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## Early accounting: The Tally and checkerboard

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## **EARLY ACCOUNTING: THE TALLY AND CHECKERBOARD**

*Abstract:* How could our ancestors do accounting while they were still illiterate and had no paper? The answer is that they used the tally and the checkerboard. In medieval Europe, the tally was normally a short stick on which notches were cut to represent numbers; different number units could be shown by notches of different sizes. The two parties to a deal could get a fraud-proof record by splitting the tally into matching "foil" and "stock" (hence our "stock market"). Counting was done by moving counters onto and off a surface ruled like a chess-board. These devices were central to medieval finance, e.g., the English exchequer issued stocks like bills of exchange. The exchequer clung to tallies long after they had become obsolete; but in 1834 it decided to destroy its tallies by burning them, and the resulting blaze destroyed Parliament too.

### **TYPES OF TALLY**

History shows us (or so historians claim) how mankind once coped with conditions that now seem impossibly adverse. Certainly this is true of accounting history. It shows how accounts could be kept when paper was still unknown or costly, coins were scarce and bad, and most men were illiterate.

In these straits, our ancestors made good use of two devices. To record numbers, they cut notches on tallies. To calculate, they used the abacus, notably in its form of the checkerboard.

#### *Meanings of "Tally"*

The word "tally" suggests various things:

- (1) A simple record of numbers, such as notches on a stick or chalk marks on a slate.
- (2) An object divided into two interlocking bits, thus giving proof of identity, e.g. a split seal or die.
- (3) A combination of (1) and (2), such as a stick that is first notched to show e.g. the number of £'s lent by A to B, and then is split to give both A and B a record.

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All three types have in the past helped business, but (3) — the split tally — probably has been by far the most useful.

### *Wood's Importance for Records*

Most of the tallies described below were bits of wood. ("Tally" comes from the Latin *talia*, a cutting, rod, or slip for planting.)

To us, wood must seem a clumsy material for records. But our ancestors were short of alternatives. The most obvious was parchment (sheep or calf skin); but this was costly. Such paper as was used in Europe came from the outside till the twelfth century, when its manufacture started in Italy or Spain; Britain had to rely on imports till the late sixteenth century.<sup>1</sup> And wood was in fact a surprisingly suitable means of recording. It could take ink and seals, and was for long regarded as the most important writing material after parchment. Even lengthy documents such as charters could be written on birch bark.<sup>2</sup>

A wooden tally had many virtues. It cost practically nothing. It was easy to score. It was intelligible at a glance to both the literate and illiterate. Its harder varieties withstood rats and decay better than paper and parchment; on many survivors, every notch is as clean and true as it was six hundred years ago. And, as we shall see, it could serve as a flexible aid to sophisticated systems.

### *The Many Roles of the "Carved Stick"*

Marked sticks have been able to fill many roles in many lands — e.g. management records in Sweden,<sup>3</sup> and "message sticks" (mnemonic aids for messengers) in ancient Greece and among Australian aborigines, etc.<sup>4</sup> The counting tally must be seen as only one part of a wide range of "carved sticks".

Scandinavia in particular has kept many specimens of the *karvstock*, chiefly for their value as a "rich and subtle" form of folk art. A few date back to the Vikings, but some examples in

<sup>1</sup>D. C. Coleman, *British Paper Industry*, Oxford: Clarendon Press, 1958, p. 4. Alex. Murray, *Reason and Society*, (1978), p. 301 and 475.

<sup>2</sup>M. T. Clanchy, *From Memory to Written Record*, London: Edward Arnold, 1979, p. 95.

<sup>3</sup>Scandinavian examples (mentioned on this and later pages) are in museums in Stockholm and Helsinki; many are described in Alex Grandell, *Karvstocken*, Ekenas, 1982, *Tidskrift for Svensk Antikvarisk Forskning*, No. 2, 1986, *Daedalus*, Swedish Technical Museum, 1987, and *Historiska studier i folkliv*, Abo Academic Press, 1989. (Swedish with English summaries.)

<sup>4</sup>Horniman Museum, London.

museums at Stockholm and Helsinki were still in use in the mid-nineteenth century. They have been aptly described as “neglected bearers of a cultural tradition” because of their importance for administration as well as counting.<sup>5</sup> For instance, some aided village headmen: the “alderman” had a rod on which was recorded the mark — such as a variant of the swastika — of each household; he had also a ceremonial staff of office (cf. the university’s mace and the magic wand?). Some were used by tax-gatherers to note receipts in cash or kind. Some long and slender survivors were measuring rods (e.g. for checking labour on fencing). Some are carved roughly, others with loving care; thus one ell-stick has been pared into a basket-like frame enclosing loose balls of the wood.

### *The Reckoning Tally*

Such measuring rods, etc., had more-or-less permanent markings and functions. But a stick used for recording numbers might from time to time get extra notches, e.g. to note additional payments; and it might have only a brief life.

The unsplit tally (function 1 of the list on page 43) was a handy means for recording both physical quantities and money. Thus an English monastery used a tally to note milk yields.<sup>6</sup> Surviving specimens show e.g. numbers of seals caught (Sweden), reindeer herded (Siberia), and loaves baked (Albania).<sup>4</sup> The tally’s role in cargo checking is recalled by our use of “tally-man”.

Crude examples of the unsplit counting tally might be no more than a rough stick on which (an English survivor) a wood-cutter scratched a line for each bundle of faggots made, presumably because he was paid by piece-rate.<sup>7</sup> A slight improvement gave a short notch to each unit (e.g. bundles of hides handled at Bergen docks) and an extended notch to every  $n$ th unit. And some tallies took elaborate forms. A Finnish survivor, recording day labour (rent by tenant farmers) is a long stick ruled into two columns; the left column shows each man’s mark; a small indentation was made on the right column, opposite his mark, after each day’s work. Other examples of management records were multi-sided. Thus, where a Swedish flour mill was owned co-operatively, somewhat complex records were needed

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<sup>5</sup>A. Grandell, 1982.

<sup>6</sup>M. T. Clanchy, *op. cit.*, p. 32.

<sup>4</sup>Horniman Museum, London.

<sup>7</sup>British Museum.

to keep track of each owner's days of use and his contributions of upkeep work; an octagonal tally met the need. And a sixteen-sided tally of 1863 served a Swedish mine foreman as output record (one side per worker).<sup>7,1</sup>

The transition from physical measure to money must have been easy. Notches proved a convenient way of showing wage and tax payments, also credit sales at inns and shops. The word "tally" sometimes meant a credit transaction: "ye shall not have redy mony neyther, but a taly" (1545);<sup>8</sup> and it was further stretched to cover records on materials other than wood, e.g. a slate.

### *Antiquity of the Tally*

In the nature of things, tallies of classical times were unlikely to survive till now (though Roman remains dug up in Kent include a bone with scratched notches — function 1 of the list on page 43). We must therefore rely on literary references. These exist; thus the Greeks used the word *symbolon* for "tally" in the sense of two matching parts, usually of a coin or other hard object. Unfortunately the references do not always make clear whether such a tally filled function 2 (identification) only, or 3 (identification and number); but some early writers were clearly familiar with the use of split sticks in financial transactions.<sup>9</sup>

A moral tale of 500 BC is germane to business. It tells of Glaucus, a Spartan who has a reputation for justice above all other men. A traveller from Miletus therefore entrusts him with gold and silver, saying "take these tallies and be careful of them . . . give back the money to the person who brings you their fellows". But later, when the Milesian's sons come to claim the money, Glaucus is tempted to deny remembrance of the matter. He asks the Delphic oracle whether he can safely swear that he never received it; rebuked, he hands it over, but — for even contemplating the perjury — he and his are "utterly uprooted out of Sparta . . . there is at this day no descendant of Glaucus, nor any household that bears Glaucus' name". It is tempting to argue that such *symbola* would not be much use unless they were marked with the *amount* of money — function 3.<sup>10</sup>

<sup>7,1</sup>Grandell, 1989, p. 49.

<sup>8</sup>*Oxford English Dictionary*.

<sup>9</sup>Society of Antiquaries, *Proceedings*, 1899-1901, p. 78. S. West "Archilochus' Message-stick," *Classical Quarterly*, 38, (i) 42.

<sup>10</sup>Herodotus, VI, 86, a5, b1. S. West, *op. cit.*

Plato gives the tally a role that far transcends accounting. He makes one of his characters suggest the *symbolon* as an explanation of sexual desires, as follows. Originally, humans were united in pairs as spheres. Each sphere had two faces, four arms, four legs, etc. Some spheres were man-man, some woman-woman, some man-woman. They had surprising strength and vigour, and planned to assault the gods. So Zeus sliced every sphere into two. Each of us therefore is only "the tally of a man", ever yearning to be grafted again to the tally that will fit him. All men who are sections of man-man delight to be clasped in men's embraces; all women who are sections of woman-woman "have no great fancy for men"; men who are descended from the hermaphrodite spheres are women-courtiers and adulterers, and the women are man-courtiers and adultresses.<sup>11</sup>

A Latin equivalent to the *symbolon* was the *tessera hospitalis*. This too was used of two matching halves, normally of something durable such as a die. And it too confirmed identity, e.g. of a stranger bringing a letter of introduction.

### THE MEDIEVAL SPLIT TALLY

Thanks in part to its central role at the English exchequer, we have abundant evidence of the medieval tally's use in England. And some references come from further afield. Describing his Chinese trip (1271), Marco Polo tells us that he saw illiterate persons recording their business dealings by notching and splitting sticks "exactly as it is done with our tallies", i.e. in Venice. The 1407 statutes for university students at Paris include:

Whoever wishes to have wine beyond his portion, whether at table or away, should record it on his tally, and reckon it according to his conscience. Of which tally the one part remains with the servitor and the other with his master, and the receipt is to be tallied as soon as he gets his wine.<sup>12</sup>

Again, monasteries in medieval Italy accepted deposits of goods and money for safe-keeping, giving the depositor part of a split tally (of wood or parchment). This he presented at withdrawal.<sup>13</sup>

<sup>11</sup>*Symposium*, 191d.

<sup>12</sup>W. Marsden, trans., *Travels of Marco Polo*, London: Dent, 1908, p. 251. Gabriel, Asteric L. & Boyce, Gray C. (edd.), *Acutorium Chartularii Universitatis Parisiensis*, Paris, 1964.

<sup>13</sup>Florence Edler, *Glossary of Medieval Terms of Business*, Cambridge, U.S.A., p. 21.

