
NOTES

*Spanish Bullion and Monetary Inflation in England in the Later Sixteenth Century**

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I.

In recent years the significance of the influx of bullion from the New World for the rise of English commodity prices during the sixteenth century has been repeatedly questioned; partly because historians have inclined, more and more, to stress real as opposed to monetary explanations of rising prices, and partly because, even within the more restricted discussion of monetary influences, the case for a significant inflow of Spanish bullion into England in the later sixteenth and early seventeenth centuries has never been fully substantiated. Some measure of the extent to which Spanish bullion has been relegated in the explanation of the so-called great inflation may be seen in the contrasting views of two post-war contributors to the debate, the late Professor R. de Roover and Professor Y. S. Brenner. When, in 1949, Mr. de Roover wrote that « it is undoubtedly true that the gold and silver which poured into Europe from Peru and Mexico were largely responsible for the steady rise in prices which occurred after Elizabeth's accession »¹ he implicitly assumed not only that American treasure entered the English economy in appreciable quantity but also that it passed (via the mint) into circulation, swelling the circulating medium to unprecedented heights. And such assumptions seemed to be borne out by the vastly increased mint activity which characterised the Elizabethan period. In contrast, when Mr. Brenner subsequently surveyed the movement of prices between 1551 and 1650 a very

* I wish to thank Professor F. C. Spooner for reading a draft of this paper.

¹ R. DE ROOVER, *Gresham on Foreign Exchange* (Cambridge, Mass., 1949), p. 85.

different conclusion emerged, for part of his brief was specifically to ask if « the evidence suggesting a considerable influx of Spanish-American treasure into England, by trade or in any other way, really [was] *conclusive and necessary* for the explanation of the increased quantity of coins turned out by the English Mint ».² Placing his trust in a favourable balance of trade as the most likely means of achieving an inflow of precious metals and yet doubting if in the later sixteenth century English trade was ever sufficiently buoyant to achieve this end, Mr. Brenner believed that « there is little evidence to support the view that great quantities of Spanish-American silver arrived in England before 1631 »,³ and went on to suggest that the high mint output of Elizabeth's reign was to be explained by the recoinage of existing money, and by dishoarding. In Mr. Brenner's hands, then, not only did the whole significance of Spanish bullion melt dramatically away but the increased mint activity of the later sixteenth and early seventeenth centuries was to be explained purely in terms of the stock of precious metals already existing within the English economy.

To single out but two interpretations of the possible connection between Spanish bullion and the English price rise is obviously to oversimplify, for between the two must inevitably lie a whole range of commitment, both for and against. Yet that it is possible for historians to reach such diametrically opposed conclusions is surely both remarkable and puzzling, particularly as it seems clear that in taking his stand neither author went on from his theoretical discussion of the problem to test his conclusions by empirical enquiry. Both authors in fact stand in the rather illogical position of having reached positive conclusions about the significance of Spanish bullion *before* they have considered what evidence there actually is for the movement of Spanish bullion into the English economy in general, and into the English mint in particular. Considering the fragmentary nature of the evidence relating both to the importation of commodities into England at this time and the origin of raw materials entering the mint the reasons for such an omission are clear enough. But if the debate over the significance of Spanish bullion is to be taken further than it has been left at present — an unsubstantiated assertion *pro* or *contra* — the contemporary record must be examined to see what support there is for the proposition that Spanish bullion did penetrate the later sixteenth-century English economy. In this brief note it is proposed to make a tentative start by looking at one corner of the evidence, principally the records of the English mint. The conclusions which emerge may not be conclusive, but they do indicate that perhaps the pendulum has swung too far away from the interpretation which Mr. de Roover once so boldly espoused.

² Y. S. BRENNER, *The Inflation of Prices in England, 1551-1650*, « Economic History Review », 2nd ser. xv (1962-63), 270. My italics.

³ *Ibid.*, p. 278.

II.

