

The first Sterling Area

By MARTIN ALLEN*

Between the eleventh century and mid-thirteenth century a Sterling Area evolved in the British Isles, with a common currency based upon the English silver penny and equivalents of it produced in Scotland and Ireland. This Sterling Area began to contract in the second half of the fourteenth century, when reductions in the bullion content of Scottish coins ended the equivalence of the English and Scottish currencies, and in the fifteenth century Ireland developed its own coinage. Estimates of the currency of the Sterling Area are provided, taking the chronology of its growth and contraction into account. Estimates of the sterling currency are not estimates of the currency of England, and they cannot be combined with data relating exclusively to England in economic modelling, without qualification. Per capita currency estimates and values of coin hoards and single coin finds are at a high level around 1400, falling in the second half of the fifteenth century, indicating that the European ‘bullion famine’ of the 1390s to c. 1415 had less effect on the currency than the second late medieval bullion crisis, from the 1430s to the 1460s.

The size of the money supply, in absolute terms and per capita, is an economic variable potentially of great importance to our understanding of the economies of England and the other parts of the British Isles. Money supply may not be a sufficient cause of the commercialization of medieval societies, but it is a necessary element in that process. The per capita supply of currency can be an important indicator of the relative degree of commercial development of the various parts of the British Isles, and fluctuations in per capita estimates may provide evidence of shortages of currency with potentially recessionary effects.

The investigation of medieval England’s money supply has been greatly assisted by the survival of mint accounts documenting the outputs of the mints to an extent unrivalled in Europe.¹ Since the 1970s these mint outputs have been combined with the evidence of coin hoards for the relative sizes of the various elements of the currency to produce many estimates of the money stock of England or England and Wales, in total and per capita.² All of these estimates, and calculations that combine such estimates with other economic variables relating to England, are vulnerable to the criticism that the area of circulation of the currency being measured may be wider than just England or England and Wales. In the 1970s Mayhew proposed that the British Isles was one Sterling Area for much of the thirteenth and fourteenth centuries, with a common currency largely consisting of English coins.³ The evidence for this principally consisted of coin hoards of similar composition from various parts of the British Isles, while official prohibitions and regulations of the use of coins in England and Scotland elucidated the disengagement of Scotland from the common currency in the second half of the fourteenth century. This was an important insight, but it has been largely ignored by economic historians.

It is the purpose of this article to establish when the various parts of the British Isles became part of the Sterling Area or left it, and to consider the implications of this

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¹ Allen, *Mints and money*, pp. 304–16, 404–45.

² Allen, *Mints and money*, pp. 317–18, 325–45.

³ Mayhew, ‘Money in Scotland’, pp. 90–2.

for our understanding of the economy. It is necessary to go far beyond the limited scope of Mayhew's brief investigation of the problem, tracing significant developments in the currencies of England, Wales, Ireland, Scotland, and the Isle of Man from the eleventh century to the sixteenth. Since the 1970s there has been a considerable increase in the evidence. Information from coin hoards is now supplemented by data from the systematic recording of thousands of single finds of coins, which have proliferated due to the use of metal detectors. Hoards may indicate the composition of the currency at one particular time and place, but single finds provide much more comprehensive evidence of the currency in use.⁴

Stahl has reviewed the evidence for the use of the English sterling currency outside the British Isles from the mid-twelfth century onwards.⁵ English coins became part of the currency of the French territories of Henry II (1154–89), but this role rapidly diminished after John's loss of Normandy in 1204. In the thirteenth century English coins also circulated in parts of Germany, the Low Countries, Scandinavia, southern France, Italy, the Balkans, and the Latin Empire of Constantinople, and they remained one of the most stable and widely trusted of European currencies for the rest of the Middle Ages. It is not proposed to investigate this subject any further here, because the exported element of the English sterling currency is not included in estimates of its size.

I

Wales became part of the Sterling Area in the eleventh century, after which its currency was permanently integrated with that of England. Hoards and the relatively small number of single finds recorded from Wales before 1066 principally consist of Anglo-Saxon coins, with some coins from Ireland and the Irish Sea area, and they are concentrated in coastal areas of north and south Wales.⁶ The arrival of Anglo-Norman settlers after 1066 brought about a significant growth in the use of English coinage in the areas of Wales under their influence. In the 1080s mints were briefly established in Cardiff, St Davids, Rhuddlan and (possibly) Abergavenny, producing imitations of English coins.⁷ By the time of Domesday Book (1086) parts of North Wales, the Marches and all of Gwent were under Norman rule, and this rule was extended in the 1090s, with castles in Pembroke, Cardigan and Rhyd-y-Gors.⁸ Under Henry I (1100–35) much of Pembrokeshire was settled by Flemings under Anglo-Norman patronage, as farmers, traders and woollen manufacturers, and a mint was established at Pembroke.⁹ Two Welsh hoards of the reign of Henry I, from Milford Haven in Pembrokeshire and Llantrithyd in the Vale of Glamorgan, entirely consisted of English coins.¹⁰ During the civil war of the reign of Stephen (1135–54) the unity of the English coinage was disrupted, and the Coed-y-Wenallt (Glamorgan) hoard has shown that in the 1140s Wales and adjacent parts of south-western England had a

⁴ Blackburn, 'Single finds'; idem, 'Coin finds'.

⁵ Stahl, 'Sterling abroad'.

⁶ Boon, *Welsh hoards*, pp. 1–35, 102–3; Besly, 'Recent coin hoards', pp. 84–5; idem, 'Few and far between', pp. 702, 704–5, 715–17.

⁷ Besly, 'Few and far between', pp. 706–7; Allen, *Mints and money*, pp. 23–6.

⁸ Besly, 'Few and far between', pp. 706, 708.

⁹ Besly, 'Few and far between', pp. 708–9.

¹⁰ Dolley, 'The 1962 Llantrithyd treasure trove'; idem, 'Two further coins'; Boon, *Welsh hoards*, pp. 103–5; Besly, 'Milford Haven hoard'. The Llantrithyd hoard had one coin of Cardiff as a mint of the English coinage.

local currency issued by the Empress Matilda and her supporters, with mints in Cardiff, Swansea and Bristol, but unity was restored with the settlement of the civil war in 1153.¹¹

There is a considerable increase in single finds of coins from Wales after the introduction of the English Short Cross coinage in 1180, with a greater spread of finds into areas not under English rule. These finds indicate the increasing monetisation of Wales, and they are predominantly of English coins.¹² In the 1180s or early 1190s the Rhuddlan mint (which had been closed for about a century) was reopened – probably by the Welsh ruler of Gwynedd, Dafydd ab Owain – producing local copies of the English Short Cross penny until about the 1220s or 1230s, but there were no more mints in medieval Wales after this.¹³ Two Welsh hoards from the first half of the thirteenth century (Slebech, Pembrokeshire, c. 1200, and Wrexham, c. 1245) indicate that the coinage of the monetised areas of South Wales and the Welsh Marches was effectively homogenous in composition with that of England.¹⁴ This union of the currencies of England and Wales, as shown by hoards, continued until the sixteenth century and beyond.¹⁵

II

Ireland had its own Hiberno-Scandinavian coinage, minted in Dublin, from about 995 to the Anglo-Norman invasions of Ireland in the late 1160s and the sack of Dublin in 1170.¹⁶ The Anglo-Norman invaders presumably brought some of their own coins with them. A hoard of twenty-one coins excavated at the monastic settlement of Inis Cealtra (Co. Clare) consisted of twenty English coins, the latest being dated to c. 1174–80, and one contemporary Scottish coin.¹⁷ In 1177 Henry II of England conferred the title of Lord of Ireland on his son, John, and an Irish coinage was issued in John's name, probably during and after John's expedition to Ireland in 1185.¹⁸ John de Courcy, who began the invasion of Ulster in 1177, also issued his own coins, from about 1182.¹⁹ These were local coinages that did not circulate in England.

