

## *Two Municipal Accounts: Frankfurt and Basel in 1428*

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Basel

Only one year of the rich hoard of municipal accounts of the city of Frankfurt am Main since 1348 has survived destruction by war. Those are the accounts of the city's income and expenditure for the year 1428. Basel is a good counterpart for Frankfurt. Despite all differences — especially perhaps in their political situation — both have various things in common: location beside a river, with greater and lesser city districts on either bank, an excellent position for traffic, considerable economic importance and a comparably large population. Until the last war Frankfurt and Basel had the longest series of annual municipal accounts. Basel's accounts have been kept complete since 1360. It would therefore be natural to compare them for 1428, the year that had been preserved for Frankfurt, and this we shall do, taking Frankfurt first.

### Frankfurt am Main

The ledger for 1428 opens with the note: masters of the accounts Jacobs Brune, Johan Moms, Scheffen Johan Marburg, Heinrich Wyse zum Widel, Gilbrecht Krug and Pederman Gilbrecht. Next after this is the *income* of the city. And because in the Frankfurt account we are dealing with a financial document which has become unique, we shall give details which on account of their order of magnitude would not normally be of interest. The sequence and the classifications will be kept to so that the structure of the original account will become apparent.

In the year of 1428 the income considerably exceeds the *expenditure*. This was by no means normal at that time, and to this extent we have before us an exception; but the case can be explained, as will be seen later.

The account was worked out in Pfund. That was the currency of the time, but it only existed for accounting purposes and not as a coin. One Pfund comprised 20 Schilling, and a Schilling consisted of 9 Heller, and a Pfund therefore of 180 Heller. (In Basel the classic carolingian currency was used, with a Pfund at 20 Schilling, a Schilling at 12 Pfennige.) Another parallel currency was the Gulden. In 1428 in Frankfurt the rate for a Gulden was 1.20 Pfund or 24 Schilling. Large and privileged sums were given in Gulden. Thus the annual expenditure on pensions ('Leibgedinge') was entered largely in Gulden. (In Basel the rate of Gulden to Pfund was at the time 100:116.66; a Basel Pfund contained 30 grams of refined silver and a Pfennig 0.125 gram-s.) A further monetary unit mentioned — if only infrequently — is the Mark. In two cases there is the redemption of a pension of 3 Marks, whereby those entitled are paid 30 Marks each; in a third case there is 25 Marks' redemption for 2½ Marks' pension. Gulden and Marks too can be seen as conditions for security of value. But the municipal account as a whole is expressed in Pfund and presumably also thus paid into and out of. Expenditure is also entered in Turnosen.

First the total of all income and expenditure, viz.: income 40,160-14-2 Pfund; compared with expenditure 28,120-5-2 Pfund; making a surplus of 12,040-9-0 Pfund. In fact this difference or surplus appears in the accounts of expenditure as a stock of cash, and with an arithmetical difference of only 2 Heller.

Here we must make reference to the differences in figures in these medieval accounts, which exist as much in Frankfurt as in Basel. A plus or minus of this kind does not originate necessarily or even primarily in inaccurate book-keeping. In an arithmetical system using Roman numerals, in finance using the technical means of the time, it is in fact astounding that even greater differences do not occur or conversely just how accurately the accounts were kept in such circumstances. In the meantime one will have to accept as a starting-point that the final figure of such accounts, the 'summa summarum', is *de facto* correct. Possible inaccuracies must be sought under individual heading. As has been said, there was no Pfund coin, and the Schilling came only later, and most payment procedures required extensive use of the Heller coin. The 40,160 Pfund of income correspond — if we disregard possible payments in Gulden — to the huge sum of 7,228,800 Heller, and for expenditure it would also have been over 5 million. The financial administrators of the city and of the various financial offices had to use very large amounts of small and unsightly coin.

Entries were generally made weekly according to when they occurred, and they would then be summed up quarterly in the first to fourth accounts of the original. The financial transactions are arranged first of all in groups and only then chronologically. The accounts master uses mainly the individual groups of entries. In fact the 27 groups of income and the 24 groups of expenditure form the original sequence of 1428. The groups are all of very different magnitude: thus with income, apart from one collective entry which makes up about

18,000 Pfund and which will be considered later, the entries in these groups of income vary between the largest item at about 5,800 Pfund and the smallest at 1½ Pfund for the whole year. As the original sequence is followed here, although it does not correspond to contemporary methods of representation, the accounting process can be depicted faithfully. The income and expenditure are entered chronologically only inside the 27/24 groups. And so with the income the wine excise ('Weinungeld') is totalled up, delivered and entered in on a Friday, in principle therefore every week. Other entries occur less frequently, for example the very important Bede — a form of wealth tax — occurs only once in each quarter, and the tax on Jews once, in the fourth quarter. For exact dating at the time the usual ecclesiastical description was used, for example:

primo sabbato ante Servatii; sabbato post ascensionem domini - and so on till - sabbato ante Philippi et Jacobi in the fourth account, that is to say in the fourth quarter as the 52nd entry, as long as there had in fact been a transaction. Corresponding groups are formed in the same way for the expenditure, and there follows the chronological entry for the payments ratified by the municipal treasury. The four quarters are then summed up in the report we shall be considering.

Along with all the difficulties in calculation that have been mentioned there are also possible mistakes which occurred during writing, copying and transcription. It is reasonable to omit trivial differences here. At any rate these references are only made to Schilling and Heller as corroboration; as a quantity they are unimportant, and it will suffice to round the figures off to the complete Pfund.

The figures for the quarters show an uneven pattern in income and even more so in expenditure. Incomings and outgoings of treasury funds occur in jumps. This may be attributable to the times, but also just as much to the fiscal system, which operated without budget plans. The very different magnitudes of revenue and expenditure groups show up very clearly.

## Revenue

To begin with, 45% of the total falls to one collective entry, but this is a special case. The other 26 groups of income, 55% of the total, show a few relatively sizeable entries. The most significant is the indirect tax on flour and wine, which contributes to the municipal income under several headings. The Bede, as a direct tax, is very important, and in this respect the upper and lower towns of Frankfurt are to be considered together, even if it was raised and submitted separately.<sup>1</sup> Most of the remaining 17 groups vary with amounts under 1%. There remains the final entry of 'other income' with 45% of the

<sup>1</sup> Karl Bücher, *Beiträge zur Wirtschaftsgeschichte, II Die Frankfurter Bede*.

total. Only when this entry is broken down can the — as it were — normal weight of the other groups be assessed. (See table 1 — income.)

There are many entries for income and expenditure in the municipal books, but in fact there were even more, because the accounts were already a collection of entries taken together on a net basis. Accordingly in the books themselves these adjusted references occur in their groups in chronological order. In total in this year there are 3139 entries, 872 from income and 2267 from expenditure. Here it can be seen that according to the group the number of entries varies greatly. The first group, with the wine excise, totals 52 entries, made on Fridays, and these running from the *primo sabbato ante Servatii* to the *sabbato ante Philippi et Jacobi* of the following year — from May to May. The next group contains the wine value tax ('Wein-Schatzgeld'), which is worked out on Tuesdays in the same period, that is with 52 entries as well.

And finally the treasury reckons up the income from the wine measurers for 50 weeks — in the third quarterly account the *sabbato ante invocavit* is missing, in the fourth the *sabbato ante Ambrosii* — but with the barrel measurers it is again for 52 weeks of the year. One may well assume that for these four groups a weekly totalling was the norm, for they all concern wine. One can assume a similar regularity with five other income groups, each of which appears 26 times; that is the income from the storage of wine, from flour and cranage, from the quarrying of stone and the weighing of salt. Here the entries and totals follow a fortnightly sequence.