According to the late Sir H. Jenkinson (deputy-keeper at the Public Record Office), in medieval England the split tally was the ordinary accompaniment of government and private business. After studying hundreds of exchequer and private tallies, he concluded: "the more we examine financial conditions . . . the more do we find that all development is conditioned at every turn . . . by that system of tally cutting that was already well established in the twelfth century."<sup>14</sup>

### *Physical Form*

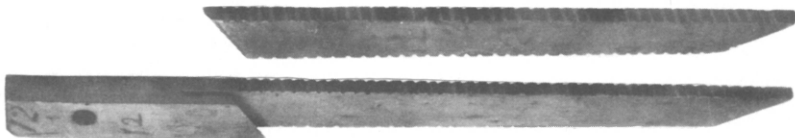
Tallies intended for splitting were usually made of well-seasoned hazel or willow (woods that split easily), and were square in cross-section. Originally they were slender, and their length often was the space between the tip of the index finger and the outstretched thumb, i.e. was less than six inches if we allow for our growth in physique over the centuries; but, as we shall see, they were later to become much bigger.

Even the exchequer tallies for large sums could be crude: some of the survivors have knots, follow the slight curve of the original branch, and still have bark along one side. A hole might be bored at one end, so that as many as fifty tallies could be strung on a thong or rod.

### *Stock and Foil*

Typically the medieval tally was split into two bits of unequal length. The longer (the "stock", with a stump or handle) was kept as a receipt by the person who handed over goods or money. The shorter (the "foil" or "leaf") was kept by the receiver. Illustration 1 shows the two parts of a modern Kent tally with notches for physical units (hops gathered).

### **ILLUSTRATION 1**



**Modern Kent hop-picker's tally. Horniman Museum, London.**

<sup>14</sup>M. Jenkinson, "Medieval Tallies, Public and Private," *Archaeologia*, 1923-4, p. 290.

The literate often wrote ink “superscriptions” on both stock and foil, to show the nature of the payment. The writing of the exchequer officials was normally in Latin, but in Hebrew at the “exchequer of the Jews”. The writing tended to be neat and compact on the short early tallies, but to sprawl across the later ones. Some private tallies also bore words — occasionally scratched on, and then perhaps re-written later in ink.<sup>15</sup>

### *Cutting the Tally*

An anonymous description (perhaps eighteenth century) of the exchequer’s cutting method runs:

A thick stick was put into a vice and roughly squared. On one side was written in Latin the name of the accountant [e.g. a sheriff bringing cash to the exchequer] and for what service the money was paid; on the opposite side the same particulars were written. On the other two sides were written, in front, the test or day of the payment and the year of the reign of the king . . . and on these two sides the sum paid in was represented by notches of various sizes cut in the wood, each size denoting a certain amount. . . . Thus written upon and notched the stick was put into a strong block, and on one of the written sides, about three inches up, a short thick knife was placed diagonally and struck with a heavy mallet, cutting the wood halfway through; the stick was then turned and the knife inserted on one of the notched sides, at the diagonal cut, when two or three sharp blows split it down to the end into two parts, one part having exactly the same writing and notches as the other.<sup>16</sup>

### *Complex Splitting*

In Scandinavia, the splitting process was sometimes complex. Where three parties were concerned in a transaction (e.g. the consignor of goods, the carrier, and the consignee), a “triple tally”, split into three parallel pieces, could be used. But the high point in tally technology was the “fork tally”. The two ends of a four-sided stick were cut apart in such a way that each consisted of a butt with two prongs; the four prongs interlocked neatly when joined. This device was used in eighteenth century Sweden, and enabled illiterate smiths to record transactions in

<sup>15</sup>Hubert Hall, *Antiquities and Curiosities of the Exchequer*, London: 1891, p. 119.

<sup>16</sup>*Notes and Queries*, 1881, p. 493.



two currencies — the *daler* (silver) and *ore* (copper), coins whose relative values varied over time.<sup>3</sup> Members of the staff at the Stockholm Museum have recently made copies of the pronged tally, and have found this task easy once the trick is learned.

### *The Tally as a Receipt*

Thanks to the diagonal cut (the projection seen in the illustrations), stock and foil could at any time be squeezed together again, so that extra cuts for new transactions could be made across the split, or the genuineness of the record could be tested:

“when these two parts came afterwards to be joined, if they were genuine they fitted so exactly that they appeared evidently to be parts the one of the other.”<sup>17</sup>

The split tally thus gave a form of receipt that was simple yet almost fraud-proof — “an intricate but robust form of record, not replaceable readily till carbon copying”.<sup>18</sup>

At settlement, the creditor would often hand over his stock to the payer. The latter could then break both stock and foil, or keep them spliced together as a permanent record. Any balance could be put on a new tally.

### *The Dialogus*

Our knowledge of medieval tallies comes in part from two remarkable books by exchequer officials. About A.D. 1179, Richard Fitznigel, head of the permanent staff at the exchequer and later bishop of London, wrote his *Dialogus de Scaccario*. It is cast as a text-book for fledgling civil servants, and takes the lively form of question and answer. In 1711, another official (Thomas Madox) again described the exchequer’s procedure (“if I do not err in my observation”), confirming that it had hardly changed during the intervening five centuries. An accounting text-book of 1793 still defined a tally, in its dictionary of “the abstruse words and terms that occur in merchandise”, as

a cleft piece of wood, to score up an account upon by notches. They are used by the officers of the exchequer, who keep one of the clefts in the office, and give the other to persons who pay in the money.<sup>19</sup>

<sup>17</sup>Thomas Madox, *History and Antiquities of the Exchequer*, 1711, p. 709.

<sup>18</sup>M. T. Clanchy, *op. cit.*, p. 27.

<sup>19</sup>Charles Johnson (trans.), *Dialogus de Scaccario*, London: Nelson, 1950. T. Madox, *op. cit.* John Mair, *Book-keeping Modernized*, 1793.

*Notch Language*

A simple form of tally had parallel notches of much the same width, each representing a single unit, as in Illustration 1. But this form was clumsy where numbers were big. Then some of the numbers might be shown by other types of cut. In Scandinavia, the angle was varied;  $\swarrow$  stood for 5,  $\times$  for 10, and  $\star$  for 20.<sup>3</sup> In England, notches of different breadth and depth have been used for different numerical units. Thus 1 was denoted by a mere scratch, but 12 by a slightly bigger cut, and 240 by a still bigger cut. A tally marked with a 1-notch and 12-notch could be a receipt for one plus a dozen units of goods, or for a penny and a shilling. We must remember that the pound and shilling were for long merely convenient units of account, i.e. coins worth a pound or shilling did not yet exist; the only English coin was the silver penny (240 of which were in theory equal to one pound weight of silver).<sup>20</sup>

At the exchequer, a strict ritual governed the breadth of the notches (and private persons may well have used the same dimensions). The *Dialogus* states that the cut for £1,000 had the thickness of the palm of the hand; £100, of the thumb; £20, of the little finger; £1, of a swollen barley corn; a penny, a mere scratch. Later, inches were used as measures. The exchequer then allotted 1½ inches to £1,000, and 1 inch to £100; such big notches tended to be U-shaped. Half-an-inch as a V-shaped notch denoted £20, and ¾ inch denoted £10; as a  $\vee$ -shaped notch, it meant £1 in late years.  $\frac{3}{16}$  inch meant a shilling; a hair's breadth, 1d.; and a small hole "prickt only by a bodkin", a halfpenny.<sup>21</sup>

If there were many notches of different sizes, they might be grouped on both the upper and lower sides of the tally:

If you hold a tally in your hand with the thick part and hole to the left, and with the note recording the name of the person to whom the business relates and the cause of the payment towards you, then you will find the cuts for the largest denomination — whether thousands, hundreds, scores of pounds or smaller amounts — on the lower edge near the right-hand extremity, and no other denominations will be cut on

<sup>20</sup>John Lubbock (Lord Avebury), *A Short History of Coins and Currency*, London, 1902.

<sup>21</sup>H. Jenkinson, *Proceedings of Society of Antiquaries*, 1913, p. 33. J. E. D. Binney, *British Public Finance and Administration, 1774-92*, Oxford: Clarendon, 1958, p. 222.

that edge. The lower denominations are all cut on the upper edge with pennies nearest the right-hand end.<sup>22</sup>

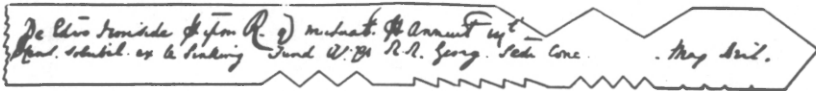
Illustration 2 shows a stock of 1293, issued as a receipt by the exchequer to the sheriff of Surrey.<sup>22.1</sup> It has two deep triangular notches, and is thus for  $2 \times £20 = £40$ . Illustration 3 is a diagrammatic view of one end of an exchequer tally acknowledging the receipt of £236.4s.3½d. on 25 October 1739, as a loan to the king on 3% annuities repayable out of the Sinking Fund.<sup>22.2</sup>

### ILLUSTRATION 2



Exchequer stock of 1293. Public Record Office, E 402.

### ILLUSTRATION 3



Exchequer tally, 1739, for £236.4s.3½d. See note 22.2 for source.

Thanks to notches of different sizes, it was easy for even an illiterate stall-holder to cut and to recognise elaborate money numbers. But perhaps we are wrong to dismiss him as completely illiterate, since his notches surely can be looked on as a form of writing. (It has indeed been suggested that the tally's vertical and diagonal notches may be the ancestors of some ancient alphabets — runic in Scandinavia, and ogham among the Celts — and conceivably of Roman numerals.)<sup>23</sup>

<sup>22</sup>R. L. Poole, *The Exchequer in The Twelfth Century*, Oxford: 1912, p. 88.

<sup>22.1</sup>PRO. E 402.

<sup>22.2</sup>*Parliamentary Papers*, 1868-9, XXXV, Vol. 2, p. 339.

<sup>23</sup>A. Grandell, 1989, p. 9, tells of a Viking tally with cuts for both numerals and Ogham words.

### *The Tally Grows Bigger*

The tally's dimensions could readily be varied to suit the breadth and number of the notches.

Accordingly, as prices rose over the centuries, the tally's length tended to grow. (Maybe its growth could yield a rough index of general prices.) The collection at the Public Record Office (P.R.O.) includes specimens dating from medieval times to the early nineteenth century. Its fourteenth century stocks are slim and short (say, 5 inches), and thus in outline look rather like a toothbrush. By the eighteenth century, prices had risen perhaps fifteen-fold, and the length of some P.R.O. tallies had stretched to between two and five feet. The famous specimen at the Bank of England is eight feet long. The sides grew to about an inch, and the weight to a quarter of a pound or more.