The official integration of the Irish and English currencies was delayed until 1210, when King John ordered that his new Irish coinage, made to the English standard, should be current in England and Ireland, and received by his treasury without distinction.²⁰ This new coinage (the so-called 'REX' coinage) had probably been introduced in 1208, and it had a penny compatible with the English coinage and

¹¹ Boon, *Welsh hoards*, pp. 36–82; Besly, 'Few and far between', p. 709; Allen, 'English coinage'.

¹² Besly, 'Short Cross and other medieval coins', pp. 55–6; idem, 'Few and far between', pp. 709–12.

¹³ Besly, 'Few and far between', pp. 713–14.

¹⁴ Lewis, 'Short Cross hoard'; Boon, *Welsh hoards*, pp. 105–9; Besly, 'Recent coin hoards', p. 86; Allen, 'Hoards and the circulation', pp. 113, 120.

¹⁵ Woodhead, 'Two finds' pp. 78–80; Boon, *Welsh hoards*, pp. 83–90, 109–26; Besly, 'Recent coin hoards', pp. 86–7; idem, 'Mid-fourteenth-century hoard'; idem, 'Fourteenth-century hoard'; idem, 'Updated listing'; Allen, 'Coin hoards', pp. 160–3.

¹⁶ Woods, 'Monetary activity'. Dolley, 'Anglo-Norman coins', noted only one confirmed find of an English coin of the Anglo-Norman period in Ireland by 1971 (a penny of Stephen excavated in Dublin).

¹⁷ Information from Dr Andrew Woods.

¹⁸ O'Sullivan, *Earliest Anglo-Irish coinage*, pp. v–vi, 5–13, 22–86.

¹⁹ O'Sullivan, *Earliest Anglo-Irish coinage*, pp. v–vi, 1–5, 20–1.

²⁰ Luard, *Matthaei Pariensis*, II, p. 530; Coxe, *Rogeri de Wendoveri Chronica*, III, pp. 233–4; Cook, 'Foreign coins', p. 242; Dykes, 'King John's Irish coinage', pp. 121–2.

halfpennies and farthings that circulated only in Ireland.²¹ Irish hoards seem to indicate that there was a protracted period of adjustment in which the new coinage of John and English coins circulated alongside the old Irish coinages, but from the 1230s and 1240s Irish hoards resemble English hoards in their composition, indicating that Ireland had become fully integrated into the English Sterling Area.²² Three inadequately recorded thirteenth-century hoards from County Clare may have entirely consisted of Scottish coins, which might be connected with the activity of Scottish gallowglasses (mercenaries) in the area from 1258,²³ but otherwise Irish hoards now predominantly consist of English coins.

There was a new incursion of Scottish coins into Ireland in the 1370s, which resulted in a proclamation of 1379 that Scottish groats (with a nominal value of 4d.) should be current for only 3d., and eight hoards of the late fourteenth century from north-east Ireland predominantly or wholly consist of Scottish coins (mostly groats).²⁴ Hoards of the late fourteenth century to mid-fifteenth century from other parts of Ireland do not contain post-1344 English gold coins or English groats issued in the second half of the fourteenth century, while old supplies of increasingly worn pre-1351 English pennies continued to be hoarded.²⁵ There seems to have been a shortage of exports of English coins to Ireland from the mid-fourteenth century onwards, which began a process of partial disengagement of Ireland from the Sterling Area. English coins of Richard II (1377–99), Henry IV (1399–1413) and Henry V (1413–22) are rare as finds in Ireland, but early coins of Henry VI (1422–61) are relatively common, arguably reflecting trends in English mint outputs.²⁶ There was an abortive attempt to produce an Irish coinage of pennies on the English standard in 1425, known today from only three surviving coins,²⁷ but by the 1440s the Irish currency seems to have been dominated by heavily clipped English coins and forgeries of them, which would never have circulated in England.²⁸ Irish parliaments of 1447 and 1456 legislated against clipped coins and plated forgeries known as ‘O’Reilly’s money’.²⁹

The Irish parliament of February 1460 instituted a new Anglo-Irish coinage with three-quarters of the value of the English coinage, which was implemented in 1461.³⁰ Irish coins now usually had their own distinctive designs, which should have prevented their use in England, but in the 1470s there was a departure from this rule, resulting in the export of Irish coins to England, and an English statute of 1478 attempted to ban their circulation.³¹ English coins also continued to be exported to Ireland, and many of them were presumably melted down for conversion into Irish coins, but English groats of Edward IV (1461–70, 1471–83) often occur as Irish finds.³² English groats and halfgroats of Henry VII (1485–1509) and coins of Henry

²¹ O’Sullivan, *Earliest Anglo-Irish coinage*, pp. 13–17, 87–8 (dating the introduction of the new coinage to 1210); Dykes, ‘King John’s Irish coinage’.

²² Brand, ‘Some notes’, pp. 33–4; Allen, ‘Hoards and the circulation’, pp. 113, 120; Dykes, ‘King John’s Irish coinage’, pp. 125, 130–2.

²³ Dolley, ‘Medieval coin-hoards’, pp. 28–9.

²⁴ Seaby and Stewart, ‘Fourteenth century hoard’, pp. 95, 100–1; Gallacher, ‘Neglected documentary evidence’; Dolley, *Medieval Anglo-Irish coins*, pp. 16–17, 52, 62; Bateson, ‘Medieval coin hoard’, Heslip, ‘Two recent finds’.

²⁵ Dolley, *Medieval Anglo-Irish coins*, p. 16.

²⁶ Dolley, *Medieval Anglo-Irish coins*, pp. 52–3.

²⁷ Dykes, ‘Anglo-Irish coinage’.

²⁸ Dolley, ‘Anglo-Irish monetary policies’, p. 52; idem, *Medieval Anglo-Irish coins*, pp. 17–19.

²⁹ Dolley and Seaby, “‘Le money del Oraylly’”.

³⁰ Dolley, ‘Anglo-Irish monetary policies’, pp. 52–4; idem, *Medieval Anglo-Irish coins*, pp. 20–2.

³¹ *Statutes of the Realm*, II, pp. 452–3; Cook, ‘Foreign coins’, p. 265; Allen, *Mints and money*, p. 367.

³² Dolley, *Medieval Anglo-Irish coins*, p. 53.

VIII (1509–47) are also relatively common as finds in Ireland.³³ A hoard from near Ballypark (Co. Wicklow) seems to have entirely consisted of Henry VII halfgroats,³⁴ and the Drumrod (Co. Leitrim) hoard (c. 1530–5) had 11 English groats and halfgroats, only 3 Irish groats and 1 Burgundian double patard (used as a groat substitute in England).³⁵ A new Irish coinage was introduced in 1534, and exported to Ireland from English mints until 1546–7, after which the Irish coinage was continued in Dublin.³⁶ The new coinage did not completely eliminate the use of English coins in Ireland: a hoard from County Down (c. 1546) had 12 English groats and halfgroats in a total of 54.³⁷ The export of the post-1534 Irish coinage to England was forbidden, however, and it can be argued that after 1460 Ireland no longer had a common currency with England, although English coins were often used there.³⁸ Ireland continued to have its own intermittently issued coinage, tariffed to English values, until the early nineteenth century.