The trail of foreign coin within the Tudor economy does not begin in the 1550s but it is perhaps from the reign of Mary that it can be distinguished with greater ease and clarity. In 1554, the year in which the Spanish match was made, the government permitted a wide range of foreign coins to circulate freely at official rates. In addition to French and Imperial crowns which were tariffed at 6s. 4d., Spanish ducats, both double (13s. 4d.) and single, Spanish reals (6½d.), double reals and half-reals, pistolets (6s. 2d.), and Portuguese cruzados (6s. 4d. or 6s. 8d.) also passed current.⁴ To what extent these regulations were accompanied by an increase in the amount of foreign gold and silver available in England is impossible to tell with any degree of accuracy, but the presumption must be that some increase did occur. Certainly the government was to claim in 1561 that foreign coin was circulating in some quantity,⁵ and later on, when he came to complete his *Description of England*, William Harrison was specifically to recall that in Queen Mary's time « the Spanish money was very common in England by reason of her marriage with Philip, King of Spain ».⁶ It is also clear that foreign coin found its way to the mint in the 1550s. In March 1555, 5,864 lb of silver was coined out of Spanish reals supplied by the queen's agent in the Netherlands, Thomas Gresham.⁷ These were not the first foreign coins to be sent over by Gresham in this reign and then re-minted, for in the previous year French and Burgundian crowns, *philippusgulden*, and Kaiser reals had been converted into English gold, 23 c. 3½ gr. fine.⁸ Nor were they more than a fraction of the Spanish money which was sent over to England at this time. As a result of negotiations which allowed England to import bullion from Spain to the extent of 300,750 ducats, Gresham had delivered no less than £ 73,626 in Spanish coin to the English mint but in the event much of this sum must have been paid away without being re-minted.⁹

The expansion of the volume of foreign coin in circulation in England during Mary's reign was followed by some contraction in the early years of Elizabeth. On 9 October 1560 the value of the principal foreign gold coins was reduced — the French crown and others from 6s. 4d. to 6s. and the pistolet from 6s. 2d. to 5s 10d. — and a year later all foreign coin other than French, Flemish or Burgundian crowns was demonetized.¹⁰ According

⁴ *Tudor Royal Proclamations*, ed. P. L. HUGHES and J. F. LARKIN (New Haven and London, 1969), ii. nos. 408, 412.

⁵ *Ibid.*, no. 487.

⁶ W. HARRISON, *The Description of England*, ed. G. Edelen (Ithaca, New York, 1968), p. 297.

⁷ Public Record Office, London (hereafter, PRO) AO 1/1670/497.

⁸ PRO. E 351/2080.

⁹ DE ROOVER, *op. cit.*, pp. 28-29, 60-61; PRO. AO 1/1670/497.

¹⁰ HUGHES and LARKIN, *op. cit.*, nos. 472 (473), 487.

to Bishop Quadra,¹¹ the explanation of this demonetization was to be found in the profit which the Queen hoped to enjoy from the recoinage of the prohibited specie and there can be no doubt that the disappearance of foreign coin was in fact matched by the emergence of newly-minted English specie. However, this partial demonetization of foreign coin in 1561 did not stop the inflow of foreign coin into England. Harrison tells us that in addition to the French and Flemish crowns which, as we have already seen, were allowed to circulate at official rates, the English circulating medium contained other foreign gold coins — « all the ducats, the single, the double, and double double, the cruzadoes with the long cross and the short, and the portague »¹² — all of which must have passed at rates agreed by individual buyers and sellers. He also mentions that although there were no foreign coins of silver current in England « yet are the dalders and such oftentimes brought over but nevertheless exchanged as bullion according to their fineness and weight and afterward converted into coin by such as have authority ».¹³ Technically, it may be supposed that the "dalders" which Harrison mentions were European silver coins, like the *philippusdaalders* which were issued by Philip II in the Netherlands. But the coincidence of weight between the daalder and the Spanish eight real piece, struck in America, coupled with the fact that it is the Spanish real which is the most commonly mentioned foreign silver coin in the English economy in the later sixteenth century may possibly mean that what Harrison observed was in fact an inflow of Spanish-American treasure.¹⁴

Occasionally this inflow of foreign bullion, both gold and silver, is clearly discernible. In 1568 the seizure of Alva's treasure ships yielded 3,276,012 silver reals of which 11,961 were consumed in paying transport charges of the bullion overland to London, 2,481,303 were quickly turned into English coin worth £ 66,317 17s. 4½d., and the rest estimated to be worth £ 21,600 14s. 11½d.¹⁵ In 1573 Francis Drake returned to England with half the treasure, worth upwards of £ 40,000, captured in the Isthmus of Panama and in 1580 landed the immense booty won during the circumnavigation of the world, possibly amounting to £ 600,000.¹⁶ The expedition which set out in 1585 brought back gold, bars of silver, corento, plate and Spanish reals which yielded, all costs of refining and coinage deducted, £ 39,279, of which

¹¹ *Calendar of State Papers Spanish, 1558-67*, no. 143.