## THE MEDIEVAL EXCHEQUER TALLY

From earlier pages, one might well suppose the tallies at the exchequer to have mainly been its own receipts — issued for instance to a lender of cash, and brought back by him for cancellation at repayment date. But in fact some tallies came to concern more than those parties, and took on roles far more ambitious than those of straightforward receipts.

### *The Tally as an Order on the Exchequer*

In one of its extra roles, tallies became rather like a modern bill of exchange or bearer cheque drawn on the exchequer. Various officials other than those of the exchequer (e.g. of the "King's wardrobe") issued their own tallies in return for goods that the king needed urgently but could not pay for: "supplies could not wait upon arithmetic". For instance, when the king and his vast household travelled, he had the right of purveyance, for which large numbers of tallies were issued to suppliers. Other officials might be far afield. A surviving account of the Bishop of Carlisle tells how he bought nails on credit for work on the king's behalf at Carlisle castle; he gave stocks to the suppliers, and rendered his account (rolls) to the exchequer with the foils attached by thread as vouchers. Again, kings increasingly decentralised supply work by off-loading it onto sheriffs (e.g. these might be told to send 500 lambs to Westminster); the

sheriffs issued their own tallies to sellers, as claims to be paid presently.<sup>24</sup>

The holder of these stocks was presumably paid later by the sheriff, etc.. Or he might approach the exchequer for allowance; whether he then got satisfaction was, as we shall see, quite another question.

### *Orders on Distant Debtors*

In financial matters, the medieval king faced two difficulties. First, at times he needed more ready cash (e.g. for a campaign) than lay in his London exchequer. Second, much of his revenue was gathered and held by officials who were scattered across the realm; this cash could not readily be sent to London. He contrived to lessen both these difficulties by promoting the tally to yet another role.

The king's far-off debtors included the sheriffs and various other tax collectors, such as the port officials who levied customs dues on e.g. wool exports (the "customers", of whom Chaucer was for some years the head). In an age without banks and safe roads, these men had great trouble in remitting money to London. For instance, on one occasion when the Boston customers brought coins, the exchequer had to command sheriffs *en route* to provide armed guards and accommodation, to be paid for out of the customers' treasure.<sup>25</sup>

To circumvent this difficulty, the exchequer had by about 1320 invented an ingenious use of the tally that enabled the king to settle accounts with his remote agents, and moreover to do much of his business without cash. The tally turned into an instrument for many-sided transfers.

To paraphrase Jenkinson; "If X owes B, but is owed by A, let him — X — make out a receipt to A and give it to B, and let B not part with it till he receives the money". In other words, if the exchequer — X — was short of funds, it would cajole creditor B into taking not cash but a tally addressed to some tax collector A. The tally purported to be a receipt by the exchequer for such-and-such a sum, paid in by the collector A out of such-and-such type of revenue: in fact, it recorded not A's payment but what he

<sup>24</sup>H. Jenkinson, *Proceedings of the Society of Antiquaries*, 1913, p. 33; *Archaeologia*, 1923-4, p. 306. Anthony Steel, *Receipt of the Exchequer, 1377-1485*, Cambridge: 1954, p. xxxv. W. A. Morris, *Medieval English Sheriff*, University of Manchester, 1925, p. 267.

<sup>25</sup>Hubert Hall, *History of the Customs Revenue*, London: 1892, p. i 10, 193; ii 27.

was someday likely to owe. Armed with this tally of assignment, creditor B presented himself to the collector, and — if all went smoothly — exchanged it for cash. The tally would afterwards serve the collector as his acquittance at the exchequer.<sup>26</sup>

On occasion, the tally followed a more roundabout path. The first holder B used it to pay C (at a discount?); C in turn might pass it to D; and so on. It thus circulated like a negotiable bill of exchange before reaching A. It became a kind of wooden money, useful to eke out the poor coinage.<sup>27</sup> Here then was a great innovation, but with the old primitive form preserved.

### *Assignment and Anticipation*

These assignment tallies came to play a big part in royal finance. They enabled the king to anticipate revenue:

a pernicious process by which the crown sought to stave off present disaster by imposing severe penalties on the future.<sup>28</sup>

Such tallies also let exchequer officials shift the trouble of debt collection onto other shoulders. This was a mixed evil. If creditor B and collector A both worked in London, the system might do them little harm. If they worked in the same remote area, the system was positively beneficial to both, in that it cut out the costs, fatigues, and dangers of taking money to London and back; thus a royal employee B could conveniently get his salary from nearby collector A. But if B worked in London, and a high-handed exchequer gave him a tally on a remote A, the system was grossly unfair. B might be forced to go on a long journey, with no assurance of a favourable reception at the end.<sup>29</sup>

### *Delays and Default at the Exchequer*

If a creditor's tally was drawn on the exchequer, he could face many troubles. His tally might take the form of an order on the Treasurer, payable at sight out of either revenue at large ("so much of the treasure remaining in your hands"), or some

<sup>26</sup>H. Jenkinson, *Archaeologia* 1911, p. 369; *Proceedings*, 1913, p. 34. T. F. Tout, *Chapters in the Administrative History of Medieval England II*, London: 1920.

<sup>27</sup>Philip Norman, *Archaeological Proceedings*, 1902, p. 288.

<sup>28</sup>T. F. Tout, *English Historical Review*, 39, p. 411.

<sup>29</sup>A. Steel, *op. cit.*, p. xxxi.

specified source of revenue.<sup>30</sup> But, if the exchequer's funds were running low, such orders could not guarantee payment.

Kings were not systematic in their spending, and the exchequer sometimes still faced claims for two whole years of arrears. It therefore had to rank claims in some order of preference. Its chosen system affronts today's ideas of fairness. A creditor was most likely to get paid if he was (1) a member of the king's family or household; (2) a current supplier who threatened to withdraw; and (3) someone who could trade services, e.g. make a fresh loan, or (members of parliament) grant a tax.<sup>31</sup>

If he was not on this privileged list, the tally-holder could follow various courses. He could employ an attorney with inside knowledge to solicit on his behalf. He might pay a fee (perhaps a bribe) to officials who could "spy out an assignment". He might try to "catch the king's ear" — especially by offering to cut down the size of the debt, sometimes by half. The king was apt to drive a hard bargain. If he finally favoured the claim, he gave the creditor a warrant on the exchequer. But even this might not be enough to secure attention there. Some creditors would in the end despair of being paid, and look on their claim as gifts to the king.

Even where the creditor was lucky, he would probably receive not cash but ("with somewhat tempered satisfaction") a tally of assignment. In most years, the exchequer paid more by tally than by cash; in 1381, the assignments rose to £47,000 while cash payments were only £7,000.<sup>32</sup>

### *Troubles with Assignment Tallies*

The winning of an assignment tally could herald fresh tribulations. If it were drawn on (say) a customer in Cornwall, the holder faced an arduous journey (a prospect that might prompt him to discount the tally in London, with a merchant or perhaps an enterprising official at the exchequer itself). Arrived in Cornwall, he might be met by a harassed customer who was already overdrawn, or who faced a proliferation of preferences. Delay and insolence were common. The customer's difficulties might be genuine, e.g. where he had been ordered (assignments

<sup>30</sup>H. Hall, *op. cit.*, 1892, p. 188.

<sup>31</sup>G. L. Harriss, "Preference at the Medieval Exchequer," *Bulletin of the Institute of Historical Research*, 1957, p. 17, *et. seq.*

<sup>32</sup>J. F. Willard, "The Crown and its Creditors," *Eng. Hist. Rev.*, 1927, p. 12. A. Steel, *op. cit.*, p. 345.

notwithstanding) to send all his money to the exchequer. But he sometimes used his position as discretionary paymaster to line his own pockets.

A system of preferences here again affected the tally-holder's prospects. His chances were good if he was a local baron; they might be good too if he was a local merchant, especially one whose tally was levied on customs arising from his own goods; he might even contrive to be appointed collector, and pay himself. A peremptory writ from the king reinforced a claim. A less-favoured holder might try to discount the tally with the collector, or perhaps hint at a bribe; but he would still be in competition with other claimants. An insignificant pensioner was likely to get only a "saucy answer".

If the holder's importuning finally came to naught, as was often the case, he had to take his dishonoured tally back to the exchequer. There the clerks cancelled his original entry in their accounts; and he wearily joined the queue for a fresh tally, probably on a different revenue. Another journey followed. Years might pass before he got his money. Yet all these (and other) imperfections in the system "do not seem to have disturbed the equanimity of the exchequer".<sup>33</sup>

#### *The Exchequer's Accounting for Tallies*

The exchequer kept its accounts as lists of receipts and payments on separate sheepskin rolls ("pells"). This simple method worked efficiently until the tally of assignment came into use.

Not surprisingly, the exchequer could not readily fit entries for these new tallies into its cash accounts, which became endlessly confused. On striking an assignment tally, the clerks entered not only the notional receipt but (as cash was not in fact received) also a notional payment. More trouble came when the tally was finally returned by the customer, etc., for his acquittal. The clerks sometimes took refuge in explanatory glosses and fictitious loans.<sup>34</sup>

#### *Discounting*

We may guess that, as tallies circulated so freely, many private firms engaged in discounting; and that the big risks and delays made for stiff rates. But we know little about the details

<sup>33</sup>*Ibid.*, p. 364. H. Hall, *op. cit.*, 1892, p. i 11, 190. G. L. Harris, *op. cit.*, p. 25.

<sup>34</sup>H. Jenkinson, *op. cit.*, 1923-4, p. 306. C. D. Chandaman, *The English Public Revenue, 1660-88*, Oxford: Clarendon, 1975, p. 288.



and rates of discounting, presumably in part because canonical rules against usury made explicit mention indiscreet. We do know that the customers' discount charges on tallies (bribes rather than time discount?) were looked on as an abuse of power, and were denounced in popular petitions.<sup>35</sup>

We likewise know little about rates of loan interest. Despite the ban on usury, the king was able to raise loans; and the rich lenders grew richer. Interest must have been allowed in some guise or other. Possibly the exchequer issued loans at a deep discount; in one instance, the lender of £2,703 seems to have paid in only £2,000, the £703 shortfall being described as war expenses. Or a lender might get a seemingly unconnected reward such as a post as tax 'farmer'.<sup>36</sup>

### *Royal Control of Sheriffs via the Tally*

In the early middle ages, the English kings (notably Henry I, 1100-1135) were bent on wresting administrative power from feudal barons, and giving it to royal servants. These included the sheriffs of the counties. Besides their many other duties, sheriffs collected revenues that included certain taxes, receipts from the royal estates, and the "rich spoils of the law" (i.e. fines).