III

There was no Scottish coinage until David I of Scotland's invasion of northern England in 1136, which gave him possession of the English mint at Carlisle and led to the establishment of mints in Scotland.³⁹ It may be reasonable to assume that some English coins were circulating in Scotland before this, but Anglo-Norman coins are very rare as finds in Scotland.⁴⁰ English coins of Henry II's *Tealby* coinage (1158–80) have occurred in a hoard from the Dyke Churchyard, Elgin, and as single finds at Jedburgh and Eyemouth, but the Baddingsgill hoard (deposited between the late 1180s and 1195) consisted of nine Scottish sterlings (pennies) and only one English coin.⁴¹ The integration of the Scottish currency into the Sterling Area occurred at some time after the introduction of William I of Scotland's Short Cross coinage in 1195. The precise chronology of this change is uncertain, but 24 of the 26 coins in the Dun Lagaidh (Ross and Cromarty) hoard (c. 1235) were English, which may indicate that integration into the Sterling Area occurred no later than the 1230s.⁴² English coins of the Short Cross coinage (1180–1247) outnumber Scottish coins of the Short Cross and Stars coinage (1195–1250) by 184 to 46 in a survey of Scottish single finds of 1978–2000,⁴³ and Scottish hoards and single finds of 1247/50–79/80 are dominated by English coins.⁴⁴ Hoards and single finds continue to provide evidence of the homogeneity of the English and Scottish currencies after the introduction of new

³³ Dolley, *Medieval Anglo-Irish coins*, p. 52.

³⁴ MacIlwaine, 'Find'.

³⁵ Dolley and Gallacher, 'Four notes', pp. 219–23.

³⁶ Dolley and Gallacher, 'Four notes', pp. 223–5.

³⁷ Brooke, 'English and Irish coinages', pp. 260–1. The total of 54 groats and halfgroats includes one Burgundian double patard.

³⁸ Dolley, 'Anglo-Irish monetary policies', pp. 56–7.

³⁹ Stewart, 'Scottish mints', pp. 191–7.

⁴⁰ Holmes, 'Evidence of finds', p. 243.

⁴¹ Bateson, *Coinage in Scotland*, pp. 41–2; Stewartby, '1834 Baddingsgill find'.

⁴² Barlow and Robertson, 'Dun Lagaidh hoard'; Bateson, 'Roman and medieval coins', p. 172; Holmes; 'Evidence of finds', pp. 244–5; idem, 'Probable Short Cross purse hoard'.

⁴³ Holmes, 'Evidence of finds', pp. 243–4.

⁴⁴ Bateson, 'Roman and medieval coins', pp. 182–3; idem, *Coinage in Scotland*, p. 47; Holmes, 'Two Scottish mediaeval hoards', pp. 164–5; idem, 'Evidence of finds', pp. 245–6.

coinages on both sides of the border in 1279/80.⁴⁵ This homogeneity was briefly disrupted by the presence of large numbers of Continental sterlings in Scottish hoards of the early years of the fourteenth century, which may have been at least partly caused by their export from England after the prohibition of them there in 1299.⁴⁶

In the 1350s, 1360s and 1370s the Scottish coinage suffered a series of reductions of its silver content, which caused a gradual disengagement of Scotland from the English Sterling Area. The introduction of a new light-weight penny by David II of Scotland caused a prohibition of the use of Scottish coins of the new standard (but not the old) in England in 1355.⁴⁷ This ban was rescinded in 1358, at the request of David II, but it was restored in 1367, after a further reduction in the weights of Scottish silver coins, and it was repeated in 1373.⁴⁸ The English exchange rate was set at 3d. sterling to 4d. Scottish in 1373, 1374 and 1387, falling to 2d. by 1390, and Scottish coins were banned altogether after another Scottish debasement in 1393, although some post-1393 Scottish coins occur as finds in England.⁴⁹ In Scotland there are occasional references to the 'usual money of Scotland', as distinct from sterling, after 1367, and this usage greatly increases after the debasement of 1393.⁵⁰ The effects of the gradual disengagement of the English and Scottish currencies can be seen in Scottish coin finds. Scottish hoards and single finds of the second half of the fourteenth century indicate that substantial imports of English coins ceased in the early 1360s, and that English pennies gradually disappeared from circulation between the 1370s and the 1390s.⁵¹ Groats and halfgroats in Scottish hoards from the reigns of Robert II (1371–90) and Robert III (1390–1406) are almost entirely Scottish.⁵² English gold coins retained a role in the Scottish currency much longer than English silver. David II's attempt to introduce a Scottish gold noble (on the English standard) in about 1357 was unsuccessful, and it was only in the 1390s that Robert III successfully introduced an independent Scottish gold coinage.⁵³ A hoard from Glasgow Cathedral (c. 1400) seems to show the Scottish gold coinage in a state of transition, with 63 gold lions of Robert III and 67 English gold nobles.⁵⁴

After 1400 English coins had a minor role in the Scottish currency that varied from time to time. Scottish single finds of English silver coins of Henry V (1413–22) and early issues of Henry VI (1422–61) may indicate an influx of English coins during the hiatus in Scottish minting caused by the imprisonment of James I of Scotland in England from his accession in 1406 to 1424.⁵⁵ In the 1460s the rapidly declining bullion content of the Scottish coinage seems to have encouraged the import of English groats, preferred for their high intrinsic value. A Scottish statute of 12 October 1467 specified new values for coins of different issues, including the old (pre-1464) English groat at 16d. Scottish, and the new English groat (of Edward IV,

⁴⁵ Metcalf, 'Evidence', pp. 13–15; Bateson and Holmes, 'Roman and medieval coins', p. 271; Holmes, 'Evidence of finds', pp. 247–8.

⁴⁶ Metcalf, 'Evidence', pp. 12–13; Mayhew, 'Money in Scotland', p. 89; Holmes, 'Evidence of finds', pp. 248–9; idem, 'New finds', p. 272.

⁴⁷ *Close Rolls 1354–1360*, p. 184; Cochran-Patrick, *Records*, I, p. 6; Gemmill and Mayhew, *Changing values*, p. 116; Cook, 'Foreign coins', pp. 260–1.

⁴⁸ *Close Rolls 1369–1374*, pp. 320, 482; Gemmill and Mayhew, *Changing values*, pp. 116–17; Cook, 'Foreign coins', p. 261.

⁴⁹ Gemmill and Mayhew, *Changing values*, p. 117; Cook, 'Foreign coins', p. 261.

⁵⁰ Scott, 'Sterling'.

⁵¹ Holmes, 'Evidence of finds', pp. 250–2; idem, 'Catherinefield, Dumfries. hoard', pp. 174–9.

⁵² Bateson and Stott, 'Late 14th-century hoard'; Holmes, 'Evidence of finds', p. 251.

⁵³ Bateson, *Coinage in Scotland*, pp. 74–7.

⁵⁴ Bateson, *Coinage in Scotland*, pp. 75–6.

⁵⁵ Holmes, 'Evidence of finds', pp. 254–5; Bateson and Holmes, 'Roman and medieval coins', p. 192.

from 1464) at 12d.⁵⁶ The groats in two Scottish hoards of the 1460s (New Cumnock and Bridge of Don) are predominantly English.⁵⁷ This seems to have been a short-lived phenomenon, and from the 1470s onwards Scottish hoards usually contain only relatively small numbers of English silver coins, increasingly worn and clipped.⁵⁸ Scotland continued to have its own coinage until the Act of Union in 1707, with its value fixed at 12d. Scottish to 1d. English after the accession of James VI to the English throne in 1603.

