In the Absence of Domestic Currency: Debased European Coinage in the Seventeenth-Century Ottoman Empire

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ŞEVKET PAMUK

The Near East was subject to many of the same fiscal and monetary forces that affected Europe and parts of Asia during the early modern era. For almost two decades during the seventeenth century, debased European coinage circulated widely in Ottoman markets at values far above their specie content. This article provides an explanation in terms of Ottoman fiscal deficits, currency instability, currency substitution, and decline in local silver mines all of which led to the closure of mints. The reasons behind the conspicuous absence of Ottoman copper coinage during this period are also explored.

For almost two decades during the middle of the seventeenth century, French, Italian, and Dutch merchants minted in southern France, northern Italy, and elsewhere in Europe large amounts of European coinage whose specie content had been reduced to mostly copper with a thin silver coating. These coins were then transported across the Mediterranean and used as payment for Ottoman goods or even sold wholesale to local merchants and moneychangers. Initially they fetched prices far above their metal content, but these premiums declined over time with the increasing volume of trade that eventually involved hundreds of ships and close to 200 million pieces of coin. The gross revenues of the European merchants have been estimated at more than ten million Spanish pieces of eight or somewhere between six to eight million Venetian gold ducats.

This episode has been described in detail by at least half a dozen European travelers including the authors of well-known volumes such as Chevalier Chardin, J. B. Tavernier, and Paul Rycaut.[1] Published documents from the archives of mints in northern Italy also confirm the production of these coins.[2] In addition, the numismatics literature provides a detailed inventory and description of these coins, including their inscriptions and dates of

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[1]Chardin, *Voyages*, pp. 7–22; Rycaut, *History*, pp. 258–68; and Tavernier, *New Relation*, pp. 15–33.

[2]Hasluck, "Levantine Coinage", pp. 58–59.

production.[3] Many of these coins are now available in numismatics collections throughout Europe.

Contemporary European observers were incredulous that debased coins could be so popular in the markets of the Levant. Rycaut lamented that the Turks "had no wit enough to understand" what was happening.[4] In an article published in the early part of this century, F. W. Hasluck provided the most detailed treatment of the coins involved and insisted that "the Turkish public refused to be undeceived." He concluded that "in all times certain foreign currencies have had special vogue among alien, and especially illiterate nations. . . . The scandalous exploitation of the Turkish markets by the importers of *luigini* was neither the first attempt of its kind nor the last. It differed from others by the scale on which it was carried out, by the success that attended it, in spite of repeated protest and exposure, down to the final abolition of the traffic, and perhaps by the more than ordinary shamelessness of those engaged in it."[5] Writers in twentieth-century Turkey have accepted this interpretation and argued that in this "biggest counterfeiting scheme in history," the unscrupulous European merchants robbed the unsuspecting Ottomans.[6] It is also interesting that the Ottoman archives, which offer extensive records on a wide variety of phenomena around the empire, have so far revealed little about this episode.[7]

There are two related puzzles here. The first concerns the popularity of the European coins. Attempts at counterfeiting coins are not always successful and rarely at this scale. It was always easy for the local merchants and moneychangers who initially accepted these coins from the European merchants to assay them, a practice known in the Near East for almost two millennia. Even if the moneychangers were reluctant to divulge their trade secrets, the silver content of these coins could not possibly have remained hidden for so many years. Clearly, it remains to be explained why the Ottoman public was willing to accept them at rates far above their specie content at this particular time.

I will provide an explanation from the Ottoman side, in terms of the fiscal and monetary conditions prevailing in the Ottoman Empire at the time. I will show that at the eastern end of the Mediterranean, the period from the 1560s until late in the seventeenth century was at least as turbulent for state finances and money as it was at the western end. The Ottomans faced severe fiscal pressures and struggled with rising military expenditures and the adverse consequences of the silver inflation during this period. One response

[3]Ibid, pp. 68–76.

[4]Rycaut, *History*, p. 258.

[5]Hasluck, "Levantine Coinage," pp. 59, 63.

[6]Berkes, *Türkiye Iktisat Tarihi* , vol. 2, pp. 183–91.