Sometimes the office of sheriff was filled by a powerful baron and became hereditary; but, whenever possible, the king put his own men into these key posts. He used the exchequer as a means of clamping tight controls on them. And the exchequer relied heavily on the tally. (Curiously, the king does not seem to have used this tally system in his southern French domains<sup>39</sup>.)

Twice a year, the sheriff had to present himself at the exchequer to defend his stewardship, i.e. act as 'accountant' for all details of the revenues and expenses of his shire. (The civil servant at the head of a British government department is still its "accounting officer"). He then paid in sums that he owed, and was given tallies as receipts; in early days, he might be given separate tallies for individual items of revenue (e.g. on one occasion, the Yorkshire sheriff got 972 at once), but later on he received a collective *dividenda* tally for all petty items. He produced tallies as vouchers for some of his expenses.<sup>37</sup>

<sup>35</sup>H. Hall, *op. cit.*, 1892, p. i 10.

<sup>36</sup>A. Steel, *op. cit.*, p. xxxvii, 319; Cambridge Economic History.

<sup>37</sup>Helen M. Cam, *The Hundred and the Hundred Rolls*, London: Methuen, 1930, p. 1, *et. seq.* Judith A. Green, *Government of England under Henry I*, Cambridge, 1986, p. 195. Parliamentary Papers, 1868-9, xxxv, 2, p. 339. H. Jenkinson, *op. cit.*, 1911, p. 368; 1923-4, p. 300. Sheriff = shire-reeve. Reeve = steward.

*Tax and Tallies*

Throughout Europe, taxes and other dues were levied with the tally's aid. Scandinavia in particular gives proofs that tallies were used when taxes and tithes were gathered. Thus a Finnish court record of 1522 tells how Thomas had to pay a heavy fine for breaking the collector's tally "with which it is the custom to collect tax".<sup>38</sup> Again, a French document of 1578 orders villagers near Dijon to stop using tax tallies.<sup>39</sup>

Two interesting questions follow. First, as some taxes had names that resemble "tally", were these names derived from the tally? Examples are:

*Tallage*, imposts levied by English kings and feudal superiors. Serfs protested "they would rather go down to hell than be beaten in this matter of tallage".<sup>40</sup>

*Tallia*, a Swedish tax.

*La taille*, the vexatious French tax originally levied on ignoble persons to raise funds for e.g. their lord's crusade, and later levied by the king (till the Revolution).

Voltaire tells us that the name *la taille* did indeed come from the "odious collectors'" practice of marking each payment on a tally;<sup>41</sup> and some later writers find this plausible. But the balance of expert opinion traces the name to an allied stem, *taliare*, to cut (cf. "tailor"); thus the French king cut (apportioned) the tax total between provinces according to reports on their crops, etc., and so on down to parishes, and then (by "friendship, party, animosity, and private resentment") to persons.<sup>42</sup>

Second, did the collection process rely on the split form of tally? Probably not. The unsplit tally was better in two ways: it displayed the apportionment of taxes between households, and it served the collector as voucher when he accounted to his superior for all sums due.<sup>38</sup>

Records of as late as 1784 show the procedure still extant in remote villages of the Landes and Pyrennees. The "coarse and ignorant" inhabitants met in general assembly, and assessed

<sup>38</sup>A. Grandell, 1989, p. 12.

<sup>39</sup>J.-J. Hemardinquer, "La Taille, Import Marque sur un Baton", *Bulletin Philologique et Historique*, Bibliotheque Nationale, 1972, p. 508-11.

<sup>40</sup>H. S. Bennett, *Life on the English Manor*, Cambridge: 1937, p. 139.

<sup>41</sup>*Larousse*, "la Taille"; Voltaire, *Oeuvres*, Paris: 1819, xiii, p. 80; xiv, p. 371.

<sup>42</sup>*Oxford English Dictionary*. Adam Smith, *Wealth of Nations*, III, p. 307.

themselves (in kind) according to their means; the collectors, also illiterate, notched the tax roll on a "baton".<sup>39</sup> Sweden has hundreds of unsplit tax tallies. A rather fine one, from 1627, looks somewhat like a broadsword. It has a line down the middle of each side. One of the resulting strips lists the payers' marks: alongside each mark, in the other strip, are notches recording the payers' dues. Finland has a planchette of as late as 1820, for day labour on roads, etc., by twenty families. Thanks to such tallies, the villagers could see the fairness (or otherwise) of the sharing between households, the payers were given a receipt before witnesses, and the collector had a complete record.<sup>38</sup>

### THE PRIVATE TALLY

The more remote the tally was from a government office, the less likely it was to survive. The PRO has preserved several hundred private tallies (vouchers to accounts); otherwise few remain. However there can be little doubt about the "extreme popularity" of the private tally. Estates and monasteries found it convenient; some surviving stocks, notched by a reeve when he collected rents from monastery tenants, served to acquit tenants in the eyes of the abbot. Wycliff denounced "lords who take goods of the poor and pay for them with white sticks". There is evidence of the tally's common use among traders by the thirteenth century (and presumably it had come into use earlier). Chaucer's characters mention it twice ("so be I faille [to pay] . . . write it upon my taille"). Many tallies, anticipating bills of exchange, were passing from hand to hand at a discount. "English medieval finance was built on the tally."<sup>43</sup>

At a time when coins were both scarce and bad, the tally helped to foster the process by which a credit economy flourished even though debt settlements depended ultimately on barter. A barter system could hardly function well if it consisted only of discrete transactions — if (say) tailor and peasant had to swap a coat for a pig. The tailor might not want a pig that day; and the coat might be worth more than a pig. Dealings became feasible if the tailor sold the coat on credit, and at later dates bought such items of farm produce as he needed, crediting the peasant; tallies enabled the necessary accounting to be done. They likewise enabled merchants to trade with one another on a

<sup>38</sup>A. Grandell, *op. cit.*, 1989, p. 12.

<sup>39</sup>J.-J. Hemardinquer, *op. cit.*

<sup>43</sup>H. Jenkinson, *op. cit.*, 1923-4, p. 293; 1911, p. 379. A. Steel, *op. cit.*, p. xxxv. M. T. Clanchy, *op. cit.*, p. 72, 95. G. Chaucer, *Prologue*, line 570.

two-way basis, with the balance swinging from side to side (as in Colonial America, where however ledger accounts kept track of the deals).<sup>44</sup>

Private persons used much the same notch language as the exchequer, but their writing — if any — tended to be terse and less likely to stick to the full and rigid formulas of officialdom.<sup>45</sup> Notches thus might perhaps stand for money or pigs or corn. The users relied on memory and witnesses for the full story.

The tally's everyday use is attested in several ways. It is for instance taken for granted in the matter-of-fact evidence at an "inquisition" into the wounding of Walter, an estate servant: Walter was lifting a table, and Hugh was cutting tallies ready for use, when Walter tumbled and fell on Hugh's upturned knife.<sup>46</sup> Consider too comments by judges, and the tally's contributions to our speech.

### *Judges and Tallies*

Tallies featured in legal cases, for instance where a creditor demanded payment for goods or repayment of loan. His stock would then at least support his claim; but it might be accepted, not merely as evidence, but as itself generating liability. Its validity was increased if it bore the debtor's seal (important with illiterates).

In 1294, a judge went out of his way to help a merchant who produced an inadequate tally:

He who demands this debt is a merchant, and therefore if he can give slight proof to support his tally, we will incline to that side . . . Every merchant cannot always have a clerk with him.

Again, a creditor in 1310 proffered two sealed tallies to witness a debt due by a parson. When the latter tried to evade liability, he provoked the following argument:

"To that you cannot get: for we have produced tallies sealed with your hand."

"We are not put to confess or deny this tally."

At which Chief Justice Bereford thundered:

"Are not the tallies sealed with your seal? About what would you tender to make law? For shame!"

<sup>44</sup>W. T. Baxter, *The House of Hancock: Business in Boston, 1724-75*, Cambridge, Mass.: Harvard, 1945.

<sup>45</sup>H. Jenkinson, *op. cit.*, 1923-4, p. 319.

<sup>46</sup>*Ibid.*, p. 312.

But Bereford in a later case disparaged the tally (somewhat inconsistently?), pointing out its defects:

“The tally is a dumb thing and cannot speak . . . The notches too; we cannot tell whether they refer to bullocks or to cows or to what else, and you may score as many notches as you like; and so we hold this to be no deed which a man must answer”.<sup>47</sup>

### *The Tally's Imprint on our Speech*

The wide use of tally is suggested by its many contributions to our everyday speech, e.g.:

*To tally*, i.e. to match or agree.

*Stock*. The tally's use as receipt led to “government stock”, “stock exchange”, etc. (But “stock-in-trade” stems from the other use of “stock” as “wealth”).

*Counterfoil*, “counter” probably meaning a control or check.

*Score* has led to e.g. “pay off old scores” and “refused on the score of —”. Its meaning of “twenty” is said to have come from the herd's habit of counting his beasts by scoring a stick (using the Scandinavian  $\diagup$ ,  $\text{+++}$ ,  $\times$ , and  $\text{X}$  for 1, 5, 10, and 20). The meanings in sport come from recording cricket runs, etc., with notches; eighteenth century pictures of cricket matches often show two scorers notching the runs on short sticks.

*In the nick of time* suggests last moment victory.

*Hop-sotch* is related.

*Indenture*, a paper cut zig-zag — an alternative to the wooden tally.

Less common now are “tallyman” (a trader selling goods on credit, and collecting the price by instalments); “on tally” (on tick); and “to live on tally” (outside wedlock).<sup>48</sup>

<sup>47</sup>C. H. S. Fifoot, *History and Sources of the Common Law*, London: Stevens, 1949, p. 224-246.

<sup>48</sup>*Oxford English Dictionary*; but see Thomas, Keith, “Numeracy in Early Modern England”, *Trans. Royal Historical Society*, 1987, p. 119.