IV

The Isle of Man had a mixed monetary economy before 1100, with Anglo-Saxon, Hiberno-Scandinavian, Irish Sea, Continental and Islamic coins, and bullion, as well as its own coinage from *c.* 1025 to *c.* 1065.⁵⁹ Twelfth-century single finds recorded from the island are English and Scottish, but two eighteenth-century Manx hoards, dated to *c.* 1180 and 1165–1214 respectively, seem to have predominantly consisted of Scottish coins.⁶⁰ The Isle of Man had strong political and economic links with Scotland and Norway until the thirteenth century. Man was under Norwegian suzerainty until 1266, when Mágnus Hákonarson transferred authority to Alexander III of Scotland under the treaty of Perth, and Alexander consolidated his control with the battle of Ronaldsway in 1275.⁶¹ Edward I of England took control of Man in 1290, but Robert I of Scotland regained the island in 1313, and it was disputed territory between England and Scotland until 1346, when it fell under permanent English control after the battle of Neville's Cross.⁶² There is no hoard evidence to elucidate the development of the Manx currency in the thirteenth century before the introduction of new coinages in England and Scotland in 1279/80, but it may perhaps be assumed that it followed the same general pattern as the Scottish and Irish currencies, with integration into the Sterling Area during the first half of the century. Single finds of *c.* 1200–79 and 1279–1399 from the Isle of Man are predominantly English.⁶³ Four Manx hoards of the early fourteenth century (from Ballayelse, Ballaslig, Kilkenny and Ronague) indicate that the island was now fully integrated with the English currency.⁶⁴

In 1405 Henry IV of England granted the Isle of Man with sovereign rights to Sir John Stanley, and the Stanley family held the island as kings or lords of Mann until 1736. There is no published single find evidence that would allow us to assess the degree of integration of the Isle of Man into the Sterling Area in the fifteenth century, but three English groats of Henry VI (1422–61) found at Ballakissak seem to be from a hoard, and an undoubted hoard of 22 coins from German, deposited in

⁵⁶ Cochran-Patrick, *Records*, I, pp. 32–3; Holmes, 'Evidence of finds', p. 253.

⁵⁷ Holmes, 'Evidence of finds', p. 257.

⁵⁸ Holmes, 'Fifteenth-century coin hoard', pp. 79–81, 95–6; idem, 'Evidence of finds', pp. 257–8; Bateson, *Coinage in Scotland*, p. 68.

⁵⁹ Bornholdt Collins, 'Viking-Age coin finds'; Bornholdt Collins, Fox and Graham Campbell, 'Glenfaba hoard'; Bornholdt Collins, 'Coinage', pp. 418–22.

⁶⁰ *Single coin finds 1100 to 1278*, pp. 6–7, 10; Stewart, 'Eighteenth-century Manx find'; Bornholdt Collins, 'Coinage', pp. 422, 439.

⁶¹ Bornholdt Collins, 'Coinage', pp. 422–3.

⁶² Bornholdt Collins, 'Coinage', p. 423.

⁶³ *Single coin finds 1100 to 1278*, pp. 7–11; *Single coin finds 1279 to 1405*.

⁶⁴ Cubbon, 'Remarkable decade', pp. 36–9, 42–3, 46–8; Bornholdt Collins, 'Coinage', pp. 423–4, 435–6.

1532–44, entirely consisted of English coins.⁶⁵ After 1544 the Isle of Man continued to use English currency, but with a local or Irish copper currency from the late seventeenth century to the nineteenth.⁶⁶

V

Table 1 shows the best available estimates of the currency of the Sterling Area at various dates from 1158 to 1544, and Table 2 summarizes the degree of integration of England, Wales, Ireland, Scotland and the Isle of Man into this currency at dates selected from Table 1. Mayhew has proposed a series of annual estimates of the English currency from 1220 to 1750, based upon cumulative totals of recorded English mints outputs, with fixed deductions of 2 or 4 per cent per annum for ‘wastage’ (by export, hoarding, accidental loss and other means).⁶⁷ Mayhew’s estimates are untenable in the medieval period, however, because there were substantial unrecorded mint outputs not included in the calculations, and because analysis of data from coin hoards of 1279–1351 has shown that wastage was highly variable.⁶⁸ It will be seen that the estimates of the currency in Table 1 apply to England and Wales in 1158 and 1180, extending to various parts of rest of the British Isles in the thirteenth century.

Table 1. *Estimates of the currency of the Sterling Area, 1158–1544 (£m.)*

<i>Date</i>	<i>Silver</i> (£ m.)	<i>Gold</i> (£ m.)	<i>Total</i> (£ m.)
1158	0.015–0.03		0.015–0.03
1180	0.015–0.06		0.015–0.06
c. 1210	0.10–0.30		0.10–0.30
1247	0.46–0.49		0.46–0.49
1279	0.50–0.80		0.50–0.80
1282	0.755–0.92		0.755–0.92
1290	1.064–1.4185		1.064–1.4185
1299	0.852–1.067		0.852–1.067
1310	1.47–1.8425		1.47–1.8425
1319	1.867–2.414		1.867–2.414
1332	1.5625–2.051	<i>Unquantified</i>	1.5625–2.051
		<i>foreign gold</i>	<i>+ foreign gold</i>
1351	0.521–0.563	0.10–0.15	0.621–0.713
		<i>+ foreign gold</i>	<i>+ foreign gold</i>
1377	0.22–0.74	1.20–1.65	1.42–2.39
1422	0.10–0.15	1.12–1.20	1.22–1.35
1470	0.35–0.45	0.40–0.50	0.75–0.95
1544	?	?	1.00–1.50

Sources: Allen, *Mints and money*, pp. 321–45; Allen and Oddie, ‘Revised estimates’.

⁶⁵ Cubbon, ‘Remarkable decade’, pp. 44–5, 48; information from Allison Fox.

⁶⁶ MacKay, *Pobjoy encyclopaedia*, pp. 12–33

⁶⁷ Mayhew, ‘Quantity Theory’, pp. 65–87. Mayhew’s annual estimates of the English currency are used by Casson and Casson, ‘Modelling’.

⁶⁸ Allen, *Mints and money*, pp. 310, 312 (tab. 9.12), estimating that recorded mint outputs constituted less than 65% of total quantifiable output in three out of seven periods between 1279 and 1351; Allen and Oddie, ‘Revised estimates’, pp. 245–52.

Table 2. *Integration into the Sterling Area*

<i>Date</i>	<i>England and Wales</i>	<i>Ireland</i>	<i>Scotland</i>	<i>Isle of Man</i>
1158	Yes	No	No	No
1180	Yes	No	No	No
c. 1210	Yes	Partial	Partial?	Partial?
1247	Yes	Yes	Yes	Yes
1279	Yes	Yes	Yes	Yes
1351	Yes	Yes	Yes	Yes
1377	Yes	Yes	Partial	Yes
1422	Yes	Partial	No	Yes?
1470	Yes	No	No	Yes?
1544	Yes	No	No	Yes

It is possible to analyse the regional shares of the currency of the Sterling Area in the thirteenth century. Mayhew has compared estimates of the currencies of England, Ireland and Scotland in *c.* 1247–51 and *c.* 1279–84, concluding that the Scottish currency had the fastest rate of growth.⁶⁹ This comparison was taken further in Campbell’s groundbreaking analysis of the economy of the British Isles in 1290, using estimates of the currencies of England and Wales, Ireland and Scotland published by Allen, Dolley and Mayhew. Campbell confirmed Mayhew’s conclusion that the Scottish currency had the fastest growth, and observed that Ireland had the lowest growth rate and per capita supplies of currency.⁷⁰ Mayhew and Campbell’s comparisons added together the English, Irish and Scottish estimates at the two periods involved, but if all of the British Isles was effectively part of one Sterling Area the Irish and Scottish figures should be deducted from the estimates of the total ‘English’ currency instead.