Of the rest, two are particularly enlightening, even if they are very disparate cases: one is the tax for Jews, on the Sunday before Easter, in the fourth quarter towards the end of that particular year of accounts. Its peculiarity is first that it is entered into the account only in Gulden. The total tax of 586 Gulden (at the rate of the time 703-4-0 Pfund) came from 13 taxpayers and their dependants. It is not clear what the rates were for income, property or number of Jews. The 13 contributors are given by name. The largest amount is paid by Symon of Nuremberg with his son Jacob, 112 Gulden (= 134-8-0 Pfund). After him there is a woman and her brother-in-law who pay 62 Gulden (= 74-8-0 Pfund). The least burdened is Lazarus with 12 Gulden (= 14-8-0 Pfund). And finally the Jewish community had to find a further 49 Gulden (= 58-16-0 Pfund) for the burial of Jews from outside. Money was taken both for the living and for the dead.

It is to be noted that Bücher, who concerned himself at length with this question, also produces data for 1428.<sup>2</sup> His tables agree with the municipal accounts on the number of 13 liable households. But as the amount of tax he cites a total of 610 Gulden or 46.9 Gulden per household. The municipal accounts on the other hand show 586 Gulden for 13 households, as well as a further 49 Gulden for the privilege of burying outsiders — all together 635

<sup>2</sup> Karl Bücher, *Beiträge...*, VII *Der öffentliche Haushalt der Stadt Frankfurt*.

TABLE I

## MUNICIPAL INCOME IN PFUND

<i>Frankfurt 1428</i>	1st Qu.	2nd Qu.	3rd Qu.	4th Qu.	Year	%
Wine excise (Friday)	632 15 4	895 18 1	669 1 2	699 0 8	2896 15 6	7.21
Wine value tax (Tuesday)	1278 12 2	1792 12 8	1323 13 1	1395 3 7	5790 2 0	14.42
Vineyard labourers	42 19 7	45 12 6	30 5 5	35 18 0	154 16 0	38
Customs and tolls	205 7 8	470 16 8	296 16 1	329 5 7	1302 6 6	3.24
Wine, storage of	497 6 1	502 15 3	410 14 1	283 10 4	1694 6 0	4.22
Milling tax	896 13 2	1052 3 2	829 12 7	648 12 4	3427 1 6	8.53
Cranege	22 12 2	52 14 8	39 16 8	63 17 4	179 1 4	44
Steinfuhr	38 18 0	30 18 3	30 14 4	24 14 6	125 5 4	31
Salt-measuring	181 3 8	76 19 7	85 16 8	44 19 0	388 19 5	97
Salted fish	9 13 5	11 15 5	32 4 2	66 7 6	120 1 0	30
Linwathus F022a	—	325 17 8	—	283 17 2	609 15 1	1.52
Dues from foreigners (or: people from outside Francfort) for stalls at the textile fair	—	—	—	—	—	—
Wine measurers	10 16 0	9 0 2	11 8 0	9 18 7	41 3 0	10
Barrel-measurers	21 9 2	19 17 0	26 2 0	22 6 0	89 14 2	22
Amegeld	9 5 0	5 5 3	3 16 0	8 1 0	26 7 3	07
Bede upper city	750 0 0	1367 4 0	366 0 0	12 1 2	2495 5 2	6.21
Bede lower city	243 12 0	960 0 0	379 11 8	—	1583 3 8	3.94
Bede old	3 15 5	—	—	—	3 15 5	01
Jew tax	—	—	—	762 0 0	762 0 0	1.90
Office of mayor	—	130 18 5	4 2 0	—	135 0 5	34
Coal-measuring	12 19 3	9 7 3	4 11 0	3 11 6	30 9 3	08
Grinding mill	4 15 2	4 10 0	4 0 3	3 7 7	16 13 3	04
Bonames	32 3 4	36 2 6	31 1 0	44 3 8	143 11 0	36
Nieder Erlenbach	—	6 5 5	—	3 19 0	10 4 5	03
Oberrad	—	—	—	44 8 2	44 8 2	11
The poor	—	—	—	1 10 0	1 10 0	003
City mill	—	—	—	2 0 7	2 0 7	01
Other income	3262 10 0	4198 4 6	7175 19 2	3450 14 2	18087 8 1	45.04
Total	8157 8 1	12005 0 8	11755 6 7	8243 9 8	40161 5 6	100.00
Original total	8156 16 6	12005 0 8	11755 6 7	8243 9 8	40160 14 2	
Difference	11 4	—	—	—	11 4	

a Dues from foreigners (or: people from outside Francfort) for stalls at textile fair.

Gulden. According to this the tax for each of the households came out on average at just over 45 Gulden (= 54 Pfund). The difference should just be borne in mind.

The other group of income which is to be isolated is the collective entry already mentioned of 'eintzeling innemen' or individual sources of income. Under this heading are 206 entries, for small, large and very large sums; they are nearly a quarter of all entries. The dissection of this huge entry of 45% produces additional information. Under six dates and in each quarter, as we see from the weekly notes, there is a special income. It is described as: 'Vom rade an gelde und schulde enphange', this a sum in Pfund four times; and in Gulden 'uss irme schanke in der radstoben', two times, incomings from the council. Individually they are:

in the first quarter	3082-7-6 1b
in the second quarter	2730-3-5 1b
in the third quarter	4442-6-2 1b
in the fourth quarter	<u>2657-3-5 1b</u>
in the year	12912-1-0 1b

On top of this come in the third quarter the two payments in Gulden, thus:

650 Gulden	780-0-0 1b and
1000 Gulden	1200-0-0 1b
Total from the council	<u>14892-1-0 1b.</u>

These almost 15,000 Pfund make 37% of all documented income, a quite considerable contribution. The 'eintzeling innemen' in total stand in the books as 18,087-8-1 Pfund. If the contribution of the council is taken away, then the real 'eintzeling innemen' stand at only 3,195-7-0 Pfund. Without the six entries just described, they divide up into exactly 200 individual cases of income, which together only make up 8% of the total income. And if one subtracts the donations of the council — whatever the reasons for them — from the original total of income at 40,160-14-2 Pfund, then the real income remaining is 25,268-13-2 Pfund, or 63% of the original total. At least apparently this brings about a considerable change. Through this the part played by the individual entries goes up by 59%, while the part played by the reduced entries of 'other income' sinks correspondingly.

And finally the question of surplus or deficit. For the total the complete expenditures were

28,120-5-2 1b,	
the revised income	<u>25,268-13-2 1b,</u>

leaving an actual deficit of 2,851-12-0 1b

Previously a considerable surplus had been documented. On the other hand, the council contributed to the treasury 14,892-1-0 1b. In the treasury there remained cash and debts, as it were a surplus of income over expenditure of 12,040-9-2 1b - thus that used from the council's contribution was 2,851-11-7 1b. This difference was clearly used to cover the budget deficit.

The three most important forms of income from wine, the wine excise, the

wine value tax and the storage of wine (see *Table 1*) have up till now, before the change discussed above, made up nearly 26% of total income. After the subtraction of council subsidies their part of real income rises to a full 41%. The part of the Bede, the direct tax on property common to both the upper and lower towns, is revised: it rises from 10.15% to 16.14%. And finally the milling tax is no longer 8.53% but 13.56% instead. Wine and milling tax together already formed 34.38% of the unadjusted account; after subtraction of the extraordinary entry of the council contribution their proportion rises to 54.64% of the income. Thus wine and milling tax and the Bede together at first give 44.53% of the income (about as much as the original 'eintzeling innemen'); after the subtraction their part rises to 70.80%.

The income entries not specified until now make little difference. With two exceptions the remaining incomings are only like small change, even if they do amount to almost 30% of the reduced total. Of greater importance of course are the customs and tolls, which contribute 3.24% and 5.15% respectively to the budget. From Linwathus come twice in the year a further 1.52% and 2.42% respectively. All the other incomings remain even with the reduced total under 1%, to some degree even considerably under. The table shows the details of these remaining minor incomings.