*The Decline of the Private Tally*

Jenkinson argued that tallies reached their peak of popularity in the fourteenth century, and that their private use declined thereafter (though the exchequer clung to them, ostensibly because they were necessary for the safety of the king's revenue, but also because the staff had a vested interest in the old ritual). He dated private tallies by their use of Latin or English; he saw many with Latin inscriptions (i.e. early date), only two with English (later date). He ascribed the decline to increased literacy and the coming of paper.<sup>49</sup>

But we may well suppose that the decline was slow, and stretched over centuries. Paper may perhaps have appeared in urban England by the thirteenth century, but it remained an expensive import. In Tudor times, a quire of writing paper (twenty-four sheets) cost a labourer's day wages; and probably the fringes of Scotland and Ireland had not yet heard of it. The invention of printing must have strained supplies of both paper and parchment; one parchment copy of the Gutenberg bible needed the skins of three hundred sheep.<sup>50</sup>

The tally in many ways compared badly with paper. It was less easy to use and store. And it could hardly be adapted to the needs of the new breed of literate men who were learning to use Arabic numerals, the alphabetical index, cross-references, and then the ledger.<sup>51</sup> Paper's convenience came to outweigh cost, in the eyes at least of substantial merchants. The Yamey volume of accounting pictures shows Renaissance counting-houses in rich detail, but not a single tally.<sup>52</sup>

Yet some lesser folk must have stayed loyal to the tally. Shakespeare would hardly have mentioned it in a poem of personal feeling if it had not been in fairly common use ("nor need I tallies thy dear love to score"). Another of his lines perhaps suggests that, though still familiar, the tally was coming to be looked on as out-worn ("whereas, before, our forefathers had no other books but the score and tally").<sup>53</sup>

Can we regard the tally as being, in any direct sense, the ancestor of double-entry accounts? Clearly not. But the tally did

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<sup>49</sup>H. Jenkinson, *op. cit.*, 1923-4, p. 313.

<sup>50</sup>D. C. Coleman, *op. cit.*, p. 4.

<sup>51</sup>K. W. Hoskin and R. H. Macve, "Accounting and Examination", *Accounting, Organization, and Society*, 1986, p. 105.

<sup>52</sup>B. S. Yamey, *Arte e Contabilita*, Bologna: Credito Romagnola, 1986.

<sup>53</sup>Sonnet 122. 2 Hen. VI., iv 7 39.

foster credit transactions and multi-sided transfers; and so it must have made merchants familiar with notions that later won better expression as debits and credits.

### THE CHECKER-BOARD

Despite its merits as a record, the tally was hardly an efficient means of calculating. It became more helpful when it was used alongside the abacus.

The latter has taken several forms, some of which were already familiar in antiquity. It might be no more than a board sprinkled with dust on which lines were scratched (“abacus” possibly comes from Hebrew “abaq”, dust); and pebbles might

### ILLUSTRATION 4

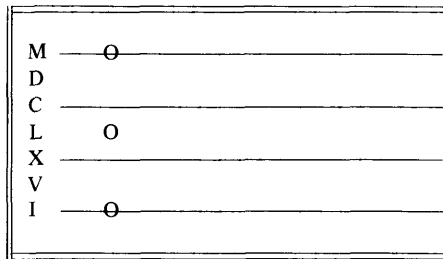


Checkerboard and counters. (Hans Schüfelein, parable of the unjust steward, early sixteenth century. Courtesy of B. S. Yamey, page 107 — see note 52.)

serve as counters (Latin *calculus* means “pebble”). By late Norman times, however, it had developed into the superior form (imported from Moorish Spain) of the checker-board (*scaccarium*, a chessboard). This might literally be a board, or a table-top, or a “worked reckoning cloth” to be put on a table. It was criss-crossed with suitable lines; calculation was done by moving counters onto and off the resulting spaces. The counters usually were bits of metal like coins.<sup>54</sup>

### *Rulings*

There were several forms of ruling (geared to the Roman numerals). One of 1691 looked like this:



The circles represent counters, here for 1,000, 50, and 1, i.e. a total of 1,051. As can be seen, counters were put either on the lines, or (to represent intermediate numbers such as V and L) half-way between lines.<sup>55</sup>

For money arithmetic, some slightly more complex form was useful. Two such forms are shown below. The first (“the merchants’ use”) had a horizontal row for each denomination of money:

*Pence* — lowest row (nearest operator). A counter on the line stood for 1d.; above the line, for half a shilling, i.e. 6d.

*Shilling* — next row. A counter on the line and to the right stood for 1s., to the left for 5s.; above for half a £, i.e. 10s.

<sup>54</sup>F. P. Barnard, *The Casting-Counter and the Counting Board*, Castle Cary: Fox, 1981, p. 29.

<sup>55</sup>*Ibid.*, p. 235.



and so on for the £ and for scores of £s. The abacus might accordingly look like this:

£xx	○	○	○	○	○	$20 \times (5 + 4) = \quad \text{£}180$ $10 \quad \left. \vphantom{20} \right\} = \quad \text{£}18$ $5 + 3 \quad \left. \vphantom{20} \right\} = \quad 19 \text{ s.}$ $10 \quad \left. \vphantom{20} \right\} = \quad 11 \text{ d.}$ $6 \quad \left. \vphantom{20} \right\}$ $5 \quad \left. \vphantom{20} \right\}$
£	○	○	○	○	○	
s.	○	○	○	○	○	
d.	○	○	○	○	○	
£198.19.11						

The second form ("the auditor's use", employed at the exchequer) had vertical columns for the denominations; the operator used as many horizontal rows as he found helpful (e.g. for distinguishing revenues from expenses):

*Pence* — right-hand column; counters stood for 1d. if placed low, and for 6d. if high.

*Shillings* — next column; low counters stood for 1s.; high counters for 5s (at right) and 10s (at left)

and so on £s, etc. The exchequer used seven columns (£10,000, £1,000, £100, £20, £1, 1s., 1d.),<sup>56</sup> and thus reflected the various sizes of notches on tallies:

£xx	£	s.	d.
○	○ ○	○ ○	○
○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○
○		○	○ ○
20 × 5	10 + 5	10 + 5	6
20 × 4	3	4	5
£180	+ 18	19s.	11d.

<sup>55</sup>Dialogus, p. 31.

### *Calculation Technique*

To see how addition sums were done on the abacus, we can turn to the description of a tax audit at a German city (adapting it by substituting English money units). A gentleman of standing (the “reckoner” or “calculator”) had the cloth before him, and a bowl with silver counters. The burgomaster read out the various sums due; for each sum, the calculator placed counters on the appropriate spaces. As soon as there were counters for 12d. in the penny space, he took them off and put one counter in the shilling space. As soon as there were counters for 20s. on the shilling space, in like manner he took them off and put a counter in the space for £s. A second gentleman examined the vouchers. A prelate read out a duplicate copy of the accounts (to ensure that the church got its share?). When the reckoning was finished, the calculator stated the amount shown on the cloth; the burgomaster was responsible for the accuracy of the result.

Subtraction could be done by removing counters. Even multiplication and division were possible, but only by a skilled abacist.<sup>57</sup>

### *The Counters*

Coins could serve as counters. But, soon after AD 1200, the French court took to using special “casting counters” (*jettons*), and this fashion spread. Persons of refinement might have their own silver pieces, stamped with fanciful designs that illustrated proverbs, verbal conceits, etc. The less-affluent used crude pieces made of base metal. Sometimes counters served too as small change.

Though few “boards” have survived, there are still counters in plenty. One collector tells us that he owned 7,000 and had examined 35,000 others.

From the standpoints of numbers and interest to later collectors, French counters reached a peak under Louis XIV. They were employed until the Revolution (and acquired extra uses as medals and as largesse to be thrown to the poor). But the Revolution brought its simpler decimal units of money, weight, etc.; moreover the old system savoured of royalism. Many counters went to the melting pot.<sup>58</sup>

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<sup>57</sup>F. P. Barnard, *op. cit.*, p. 233; Charles Singer (edit.), *History of Technology*, II, Oxford: 1957, p. 766.

<sup>58</sup>F. P. Barnard, *op. cit.*, p. 22; J. M. Pullan, *History of the Abacus*, London, Hutchinson, 1968, p. 45; David E. Smith, *History of Mathematics*, Vol. 2, N.Y., Dover, 1958.

*Decline of the Abacus*

In Britain, the counting board probably dropped out of use somewhat earlier. Shakespeare still had references to it: Iago speaks scornfully of "this counter-caster", and an ignoramus "cannot do it [arithmetic] without compters".<sup>59</sup>

Two things lessened the need for the abacus. One was cheap paper. The other was the use of Arabic numerals. Europe was slow to accept these. The author of the *Dialogus* knew of them (thanks to the writings of Moorish scholars), but preferred the Roman system. "Ciphering" was long regarded as a bizarre and mysterious art. Arabic figures had however percolated into common use by the seventeenth century, and "made the elementary rules of arithmetic accessible to every child". An arithmetic book of 1668 explains manual accounting, but omits this section in its 1699 edition.<sup>60</sup> The Scots exchequer abandoned its board perhaps about 1660.<sup>61</sup> Only in the East has the abacus (in its form of beads on wires) remained popular.

## THE MEDIEVAL AUDIT

*Manor Accounts*

A feudal lord could own many manors. His whole estate was often supervised by a steward, and each manor by a reeve. The latter was either appointed from above or elected by his fellow serfs.

## The Reeve as Accountant

One of the reeve's most troublesome tasks was to draft the yearly accounts for his manor. For this work, he relied on his memory, tallies, and perhaps notches on barn-posts. (We are told that some nineteenth-century farmers still kept complicated accounts on tallies, cutting the amounts with a bill-hook "as fast as you could write them with a pen".) The reeve's figures were put into writing by trained scribes, who made a round of manors each Michaelmas for this purpose; or the priest might do the writing.

In form, the reeve's accounts seem the obvious ancestor of the "account charge and discharge", still used by Scottish

<sup>59</sup>*Othello*, I i 31; *Winter's Tale* IV iii 38.

<sup>60</sup>*Dialogus*, p. xxxvii; C. Singer, *op. cit.*, p. 767; K. Thomas, *op. cit.*, p. 122.

<sup>61</sup>A. L. Murray, "Procedure of the Scottish Exchequer". *Scot. Hist. Rev.*, xl, p. 95.

solicitors for trust funds, etc. The reeve was charged to deliver, e.g.:

Rents  
Sales  
Fines receivable

The discharge allowed him such items as:

Tithes  
Repairs to castle

The fines of tenants too poor to pay

Then came the balance payable by the reeve for this year, plus any balance due from earlier years. (Sometimes the latter balance prefaced the charge; but that arrangement blurred the current year's results.) A physical inventory of livestock might be appended on the back of the account. Tallies might be attached to the foot of the account, to record payments by the reeve to his lord.

### Hearing the Accounts

The feast of St. Michael (29 September) was the "season for hearing the accounts". The reeve at that time faced a whole team of auditors: it might include the steward and (if the manor belonged to a monastery) the cellarer. These men were well-informed, and would "take inquest of the doings which are doubtful". To help their probings, they brought with them the rolls of the manor, and so could — with seemingly uncanny knowledge — check the current figures with earlier ones. In many surviving accounts, some entries in the scribe's writing are struck out and replaced by entries in an auditor's hand. The reeve used tallies to vouch his outlays, and received a tally when he handed over his balance. If we may judge from the well-known procedures at the exchequer, the manor auditors did the needed sums with the help of a reckoning cloth.