The estimates of the Irish and Scottish currencies used by Mayhew and Campbell were based upon mint output figures for the total recoinages of these currencies, in the early 1250s and from 1279/80 to later in the 1280s, and the assumption that the mint outputs of the recoinages largely derived from the conversion of the old coins into the new. In the Irish recoinage of 1251–4 the mint accounts show a total output of £43,599 3s. 0d.⁷¹ Consequently, Mayhew and Campbell estimated the Irish currency at about £43,000. It could have been significantly larger than this, because any new English coins produced after the beginning of the English recoinage in 1247 and subsequently exported to Ireland would not have needed to be converted into new Irish coins, but £43,000 seems to be a reasonable minimum estimate of the Irish coinage at the beginning of the recoinage in 1251.

⁶⁹ Mayhew, ‘Irregularities’, pp. 92–4; idem, ‘Alexander III’, pp. 61–2.

⁷⁰ Campbell, ‘Benchmarking’, pp. 919–21; Allen, ‘Volume and composition’, pp. 48–9; idem, ‘Volume of the English currency’, p. 603; Mayhew, ‘Alexander III’, pp. 61–2; Dolley, ‘Coinage’, pp. 820–1.

⁷¹ Dolley and Seaby, *Ulster Museum*, p. xl. The total weight of silver minted was £43,238 16s. 7d. (equating £1 with a Tower pound weight), implying an output of £43,599 3s. 0d., at 242d. per Tower pound.

Dolley and Dykes have argued that most of the Irish coins produced in the reigns of John, Henry III and Edward I were exported by the English crown.⁷² Whether or not this was the case, finds of English coins in Ireland indicate that there was a flow of currency back across the Irish Sea. The degree of integration of the Irish and English currencies after the recoinages of the mid-thirteenth century can be tested by comparing numbers of English and Irish coins in six English hoards of the 1250s to 1270s. By far the largest English hoard deposited between the recoinages of the mid-thirteenth century and 1279/80 is the 1969 Colchester hoard, which is believed to have been deposited in 1256.⁷³ There are five smaller but adequately recorded hoards, datable to the 1260s and 1270s, from Hornchurch, Palmer's Green, Coventry, Steppingley and Greywell.⁷⁴ Table 3 compares the numbers of coins from the Irish recoinage of 1251–4 in these six hoards with the coins from the thirteen English mints having a recoinage output known from documentary evidence: London, Canterbury, and eleven minor mints (Exeter, Gloucester, Lincoln, Newcastle, Northampton, Norwich, Oxford, Shrewsbury, Wilton, Winchester, and the York royal mint).⁷⁵ If the recorded English mint outputs are multiplied by the proportions of Irish coins in the Colchester hoard to coins of the English coins of the mints concerned, the calculated Irish mint output is between £26,471 and £29,722, which is substantially less than the actual recorded output of £43,599 3s. 0d. The estimates from the five hoards of the 1260s and 1270s are much higher, from £41,416 to £52,640. This indicates that the Irish coins of 1251–4 were under-represented in the Colchester hoard, presumably because movements of coins across the Irish Sea had not yet fully integrated the English and Irish currencies by the time the hoard was deposited, in 1256, and that the currencies were effectively integrated by the 1260s and 1270s. Two of the three estimates of the Irish mint output from the hoards of the 1260s and 1270s are actually higher than the documented figure, but this might be expected, since losses of coins from circulation will have had a greater negative effect on numbers of English coins of 1247–50 than on Irish coins of 1251–4 by the time the hoards were deposited, because the English coins had been in circulation slightly longer.

Table 3. *Estimates of Irish mint output in the recoinage of 1251–4*

	<i>London</i>	<i>Canterbury</i>	<i>11 other English mints</i>	<i>Ireland</i>
Coins in Colchester hoard	2,069	1,004	2,187	289
Coins in five other hoards	151	68	141	33
English mint output	£189,511	£100,355	£224,917	
Irish mint output estimated from Colchester hoard	£26,471	£28,887	£29,722	
Irish mint output estimated from five other hoards	£41,416	£48,702	£52,640	

Sources: See text.

⁷² Dolley, 'Irish mints', pp. 290–1; idem, 'Anglo-Irish monetary policies', pp. 46–7, 48, 49–51; Dykes, 'Anglo-Irish coinage', pp. 101–2.

⁷³ Clarke, Seaby and Stewart, 'The 1969 Colchester hoard'; Archibald and Cook, *English medieval coin hoards*, pp. 67–142.

⁷⁴ Allen, 'Treasure Trove', pp. 274–9; Grueber, 'Palmer's Green'; Dolley, 'Coventry Treasure Trove'; Lawrence and Brooke, 'Steppingley'; Archibald and Cook, *English medieval coin hoards*, pp. 62–6; Allen, *Mints and money*, pp. 477–9, nos 247–8, 255–7.

⁷⁵ Allen, 'Mint output'; idem, 'Salaries', p. 174 n. 6; idem, *Mints and money*, pp. 306–8, 407.

Stewart combined the recorded mint outputs of Ireland and the Shrewsbury mint in the mid-thirteenth-century recoinages with data from the Colchester and Brussels hoards to estimate a Scottish mint output of about £50,000–£60,000 from the beginning of the Scottish recoinage in 1250 to 1256.⁷⁶ Unfortunately, the Brussels hoard is an unreliable source of data, because large numbers of coins were dispersed from it without record, and numbers of Scottish coins in the English hoards of the 1260s and 1270s used in Table 2 are too small to be statistically significant.⁷⁷ Table 4 provides estimates of mint output in the Scottish recoinage of 1250 (to an unknown later date in the 1250s), based upon numbers of coins in the Colchester hoard only, and limiting the Scottish data to coins of types I–VII, which seem to be the issues of the recoinage.⁷⁸ The figures for Scottish mint output (from £40,119 to £45,045) may be too low, if the new Scottish coins had not yet become fully integrated into the English currency by 1256. In addition, it may be assumed that any new English coins circulating in Scotland by 1250 would not have needed recoinage.⁷⁹ Consequently, it is reasonable to suggest that the actual recoinage output in Scotland was higher than the calculated figures, at perhaps about £50,000–£60,000, as proposed by Stewart, while the total currency in circulation in Scotland in 1250 was significantly larger than this.

Table 4. *Estimates of Scottish mint output in the recoinage of 1250*

	<i>London</i>	<i>Canterbury</i>	<i>11 other English mints</i>	<i>Scotland</i>
Colchester hoard	2,069	1,004	2,187	438
English mint output	£189,511	£100,355	£224,917	
Estimated Scottish mint output	£40,119	£43,780	£45,045	

Sources: See text.

Mayhew has analysed the incomplete mint accounts from the Irish recoinage of 1279–84, concluding that the Dublin mint had an output of at least £40,000, and that the unrecorded output of the other Irish recoinage mint in Waterford probably amounted to at least another £20,000, providing a total estimate of £60,000 as a minimum.⁸⁰ An aggregate of 23 English, Welsh and Scottish hoards has a total of 143 Dublin pennies from the recoinage of 1279–84 to 98 of Waterford, and if this accurately represents the relative sizes of the outputs of the two mints then £27,000 can be suggested as an estimate of the Waterford output, with the total estimate of recoinage output increased to about £67,000.⁸¹ This can serve as a minimum figure for the Irish currency in 1279.

⁷⁶ Stewart, 'Volume', p. 69.

⁷⁷ Stewartby, 'Scottish coins'.

⁷⁸ Stewart, 'Scottish mints', pp. 207, 209–14.

⁷⁹ Mayhew, 'Alexander III', pp. 62–3; Gemmill and Mayhew, *Changing values*, p. 140 n. 125.