¹² EDELEN, *op. cit.*, p. 299.

¹³ *Ibid.*

¹⁴ J. PORTEOUS, *Coins in History* (1969), pp. 170-173.

¹⁵ C. READ, *Queen Elizabeth's seizure of the Duke of Alva's pay-ships*, « *Journal of Modern History* », v (1933), 443-64; PRO. SP 12/60, nos. 28-29; 66, no. 44; 67, no. 33. British Museum, London (hereafter, BM), Lansdowne Mss. 12, fo. 22.

¹⁶ J. A. WILLIAMSON, *The Age of Drake* (1938), p. 128; W. R. SCOTT, *The Constitution and Finance of English, Scottish and Irish Joint-Stock Companies to 1720* (Cambridge, 1912), i. 78-82.

£ 5,146 was in gold and £ 34,133 in silver.¹⁷ This strand runs on to the end of the reign and exists side by side with a second which traces the shipment of both gold and silver in the opposite direction. The agreements whereby English companies trading with Russia, the Levant, and the East Indies were allowed to export bullion in the normal course of their activities need no repetition here, nor do those by which Elizabeth shipped large sums of cash over to the Netherlands to maintain the war effort there.¹⁸ But each in its way illustrates how trade and war could help to denude England's stock of precious metals and is a timely reminder that the flows of metal between England and the world economy did not always lie in a single, favourable direction.

In forming an overall impression of the extent to which foreign bullion did dominate mint supply in the late sixteenth century it is helpful to go beyond the scattering of information already discussed and examine other, more quantifiable evidence. Consider first the question of the mint's bullion supplies. According to the contracts between the Crown and the master-workers of the Tudor mint, details of each parcel of bullion brought to the mint to be coined were to be set down in ledgers kept by the mint officials: in practice this usually meant that in each case the weight of the bullion received, its fineness, the name of the owner, and the date of receipt were all carefully recorded. Similarly, when bullion was sent to melting the officials were expected to record in melting books which parcels of bullion went into which pots, who owned the parcels, at what fineness the metal was received, and at what standard the pot was turned out. By simple book-keeping of this kind, it was hoped, both administrative confusion and serious malpractice would be avoided. Few of these official records now survive, but those which do have significance for this present discussion in that in addition to the details already indicated they usually record the exact form in which metals entered the mint. Thus the « ledger book containing the bullion both gold and silver, brought into the mint to be coined, from the first day of February 1597 [i. e. 8] until the last day of January 1598 [i. e. 9] » distinguishes four kinds of silver bullion: ingots, or bars of silver, ranging in fineness from 8 oz. 14 dwt. to 11 oz. 18½ dwt.; Spanish money; French

¹⁷ BM. Lansdowne Mss. 52, no. 36, fos. 92-100. The final accounts for this voyage were only presented in 1587 and it looks very much as though the estimate made by Sir Thomas Smith in September 1586 of the bullion landed at Deptford related to this voyage. BM. Cotton Mss. Titus B, iv. fo. 172.

¹⁸ BM. Cotton Mss. Vespasian C, xiv no. 179; *Historical Manuscripts Commission, Salisbury Mss.* iii no. 86; *The Register of Letters etc. of the Governour and Company of Merchants of London trading into the East Indies, 1600-1619*, ed Sir GEORGE BIRDWOOD and W. FOSTER (1893), p. 180 ff; A. C. WOOD, *A History of the Levant Company* (reprint, 1964), pp. 16-17; *CSP Domestic, 1591-90*, ccxxxv/12 (misdated in the calendar to 1590); L. STONE, *An Elizabethan: Sir Horatio Palavicino* (Oxford, 1956), pp. 70, 101-104.