### Expenditure

The expenditure looks in a certain sense similar and yet it is different. (See table 2 - expenditure). First the unavoidable collective entry, 'other expenditures'. In this case it figures not at the end of the list, as with income, but nearly up at the top. Originally in the income it counted for a full 45% of the total, but in expenditure at 23.14% it is only about half. And even this fairly large part is dominated by two transactions. In one the 'Dammen von Prunheim' ('the ladies of Prumheim') are paid 2360 Gulden (= 2832 Pfund) for the purchase of various goods. And 1113-6-0 Pfund were spent 'von des richs sturen' ('from the coffers of the empire') for the Roman Emperor Sigmunt in the form of three slices: for his 'scribe' — this was Herr Michel — 200 Gulden; to Reinhart Sase also 200 Gulden, as well as to Caspar Slig ('auch sin schriber' — 'also his scribe') 128 Gulden; and 400 Gulden to Bürgermeister Walther Swarzenberg, who had been sent to wrest certain privileges from the king, which he duly did — 'ertzliche privilegia zu erkobern daz er auch det'. Altogether that was 928 Gulden (= 1114 Pfund 'myner 3<sup>1</sup>/<sub>2</sub> Schilling'), therefore the 1113-16-4<sup>1</sup>/<sub>2</sub> Pfund entered at a rate of 120. It remains to be said here that Caspar Schlick later became the chancellor of the Emperor; but he was also an ancestor of the Counts Schlick, the owners of Joachimsthal in Bohemia with its silver deposits, and who in the year 1519 coined the Joachimstaler or Taler, and later this coin was also called a dollar. But back to the other expenditures. The large entries cited of altogether nearly 4000 Pfund already make up over 60% of the rest of the

## FRANKFURT 1428: MUNICIPAL EXPENDITURE IN PFUND

TABLE 2

Josef Rosen

	1st Qu.	2nd Qu.	3rd Qu.	4th Qu.	Year	%
Building	1340 56	1502 56	1298 80	592 60	4733 53	16.83
Stone	73 14	98 70	132 30	122 67	425 182	1.51
Chalk	151 120	82 00	—	—	234 120	83
Goltstein, Hof	16 53	17 83	22 95	117 53	173 85	63
Bonames	27 106	116 13 1	53 197	12 85	210 12 1	75
Nieder Erlenbach	17 120	19 146	38 00	4 104	89 17 1	32
Other expenditure	828 180	413 13 6	4512 16 1	755 73	6510 15 1	23.14
Pensions	931 40	3611 60	935 120	3037 80	8515 100	30.27
Provisions	261 11	159 40	300 45	182 198	903 60	3.21
Night money	45 70	64 120	4 180	27 50	142 20	51
Horse money	33 00	10 50	37 00	7 100	87 150	31
Office of Bürgermeister	70 80	34 00	56 00	33 40	193 120	69
Mercenaries	1080 132	898 6 1	988 80	693 142	3661 15	13.01
House interest	20 188	100	80 120	1 140	103 148	37
Gate Kuper	57 134	70 93	87 30	60 190	276 47	98
Watchmen	130 10	103 150	112 50	85 30	431 40	1.53
Wine shops	112 62	109 15 1	100 187	100 178	423 180	1.51
Office of mayor	—	36 60	11 2	—	36 172	13
Gifts	153 22	127 66	138 11 1	93 11 1	512 11 1	1.82
Foresters	25 00	20 00	25 00	10 00	80 00	28
Prisoners	113	5 43	5 178	6 152	18 87	07
Master of the rifles	10 00	20 00	20 00	—	50 00	18
City mill	43 11 5	41 16 2	71 100	35 01	191 178	68
Mill at Husen	—	—	75 15 2	51 18 1	127 133	45
Total	5430 31	7562 14 6	9098 3 2	6032 4 0	28123 5 0	100.00
Original total	5427 3 1	7562 14 6	9098 3 2	6032 4 2	28120 5 2	
Difference	3 00	—	—	2	—	2 197
Cash and debts	2729 13 5	4442 6 2	2657 3 5	2211 5 8	12040 9 2	

entries. The numerous individual expenditures — there were no less than 565 of them — remain within total 2,500 Pfund, less than 40% of this heading. That may not be a great deal, but it is worth looking at some of the expenditures.

### **Wages etc.**

Walther Swartzenberg, mentioned above, is reimbursed a few times for journeys undertaken in the service of the city under the collective heading 'zerunge'. He was often on journeys, 'geyn Costentze zu der stede frunden', at the expense of the city. Reimbursement of 5 Schilling per day and per horse was given for journeys. As Bürgermeister, Swartzenberg drew an annual wage of 25 Gulden. That was not much compared with other full official salaries, and thus it was — as in Basel — an honorary political position. Other wages were much higher. The captain of the mercenaries or the city army, by name Johan Rubesamen, received 330 Gulden (= 396 Pfund) per year. The chief scribe Sifrid, the head of the official administration, drew 106 Gulden. But further expenditures also appear for him (and for the other scribes). 15 Gulden are entered which Sifrid received for his clothing for the past year; but he also received 30 Gulden reimbursement because 'er Nicolaus schriber diss jar by im den koste gehalten' — Nicolaus, the assistant scribe, had been kept by him throughout the year. (In Basel too the city's scribe also fed the apprentice from time to time, and he and his wife were subsequently repaid for it). The assistant scribe Nicolaus was paid 20 Gulden per year, the apprentice Marthys 12 Pfund (not Gulden!) — using the Basel designations of office. Then there is a scribe called Heinrich, for whom 52 Gulden are put aside. And finally the account keepers and (probably their own) scribes were given a total of 5-12-0 Pfund twice for the fairs and once for the new year.

Some other wages are given. 'Meister Godfrid der Artzt', probably the chief doctor of the city, received 52 Gulden per year, that is 1 Gulden per week. Meister Peter 'der stede artzt' — the city doctor — received 10½ Pfund quarterly or 42 Pfund p.a. However, Meister Mader 'der stede wergman' — the city's officer of works — was paid 20 Gulden per semester or 40 Gulden annually. The barrel measurer (for wine) received only 18 Gulden, but he received it in a single payment for the whole year. And Meister Heinrich Welder, 'der stede advocatus' (the city's lawyer), had the highest civil salary at 113 Gulden. He was right on top of the financial hierarchy. Two salt-measurers received each 6 Gulden annually. The 'Urglucker' — whose responsibility it was to keep the town's clock working accurately — received 12 Schilling each week, annually 31-4-0 Pfund: the clock inspector had in those times an important and responsible position. On the other hand the rates for labourers were considerably lower. Those employed in the 'Lanrwer' and those in other occupations drew no weekly or annual wage; they were paid for the days they were needed. A 'Knecht' received 24 Heller per day. The daily

wage for a labourer was 14 or 16 Heller, but most — six-sevenths — received the lower daily rate. 14 Heller are 1 Schilling and 5 Heller, not very much. (In Basel it was 2 Schilling). That would have been 28 Pfund per year, if each worker had had work wages for 365 days, which was by no means the case. The drop in incomes was therefore very steep.

This picture can be finished off with the income of one of the privileged, in this case, though, that of a pariah — the executioner. He received 16 Schilling per week or 41-12-0 Pfund annually. But in addition he also had a form of productivity payment. We find noted: 'Dem zuchtiger 4 Pfund von vieren zu richten', that is 1 Pfund for each criminal hanged; similarly 1 Pfund was the rate for 'usszlauffen eines Gehängten', getting rid of someone who had been hanged. The hangman was not badly paid, and this was also the case in Basel. As elsewhere the executioner appeared on the bottom end of the social ladder. He was held in dishonour but was nonetheless indispensable. The one in Basel drew 3 - 8 Schilling weekly, 'so er nit spil hat'. In addition he received every quarter 2 Pfund for 4 cart-loads of wood as well as 10 measures of rye to be delivered by the bakers; and finally house and yard with all that goes with it. In addition he received bonus payments for certain activities, which were meticulously specified:

- 2 Pfund for quartering (plus 16 Schilling for putting the quarters on display);
- 1 Pfund for breaking on the wheel or boiling, impaling, or burning;
- $\frac{1}{2}$  Pfund for beheading, hanging, or drowning or throwing a suicide into the Rhein in a barrel;
- $\frac{1}{4}$  Pfund for blinding, cutting off ears, hands or tongue.