A reeve might be put in the stocks because of his arrears. But sometimes the auditors would forgive a debt because of the reeve's "weakness and poverty".<sup>62</sup>

### *The Exchequer Audit*

Just as many a pub is called "The Chequers", the principal treasury of England took its name from the checker-board,

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<sup>62</sup>H. S. Bennet, *op. cit.*; John Hacker, *Rural Economy and Society in the Duchy of Cornwall*, Cambridge: 1970. *Proceedings of the Society of Antiquaries*, 1893-5, p. 309. P. D. A. Harvey, *Manorial Records*, British Records Association, "Archives and the User, No. 5", 1934.

which was central to its working. An earlier name was “The Tallies”.

The exchequer was first mentioned in 1110<sup>62-1</sup>. It was organised in two divisions:

*Upper.* This was a court of the “King’s Baron’s and Great Men”, e.g. the Justiciar (first subject of the realm, entrusted “with the king’s very heart”), Chancellor, Constable, and Treasurer. They made sure that the royal revenue was properly collected, largely by the sheriffs. The Treasurer was the mainstay of the whole exchequer. Fitznigel had himself obtained the post (by purchase); his *Dialogus* lingers affectionately over the procedures, particularly the sheriff’s audit. The upper division became also a court of law, popular because it gave prompt judgment over disputed dues, and enabled citizens to appeal against harsh collectors.

*Lower.* This had the humbler roll of cash office. It was staffed by lesser officials, differing in their duties (Fitznigel tells) “but alike in their zeal for the king’s advantage when justice permits it”. They deputised in their masters’ names; thus, when in time the Chancellor stopped attending the meetings, his clerk took his place, eventually coming to be called the Chancellor of the Exchequer and then superseding the Treasurer as chief official; there were likewise two understudy Chamberlains and a Constable. Other officers included four tellers to count the cash, a silver-smith and melter (to assay coins paid in), a tally-cutter, and an usher who went to the royal forests to fetch wood for tallies. Some of these functionaries assisted their masters in the Upper Court when it was in session.<sup>63</sup>

### The Sheriff’s “Farm”

Because trustworthy officials were not always available, medieval kings tended to privatise tax gathering, i.e. to use tax farmers. A sheriff paid a fixed rent — his “farm” or “ferm” — for the right to collect certain of his county’s taxes, rents of royal manors, etc. (but he also had to collect and hand over some other items). A surplus on his farm was his wages; a deficit had

<sup>62-1</sup>Judith A. Green, *op. cit.*, p. 41.

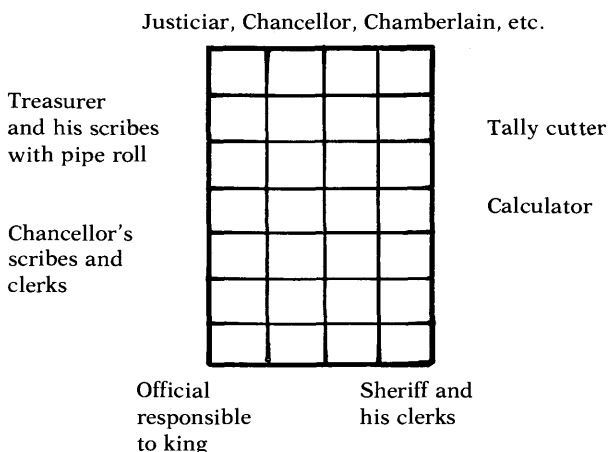
<sup>63</sup>*Dialogus*, p. xxxv *et. seq.*; *Dictionary of the Middle Ages*, N.Y.: Scribner, 1984, p. 532.

to be made good out of his own pocket. He thus had strong reason to act as “the hammer of the poor”.<sup>64</sup>

The king summoned a sheriff (“see, as you love yourself and all that you have, that you be at the exchequer there and then”) at Easter and at Michaelmas. The Easter visit was provisional, i.e. the sheriff then paid in about half of his dues on account — the “sheriff’s profer”, for which he received a memorandum tally. His accounts were not audited till his Michaelmas visit, when he came back for another profer and then his audit, final payment, and acquittance.<sup>65</sup>

### Analogies with Chess and Criminal Courts

On taking his place in the court, the sheriff found himself facing a formidable team that was arrayed on three sides of a table:



The table was rather small (10 feet by 5 feet), with a rim to stop the checkers from rolling off. On it was spread a dark cloth “figured with squares like a chessboard” with lines 1 foot apart. The row of barons overlapped the top of the table. The sheriff sat opposite them; beside him were his assistants (bailiffs, and

<sup>64</sup>*Cambridge Economic History*, III, 1963, p. 437. It is not clear how much the sheriffs could earn. Their jobs were burdensome and involved outlays, yet were prized. An honest sheriff was at least entitled to various small fees and some hospitality. A dishonest sheriff could exact other fees (“the sheriff’s welcome”); he could cheat the exchequer; he could commandeer horses and carts; and he could be ambidextrous as a judge, i.e., take bribes from both sides — W. A. Morris, *op. cit.*, p. 279.

<sup>65</sup>*Dialogus*, p. 79; H. Hall, *op. cit.*, R. L. Poole, *op. cit.*

clerks with stocks and vouchers). His opponent, the Treasurer, sat on the left side, also with supporters.<sup>66</sup>

Fitznigel relishes the confrontation between Treasurer and sheriff, and the analogy with a chess game: just as “on a chessboard, battle is joined between two kings . . . here too struggle is joined between two persons, to wit, the Treasurer and the Sheriff who sits at his account, while the rest sit by as judges to see and decide”.

Fitznigel carries the analogy further by describing the minor officials as pawns. There were many of these, and there was much duplication of work. Not only was each item in the sheriff’s account checked carefully and entered in several rolls, but many of the officials were watched over by colleagues; as Fitznigel puts it, “a three-fold cord is not easily broken”. Such excessive checking prompts one to wonder whether the officers perhaps were too ill-educated for accuracy, or were intent on making jobs for hangers-on, or were prone to corruption. Fitznigel must have permitted himself the same doubts; when, as “master” in his dialogue, he has described the officer who acted as watchdog over the Treasurer, he makes his “scholar” interject:

Well then, saving the Treasurer’s reverence, this appointment seems to detract from his dignity, since his honour is not absolutely trusted.

At which, the master replies:

God forbid! Say rather that his labour is spared and his security assured. For it is not because either he or anyone else is not trusted that so many sit at the Exchequer; but because it is fitting that such great matters and the public affairs under so great a prince should be entrusted to many great personages, not merely for the King’s profit, but to honour his excellence and royal state.<sup>67</sup>

### Audit by Ear

Medieval audit procedure had to suit men who were illiterate, i.e. to whom the ear was more important than the eye; even nobles and monks “wrote” by dictating to a scribe, and could

<sup>66</sup>T. Madox, *op. cit.*, p. 105 *et. seq.*

<sup>67</sup>*Dialogus*, p. 28. The rolls were not exact duplicates of one another, e.g. fines levied by different courts were classed differently in the various rolls. Modern attempts to reconcile the rolls may baffle researchers. M. H. Mills, *Eng. Hist. Rev.*, 1921, p. 349.

“read” with most understanding by listening to someone with reading skill. “Inspecting a document” meant hearing it read. Auditors accordingly listened as the details of an account were related. (This presumably explains our rather odd use today of “auditor” — rather than, say, “scrutineer” — and of “to hear from” those who write to us.)<sup>68</sup>

At the sheriff’s audit, therefore, most of the court’s exalted members sat back and listened to a dialogue between the (attacking) Treasurer and the (defending) sheriff.

### The Audit Ceremony

This can be visualised as follows. The Treasurer has made meticulous preparation; he has brought tallies awaiting matching and each shire’s sheepskin records (pipe-rolls, so called because of their shape). Known revenues, (e.g. fixed rents) and payments are already entered in the rolls, and blanks are left for the unknown. The Treasurer is supported by his “lynx-eyed” scribe; next sits the Chancellor’s scribe (copying what the other writes), and the Chancellor’s clerk to watch that no mistakes are made. Yet another official is directly responsible to the King for another roll; he sits on the sheriff’s left. At the table’s right is the calculator; he sits at the middle of his side (in front of the £ column) so that his hand can move freely and everyone can see him. Beside him is the tally-cutter. Others present include suppliers, etc., holding tallies from the sheriff; alerted by public notices, they could attend the audit to check that their claims were allowed.<sup>69</sup>

The Treasurer starts by calling the name of the accountant, i.e. the sheriff, who is put under oath, and is charged — almost like a criminal — with having money of the King. The accounting (like that of the manor) follows the system of charge and discharge. The Treasurer carefully dictates from his roll the known amounts of the charge — the farm, arrears from former years, etc.; also the sheriff has to confess his variable revenues (including fines, the chattels of fugitives from justice, of those mutilated for their crimes, and of deceased usurers). His discharge covers fixed payments such as tithes, alms, and the wages of royal servants (e.g. pipers and wolf-takers). It covers also his variable payments. As authority for making these, he may plead custom (e.g. the expenses of trial by ordeal), or he

<sup>68</sup>M. T. Clanchy, *op. cit.*, p. 97, *et. seq.*

<sup>69</sup>*Dialogus*, p. 18, *et. seq.*; *Dictionary of the Middle Ages*; IV, p. 530; *Parliamentary Papers*, p. 341; W. A. Morris, *op. cit.*, p. 252.



may hand in the royal writs sent to him (e.g. orders to fortify castles, and to give “honours and succour” to royal guests). Even where the court knows well that such-and-such outlays have been made, it may hotly contest the sheriff’s claim if he does not submit writs as authority and vouchers proving payment.<sup>70</sup>

Meantime the calculator — who can perhaps be likened to a slick modern *croupier* — listens to the proceedings, and says the amounts as he flips his counters on and off — a “confusing and laborious process . . .

Tongue, eyes, hand and restless brain  
Work with all their might and main”.

He puts out the charge items as heaps of counters, and then the discharge items as heaps on a lower line. In simple cases (no “blanching” — see below), the lower line is next subtracted from the upper; the sheriff is responsible for the remainder. His stocks for earlier payments are duly matched with foils held by the exchequer.