quarter crowns; and rijks dollars. Out of the whole sum received in this instance, 6,726 lb. $4\frac{2}{8}$ oz., Spanish money clearly predominated, accounting for no less than 62% of the total, while silver ingots (34%) made up most of the rest. As far as gold was concerned the entire sum of 71 lb. $3\frac{7}{8}$ oz. was received in ingots.¹⁹ Another ledger book, covering the period from the beginning of February 1583 to the end of November in the same year, gives similar sorts of information. In this case the total amount of bullion coming in was 51,817 lb. $2\frac{3}{8}$ oz. and although part of this sum was not precisely described and a further small proportion took the form of silver plate or Portuguese coin, once again the vast majority of the mint's intake was in Spanish coin (78.1%) and silver ingots (20.77%). In respect of gold this particular ledger goes back as far as August 1582 but, unfortunately, it does not distinguish the form which the bullion took.²⁰ Portions of two melting books also survive and tell much the same story as the ledgers. Those parts which relate to gold, running from December 1583 to 13 February 1585, are not very helpful for our present purposes because they do not specify the exact form of the bullion put to melting.²¹ But the remaining portions, which cover silver output between 3 June 1584 and 13 February 1585, are just as useful as the ledger books for silver because, like them, they distinguish clearly between one kind of bullion and another. Out of a total of 47,394 lb. of metal handled, 0.74% was in alloy, 12.94% was in silver ingots, and 86.31% was in Spanish coin.²²

The type of evidence which survives for the 1580s and 1590s also exists for some earlier parts of Elizabeth's reign. Looking no further back than the end of the great recoinage, we may notice first a silver melting book for the period 27 October 1561 to 17 December 1562. The total quantity of metal handled amounted to 81,325 lb. and, if we exclude from this all base alloy as well as the remelting of waste produced during the manufacturing process, the vast majority of silver melted, some 75%, consisted of Spanish coin. The case is similar for gold. To be sure, the mint was fed by a wide variety of raw material — cruzados, double ducats, French crowns, Kaiser reals, crown gold, ingots, fine gold, barbary gold and the like — but

¹⁹ PRO. E 101/304/35.

²⁰ The silver part of the ledger is now in two pieces: the first, covering 1 February to 15 April 1583, is part of PRO. E 101/620/56 and the second, running from 21 April 1583 to the end of the following November, is in PRO. E 101/620/57. The two parts are not quite consecutive, but the gap of a few days is small and does not seriously distort the overall conclusions drawn here. The gold ledger is in PRO. E 101/620/57.

²¹ PRO. E 101/304/7, fos. 1-11.

²² This melting book has also been divided arbitrarily into two parts by the Public Record Office, the first part running from 3 June to 15 September 1584 being in E 101/620/56 and the second in E 101/304/7. One page of a ledger for November 1582 is also in E 101/620/56.

it was Spanish coin — the ubiquitous pistolets — which constituted the greater part.²³

In the mid-1560s there is a break in the evidence for silver²⁴ but for gold a melting book covering the period 30 January 1563 to 9 April 1566 lets us see that in sharp contrast to 1561-62 very little Spanish coin did in fact enter the mint, pistolets accounting for no more than 3, 31% of the total.²⁵ Another melting book which begins on 21 June 1567 and ends on 3 May 1570²⁶ cannot be precisely analysed because pistolets are often lumped together with other items such as fine gold but from the fact that pistolets are not mentioned after November 1567 we may surmise that the relative insignificance of Spanish coin in the mint's gold supply during the mid-1560s continued until 1570. The case of silver during this later period, 1567 to 1570, is at the outset very similar to that of gold but then, late in 1569, it suddenly diverges. Between 17 June and the end of December 1567 only 7.36% of all new silver bullion melted at the mint was in Spanish coin and in 1568 this proportion fell as low as 2.1%. In 1569, however, thanks to the very heavy influx of Spanish coin in September, October, November and December, the importance of Spanish specie turned sharply upwards and the continued into the New Year. Out of 26,193 lb. of new bullion melted between the beginning of September 1569 and the end of February 1570 no less than 81.4% was in Spanish coin.²⁷ For the 1570s seemingly neither ledger nor melting books survive.

The picture which emerges from the fragmentary record of the ledger and melting books of the 1560s, 1580s and 1590s is straightforward enough. Foreign gold coins, especially Spanish pistolets, dominated mint supply in 1561-62 but then, in later years, apparently lost ground.²⁸ Foreign silver coin, again Spanish, starts equally strongly in 1561-62 but then with the one exception of the years 1567-69 goes on, unlike gold, to form a dominant element in the remaining parts of the Tudor mint supply for which we have accurate record — 1569-70, 1583, 1584-85 and 1598-99. For silver, in fact, there can be no doubt that Spanish bullion did come into the mint, and did

²³ PRO. E 101/304/2. The receipt book for this bullion is in PRO. E 101/304/1 which also contains the details for gold. Portions of two other books for this period are in E 101/303/23 parts 2 and 3.