As these are variable productivity payments dependent on the time and the circumstances, it is impossible to give a complete figure for the hangman's income. At any rate there was a guaranteed income of 8 Schilling per week, 20-16-0 Pfund per year and on top of that wood, rye and house. The executioner as an official was therefore not to be overlooked, and he belonged in the higher income bracket.<sup>3</sup>)

The status of an employee of the city, in Frankfurt or in Basel, depended on whether he was paid in Heller (or Pfennige), in Schilling, Pfund or even in Gulden; it was also significant whether he was paid daily, weekly, quarterly or even annually. This can be seen from the details so far for both cities.

### Some prices

So much for the wages. Under expenditure in the Frankfurt account book we also find various prices. Here are a few examples: for the court in Rödelheim 21 litres of wine were bought; a litre, of no particular quality, cost 14

<sup>3</sup> Josef Rosen, *Die staatliche Verwaltung in Basel*.

Heller (that was the daily wage of a labourer). Paper was bought for the scribes of the city, 4 reams costing 6 Gulden. Other details concern in the main building materials.

1 'huffen' (pile) of stone	9 Schilling
1 pile of 'hurtzel'	5 Schilling
300 bricks	1 Gulden = 24 s
100 tiles	6 Schilling
2 square-cut stone blocks	3 Schilling
1 ream of slating stone	69 Heller
1 measure of chalk	4 Schilling
1 measure of coal	20 Heller
1 pound of iron	1-6-0 Pfund = 26 s

A further large expenditure may be given. For 350 Gulden (= 420-15-0 Pfund), 51 Marks of silver were bought, in our reckoning then a Mark of silver for 6.86 Gulden or 8.25 Pfund on average. (The Mark was in itself a weight. The Cologne Mark was the most important and weighed 233.856 grams.) According to the accounts a Mark of silver cost 7 Gulden minus 3 Schilling, as people expressed it at that time. From this precious metal the city wanted to coin small silver coins, Turnosen, Englische and Heller, according to the privilege won from King Sigmund. "I have been unable to find any direct notes on the Turnosen coined by the city of Frankfurt in 1423-1432" writes Paul Joseph in his part of the fundamental work on Frankfurt coins;<sup>4</sup> a Turnos weighed 2.9226 grams (*ibid.* p. 34). In 1428 King Sigmund gave the town the right to strike its own silver coin. On the basis of this right, according to the same source, Frankfurt "in 1428 bought in silver, cut stamps and coined Turnosen, Englische and Heller". This was shown too by the above-mentioned entry in the accounts book. In the accounts for 1492 and 1430 "one finds all three sorts of coin under income" (*ibid.* p. 9). Unfortunately these accounts no longer exist.

Apart from the municipal mint for silver coins there already existed the royal mint for gold coins. The master of the gold mint from 1423 to 1428 (more exactly: to 10th August, St. Laurence's Day) was the Basel man Peter Gatz, who performed this function in Basel as well (*ibid.* p. 7): an indirect link between the two cities.

As a curiosity it may also be mentioned that donkeys were bought and used in the mill at Husen.

Now, from the 'other expenditures' and a few other entries, back to the larger sections: 4700 Pfund or 16.83% of the total was spent on municipal building. If one adds the 830 Pfund for stone and chalk, which were entered separately, then in this year building took 20%.

The largest entry of all — 8515<sup>1</sup>/<sub>2</sub> Pfund (= 7096<sup>1</sup>/<sub>4</sub> Gulden) or more than 30% of total expenditure — was designated for the drawers of pensions. The

<sup>4</sup> Joseph und Fellner, *Die Münzen der Stadt Frankfurt am Main*, p. 33.

entries were calculated in Gulden. These annual pensions, based on previous paying-in of a corresponding capital sum, vary from a minimum of 3 Gulden and 3 Schilling (at that time 75 Schilling) to 101 Gulden maximum (for 2 who had been thus favoured). In all in this year 334 people were named as drawers of pensions. On the one side the number of those thus entitled varied with new participants who paid the city treasury a certain sum to buy themselves a corresponding life pension; on the other side the number of those drawing decreased through death and the consequent termination of the pension agreement. The municipal expenditure on pensions shows the extent of the city's debts. In Basel there was interest of 10% on pensions, but for returnable monies only 5%. With interest of 10% there would have been in Frankfurt in 1428 liabilities under this heading of 85,000 Pfund, at 5% on the other hand 170,000 Pfund, or over 70,000 and 140,000 Gulden respectively — based on the capital paid in. How much it was in actuarial terms must remain open. The Frankfurt treasury probably did not know either.

## Basel

The records of 1428 in Basel written about seven decades after it started its public book-keeping, in Frankfurt exactly 80 years afterwards. In the course of time public accounting was extended and developed. The municipal accounts were expressed in silver Pfund of 20 Schilling each; a Schilling in Frankfurt was equal to 9 Heller, but in Basel to 12 Pfennige. But apart from this there was also a series of entries for income and expenditure in Gulden, depending on importance. (Other currencies also occur occasionally.) The Gulden was more stable than the predominant silver currency. The gradual devaluation of money through a reduction of the precious metal content went more quickly with silver currency. Thus in Basel between 1360-1428 the silver content of a Pfund fell from 85.20 grams to 30 grams, 35.2% of the initial amount. At the same time the golden coin (which really existed, while the silver Pfund was a financial fiction) became lighter, from 3.54 grams of refined gold to 2.777 grams, nonetheless still 78.4% of the initial amount. The devaluation process went much more slowly with gold, and in this sense the Gulden was relatively stable. Its function became increasingly the security of gold values; the Gulden became a sort of value index.

The income and expenditure of the city of Basel were entered weekly, and the weekly accounts were totalled up quarterly. These accounts at quarterfastings were then correlated for the annual accounts, which we shall examine here. In Frankfurt in 1428 a considerable number of groups formed the framework of the accounts, 27 for income and 24 for expenditure. In Basel however they followed an almost binding sequence of entries. Slowly at first there grew a formless yet formal sequential group, for example in 1460 with the foundation of the university, the group of expenditure for the high school, or more rightly

the salaries of the lecturers.<sup>5</sup> A practically mature sequence of financial events was held to. And so a special group of income and expenditure in credit operations was formed. Under such incomings there figured regularly the borrowing at interest — the purchase sums for life pensions as well as repayable loans at interest. There was an analogous group of different size in expenditure: the repayment of loans liable for interest, the interest on which was thus dissolved. Among these primarily was the annual expenditure on the payment of interest for both types of borrowed capital, the annual interest in a narrow sense as well as the pensions (which were also effectively interest) as long as they ran.

### Expenditure

First place in the expenditures in the municipal accounts always went to the payment of interest on outstanding debts (pension contracts and returnable monies) — in 1428 this was 13,421-3-5 Pfund. In regular order there follow further entries of recurrent and direct municipal expenditure right down to building, secret affairs (not much in 1428-17.45 Pfund) and mercenaries. Then came the salaries and wages of the leading functionaries, expressed in Gulden, but totalled up and probably also paid out in silver money (Pfund, Schilling and Pfennige). The list began with the *Bürgermeister* (at that time he received 60 Gulden, but later only 25 Gulden), the guild master (25 Gulden) and the councillors, altogether 264 Gulden, 6 Gulden apiece for each of the 44 councillors of the time — clearly an honorary position. The councillors and curiously along with them the doormen were each given two lambs at Easter. This entry claimed altogether 51 Pfund, and a lamb cost 10 Schilling. Later we shall go into other larger and smaller expenditures.