⁸⁰ Mayhew, 'Irregularities'. Dolley, 'Irish mints', pp. 291–6, used hoard data and part of the surviving mint account evidence to estimate an Irish mint output of £40,000 in 1280–3 (£24,000 from Dublin and £16,000 from Waterford)

⁸¹ Twenty-one of the hoards are listed and summarized by Allen and Oddie, 'Revised estimates', pp. 238–41: (Aberdeen (1983 and 1984 hoards), Aberdour, Amble, Attenborough, Boyton, Broughton, Cambridge, the Corringham area, Cramlington, Croal Chapel, Derby, Dumfries, Durham, Gorefield, Grantham, Loch Doon, Low Apley, Paisley, West Rudham and Whitburn), and two (Ballingry and Twynholm) are published in Holmes, 'New finds'. Each of these hoards had at least 100 English pennies of 1279–1351.

There are no records of mint output in the Scottish recoinage begun in 1280, but Stewart used English mint outputs of 1279–90 and hoard evidence to propose that the new coinage of Alexander III of Scotland in 1280–92 had a total output of £130,000–£180,000 or £150,000–£200,000.⁸² In Table 5 the output of the Canterbury mint in two periods (1280–90 and 1280–94) is combined with data from 20 English and Welsh and 10 Scottish hoards, to calculate new estimates of the Scottish mint output of 1280–92.⁸³ On this basis, about £120,000–£130,000 seems to be a reasonable estimate of the Scottish mint output. This does not include the output of halfpennies and farthings, which was probably relatively small, but to balance this some of the output probably occurred after the main recoinage was over,⁸⁴ and £120,000–£130,000 may be proposed as a minimum estimate of the Scottish currency in 1280.

Table 5. *Estimates of the Scottish mint output of 1280–92*

<i>Mint accounts/ coinage</i>	<i>Canterbury mint output (a)</i>	<i>Hoards</i>	<i>Canterbury mint pennies (b)</i>	<i>Alexander III pennies (c)</i>	<i>Estimate of Scottish mint output (a × c/b)</i>
1280–90 (classes 1–5)	£220,533	England/Wales	732	427	£128,644
		Scotland	463	248	£118,126
1280–94 (classes 1–7)	£223,074	England/Wales	736	427	£129,419
		Scotland	466	248	£118,717

Sources: See text.

Campbell estimated the per capita currencies of the constituent parts of the British Isles in about 1290, as well as the rates of growth of those currencies.⁸⁵ Table 6 provides revised estimates based upon the figures for the currency of the Sterling Area in Table 1, the Irish and Scottish currency estimates proposed, and Campbell's population estimates. There is a considerable amount of uncertainty in the new currency estimates, but the figures in the table tend to confirm Campbell's finding that the per capita supply of currency was probably still greatest in England and Wales in 1290, while Ireland had the lowest per capita currency and growth rate. England and Wales may have had the fastest growth rate.

⁸² Stewart, 'Volume', p. 70; Mayhew, 'Irregularities', p. 96 n. 36; Stewart and North, 'Classification', pp. 37–8. The coinage of Alexander III probably continued after his death, to the accession of John Baliol in 1292.

⁸³ The hoards used in Table 4 are those listed in n. 81, with the addition of the hoards from Llanddona, Maryport area, Neath Abbey, Newminster Abbey, Piddletrenthide, Scotton and Whittonstall listed with references by Allen and Oddie, 'Revised estimates', pp. 239–40.

⁸⁴ Stewart and North, 'Classification', pp. 43–5.

⁸⁵ Campbell, 'Benchmarking', pp. 919–21, 925–32.

Table 6. *Estimates of currency per capita and growth in the currency*

	<i>England and Wales</i>	<i>Scotland</i>	<i>Ireland</i>	<i>Britain and Ireland</i>
Currency, c. 1250 (£ m.)	>(0.357–0.387)	0.05–0.06+	0.043+	0.46–0.49
Currency, c. 1290 (£ m.)	>(0.867–1.2185)	0.12–0.13+	0.067+	1.064–1.4185
% of c. 1250 total	>(c. 78–79%)	c. 11–12%+	c. 9%+	100%
% of c. 1290 total	>(c. 81–86%)	c. 9–11%+	c. 5–6%+	100%
Growth c. 1250– 90	c. 243–315%?	c. 217–240%?	c. 156%?	231–289%
Population, c. 1290 (m.)	4.3 m.	0.8 m	1.3 m.	6.4 m.
Currency per capita, c. 1290	>(48–68d.)	36–39d.	12d.	40–53d.

Sources: See text.

Gemmill and Mayhew have correctly observed that there is insufficient evidence to estimate the medieval Scottish currency at any time after the reign of Alexander III.⁸⁶ The same can be said of the Irish currency after the reign of Edward I, unfortunately.⁸⁷ Consequently, it is not possible to produce regional breakdowns of the currency of the Sterling Area in the fourteenth or fifteenth centuries. The figures in Table 6 do, however, suggest that England and Wales may have had no more than about 80 per cent of the English sterling currency around 1300. This percentage probably increased during the second half of the fourteenth century and the fifteenth century, as Scotland and then Ireland became disengaged from the Sterling Area.

VI

Campbell's estimates of the per capita currencies of England and Wales, Scotland and Ireland have been by no means the only published figures, as estimates have also been proposed by Mayhew, Britnell, Bolton and Allen.⁸⁸ All of these figures, apart from Campbell's, have combined estimates of the sterling currency with figures for the population of England or England and Wales, but if the estimates of the currency apply to the whole of the Sterling Area the populations of Ireland and Scotland also need to be taken into account. This is a difficult matter, because there are no series of Irish or Scottish population estimates in the medieval period comparable with those available for England.⁸⁹ Campbell argued that the Irish population may have been about one third of the English in 1290, but he noted that it probably fluctuated widely in the fourteenth and fifteenth centuries.⁹⁰ Scotland's population has been variously estimated at about 1.0 million c. 1300, or between a quarter and a sixth of England's

⁸⁶ Gemmill and Mayhew, *Changing values*, pp. 140–2; Mayhew, 'Alexander III', pp. 63–4.

⁸⁷ Dolley, *Medieval Anglo-Irish coins*, pp. 15–36 surveys the medieval Irish coinage after the reign of Edward I.

⁸⁸ Mayhew, 'Modelling', p. 72; Britnell, *Commercialisation*, pp. 102–3; Bolton, 'Was there a "Crisis of Credit"', p. 148; idem, *Money*, pp. 25–7, 244; Allen, 'Volume', pp. 606–7; idem, 'Currency and the economy', pp. 179–80; idem, 'Coin hoards', pp. 159–60.

⁸⁹ Broadberry *et al.*, *British economic growth*, pp. 3–45, 226–39, provides the most recent series of estimates of English population, from 1270 to 1700.

⁹⁰ Campbell, 'Benchmarking', pp. 930–2.

population, with Campbell favouring an estimate of about 0.8 million in 1290.⁹¹ It may have been as low as 0.25 million in the fifteenth century, although 0.7 million has also be suggested as a maximum estimate in 1500.⁹² Campbell has observed that post-medieval historians have estimated the Welsh population at one-twelfth of the English, which in 1290 would provide an estimate close to the figures of Williams-Jones from the incomplete Welsh lay subsidy returns of 1292–3, and this assumption was used in Allen’s most recent per capita estimates of the currency.⁹³

Table 7 provides a very tentative series of per capita currency estimates for the Sterling Area from 1158 to 1544. The figure for 1158 is based upon the English population estimate used by Bolton, increased by one-twelfth (c. 8.3%) to allow for the Welsh population, and the figures for 1290 are from Table 6.⁹⁴ The population figures for the other dates in the table are taken from the series of annual estimates for England published by Broadberry *et al.*, using their earliest figure (for 1270) in 1247, and multiplying these by the same factors as Campbell’s figures for 1290, to include Ireland or Scotland.⁹⁵ The use of Campbell’s factors at dates other than 1290 is arguably the most speculative element of the table, but no better figures are available for Ireland and Scotland at present. The relatively small population of the Isle of Man is not included in the estimates. No account can be taken of the partial nature of the engagement of Scotland with the Sterling Area in 1377, or of Ireland in 1422. With all of these caveats, the per capita currency estimates clearly show an enormous increase between the mid-twelfth century and the mid to late thirteenth century, and they peak in 1377, due to a combination of relatively high figures for the currency of the Sterling Area and the severe population decline before, during and after the Black Death. The per capita currency figures fall to a lower level in the fifteenth century.