[7]Robert Mantran is the first to draw attention to the silence of the Ottoman archives on this episode. Mantran, *Istanbul*, book 2, chap. 2 and "Politique, Economie et Monnaie."

was currency debasements that provided temporary fiscal relief but also added new momentum to price increases. The massive Ottoman debasement of 1585 to 1586 was followed by a period of wars, rebellions, fiscal crises, and extreme instability of the silver *akçe*, the leading Ottoman unit, lasting until the middle of the seventeenth century.[8]

One important question these debasements raise is whether the government employed them as a long-term strategy for generating revenue. This question has been debated in some detail in the recent literature on the monetary history of the late medieval and early modern periods. On the one side, Harry Miskimin has argued that in fourteenth- and fifteenth-century France debasements reflected, more than anything else, the despair of the rulers and did not help them fiscally. Michael D. Bordo has questioned this argument and in recent contributions published in this JOURNAL, Nathan Sussman and Akira Motomura have argued that debasements were employed as a rational and sometimes long-term strategy for raising fiscal revenue in fifteenth-century France and seventeenth-century Spain. In his detailed study of the monetary history of medieval Europe, Peter Spufford also argues that central governments benefited from debasements during the fourteenth and fifteenth centuries.[9] This article provides evidence from the Ottoman debasements that support the latter position.

I will also show that this extended period of monetary volatility resulted in considerable amount of currency substitution: loss of confidence in the Ottoman currency and a shift by the public towards European coinage that had always circulated in Ottoman lands. Not coincidentally, this was a period when many European states and economies also faced silver shortages. The flow of silver from America and Europe through the Near East towards Asia must have also contributed to this common pattern. When silver stopped coming to the mints and the Ottoman government was unable to acquire additional supplies most of the mints were closed down and the production of the silver *akçe* came to a virtual halt in the 1640s. It was in this context that the debased European coinage found widespread acceptance. This perspective is either missing altogether or not adequately

[8]Two decades ago, Ömer Lütfi Barkan linked these fiscal, economic, and monetary difficulties to the arrival of American silver and the Price Revolution of the sixteenth century. Labeling the Price Revolution "a turning point" in the history of the Near East, he argued that the price increases led to the decline of industry from which the empire never recovered. Barkan, "Price Revolution." Recent research has shown that Barkan's claims about the impact of inflation on the Ottoman economy were exaggerated. A reexamination of the causes and consequences of the Price Revolution in the Ottoman Empire falls outside the scope of the present article, however. A partial critique of Barkan was provided by Sundhaussen, "Die Preisrevolution."

[9]Miskimin, *Money*, p. 59; Bordo, "Money"; Sussman, "Debasements"; Motomura, "Best and Worst of Currencies"; and Spufford, *Money*, pp. 289–318. Carlo Cipolla has also underlined the fiscal motive in medieval and early modern debasements. Cipolla, *Money*, p. 28 and "Currency Depreciation."

considered in the writings of contemporary European observers as well as in more recent interpretations based on those accounts.

The second and related puzzle concerns the absence of Ottoman copper coinage under these circumstances. For most of the seventeenth century, fiscal pressures as well as the disappearance of silver forced the governments in Spain, France, Sweden, Poland, Russia, and elsewhere in Europe to place greater emphasis on copper coinage both in order to raise fiscal revenue and also provide a medium of exchange.[10] In contrast, the Ottoman government abandoned the production not only of silver but also copper coinage some time during the second quarter of the century. The absence of copper coinage in the Ottoman case certainly contributed to the sharp differences between the European and Ottoman experiences during this period despite the apparent similarity of fiscal and monetary conditions. I will argue that the government was aware of the opportunities provided by copper coinage, but due to a combination of technological and organizational limitations, it could not pursue this alternative.

DEBASED COINS IN OTTOMAN MARKETS

It is well known that Europe experienced large trade deficits towards Asia during the sixteenth and seventeenth centuries. Often unable to find a sufficient volume of goods to sell to the markets in the East, European merchants paid the difference with bullion and coinage imported from the Americas. There are many accounts of European ships leaving for the Near East and Asia loaded with cargoes of silver and silver coinage and, less frequently, with gold. As a result, large silver coins minted in America and Europe known as *grosso* or *groschen*, the most popular of which was the Spanish piece of eight, circulated extensively in Ottoman markets and Asia after 1550. A large part of these coins continued to move towards Iran and ports on the Indian Ocean, however, since the Ottoman economy experienced trade deficits towards the east while it enjoyed surpluses towards the west.[11]

The episode to be examined here also began with the efforts of European merchants trying to secure coinage before another trip to the Levant in 1653. From that point on, however, it unfolded in a new direction; the trade balances between the western and eastern ends of the Mediterranean ceased to be the driving force for the ensuing monetary flows. Instead, fiscal and monetary conditions in the Ottoman Empire emerged as the primary explanation for what happened, as I shall show.

[10]Spooner, *International Economy*, pp. 33–53, 171–96.