After the wages of the leading officials in the accounts of 1428 comes a single large entry: Basel lends Strasbourg, an allied city, 6,000 Gulden (=7,000 Pfund) at interest. Then, as non-regular expenditure there are 884 Gulden for the mercenaries at Oberkilch. Count Hanns von Friburg receives 900 Gulden to redeem prisoners - a major cost of war. And so 243 Gulden go for copper for the rifles and cannons, and 271 Gulden for saltpetre. There are many more items.

### Income

The same procedure applies to incomings. The list always began with the yield from the tax on wine followed by the tax on milling; the two largest entries in 1428 each put around 5,500 Pfund into the city's coffers, together around

<sup>5</sup> Josef Rosen, *Die Universität Basel im Staatshaushalt 1460 bis 1535*.

11,000 Pfund or 32% of the total income of 34,700 Pfund. Then there is a series of quite considerably smaller incomings, followed by an intermediate total as 'sum of the income from the general services of the city', in this case around 20,900 Pfund out of in total 34,700 Pfund. One could describe this intermediate sum as the regular income. Missing from this is the small contribution from the three castles, the three properties then owned by the city outside its limits: Liestal, Waldenburg and Homberg, which always appear at the end of the accounts. Although all told this is less than 900 Pfund and thus financially unimportant, it is however politically important and interesting. In between stands a comprehensive and important group of incomings which is the complement to the equally significant expenditure on interest, and that is the borrowing of capital against interest. These, so to speak, form the extraordinary but nonetheless continuous income. In this year there were 25 cases of money deposited with the city as a bank. All the deposits are given in Gulden, with the amount paid in and the consequent annual pension or interest. The capital amount is expressed in Pfund as well, because the accounts are kept in silver currency. Normally interest of 10% is paid on pensions. In this year 15 contracts and transactions in pensions are recorded in the annual accounts. In one case where 480 Gulden were paid in, a pension of only 40 Gulden was agreed,  $8\frac{1}{3}\%$  instead of the normal 10%. In another policy the assured interest — pension are effectively an insurance — was only  $6\frac{2}{3}\%$ , i.e. 34 Gulden pension from 510 Gulden capital paid in. That may come from the particular insurance conditions, for this was not the normal pension contract for a married couple. Here three people were entitled to draw, the depositor of the money Katharina Dürheld (presumably a widow) who took out the insurance, then her daughter Agnes, who was of course younger and had a longer life expectancy, and finally the son-in-law Hanns Pflegler, who was in the same position. The contract ran for three instead of the normal two people, and the two other partners were considerably younger. This may explain the surcharge on the 'premium', that is, the reduction on the return. 34 out of 510 Gulden represents a pension-'interest' of  $6\frac{2}{3}\%$ . And with one more insured person in the contract, that is exactly one third less than the basic rate of 10%.

There are other deviations from the norm present. A nun from Gnadental made it also 'cheaper' — she paid 48 Gulden to draw a pension of 4 Gulden ( $8\frac{1}{3}\%$ ). A cellarman paid 398 Gulden for his wife alone to receive a pension for life of 33 Gulden — that is 8.3%. There is no obvious explanation.

The other ten transactions are money deposits with the city at mostly 5%, the capital of which was described as returnable, to be paid back after the period of loan (not specified here). For pensions however the deposited sum was forfeit.

These are some individual cases. What is most interesting here is that the city in this year borrowed capital of around 11,000 Gulden (= 12,900 Pfund), which was liable to interest one way or another, and which was repayable or not. That was another third of all the year's income. From the levy on wine

and flour and the raising of capital came about two-thirds of the income for the city that year. The other entries cover the other third, but this will be discussed later.

All these transactions are reckoned up annually. The record is that of the financial year; it sums up the quarters, which in their turn rest on the weekly accounts. In all there appear for 1428 just 90 annual entries for income as opposed to 101 for expenditure. In this respect this year does not correspond to the average of the 175 years from 1360 to 1535, when the proportion was about 1 to 2 for items of revenue against items of expenditure, i.e. 20,000 transactions of income and 40,000 of expenditure. This can be explained for 1428 in part through the long list of 25 entries of money borrowed, while for example the corresponding aggregate payment of interest appears as only one entry in the expenditures, although there were many drawers of that interest.

Until now the entries of income and expenditure have been given as they appear in the original. This is thoroughly instructive and reflects in turn the public and legal finance procedures in Basel. As we have done here, one can extract large and small entries to illustrate the policies followed in 1428. All the same this structure is not easily perceived. That could only properly be seen from an examination of the 175 years. This — especially in its technical aspects — has already been undertaken.<sup>6</sup> All these years were worked through with a structure which provides an overview and which corresponds quite closely to contemporary economic ideas. One reason for its necessity was because for example in the municipal account of 1534/35 the annual number of entries had risen to 519 for expenditure and 296 for income. The structure was to give a summary capable of overview, but keeping as much as possible of the original order. (See tables 3 and 4).

The two following tables for 1428/29 draw the survey of income and expenditure together succinctly. Money borrowed or held appears under credit operations; those are the 12,900 Pfund already mentioned which the city borrowed against interest, pensions and returnable capital. In addition 4,500 Gulden (= 5,250 Pfund) owing to the city were paid back, from Mannsperg (700 Gulden) and from the Duke of Burgundy (3,800 Gulden). That and a few other smaller entries gives credit operations of 18,570 Pfund in the income. On the expenditure side the parallel movement of capital contains three entries worthy of comment which were also recorded separately, and these were: the above-mentioned total payment of interest of almost 13,500 Pfund, then 7,000 Pfund or 6,000 Gulden lent to Strasbourg — their ally — at interest, and finally 2,646 Pfund went on debts. The 6,000 Gulden lent to Strasbourg were paid back the next year — the amount is then recorded as income. The allied debtor also gave 75 Gulden as interest, 1.25% on the sum lent. At an interest rate of 5% that would have been the interest for one quarter.

<sup>6</sup> Josef Rosen, *Der Staatshaushalt Basels and Eine mittelalterliche Stadtrechnung*.

TABLE 3

## BASEL 1428: SUMMARY OF INCOME

	Pfund	Pfund	%	%
<b>CREDIT OPERATIONS</b>		18570.60		53.51
City store	189.47	.	0.55	.
Salt house	933.75	.	2.68	.
Salt - Liesstal	30.00	.	0.09	.
Grain	54.10	.	0.16	.
Fish	20.29	.	0.06	.
Market duties	390.57	.	1.12	.
<b>STATE BUSINESSES</b>		1629.18		4.66
<b>COMMUNITY FUNDS</b>		196.66		0.57
Council fines	20.44	.	0.06	.
Other income	21.06	.	0.06	.
<b>JUDICIARY</b>		41.50		0.12
Indirect taxes	11440.97	.	32.97	.
Other taxes	10.00	.	0.03	.
Customs	1995.78	.	5.75	.
Boxes: streets, bridges	857.85	.	2.47	.
<b>TAXES AND CUSTOMS</b>		14304.60		41.22
Total	34731.54	34731.54	100.08	100.08
Summa Summarum	34700.48	34700.48	100.00	100.00
Difference	31.06	31.06	0.08	0.08

The state businesses follow in the income, and their return comes from ten entries. This leaves the community funds and the judiciary, half of whose trivial income was made up from punishments meted out by the council. The last part is tax. By far the most important entry with 11,440 Pfund is the indirect taxation (direct taxes were the exception, and in this year there were none at all). The largest of the levies in use are as we have seen the levies on wine and milling, joined later from 1475 onwards by meat tax.<sup>7</sup> Customs too play a certain role. There are no more taxes on Jews. There had been some in the decade from 1362/63 to 1371/72, followed by a gap from 1372/73 to 1377/78. The period 1397/98, with 30-12-6 Pfund, was the last in which still resident Jews had to give direct taxes to the Basel authorities.