The above description is over-simplified in various ways. For instance, the sheriff’s dealings may be split between his main farm and various minor sections, each of the latter being treated as a separate account charge and discharge. Again, some of the items may be entered by tale (the stated number of pence being accepted without deduction for clipping, forgery, and other faults), or may instead be subject to blanching (deduction for the faults). For the blanching process, the melter takes from the sheriff’s cash a random sample of 240 silver pence, melts them over a “cleansing fire”, skims off the impurities, and ends with a silver ingot. This is brought back to the court and weighed. If (say) it is 12d. (= 5%) short of a pound weight, and the sheriff’s payment is £100 of coin, the heap of counters at his credit is cut down to only £95. Then, in order that the Treasurer can account for the actual number of coins, two tallies are struck — one for the £95 (given to the sheriff), and a shorter “combustion tally” for £5.<sup>71</sup>

Moreover, doubtful questions continually come up during the audit. Do the rents accord with ancient custom? Has the sheriff acted properly? The Justiciar and other barons resolve these points and declare the law: “the highest skill at the exchequer does not lie in calculations but in judgements”.<sup>72</sup>

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<sup>70</sup>*Dialogus*; p. 24, *et. seq.*: H. Hall, *op. cit.*, 1892, p. 196.

<sup>71</sup>*Dialogus*, p. 38, 125.

<sup>72</sup>*Ibid.*, p. 15-30.

After two days of grilling, the sheriff's ordeal ends. He publicly takes his affidavit that he has made his account to the best of his knowledge and belief. If the balance is adverse, he pays it in; the two halves of his tally are put together, and the payment is recorded in fresh cuts across the splits; if he cannot pay, he is liable to go to the Tower. If a balance is due to him, it is carried forward or set off against any sums due by him on other accounts.<sup>73</sup> Finally "he is quit" is written in the rolls,<sup>74</sup> and he is "cast out of court". His account cannot in future be called in question; like a person discharged by a criminal court, he cannot be tried twice on the same charge.<sup>75</sup>

After Fitznigel's time, some details of the procedure changed. Thus the duration of a typical audit rose to seven days; perhaps as a result, the date fixed for an audit might be many months after the fiscal year.<sup>76</sup>

#### *Audit of Lesser Officials*

Much the same procedure was continued further down the official scale, e.g. between a sheriff and minor accountants (such as bailiffs from whom the sheriff exacted a farm for the right to collect part of the revenue).<sup>77</sup> The sheriff had his own "exchequer", often in the castle of his county town, with an elaborate machinery of records and private tallies.<sup>78</sup>

### THE EXCHEQUER TALLY'S SPECTACULAR END

#### *The Private Tally Disappears*

After the fourteenth century, as we have seen, substantial merchants used the tally less and less, though petty traders still found it helpful till the eighteenth century or even later. Hogarth's picture of the milk-woman shows her brandishing a tally at her poet-debtor. (Sly milk-women could sometimes, without detection, "cut dead men" — i.e. two notches for one on the split tally.<sup>79</sup>) A historian, recalling his stay in Paris during the 1830s, tell us:

<sup>73</sup>*ibid*, p. 21, 126; H. Hall, *op. cit.*, 1892, p. 186.

<sup>74</sup>"*Quietus est*"; this gives point to Hamlet's "he himself might his quietus make with a bare bodkin".

<sup>75</sup>J. E. D. Binney, *British Public Finance and Administration 1774-92*, Oxford: Clarendon, 1958, p. 216, 238.

<sup>76</sup>M. H. Mills, *Eng. Hist. Rev.*, 1921, p. 484.

<sup>77</sup>W. A. Morris, *op. cit.*, p. 250.

<sup>78</sup>*ibid*, p. 283. H. Jenkinson, *op. cit.*, 1911, p. 368; 1923-4, p. 301.

<sup>79</sup>Dorothy Davis, *A History of Shopping*, London: Routledge, 1966, p. 217; K. Thomas, *op. cit.*, p. 119.

The baker's man in the morning brought with his basket a bundle of tallies on a ring. The maid produced her counter-tally, and the number of rolls or loaves was marked with a file on tally and counter-tally laid together, just as described in the *Dialogus*.

Such a baker might keep tallies not only for his debtors, but also for his creditors; these supplied wheat, and were later paid by barter (a loaf in return for a kilo of flour).<sup>80</sup>

One comes across stray references to the split tally even in the early twentieth century. It has served as a record of output (e.g. bins filled by Kent hop-pickers), and of timber deliveries to the University of Åbo (Turku). Its use was often associated with dirty materials (e.g. charcoal deliveries in Sweden), presumably because these would soil paper records.

### *The Exchequer's Late Ritual*

Far from disappearing, the exchequer tally kept and even increased its importance for some centuries.

The exchequer has given historians much scope for colourful prose. It was "elephantine in its movements but elephantine in its memory . . . its lethargic ritual concealed a curiously sluggish vitality". Its ancient custom was "already a fetish" in the thirteenth century. Nevertheless it ran "the most efficient system of public finance in Europe"; at it, the English "showed their systematising genius".<sup>81</sup>

The exchequer's cutting and notching method persisted with little change for six centuries. A thirteenth century clerk could have interpreted an eighteenth-century tally (though, as we shall see, he would have been startled by its extended functions). Roman numerals and Latin were used till the end.

However, time brought a shift to new taxes that the sheriff did not collect, and so his half-yearly visits grew less important; nevertheless the antique manner of *viva voce* audit survived (till 1834), with a kind of dress-rehearsal the day before.<sup>82</sup> For other transactions (e.g. day-to-day dealings with tax collectors and lenders), the tally ritual had by the sixteenth century become as

<sup>80</sup>J. H. Ramsey, *Revenues of the Kings of England*, Oxford: 1925, p. 13; M. Stevelinck in correspondence. The tally was still used in some Kentish hop farms in 1938. The stocks were kept by the tallyman (strung on a cord at his belt) and the foils by the pickers. A notch was scored with a file across both bits for every five bushels — notes by Museum of Kent Rural Life, Maidstone.

<sup>81</sup>*Dictionary of the Middle Ages*, IV p. 531; H. Jenkinson, *op. cit.*, 1911, p. 368; Henry Roseveare, *The Treasury*, London: Lane, 1969, p. 21.

<sup>82</sup>J. E. D. Binney, *op. cit.*, p. 213.

follows. The sum of money received was entered in an account book and then on a strip of parchment — the “teller’s bill”. To prevent fraudulent alteration by the payer, the bill was thrown down a pipe into the tally court, i.e. a room below. Here entries were made in two more books; a tally was struck by two deputy-chamberlains, and a tally-writer put on the narration; then entries and tally were checked and re-checked. The payer could collect his stock on application, usually on a later day. If his payment was a loan, he would at its maturity present his stock; another elaborate ritual followed as the officials sought out the foil, joined it to the stock, and made suitable entries in the rolls.<sup>83</sup>

Given such strict procedures, how are we to explain the stocks that were not returned to the exchequer, and are now prized by antiquarians? Part of the answer may be that, while lenders had good reason to return their tallies at maturity date, other men might have less reason, e.g. a payer of certain kinds of tax, of a fine, or of a fee for a baronetcy. In theory, some of these payers later took their stocks back to the exchequer to have their accounts acquitted; the officials then kept the stock and spliced it with the foil. But a payer might not bother with this sterile drill; and so stocks remained in private muniments.<sup>84</sup>

### *Tallies of Sol and Pro*

At one time or another, the exchequer used perhaps a dozen different kinds of tallies (including e.g. memorandum and combustion — described above). But, for our purposes, the later tallies can still be classed under the two familiar heads;

(1) Tally of receipt.

This was the straightforward acknowledgement of actual in-payment. The first word of the entry in the pell was *solutum* (= paid); hence *sol* tally.

(2) Tally of assignment.

This was the instrument for securing payment from a third party. It usually was still a *sol* tally; the payee was not named, so that transfer was possible. But it might be a *pro* tally; here the inscription stated that it was struck *pro* (= for the benefit of) a named person, on a specified revenue. Such revenue was alienated, i.e. the right to money was transferred to a favoured creditor, who

<sup>83</sup>*Parliamentary Papers*, 1835, XXXVII, p. 342.

<sup>84</sup>H. Jenkinson, *op. cit.*, 1923-4, p. 293.

could in his own name sue the revenue receiver. A *pro tally* was clearly less flexible than a *sol tally*, and perhaps less useful to the king as a means of anticipating revenue.<sup>85</sup>

To woo cautious investors and lessen the king's dependence on goldsmiths, yet another kind of assignment tally was devised by exchequer officials early in the reign of Charles II. This was the "tally of loan", which can perhaps be regarded as the first government stock. It was backed up by a repayment order that carried 6% interest and was negotiable by endorsement. Such tallies were to be cashed in regular sequence from taxes granted by Parliament; but officials at once extended the system to other kinds of revenue that the original Act had not contemplated. The tallies passed from hand to hand, e.g. goldsmiths (whose banking activity was expanding fast in this period) cashed them at a discount.<sup>86</sup>

### *Climax under Charles II*

Charles II inherited an impossible financial position, and needed a growing revenue; yet a hostile Parliament was niggardly in voting him taxes. The exchequer was thus hard-pressed. One of its troubles now seems odd. The revenues of a financial year came in only after some delay, whereas expenditures began immediately. Modern states have learned how to smooth over this temporary shortfall; "the process seems so easy to the modern mind that we are almost reluctant to acknowledge the difficulty of the problem that beset Charles".<sup>87</sup>

The tally, particularly the new tally of loan, gave the king an unseen and unsuspected way of creating credit almost at will. He exploited it to the full.

We are lucky in having first-hand accounts of the issues from a high civil servant. Pepys, as secretary to the navy, had to rely on tallies to meet the fleet's needs. The exchequer gave him new tallies which he then tried to turn into cash. His diary has more than eighty references to them, e.g. "To the exchequer, and there got my tallys for £17,000, the first payment I ever got out of the exchequer . . . and away home with my tallys in a coach, fearful every step of having one fall out or snatched from me" (19 May 1665). His fears were not groundless. On 26 November

<sup>85</sup>J. E. D. Binney, *op. cit.*, p. 224; C. D. Chandaman, *op. cit.*, p. 288.

<sup>86</sup>John Clapham, *The Bank of England*, Cambridge: 1944, p. 11; W. A. Shaw, "The Treasury Order Book", *Economic Journal*, 1906, p. 37.

<sup>87</sup>W. A. Shaw, *op. cit.*, p. 35.

1668, a subordinate lost a £1,000 tally. However when Pepys came to his office two days later, he heard to his “great content” that a porter had found the tally in Holborn, and had brought it in; for which honest act the man was rewarded with twenty shillings.