[11]Chaudhuri relates, for example, how the ships of the East India Company occasionally experienced difficulty in securing silver coinage before their departure for Asia. Chaudhuri, *Trading World of Asia*, p. 135; see also Attman, "Flow"; Barrett, "World Bullion Flows"; and Gaastra, "Exports."

When French merchants could not obtain the Spanish pieces of eight due to political tensions between Spain and France, they brought from Marseilles to the eastern Mediterranean a five-sols piece originally issued in 1641 for Louis XIII. This was an attractive coin, probably one of the earliest examples of milled coins to be seen in the Levant. In addition to serving as a medium of exchange, the coin was also used, at least initially, as ornamentation by peasant women who could not afford the more expensive silver and gold pieces.[12]

In France 12 of these five-sols pieces exchanged for one gold ecu or one Spanish piece of eight. Soon after their arrival in the Ottoman markets, eight of these coins began to exchange for one piece of eight.[13] At this rate, the purchasing power of the five-sols piece was not at all small. If an unskilled construction worker in Istanbul was paid with these coins, he would receive approximately two of them for one day's work.[14] Given the substantial difference in their exchange rates between the western and eastern ends of the Mediterranean, the French merchants soon began to import the five-sols pieces in bulk. After a number of years, they also began to manufacture on a large scale coins of identical weight and appearance but containing smaller amounts of silver and a larger percentage of alloy. The Italians and the Dutch soon joined the trade.

The method used was to approach a local potentate in southern France or northern Italy who possessed the right of coinage and contract him or her for the use of the seignorial mint in order to strike, with his knowledge, a large number of base coins bearing his name.[15] Very soon, debased coins minted with the names of the Princess of Trevoux, the princes of Dombes, Oranges, Monaco, Masse, Avignon, Genova, and others were circulating in the Ottoman markets.[16] In his examination of another episode of trade in debased coinage, Charles Kindleberger emphasizes that this was not an unusual practice in Europe. According to Kindleberger, "many states in Europe were interested in raising seigniorage within their boundaries, but it was soon discovered that debased money could be taken abroad and exchanged for

[12]Hasluck, "Levantine Coinage," p. 56.

[13]Chardin, *Voyages*, p. 7; and Hasluck "Levantine Coinage," p. 56. In the Ottoman markets these coins were called *sumun* (or *tumn*), which meant one-eighth in Arabic-Ottoman. The standard *akçe* exchanged at 80 to 90 for one piece of eight during this period (see Table 2 below). The physical appearance of these coins may have contributed to but can not entirely explain the higher rate they fetched in the Ottoman markets, as I will argue below. Similarly, the large differences in the exchange rates of the five-sols piece between western Europe and the eastern Mediterranean can not be explained away by the east-west differences in gold-silver ratios. Recent research has shown the differences in the gold-silver ratios between the two ends of the Mediterranean rarely exceeded 10 percent during the sixteenth and seventeenth centuries. Pamuk, "Money," tables A-2, A-5.

[14]This wage rate is taken from construction account books in the Ottoman archives as part of a long-term price and wage study being undertaken by the author.

[15]Tavernier, *New Relation*, pp.16–24.

[16]For a full list, see the catalogue provided by Hasluck,"Levantine Coinage," pp. 65–71.

good money, which could in turn be brought back and recoined with greater seigniorage."[17] This was not a simple propagation of a monetary crisis from one part of the Mediterranean to the other, however. As far as I can determine, this substandard coinage did not circulate in any significant amount in southern Europe at this time.

As the silver content of the coins began to fall, the inscriptions on the coins began to change. *Bonitatis unciarum sex* (six-twelfths) gave way to *bonitatis unciarum quinque* (five) and then to *bonitatis unciarum quatuor* (four) and even *trium*. In some cases, an Arabic numeral indicating the fineness was inserted at the end of the corresponding legend in Latin. There are also examples of coins on which the Arabic numerals are higher than the standard inscribed in Latin.[18] With the disappearance of the silver and the increasing volume of trade, the market rates of the coins sunk as low as 20 for one Spanish piece of eight, thus making them even more suitable for daily transactions. In the meantime, the mint authorities wanted to prevent the circulation of these coins in Europe. One method was to differentiate the coins from export from those circulating in Europe. Inscriptions like *per totam asiam cvrrens* (current in all of Asia) or *Voluit hanc Asia mercem De procul pretium eius* (payment for goods in distant Asia) were added to some of the coins to warn Europeans about the boundaries of their circulation.[19]