²⁴ With the exception of part of a melting book which begins in January 1563 and ends on 30 March following. This is too badly damaged to bear detailed analysis. PRO. E 101/304/21, fo. 14.

²⁵ PRO. E 101/304/26. Again, alloy and remelted waste have been excluded from the overall total for the purposes of this calculation.

²⁶ PRO. E 101/602/4.

²⁷ *Ibid.* See also PRO. E 101/304/23, pt. 2, fo. 1.

²⁸ But only *apparently*. It is important to remember that the ledger and melting books for the 1580s do not permit us to distinguish the various components of the mint gold supply.

so in such quantity that on the occasions discussed it formed the dominant strand in mint supply. Indeed if it could be assumed — and perhaps it would not be unreasonable to do so²⁹ — that some of the ingots melted also contained bullion of Spanish-American origin this dominance must have been, at least in some instances, virtually complete. How typical such a picture is of the whole of the later sixteenth century — of the interstices between the points of record cited — is a difficult question to answer. Yet some guidance for one period, 1576 to 1582, can be had from the record of bullion bought for Elizabeth I during these years and stored in the Exchequer.³⁰ The total value of these purchases amounted to no less than £ 252,894 of which £ 66,290 was in gold and £ 186,604 in silver. Details of every parcel of this bullion were carefully recorded — the form it took, the name of the seller, its value, and ultimate destination — so that once again it is possible to see clearly if Spanish bullion had any part to play. In fact it had, especially in respect of gold which was needed particularly to facilitate payments abroad. A little of this yellow metal was bought in the form of English angels (1.31%), French crowns (0.04%), and double ducats (0.29%), and a fair proportion in ingots (36.5%) and Barbary gold (17.8%) but all the rest, no less than 43.96%, was in Spanish and Portuguese coin, Spanish pistolets accounting for 34.62% of the total and milreis for 9.33%. In respect of silver, though a much smaller proportion of the total bought was in foreign coin, no more than 13.52%, the significance of Spain once again stood out, for it was in Spanish reals alone that Elizabeth's demand for foreign silver coin was met. Taking gold and silver together, 26.27% of all the bullion bought for the queen and stored in the Exchequer between 1576 and 1582 was in foreign coin, predominantly Spanish coin. True, only 27% of this foreign coin was subsequently sent to the mint to be turned into English money, for the rest was paid away in the form that it was received. But whether it was subsequently recoined or not, the very fact that this foreign (and principally Spanish) coin could be supplied to the

²⁹ In 1580 part of the proceeds of the circumnavigation of the world were taken from Sion and laid up under the Jewel House in the Tower of London. Most of this bullion was said to be in silver (22,899 lb. 5 oz.), some in coarse silver (512 lb. 6 oz.), and a little in gold, 101 lb. 10 oz.). (*Calendar of State Papers, Domestic, 1547-80, Elizabeth* vol. 144, no. 60). By 26 December 1585 all the gold had been coined, as had some of the silver, but the greater part of the silver (unlike the corento which remained untouched) was simply converted into clean ingots [W. MURDIN, *A Collection of State Papers... in the Reign of Queen Elizabeth...* (1759), pp. 539-540]. When subsequently disbursed, therefore, this silver would have appeared as clean ingots, i.e. bars of silver of known fineness, and, if sent to the mint, would have been noted in the melting books simply as "Ingots".

³⁰ Sheffield City Library, Elmhirst Papers no. 1283. See also PRO. E 101/304/7 which refers to the melting of Spanish reals in 1582.

Crown by English goldsmiths clearly supports the case for the existence of Spanish coin in England in the later 1570s and early 1580s and shows also that this stock of coin was in gold as well as silver.³¹

III.