In total the Basel treasury reaped the considerable sum in 1428 of 14,300 Pfund in taxes, over 41% of all income. Credit operations contributed 53.5% to the income of that year. The (indirect) taxes and credit operations provided almost 95% of municipal income.

With expenditure, two-thirds of the total was credit operations, which went down to 46% when the one-off loan to Strasbourg was taken away, which was a whole fifth. The public administration claimed around 2,600 Pfund, 7.5% of

<sup>7</sup> Josef Rosen, *Drei Ungelder in Basel*.

TABLE 4

## BASEL 1428: SUMMARY OF EXPENDITURE

	Pfund	Pfund	%	%
Payment of interest	13477.25	.	38.81	.
Loans at interest	7000.—	.	20.16	.
Loans without interest	10.—	.	0.03	.
Repayment	2646.—	.	7.62	.
<b>CREDIT OPERATIONS</b>		<b>23133.25</b>		<b>66.61</b>
Leading officials	659.83	.	1.90	.
Lesser personnel	548.55	.	1.58	.
'Costs'	1382.21	.	3.98	.
<b>ADMINISTRATION</b>		<b>2590.59</b>		<b>7.46</b>
Foreign policy	1314.50	.	3.79	.
Mercenaries	2290.65	.	6.60	.
Wars	1390.67	.	4.00	.
<b>FOREIGN RELATIONS</b>		<b>4995.82</b>		<b>14.39</b>
Buying of corn	473.54	.	1.36	.
Others	171.33	.	0.50	.
Law	149.60	.	0.43	.
Finance	58.85	.	0.17	.
Building	3186.35	.	9.18	.
Agriculture	17.00	.	0.05	.
Divers		4056.67		11.68
Total	34776.33	34776.33	100.14	100.14
Summa Summarum	34726.33	34726.33	100.00	100.00
Difference	50.00	50.00	0.14	0.14

In this year there are no entries for:

Buying of salt, corn, wine, provisions, horses, university, church, medical facilities, fire brigade, alms, gifts, the mint.

expenditure. Foreign relations including expenditure on mercenaries and war cost at 5,000 Pfund a seventh of the total.<sup>8</sup> And the other entries came to 4,000 Pfund or 11.7%; among these are the costs of the state businesses, which consisted largely of wages, and building with 3,200 Pfund or 9.2%.

Before we draw the bottom line it should be noted that the groups of income and expenditure in the tables of 1428 are not complete. Not all of the existing or planned groups of the scheme appear in this year: only groups which have made transactions are shown. Different transactions occurred in former years, for example the tax on Jews; but many others which only figure later in the municipal accounts, like the expenditure on the university, already have their place in the scheme. Among the more important not entered for 1428 are the buying of salt, wine and other foods. Equally there was no expenditure on the university, the church, medical facilities, fire brigade, alms or gifts. Neither

<sup>8</sup> Josef Rosen, *Kriegsausgaben im Spätmittelalter*.

was anything spent on the mint in 1428. No horses were bought for the state (this often took place at the horse market in Frankfurt); but depreciation of horses is entered in seven places, connected with the military events of the time — they ran to 136-10-0 Pfund and burdened the war accounts. For income there are besides these groups expenditures which do not appear in 1428: the mint, the municipal bills of exchange and the sale of rights and territories.

The bottom line is the total, the 'summa summarum' as it is described. In the original the income totals 34,700 Pfund; the sum when added together is 31.06 Pfund larger (in decimal rather than carolingian notation) — that is a difference of less than a thousandth, which can only be corrected with difficulty, if at all. This may come from transcription and calculation (despite my computer), or it may already be in the original, in the drafting, writing and transfer of weekly to quarterly accounts and then to annual accounts. The Roman numerals used at the time certainly did not improve accuracy and the slates used for computation did not assure totally correct book-keeping. But as a working hypothesis we can accept the summa summarum as correct. The accountant doubtlessly knew the final amount from the cashing-up, and it was no doubt checked in the accounting-book — in some cases mistakes can be found in individual entries. As one cannot establish clearly whether the difference of one thousandth arose in the modern account or 550 years ago, then one must accept responsibility for a surplus or deficit of this order.

We find a similar difference in expenditure; here it is exactly 50.00 Pfund — a little bit more than a thousandth. But from experience with the entries in 175 years of Basel's municipal accounts, which total 40,000 cases of expenditure and 20,000 of income, it can be assumed that we have here a transcription mistake in the original. Probably this is one 'L' too many, the Roman figure for 50, which has crept into one entry and was not found during the many checks or which was incapable of detection.

The summa summarum for expenditure is entered as 34,726 Pfund. Thus in this year the city of Basel spent 25.85 Pfund more than it received. The accounts of 1428 close with the following remark:

"...und innammen und uszgeben eins gegen dem andern abgezogen, so ist XXV lb XVII s minus 1 d me uszgeben, denn empfangen..."

(When income and expenditure are tallied up against each other, 25 lb 17 s minus 1 d more has been spent than received). The account almost balanced. In that respect these were certainly remarkable times.

### A comparison between Frankfurt and Basel

The details up till now have shown that a comparison between the municipal accounts of Frankfurt and Basel, although it readily suggests itself and seems very simple, is extraordinarily difficult. We can leave currency alone. Gold currency was the same in both areas, the Rhenish Gulden which contained 2.777

grams of refined gold. At that time the Basel Pfund contained exactly 30 grams of refined silver. We must bear in mind that in 1428 the relation of Gulden to Pfund was similar but not identical in Frankfurt or 1.20 Pfund; in Basel the relation was 1:1.1666 — their silver Pfund stayed somewhat more stable and devalued less.

The total expenditure in Frankfurt came to 28,120 Pfund. The expenditure in Basel ran to 34,726 Pfund, but this figure contains the one-off extraordinary large loan of 7,000 Pfund to the allied city of Strasbourg. Without this loan the regular expenditure of Basel would have been 27,726 Pfund. At least in 1428 the total expenditure of the two towns can be regarded as identical.

It was quite different with income. The Frankfurt income came to 40,160 Pfund. It has already been shown that the council injected six payments in that year into the municipal accounts, 12,912 Pfund along with 1980 Pfund in Gulden, altogether 14,892 Pfund. However this transaction came to being and was carried out, the revised income without the council injection was found to be 25,268 Pfund. Starting with the recorded income of 40,160 Pfund, minus the entry 'cash and debts' of 12,040 Pfund recorded at the end, there remains a real income — regular and that injected by the council — of 28,120 Pfund.

In Basel the income was 34,700 Pfund. The amount taken from municipal facilities ('summarum empfangen von allen gemeinen stett nutzen') was 20,921 Pfund, that is 20,900 Pfund plus — for some reason not added in — 18 Gulden (= 21 Pfund) received from 'Thelsperg von irs burgrechten', for its civic rights. In that year a great deal of money liable to interest was borrowed, pensions and returnable capital, all together 12,900 Pfund. It was an unusual year with wars and other events which had their effect on the budget. But borrowing of money at interest by the city happened often and was fairly constant. This arose from the financial needs of the community but also because creditors needed to deposit their money, and thus the city functioned as a bank. If this was technically an extraordinary procedure, it was certainly not unusual: it was a regular part of the budget. Three one-off entries under income can be taken away, which were considerable repayments of municipal credits; in all in this way 4728 Gulden (=5515 Pfund) were brought in through three transactions. Without these repayments there are normal incomings of 29,200 Pfund. So here too we can talk of a similar magnitude for both cities for income. So much for the total.

