s. 3d.	£6,618	–
16 Jan. 1393–16 Jan. 1394			£258 16s. 3d.	£22,184	–
17 Jan. 1394–17 Oct. 1395			£229 12s. 0d.	£19,680	–
18 Oct. 1395–18 Oct. 1397			£123 5s. 0¼d.	£10,564	–
18 Oct. 1397–25 Aug. 1399			£4 4s. 8¼d.	£363	–
25 Aug. 1399–29 Sept. 1401			£148 13s. 10d.	£12,745	–
29 Sept. 1401–30 Mar. 1403	£173 3s. 8½d.		£30 6s. 1¾d.	£2,598	–
30 Mar. 1403–30 Mar. 1404			£3 10s. 4d.	£301	–
1403/4–1422			MINT CLOSED		
4 Feb. 1422–4 Feb. 1424			£727 8s. 3¾d.		
20 July 1422–30 Jan. 1424	£3,635½ 12s. 8½d.	£7,172 11s. 0½d.		£60,602	£10,759
4 Feb. 1424–4 Feb. 1426			£570 9s. 2¼d.		
24 Jan. 1424–24 Dec. 1427	£2,134½ 9s. 7d.			£35,588	
25 Feb. 1424–31 Jan. 1428		£67,745 4 oz. 10 dwt.			£101,618
4 Feb. 1426–4 Feb. 1428			£451 7s. 6¼d.		
4 Feb. 1428–4 Feb. 1429			£249 16s. 5¼d.		
20 Feb. 1428–3 Aug. 1431		£89,660 9½ oz.			£134,491
20 May 1428–2 Aug. 1431	£361 4 oz. 10 dwt.			£6,023	
4 Feb. 1429–4 Feb. 1431			£703 1s. 10d.		
4 Feb. 1431–4 Feb. 1432			£432 11s. 9¼d.		
31 Oct. 1431–30 Sept. 1432		£26,182 10½ oz.		–	£39,274
4 Feb. 1432–4 Feb. 1434			£683 8s. 11½d.	–	£82,014
4 Feb. 1434–10 Feb. 1436			£332 3s. 10¼d.	–	£39,863
10 Feb. 1436–30 Mar. 1436		£1,717 0s. 0d.	£21 9s. 3d.	–	£2,576
30 Mar. 1436–10 Feb. 1437			MINT CLOSED		
10 Feb. 1437–10 Feb. 1438			£2 6s. 6¾d.	–	£279
10 Feb. 1438–10 Feb. 1439			£39 16s. 10¼d.	–	£4,781
10 Feb. 1439–10 Feb. 1440			£4 17s. 5d.	–	£585
10 Feb. 1440–25 Dec. 1442			NO ACCOUNTS		
25 Dec. 1442–25 Dec. 1443			£66 18s. 5¼d.	–	£8,031
25 Dec. 1443–17 May 1448			NO ACCOUNTS		
17 May 1448–17 May 1450			£19 1s. 3d.	–	£2,288
17 May 1450–24 June 1457			NO ACCOUNTS: MINT CLOSED?		
24 June 1457–24 June 1458			MINT CLOSED		

⁶⁶ Crump and Johnson 1913, 244–5, records the purchases of this period as £1,984 1s. 11d. Account books of the treasurer and the comptroller of Calais for 5 Nov. 1375 to 4 Nov. 1376 record a seigniorage of £110 9s. 3d. (TNA: PRO, E 101/180/4, fol. 14^r; E 101/180/5, fol. 13^r).

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