If the conclusion that foreign (principally Spanish) bullion did flow to the mint in considerable quantity during Elizabeth's reign is to have real credibility it is obviously essential that the way in which this inflow of precious metal was achieved should be explained. Looking first at the 1560s, which so far as the mint books tell us saw two periods when Spanish bullion flowed to the mint in considerable quantity — October 1561 to December 1562 and September 1569 to February 1570 — the explanations are obvious enough and may be quickly dealt with. As we have already seen,³² November 1561 saw the demonetization of Spanish gold and silver coin and in view of this it seems fair interference that the bullion which poured into the mint in the first of these periods represented the foreign coin attracted to England in the 1550s and now thrust forcibly out of circulation rather than a fresh influx of coin in 1561-62. If this was so the relative unimportance of Spanish coin in the mid-1560s, which the evidence for gold suggests, is more easily understood. In contrast the later rush of Spanish bullion to the mint in 1569-70 was clearly connected with a fresh influx of silver into the country, for it was obviously consequent upon the seizure of Alva's pay ships in 1568.³³

Leaving on one side the 1560s, which are in some respects a special case, how have those historians who in the past have believed in the significance of Spanish bullion explained how that bullion flowed into England and into the mint? Essentially, three solutions have been offered: the proceeds of piratical/privateering activities of English seamen, an influx due to a favourable balance of trade, and a movement of bullion due to a bi-metallic flow. None has gained universal support but none can be dismissed out of hand. As far as privateering is concerned the case for an immense booty being brought back to England in the later sixteenth century is beyond question.³⁴ How much of this was in bullion we cannot know for certain, partly because many prizes escaped official notice, and partly because

³¹ For statements of how much foreign coin, bullion, and English money was held in the Exchequer or delivered from it a specific times in 1581 and 1582, see BM. Harleian Mss. 251, fo. 72; *Historical Manuscripts Commission, Salisbury Mss.* ii no. 968; PRO. SP 12/150 nos. 9 and 10, 154 no. 59, 155 nos. 13, 32 and 33, 156 no. 16.

³² Above, pp. 3-4.

³³ Above, p. 4.

³⁴ K. R. ANDREWS, *Elizabethan Privateering* (Cambridge, 1964), *passim*.

even when a prize is recorded we either do not know its official value or, even if we do, we have no means of knowing by what factor this figure ought to be inflated to allow for such smuggling and/or embezzlement as accompanied the ship's return to England. We can be certain, however, that such prizes carrying bullion as privateers did take were amongst the richest catches made, and that the bullion which was realized in this way was very substantially augmented by the official or semi-official voyages made under captains such as Francis Drake. The most famous haul of all was undoubtedly that resulting from the circumnavigation of the world but other ventures in the 1570s, 1580, and 1590s, of which something has already been said, also brought substantial returns.³⁵ In the last analysis we can only guess at the impact which the marauding activities of English seamen had on the country's bullion supply in the later sixteenth century, but in view of the scattered evidence which suggests a substantial inflow of gold and particularly silver, it would seem unrealistic to dismiss that impact out of hand.

The reticence which has sometimes been felt in assigning to English privateers, naval commanders, and the like an important role in the supplying of bullion extends also to the argument which would link an influx of bullion with a favourable balance of trade. For some parts of the later sixteenth century this reticence may in fact be justified, for Professor Stone concluded his survey of Elizabethan overseas trade by saying that « comparing the first decade of the reign with the last it would seem that the volume of trade was very little altered and the balance of payments could not, in view of the great increase in luxury imports, have been more than in rough equilibrium ».³⁶ But, as Mr. Stone himself says, such a conclusion takes no account of the intervening period — « the commercial prosperity of the years 1574-1585 », as he typifies it — and until we actually do know more about England's commercial prosperity at this time it really does seem premature to rule out, as Mr. Brenner does, the possibility that England's balance of trade actually did result over the whole period in a net influx of foreign bullion.³⁷

Finally, what can be said in favour of the idea that a bi-metallic flow had some influence on England's bullion supplies in the later sixteenth century? As far as such a movement from England to Spain is concerned, the case is certainly there. During the early years of Philip II's reign Spain was troubled by the loss abroad of her gold coinage because at 1 to 10.61 her gold was undervalued compared with that of other European countries such

³⁵ Above, pp. 4-5.

³⁶ L. STONE, *Elizabethan Overseas Trade*, « *Economic History Review* », 2nd ser., ii. (1949-50), 54.