As far as regular, constant and important income entries are concerned, the first to be considered are the levies on wine and milling. In both cities the wine levy was the older tax, and indeed one of the oldest taxes of all. In Frankfurt the wine tax appears under several heading. The surrendering of the tax spreads itself more or less evenly over the quarters, with the exception of the second quarter; the second quarter of the municipal accounts was not the Spring quarter but rather more like the Autumn quarter. Why at this time of the year there was more drinking, taxing, calculating and recording is not certain; perhaps it was the grape harvest, after which the cellars of the traders, landlords

and consumers were replenished. Wine was taxed in two ways: the wine excise ('Weinungeld') was due on Fridays, the doubly as important wine value tax ('Wein-Schatzgeld') on Tuesdays. Next to this was the levy on the warehousing of wine in transit, which did not burden the consumers in Frankfurt. In 1428 there was collected in Frankfurt (in Pfund and rounded-up):

	Weinungeld	Schatzgeld	Total	Warehousing
1st quarter	633	1278	1911	205
2nd quarter	896	1793	2689	471
3rd quarter	669	1324	1993	297
4th quarter	699	1395	2094	329
Year 1428	2897	5790	8687	1302
% of income	7.21	14.42	21.63	3.24

Thus the consumption of wine contributed a fifth of all income; wine excise and wine value tax stood in a relation of exactly 1:2. The transit tax (warehousing) brought in just a seventh of both levies on consumption. The unimportant income from vineyard labourers (0.38%), as well as from wine- and barrel-measurers with only 0.32% together can be left to one side. In all, the city accounts profited by a quarter of the total income from wine-drinking.

What was it like in Basel? The wine excise is here the largest regular income of the year; the 5571 Pfund represent 16% of the total. Worthy of mention is the separately levied wine excise from Liestal — one of the three 'castles' of the time — of exactly 80 Pfund, not because of its size but because it is one of the external possessions of the city, more of which were to follow. The wine tax and its proportion of the total income are quite different in both cities. In Frankfurt there was a much larger income from wine consumption, in fact 55% more. And thus in Frankfurt the proportion of this to total income was correspondingly about half as large again. Although it is unlikely, this may have come from a commensurately higher wine consumption but, bearing in mind a practically identically large adult population, more likely from a higher rate of tax. For Basel we have estimated wine consumption at approximately 75-150 litres of wine per person per year, assuming a tax rate of 25% and the cost of a wine of very good quality at 2½ Pfund per 'Saum' at 136.5 litres.<sup>9</sup> In Frankfurt in 1428 a litre of wine cost 14 Heller or 1 Schilling and 5 Heller. Discrepancies in the price could stem from differences in the quality of the wine.

The next most important entry is the daily bread. In Basel the milling tax was raised by and through the miller. That was simple and direct, and guaranteed a full collection. In Frankfurt, where there was certainly no less bread consumed, the flour was obviously considerably less heavily taxed than in Basel; it provided the treasury with 3427 Pfund or around 8.5% of all income, thus just about two-fifths of the financial income from wine. There are quarterly diffe-

<sup>9</sup> Josef Rosen: *Der Staatshaushalt Basels*, p. 9 f.

rences with flour too. They were influenced by the time of the harvest. In Basel on the other hand a total of 5476 Pfund was derived from the milling tax, as a sum 59% more than in Frankfurt — in fact almost the mirror image of wine. As a total of incomings it was just 16%, proportionally nearly twice as much.

An interesting aspect emerges when wine and flour tax are considered together. The differences between the two are then largely evened out. The levy on wine and flour brought the municipal coffers in Frankfurt around 12,000 Pfund and in Basel around 11,000 Pfund. That can have been no coincidence. One can assume an interdependence between the taxation and consumption of wine *and* flour, the most important goods needed daily.

Another 'common' income of magnitude is the taxation of salt. It would be very surprising if this literally vital product had escaped the attention of the treasury. Naturally we are not dealing with the sums associated with wine and flour. Nonetheless the municipal salt house in Basel brought in 934 Pfund and that of Liestal a further 30 Pfund, together 2.77% of incomings. As usual these sums are net. In Frankfurt 389 Pfund or just 1% of income came from 'salt-measuring'. However one should not look at these taxes through today's eyes as simply anti-social. Direct taxes occurred only occasionally and at times of urgent need, there was no such thing as income tax, at least no consistent one. The taxation burdened the necessities of life, hence the salt tax, which nobody could avoid.

Finally there were important entries in Frankfurt that year which do not appear in Basel. First is the Bede, the wealth tax, which has already been discussed, and which was levied according to the particular case. In Basel too there were from time to time wealth-based contributions (the so-called 'Margzalsteuer' from 1451/52), but not in 1428. The two parts of the city of Frankfurt brought in together 4078 Pfund, which was around 10% of the unrevised incomings. Even the Jewish community of 13 tax-payers had to pay 635 Gulden (= 762 Pfund) or 1.90%.

At this time and later in Basel there was a whole range of quite considerable duties. The following are the titles and amounts:

municipal cattle duty	202.7 lb
bishop's cattle duty	38.2 lb
horse duty	49.7 lb
fish duty	16.3 lb
duty from the city store	483.3 lb
pound duty in the store	778.8 lb
customs in Basel	47.5 lb

In all, these entries add up to 1616.5 Pfund after taking away the cost of levying them, but it was probably nearer 2000 Pfund. Frankfurt had customs and toll duties which amounted to 1300 Pfund or 3.24% of its income.

With *expenditure* the comparison becomes even more difficult. As we have already said, credit operations were decisive in Basel. The payment of interest

on money borrowed by the city cost 13,500 Pfund or 39% of all expenditure. The one-off short-term loan to the allied city of Strasbourg of 7,000 Pfund claimed alone 20%. There then come the repayments to redeem capital borrowed at interest. In total, credit operations with over 23,000 Pfund claimed around two-thirds of all expenditure.

For the settlement of pensions alone Frankfurt used 8,500 Pfund (= 7,100 Gulden) or over 30% of the total. Borrowing against interest, or 'redeemable capital' to use the Basel expression, played at least in this year a small role or perhaps even none at all.

Here we can at last gain an overview of the actual operation of the lending and borrowing of money at interest in Basel in 1428. This movement of capital was calculated and settled normally in Gulden, perhaps also paid in and out in this form. That provided far-reaching security against the unforeseeable decline of silver currency. But in the municipal accounts, after the entries had been duly made in Gulden, they were always then made in Pfund as well. As we have said, gold money was relatively more stable than the current silver money.

First the expenditure for this purpose, that is the 'redemption of interest'. What is meant here is the borrowing of a capital sum against interest. The city received from the creditor a certain sum, on which it undertook to pay interest at an agreed rate and which it had to repay on expiry of the loan contract. That was the so-called 'redeemable capital'. A few examples will make this clear: 320 Gulden were paid back to two nuns in Klingental, for which they had received up till then 16 Gulden annually, i.e. interest at 5%. That was the average interest at the time. In individual cases however it was varied. The ban on interest and current practice on interest in Basel is reported elsewhere.)<sup>10</sup> At any rate this was held to with no short cuts. In Basel interest was described as interest. Besides which, in the lending and borrowing of money interest formed the focus. The claim of the creditors — here of the two nuns, presumably sisters — concerned the interest, in this case 16 Gulden per year. Through this repayment the sum owed (320 Gulden) was not so to speak redeemed, only this interest, even if it happened that the capital had in time been cancelled out by it. In all in 1428 seven cases of repayment of money borrowed against interest were detailed with names. Of these, four creditors drew the normal interest of 5%; two further depositors received a bit less, 4.86% or 4.6% p.a. — the latter on the largest amount of 1,000 Gulden. The admittedly minor differences in interest can be explained by the current rate of interest in the year of deposit, or perhaps by personal or other circumstances which are not obvious here. So those were six loans, and the six creditors had deposited 2,108 Gulden with the city, which was duly returned to them in 1428. The seventh case will be discussed shortly.