Table 7. *Per capita currency estimates of the Sterling Area, 1158–1544*

<i>Date</i>	<i>‘English’ currency (£ millions)</i>	<i>Area</i>	<i>Population (millions)</i>	<i>Currency per capita</i>
1158	0.015–0.03	England and Wales	1.62–2.71	1–4d.
1247	0.46–0.49	British Isles	4.73	23–25d.
1290	1.064–1.4185	British Isles	6.40	40–53d.
1319	1.867–2.414	British Isles	7.13	63–81d.
1377	1.42–2.39	British Isles	4.00	85–143d.
1422	1.22–1.35	England, Wales and Ireland	2.85	103–114d.
1470	0.75–0.95	England and Wales	2.19	82–104d.
1544	1.00–1.50	England and Wales	3.14	76–115d.

Sources: Table 1; see text.

Mayhew has combined estimates of the English money supply at various dates between 1086 and 1750 with other macroeconomic variables (population, GDP, price level and daily wage rates), in calculations principally based upon the Fisher

⁹¹ Mayhew, ‘Scotland’, pp. 109–10; Campbell, ‘Benchmarking’, pp. 928–30.

⁹² Lythe, ‘Economic life’, pp. 66–7; Tyson, ‘Population patterns’, pp. 487–8.

⁹³ Campbell, ‘Benchmarking’, p. 928; Williams-Jones, *Merioneth lay subsidy*, pp. xxxv–lix; Allen, ‘Coin hoards’, pp. 159–60.

⁹⁴ Bolton, *Money*, p. 25; Allen, ‘Coin hoards’, pp. 159–60.

⁹⁵ Broadberry *et al.*, *British economic growth*, pp. 226–35.

Identity.⁹⁶ Mayhew's main concerns have been to demonstrate that the velocity calculated from the Fisher Identity decreases through time, indicating that an increasing supply of money was turning over more slowly to service the needs of the economy, and to investigate possible connections between money supply and prices. It is not proposed to revisit these calculations in this article, but it needs to be observed that estimates of the currency of the whole Sterling Area should not be used in calculations involving factors that otherwise relate exclusively to England without any qualification.

VII

The figures in Table 6 indicate that England and Wales had by far the largest share of the total currency of the Sterling Area in 1290, and it may be reasonable to assume that this was the case at other times. Consequently, recently published data for single coin finds and hoards from England and Wales can be usefully compared with the per capita figures. Comparable data is not available for the rest of the British Isles, unfortunately.

In 1977 Rigold published a survey of single finds from a sample of 100 ancient monuments and archaeological excavations in England and Wales, which showed a peak in 1279–1351 and a sharp fall after 1351.⁹⁷ Rigold's data excluded all coins of greater value than the halfgroat (2d.), and this resulted in a significant under-representation of the periods after 1351 in his figures, because gold coins and the silver groat (4d.) constituted large elements of the currency in these periods. Nevertheless, Rigold's analysis seemed to be confirmed by find data assembled by Mayhew and Dyer, and the apparent peak in 1279–1351 was interpreted by Britnell as evidence of the English currency reaching its highest level in that period.⁹⁸ This interpretation of the single find evidence has had to be reassessed in the light of new data provided by Kelleher, who has analysed thousands of single finds from England and Wales recorded by the Portable Antiquities Scheme (PAS).⁹⁹

⁹⁶ Mayhew, 'Money and prices'; idem, 'Modelling'; idem, Mayhew, 'Population'; idem, 'Prices', pp. 25–38; idem, 'Quantity Theory'.

⁹⁷ Rigold, 'Small change'.

⁹⁸ Mayhew, 'Modelling', pp. 62–5; Mayhew, 'Money in the late medieval countryside', pp. 18–21; Dyer, 'Peasants and coins', pp. 31–40; Britnell, *Commercialisation*, p. 181; Britnell, *Britain and Ireland*, pp. 74–6; Britnell, 'Uses of money', pp. 17–18.

⁹⁹ Portable Antiquities Scheme: www.finds.org.uk; Kelleher, 'Coins'. Only 313 (1.9 per cent) of the 16,802 single finds of 1066–1544 analysed by Kelleher are from Wales.

Table 8 *Single coin finds in Kelleher's data from PAS*

<i>Period</i>	<i>Coins found</i>	<i>Gold</i>	<i>4d.+2d.</i>	<i>Other silver, etc.</i>	<i>Total value</i>	<i>Value per annum</i>
1066–1100	41	-	-	34d.	34d.	1.0d.
1100–35	49	-	-	42.1d.	42.1d.	1.2d.
1135–58	98	-	-	78.6d.	78.6d.	3.4d.
1158–80	210	15.5d.	-	168.2d.	183.7d.	8.4d.
1180–1247	3,152	-	-	2,252.7d.	2,252.7d.	33.6d.
1247–79	2,597	-	-	1,682.8d.	1,682.8d.	52.6d.
1279–1351	5,886	28.0d.	4.0d.	5,317.4d.	5,349.4d.	74.3d.
1351–1412	1,665	3,048.0d.	1,854.0d.	844.3d.	5,746.3d.	94.2d.
1412–64	974	920.0d.	1,020.0d.	510.1d.	2,450.1d.	47.1d.
1464–1544	1,216	1,538.0d.	1,736.0d.	540.5d.	3,814.5d.	47.7d.

Source: Allen, 'Coin finds', p. 12 (Tables 1.4 and 1.5).

Table 8 summarizes Kelleher's data. It shows an increase in the values of the coins found, calculated on an annual basis over the periods concerned, between 1279–1351 and 1351–1412, followed by a fall to a level below that of 1279–1351 in the two periods after 1412. These data are not, however, a reliable indication of the values of coins lost in each period and subsequently recorded by PAS, because they refer to the periods of issue of the coins and not to the periods in which they were lost. There was no complete recoinage of the English silver currency between 1279 and Henry VIII's debasements of the coinage in the 1540s, and only one complete English recoinage of gold, in the 1460s, and English hoards have shown that coins could remain in circulation during two or more of the periods in the table after 1279.¹⁰⁰ I have addressed this issue by using English hoard data to estimate periods of loss of the coins in Table 8, assuming a constant decline in the presence of coins in the currency from a full representation when their period of issue ended to nothing when hoards indicate that they had finally disappeared from the currency.¹⁰¹ Analysis of data from English, Welsh, Scottish and Irish hoards of 1279–1351 by Allen and Oddie has shown, however, that the quantity of coins of a particular period in the currency tended to diminish at an increasingly slower rate in absolute terms (as distinct from its percentage rate of fall) through time, as the remaining quantity shrank.¹⁰² Consequently, my estimates of the numbers of coins lost after their periods of issue are maxima only, and the adjusted values of the single finds of each period in Table 9 probably overestimate the coins of 1279–1351 lost in 1351–1412, and so on. The actual values of losses in each period may lie somewhere between the data by period of issue in Table 8 and these adjusted figures.