³⁷ Cf. R. B. OUTHWAITE, *Inflation in Tudor and Early Stuart England* (1969), pp. 51-52.

as France and England.³⁸ In an attempt to stem this outflow the Castilian ratio was raised in 1566 to 1 to 12.12 but, since at the same time there was no alteration in Europe's other principal currencies, the Castilian ratio still remained out of step with those of its neighbours, only this time it was silver which was undervalued and vulnerable.³⁹ A profit was to be made by exporting English gold and importing Spanish silver and every time that profit accrued England's stock of bullion was increased. The bi-metallic flow was not therefore, as Dr. Outhwaite suggests, simply a matter of increased imports of one metal being « balanced in value terms by increased exports of the other, leaving no change in the total value of precious metals in circulation »⁴⁰ — a flow which altered the composition of the circulating medium as between gold and silver but not the overall volume. Rather it was a movement which brought back to England quantities of silver which had greater value within the English economy than the gold which it replaced. To some extent such a movement of gold in pursuit of silver may have lain behind the continuing chorus of complaints about the export of gold in Elizabeth's later years. But, if so, where did England continue to obtain this gold to furnish the supply? Since 1526, at the very latest, England's economy had been dominated by silver rather than gold coin and clearly the massive coinage of silver in the later sixteenth century could hardly have been sustained solely by the export of England's dwindling stock of gold. Long ago Professor Hamilton suggested in connection with the movement of undervalued silver from Spain to Italy that rather than the silver being bought with Italian gold it was Italian goods, which fetched an especially good return in the high price market of Spain, which facilitated the exchange.⁴¹ Whether such an explanation could be valid for England no one has yet determined, but if it could it would certainly help to explain how a country relatively poor in gold could nevertheless purchase Spain's undervalued silver. However this may be, so long as that undervaluation continued Spanish bullion would migrate. Writing early in the seventeenth century, the Venetian ambassador to Spain put the matter precisely when he said « at present no sooner does it [i. e. silver] come into the country, or is coined there, than it takes wing to other countries on account of the premium », ⁴² and it seems clear that long before this date England was one of the recipients. In the 1570s and 1580s various sets of calculations were

³⁸ E. J. HAMILTON, *American Treasure and the Price Revolution in Spain, 1501-1650* (Cambridge, Mass., 1934), pp. 60-61.

³⁹ F. BRAUDEL and F. C. SPOONER, *Prices in Europe from 1450 to 1750*, « Cambridge Economic History of Europe », iv. ed. E. E. Rich and C. H. Wilson (Cambridge, 1967), p. 459.

⁴⁰ *Op. cit.*, p. 33.

⁴¹ E. J. HAMILTON, *American Treasure and the Rise of Capitalism (1500-1700)*, « *Economica* » (1929), pp. 345-347.

⁴² *Calendar of State Papers, Venice, 1592-1603*, no. 981 (27 April 1601).

prepared to demonstrate how possible it was to recoin Spanish silver reals at a profit⁴³ and the lure of this prompted one Elizabethan to offer the Crown a revenue 10% higher than that currently obtained from the mint if he was allowed to convert Spanish into English coin.⁴⁴

IV.

This brief analysis has been more the starting point of a new discussion than a conclusion to the old. On the basis of manuscripts hitherto neglected it has concluded that where documentation does survive there is clear evidence of Spanish bullion not only influencing but actually dominating mint supply, and that this inflow of bullion was certainly connected with the seizures of treasure made by English seamen, and possibly also with both a favourable balance of trade and a bi-metallic flow.⁴⁵ It goes without saying that these conclusions can only be tentative, based as they are on mere scraps of evidence, but it is pertinent to note that they are in effect very much in line with what *a priori* one would expect; namely, that as an essential part of the sixteenth-century European economy England obeyed the forces which dominated that economy, amongst which was the influx of bullion from the New World. Whether future research will fill out the fragmentary evidence presented here and demonstrate the full extent of the dominance of Spanish bullion, as well as the chronology of that dominance, time alone will tell. Only if it does can we then turn meaningfully to the further and more important question of whether Spanish bullion was an active or passive element in the great Tudor inflation.

⁴³ E. g. PRO. SP 12/67, no. 33.

⁴⁴ BM. Lansdowne Mss. 4, no. 36.

⁴⁵ Or, if Hamilton's argument can be applied to England, a flow of goods for undervalued silver.