The 2,108 Gulden returned are somewhat less than the 2,702-1-8 Pfund

<sup>10</sup> Josef Rosen, *Zins und Zinsaufwand in Basel*.

entered at a rate of  $116 \frac{2}{3}$ . There are two reasons for this. Firstly a Hanns Zimmermann from Stockach (the lender of the 1,000 Gulden) received  $45 \frac{1}{2}$  Gulden in lapsed interest (and not the actual 46 Gulden due to him). That of course was not a repayment but rather a delayed payment (of interest). But secondly an extremely interesting transaction takes place which gives rise to far-reaching conclusions. This is the redemption of a pension, something which there should not even have been. A Peter Schaltenbrand had a right to a pension of 25 Gulden, which he had already been drawing for six years. Thus up till then the city had paid him 150 Gulden in pensions. Then the pensions contract was for some reason terminated. The creditor received for the dissolution of the city's undertaking a further 160 Gulden, so that in all he made 310 Gulden. How large the original pension capital was is not given. At first sight it seems to have been more than 250 Gulden — that would have been 25 Gulden at 10% — otherwise he would not have benefitted to the extent of 310 Gulden ... Or it could have been a deposited pension capital of 250 Gulden which when the contract was originally agreed gave an annual pension of 25 Gulden at 10%. Then the contract was dissolved, and as compensation a retrospective interest rate for redeemable capital of only 4% was agreed. For 250 Gulden of capital retrospectively redeemed this gave annual interest of 10 Gulden, and for 6 years therefore 60 Gulden. The original capital of 250 Gulden with the interest of 60 Gulden then makes 310 Gulden, and that is equivalent to the  $6 \times 25$  or 150 Gulden already drawn, along with the retrospectively paid 160 Gulden (in cash) or all together 310 Gulden, which our Schaltenbrand actually received. Why, we do not know.

If the two entries we have mentioned of 160 and  $45 \frac{1}{2}$  Gulden are added to the repayments of 2,108 Gulden, then the amount rises to 2,313.5 Gulden, and this corresponds to the entry of money repaid of 2,702-1-8 Pfund.

More revealing of these credit operations are the annual incomings called '*money borrowed against interest*'. Here we are concerned on the one hand with pensions, on the other with capital due for interest or repayment. We have the 15 transactions for such pensions, which were mostly agreed on a basis of 10%, and then 10 transactions with repayable capital which had been agreed in that year with 5% interest. In all the future pensioners gave the Basel treasury 4,222 Gulden for the purchase of a pension, then drawing for this 385 Gulden pension per year. That is a bit less than 10%. Only ten of the contractors were able to agree on a rate of 10%, with altogether 2280 Gulden of capital paid in, which produced pensions of each 228 Gulden. The other partners of the city had less favourable agreements. One can sometimes try to guess the reason (as in the contract already mentioned with Katharina Dürheld). With loans at direct interest there are here only a few special cases. In ten entries Basel draws the attractive amount of 6890 Gulden in repayable capital, with interest at 5%.

In all in this year Basel borrowed 11,112 Gulden 'at interest' in these two forms. They appear in the municipal accounts as 12,918-13-4 Pfund or 37.2% of all income.

Finally for the expenditure of this year it should be said that total expenditure in the re-payment of interest was 2,702-1-8 Pfund, but that at the same time '10,216-11-8 Pfund more was borrowed at interest than paid off'. This entry too is accurate.

Back to the actual comparison. The expenditures on municipal building corresponded to their nature: in Frankfurt it was 4,733 Pfund or 16.8% of the total, but in Basel it was 1,210 Pfund, little more than a quarter of the sum. But in Basel besides municipal building in a more narrow sense there were further building costs, so that under the title of building altogether 3,186 Pfund or 9.2% of the total was spent. There were some entries in Frankfurt for building materials. The payment of mercenaries claimed a great deal of money in both cities. In Basel it was 2,290 Pfund, and for other entries in connection with the waging of war another 1,390 Pfund, in all 3,680 Pfund. In Frankfurt under the rubric of mercenaries 3,661 Pfund were spent. They were very large and quite similar amounts.

The two cities had a different structure for their administration. In the Basel accounts of this year all the employees are given who belonged permanently to the municipal administration, mostly in the same order under 28 entries — although there were considerably more than 28 people. These were part-timers and people mainly in honorary positions changing annually, such as the Bürgermeister and the master of the guilds, and then the members of the council, the councillors, normally over 40 of them. There then follow those in the management of the bureaucracy who were employed here as their main profession, namely the city scribe, the highest and most influential, then the assistant scribe, the scribe of the city store, the master of the salt and his scribe. For the leading part-timers and the leading five professional officials the earnings were expressed in Gulden. They received an honorarium and a main or conversely subsidiary income, and in addition to this supplements, in some cases in kind. Their status was expressed in this as well as in the level of their income. This was the top of the state.<sup>11</sup>

In 1428 the leading officials had earnings of roughly 660 Pfund, lesser personnel received around 550 Pfund; with further smaller entries this was in all about 1,370 Pfund or 1,170 Gulden. Those were the costs of the administration. With the total expenditure of the city at roughly 34,700 Pfund or 29,650 Gulden the administration claimed 3.95% of the total. (In the account there was further expenditure for personnel and wages, as payment for works and various activities, but they did not count towards the actual administration).

In Frankfurt in 1428 it was probably on the whole not very different. There the structure of the communal administration was different and had arisen historically in a very different way. In the accounts, out of the 24 groups of expenditure, the office of Bürgermeister alone is entered separately, claiming

<sup>11</sup> Josef Rosen, *Die staatliche Verwaltung in Basel* (see note 3).

193.60 Pfund. The data are referred to this way, but cannot be compared with corresponding entries in Basel.

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The comparison of the municipal accounts of Frankfurt and Basel from 1428 has shown up both similarities and differences. This account cannot give an entry-by-entry comparison, and it would not have much point anyway. It seems more meaningful to emphasise certain common aspects and differences. A whole series of incomings and expenditures of both cities — and others too — are historically determined, have developed from local factors and are largely to be understood thus. In addition to this there are certain characteristics typical of medieval cities. They arose from the common framework of the time, in a political and an economic sense. Modern social structure was undergoing its development, as were modern economies and public administrations. Alongside new and developing characteristics there remained — and in some cases still in a dominant position — remnants and whole sectors of feudalism in politics and economics. The new elements gradually began to win through despite the resistance of the old. These processes were visible in medieval towns. There step by step a — or the — modern administration developed. Correspondingly the functions grew, and with them also the expenditure; and the expenditure in its turn demanded commensurate income.

The most important pillars of public income slowly accommodated themselves to the growing demand. Here especially common traits come to light, for Frankfurt and Basel as well as for other city states. Usually the main elements of municipal income in the late Middle Ages were the levies on consumption as indirect tax. In certain cases of special need there was a direct levy on wealth. The income from credit operations was decisive, which was then unavoidably followed by the concomitant expenditure on the payment of interest and the amortisation of debts. The public financial need was to a crass extent uneven. Expenditure and consequently income swung wildly from one budget period to another. Clearly there was no estimate of the financial requirements of the community and how the means to cover them were to be raised. Only gradually a regulated budget plan of public income and expenditure developed. In line with the ideas of the time and technical capabilities, resort to the taxation of consumption proved itself at first and for some considerable time as the simplest and most lucrative method. It was a long time before graduated income tax won through.

As a historical reminder it may be mentioned at this point that it was the Canton of the city of Basel which in 1840 was the first state to set in operation modern, comprehensive and continuous income tax (we can disregard the English emergency measure of 1799/1816), and that it was the former Oberbürgermeister of Frankfurt, Johannes Miquel, who later as Finance Minister of Prussia in 1891 introduced income tax.

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