¹⁰⁰ Allen, 'Interpretation'.

¹⁰¹ Allen, 'Coin finds', pp. 12–19.

¹⁰² Allen and Oddie, 'Revised estimates', pp. 245–52.

Table 9. *Adjusted annual values of single finds, 1066–1544*

<i>Period</i>	<i>Gold</i>	<i>4d.+2d.</i>	<i>Other silver, etc.</i>	<i>Value per annum</i>
1066–1100	-	-	1.0d.	1.0d.
1100–35	-	-	1.1d.	1.1d.
1135–58	-	-	3.5d.	3.5d.
1158–80	0.7d.	-	7.5d.	8.2d.
1180–1247	-	-	33.0d.	33.0d.
1247–79	-	-	52.5d.	52.5d.
1279–1351	0.4d.	0.06d.	36.6d.	37.0d.
1351–1412	33.9d.	19.5d.	36.4d.	89.9d.
1412–64	35.4d.	29.3d.	26.7d.	91.5d.
1464–1544	15.0d.	23.0d.	13.1d.	51.0d.

Source: Allen, 'Coin finds', p. 20 (Table 1.13).

The substantial increases in the unadjusted and adjusted annual values of single finds between 1158 and 1247 are consistent with the increase in the per capita currency estimates from 1–4d. in 1158 to 23–25d. in 1247.¹⁰³ If there was a fall in the values of finds between 1247–79 and 1279–1351, as the adjusted figures suggest, this may have been at least partly caused by a radical reduction in the supply of halfpennies and farthings, which constitute a large proportion of the finds before 1279. Small coins of low value are more likely to be lost and less likely to be retrieved at the time of loss than larger and more valuable coins.¹⁰⁴ For the same reason, the figures probably under-represent the coins used and lost after 1351, because the finds of this period include significant numbers of large and high-value gold and silver coins for the first time. The introduction of an English gold coinage in 1344 and silver coins larger than the penny in 1351 led to a fundamental change in the composition of the currency, which inhibits any direct comparison between the figures before and after 1351. With that important caveat, the annual values of single finds rise between 1279–1351 and 1351–1412, before falling by about half in 1412–1464 (unadjusted) or 1464–1544 (adjusted). This is broadly consistent with the per capita currency estimates, which rise from 63–81d. in 1319 to 85–143d. in 1377, falling slightly to 103–114d. in 1422 and 82–104d. in 1470. The actual fall in the per capita currency supply of England and Wales would have been greater than this suggests, because the figures for 1319 and 1377 refer to the British Isles, and those for 1422 to England, Wales and Ireland, while Table 6 indicates that the per capita currency of England and Wales was greater than that of the rest of the British Isles.

There is a similarity between the single find figures and the trends in the median values of English and Welsh coin hoards in Table 10, which rise to a higher level in 1351–1464 and then fall back to a level still above that of 1279–1351 in 1464–1544. Coin hoards can vary greatly in their functions, from small supplies of cash for immediate use to large reserves of money taken out of circulation for long periods, but the figures in Table 10 do suggest that the availability of an English gold coinage from the mid-fourteenth century onwards supported a substantial growth in

¹⁰³ Allen, 'Coin finds', p. 21.

¹⁰⁴ Mayhew, 'Money in the late medieval countryside', pp. 6–7; Mayhew, 'Coinage and money', pp. 82–3; Newton, 'Found coins', pp. 15–20; Frazer and Van der Touw, "The random walk", pp. 395–400; Allen, 'Coin finds', pp. 10–11.

larger holdings of cash. On this evidence, supplies of money in England and Wales per capita, being lost in everyday use, and in cash reserves showed a sustained increase after the Black Death.

Table 10. *Median values of hoards from England and Wales, 1066–1544*

<i>Period</i>	<i>Gold</i>	<i>Gold and silver</i>	<i>Silver</i>	<i>All hoards</i>
1066–1158	-	-	11½d. (55)	11½d. (55)
1158–1279	c. £7 4s. 0d. (1)	-	2s. 3½d. (89)	2s. 4d. (90)
1279–1351	12s. 0d. (1)	-	3s. 1½d. (76)	3s. 2d. (77)
1351–1412	£6 13s. 4d. (11)	£3 5s. 4½d. (8)	3s. 0d. (31)	16s. 0½d. (50)
1412–64	£11 16s. 8d. (10)	19s. 1d. (8)	3s. 0d. (22)	12s. 7½d. (40)
1464–1544	£2 6s. ½d. (12)	£1 7s. 4¾d. (6)	4s. 1d. (37)	7s. 8d. (55)
Hoard total	35	22	310	367

Source: Allen, 'Coin hoards', p. 151 (Table 5), with amendments.

There is an apparent conflict between the relatively high figures for currency per capita, single finds and hoard values after 1351 and some of our current ideas about the two European 'bullion famines' of the later Middle Ages. There is a considerable body of evidence for severe declines in European supplies of bullion from the 1390s to c. 1415, and again from the late 1430s to the 1460s, caused by a combination of falling mining outputs, a reduction in supplies of gold from the western Sudan, and exports of precious metals in international trade.¹⁰⁵ The concept of the first bullion famine around 1400 has been challenged by Sussman, on the basis of French mint output data, but English mint outputs very clearly show periods of recession coinciding with both of the periods of bullion famine.¹⁰⁶ The new figures for currency per capita do fall between 1377 and 1422, but the coin find data might suggest that it was only in the second half of the fifteenth century that there was a significant reduction in the supply of currency in use and in reserves of cash. This is no more than a tentative conclusion, because the long periods that have to be applied to the coin find data (between the major alterations of the English coinage in 1351, 1412, 1464 and 1544) do not allow any detailed analysis of trends during the fifteenth century. No conclusions are possible about trends in Scotland and Ireland, which became progressively disengaged from the Sterling Area after 1351, because there are no comparable Scottish or Irish coin find data at present.

¹⁰⁵ Day, 'Great Bullion Famine'; Spufford, *Money*, pp. 339–62; Ashtor, *Les métaux précieux*, p. 96; Munro, 'Mint output', pp. 31–4; idem, 'Wage-stickiness', pp. 213–15; Blanchard, 'Egyptian specie markets', pp. 394–6, 405–7; Bolton, 'Was there a "Crisis of Credit"', pp. 145–8; idem, *Money*, pp. 232–6.

¹⁰⁶ Sussman, 'Late medieval bullion famine'; Allen, *Mints and money*, pp. 264–77, 290–4, 312–16, 416–22.

VIII

Mayhew's concept of a medieval Sterling Area is of fundamental importance for our understanding of the money supply of the British Isles from the eleventh century onwards. English coins were in use in Wales and the Isle of Man before 1100, but it was only in the first half of the thirteenth century that the Sterling Area extended to Ireland and Scotland. The process of disengagement of the Scottish currency from the Sterling Area in the second half of the fourteenth century is now well understood, but the disengagement of the Irish currency in the fifteenth century was more complex and less clearly defined.

England and Wales probably had no more than about 80 per cent of the currency of the Sterling Area around 1300. The percentage may have been higher at other times, but England never had 100 per cent of the sterling currency, as it has been variously estimated. For this reason, figures for the sterling currency cannot not be combined with English GDP or other macroeconomic variables relating only to England in calculations involving economic models such as the Fisher Identity, without qualification.

The per capita currency estimates and values of single coin finds and hoards may be consistent with that the idea that the second European bullion famine caused a significant reduction in money supply in the mid-fifteenth century, but the first bullion famine might not have had this effect around 1400. This element of doubt may have implications for future investigations of possible connections between money supply, prices, wages and credit after the Black Death.

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