Charles II at first managed the issues with prudence. But soon, hard-pressed by the demands of war and love, he grew reckless. The issue of tallies rose to a *crescendo*. In consequence, they became hard to cash. Pepys tells how he went to the “Excise Office where I find that our tallies will not be money in less than sixteen months; which is a sad thing, for the king to pay interest for every penny he spends — and which is strange, the goldsmiths with whom I spoke do declare that they will not be moved to part with their money upon the increase of the consideration by 10 per cent” (21 Jan. 1665). The tally office became overworked, and its ancient form of accounts grew bewilderingly complex; Pepys denounces its clerks as “lazy rogues . . . Lord, to see what a dull heavy sort of people they are there, would make a man mad” (16 May 1665).

By the 1670s, the royal finances were in great disorder. The debt rose to £1 million, a whole year’s revenues. Bankers were “ground between their angry creditors and an empty exchequer”. The legal limit on interest rates was 6%, but Charles had to pay 20% or even 30%. In 1672, he was forced to suspend all payments of interest for twelve months — the “stop of the exchequer” by which “the common faith of a nation was violated”, and some goldsmiths were incapacitated.<sup>88</sup>

### *Tallies and the Founding of the Bank of England*

Despite this disaster, the exchequer in following decades was still able to issue tallies and notes. But the “stop” meant that no-one would accept these unless they were backed by high interest. Moreover they circulated at a discount. The rate reflected the status of the taxes on which the tallies were secured. It reflected too the king’s fortunes: those of William III did not inspire confidence, and so (according to a somewhat jaundiced pamphlet) great numbers of his tallies lay bundled up like faggots in the hands of brokers and stock-jobbers, who “devoured the King and the army . . . scarce 50% of the money

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<sup>88</sup>John Clapham, *op. cit.*, p. 12; E. Lipson, *Economic History of England*, London: Black, 1956, III, p. 236.

granted by Parliament has come into the hands of the exchequer, and that too late for service, and by driblets".<sup>89</sup>

Trade was expanding greatly in these years. Traders and Crown both needed a solid establishment that could advance money at a reasonable rate. So there was a strong case for the "daring idea" of a Bank of England. It was duly founded in 1694.

Tallies were important in its financing. The government wanted to get the flood of tallies off the market; and, after hard bargaining, the Bank agreed to help, on very advantageous terms. Subscribers to its capital ("engrafted stock") could pay four-fifths in tallies, taken at par; the government then paid the Bank 8% interest on the tallies' nominal value. It also instructed the Bank (1696) to buy up other tallies (said by then to be selling on average at a 40% discount), and on these too it paid the Bank 8% interest.<sup>90</sup>

Even after the Bank was founded, tallies played some part in finance. Coins were still scarce, and so "all great dealings were transacted in tallies, bank bills, and goldsmiths' notes".<sup>91</sup>

By the eighteenth century, the Crown relied increasingly for its short-term needs on exchequer bills rather than tallies. But it still issued tallies to investors in the national debt. And it experimented with a new form, the annuity tally: lenders got the right to an assignable annuity, for life or a fixed term such as ninety-nine years.<sup>92</sup>

### *The End of the Exchequer Tally*

It was obvious by the eighteenth century that the routines of the exchequer, once admirable, had become a confused farce. But they lingered on, even though they had to be buttressed with a parallel system more suited to the times. Clerks from the Bank of England came daily to take charge of the cash transactions and make the effective accounting entries; and payers got a written quittance as well as a stock.

The exchequer could not reform itself even if it had wanted to do so. It was hamstrung by its own rules, which had grown into non-statute law. The tally was the only form of quittance allowed to it. And its officials, now sinecurists who delegated their work, had the strongest reasons to fight change. They were

<sup>89</sup>J. Francis, *History of the Bank of England*, London: 1847, p. 58.

<sup>90</sup>John Clapham, *op. cit.*, p. 47.

<sup>91</sup>A. Andreades, *History of the Bank of England*, London: King, 1924, p. 23.

<sup>92</sup>Philip Norman, "Exchequer Annuity Tallies", *Proc. Arch. Soc.*, 1902, p. 300; J. E. D. Binney, *op. cit.*, p. 127.

paid fees on all receipts; as the national revenue grew, so did their pickings. A teller was rumoured to earn what was, for the times, the immense income of £30,000 a year.<sup>93</sup>

But, as part of the popular campaign for political reforms, change came at least. An Act of 1782 abolished the sinecures at the exchequer — though still with a reprieve; an indulgent Parliament provided that the Act should not take effect till the death or retiral of the two Chamberlains. These were young patricians (one was still at Eton), and they clung to their offices for another forty-four years, i.e. till 1826. Then methods were reformed also; paper replaced wood as the material for receipts (but still with the old Latin formula). The obsolete accounting routines were abolished soon after — the sheriff's in 1833, and the exchequer's in 1834.<sup>94</sup>

A fair number of the late tallies are in the P.R.O. They, and their accompanying accounts, show some odd quirks in state finance. An unknown American in 1805 sent conscience money. The account of an official at Gibraltar includes money spent for the release of captives in Morocco, and (1752, the year of calendar reform) shows deductions from salaries for "the eleven days in September annihilated by Act of Parliament". Some tallies suggest extreme dilatoriness in settling accounts; thus an 1825 tally is for transactions in the 1808-14 Spanish campaign; and the executors of a contractor got his "stipend", for work in Florida during 1767 and 1781, only in 1826.<sup>95</sup>

### *Parliament Blazes*

But the tally's story has a postscript of high drama. The exchequer had from time to time used old tallies as firewood. (Clearly it viewed records of wood with disdain; paper and parchment were preserved at some cost.) Between 1826 and 1834, however, more than twice the usual quantity had accumulated in the tally room at the exchequer. Then space was needed for a bankruptcy court, and so in 1834 the Lords of the Treasury ordered most of the tallies ("which my Lords understand to be entirely useless") to be destroyed.

<sup>93</sup>J. E. D. Binney, *op. cit.*, p. 224; *Illustrated London News*, 1858, I, p. 446.

<sup>94</sup>R. L. Poole, *op. cit.*, p. 91; M. T. Clanchy, "Burning the Tally Sticks in 1834" (the Neale Lecture in English History), *Journal of Historical Sociology*, forthcoming; Dickens was satirical about the exchequer's reluctance to replace sticks with paper: "all the red tape in the country grew redder at the bare mention of this bold and original conception". *Speeches and Letters*, edit. K. J. Fielding, Oxford, 1964, p. 204.

<sup>95</sup>P.R.O. E402/3C1; British Museum, OA 9443-8.



The site chosen for the bonfire was a yard that then lay between Parliament and the Thames; the men in charge were cautioned to be careful as the Parliament building was only wood and plaster. But the Clerk of Works — keen on the up-to-date technology — decided that the new iron stoves under the House of Lords would instead be a safe and proper place for the burning. On the evening of 15 October, two workmen employed by contractors moved the tallies (enough to fill two carts) to the cellars. At 6:30 next morning, they began to stoke the stoves, putting in only some ten tallies at a time, and damping them occasionally with water. But by afternoon they had grown impatient, and were pushing in the tallies as fast as they could. At 5:00 p.m. one witness saw an “astonishing blaze”; a member of a guided tour in the House of Lords felt the heat through his boots. An hour later, the fabric burst into flames.

*The Times* reported that

people living nearby were thrown into the utmost confusion and alarm by the sudden breaking out of one of the most terrific conflagrations that has been witnessed for many years past . . . countless numbers swarmed upon the bridges, the wharfs, and even upon the housetops; for the spectacle was one of surpassing though terrific splendour . . .

Not even the most zealous exertions could save the edifice from absolute destruction.<sup>96</sup>

The tally did not die tamely.

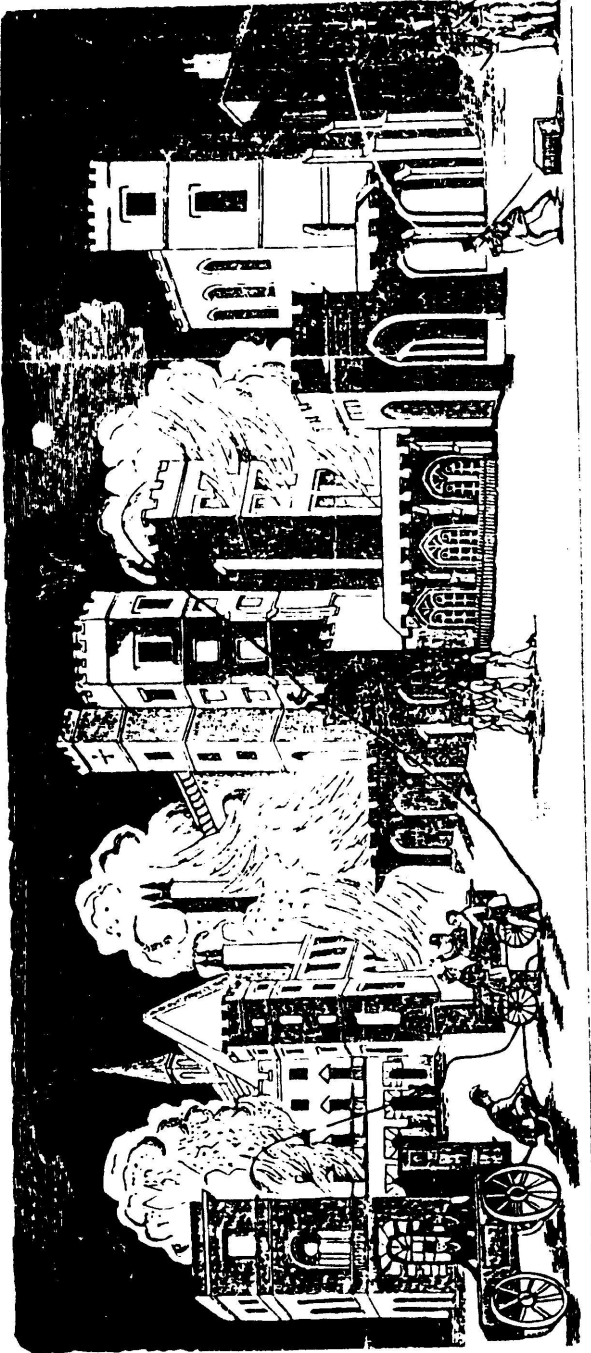
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<sup>96</sup>*Parliamentary Papers*, 1835, xxxvii, p. 329.

<sup>97</sup>*Times*, 17 Oct. 1834.

Earlier articles are: R. Roberts, “A Short History of Tallies”, *Accounting Research*, July 1952; W. E. Stone, “The Tally”, *Abacus*, June 1975; R. H. Parker, “Accounting Basics”, in G. MacDonald and B. Rutherford (edit.), *Accounts, Accounting and Accountability*, Van Nostrand Reinhold, London, 1989.

# DREADFUL FIRE!



**And total destruction of both Houses of  
Parliament.**

ILLUSTRATION 5