The peak in the traffic was reached between 1656 and 1669. J. B. Tavernier estimates the total volume of European coinage that went through the Ottoman customs at 180 million pieces, or at more than ten million Spanish pieces of eight. In gold, this corresponded to more than six million Venetian ducats. In addition, some unknown quantity was smuggled into Ottoman territory in part by bribing customs officials. According to another estimate, an average of 22 ships arrived at the port of Izmir every year during this period, all loaded with these debased pieces.[20] Such volumes suggest that the remaining good coins in the Ottoman markets were being taken back to southern Europe and reminted as base *luigini* and re-imported to the Ottoman markets.[21]

MONETARY AND FISCAL CONDITIONS IN THE OTTOMAN EMPIRE

To understand the willingness of the Ottoman public to accept the debased coins, it is essential to examine the fiscal and monetary conditions in the Ottoman empire during this period. More generally, this episode needs to be placed in the context of deteriorating economic, fiscal, and monetary

[17]Kindleberger, "Economic Crisis," p. 158.
[18]Hasluck, "Levantine Coinage," p. 59.
[19]Ibid., pp. 65–71, 86.
[20]Tavernier, *New Relation.*
[21]Hasluck, "Levantine Coinage," p. 59.

conditions in the core regions of the empire beginning in the last quarter of the sixteenth century. Many of these trends were quite similar to the difficulties experienced in many parts of Europe and Asia. Located between these two continents, the Near East was very much part of the fiscal and monetary processes that affected the Old World during the sixteenth and seventeenth centuries. It still needs to be explained, however, why Ottoman monetary difficulties unfolded so differently than those of European states during the same period.

Money

In and around the Mediterranean basin, the Ottomans were influenced by and became the carriers of the great monetary traditions of the Old World, from the Roman and Byzantine empires to the medieval Islamic states, to the Mongols of Persia and the Italian city states. The Ottoman state needed some form of money in order to collect taxes and make payments to the soldiers, bureaucrats, and suppliers of the army and the palace. More importantly, the bureaucracy was very much aware that there existed a strong link between the availability of money and the prosperity of trade and the economy especially since the Ottoman state had been located on long-distance trade routes ever since the earliest days in the fourteenth century.

Recent research has shown that the use of money in the Ottoman economy was not limited to narrow segments of the urban population. Through their participation in markets and because of state taxation of a wide range of economic activities, large segments of the rural population came to use coinage, especially the small denominations, during the sixteenth century.[22] A close examination of the provincial legal codes (*kanunname*) of this period point to an economy with strong urban and rural linkages, considerable market orientation and frequent collections of small amounts of taxes in money from the artisans and merchants as well as the nomads and sedentary peasants.[23] In addition, small-scale but intensive networks of credit relations developed in and around the urban centers. Peasants as well as urban residents took part in these monetary transactions.[24] A considerable part of the Ottoman economy as well as state finances thus depended on money and monetary stability, and the Ottoman administrators were well aware of that.

During the sixteenth century, the Ottoman monetary system in the Balkans, Anatolia and, parts of Syria was based on gold, silver, and copper coinage. The central piece was the silver *akçe*, the basic unit of account dating back to the fourteenth century. For most of the sixteenth century, this

[22]Faroqhi, "Early History" and "Sixteenth Century Periodic Markets"; Jennings, "Loans"; and Inalcık, "Osmanlı."

[23]A compilation of these provincial codes are available from Barkan, *Zirai Ekonomi*.

[24]Pamuk, "Money," pp. 950–61.

was a small coin weighing about 0.7 grams.[25] The official standards that were closely followed by the local mints until the 1570s, required that *akçes* be minted from "clean" silver without any alloy.[26] The gold *sultani* that began to be minted in the 1470s with standards identical to those of the Venetian ducat was used in large transactions, including international trade and also for storing wealth. The purchasing power of these two coins was determined by their specie content, which remained stable between the 1480s and the 1580s. At the bottom of the hierarchy were copper coinage called *mangır* or *pul* with nominal values and for small daily transactions. During the sixteenth century, eight of the large copper coins and 24 of the small copper coins equaled one *akçe* in value. The state did not accept copper coinage as payment, however. One shortcoming of the Ottoman coinage system was the absence of larger silver coins for medium-sized payments. Multiples of the *akçe* such as the ten-*akçe* piece were occasionally minted but these were discontinued. Thus, there existed a large gap in the hierarchy of coins between the gold *sultani*, whose exchange rate edged up from 55 to 65 *akçes* during the sixteenth century and the small *akçe* itself. As a result, the pressure on the *sultani* and the ducat persisted. Whenever gold coinage was not available in sufficient quantities, larger payments had to be made with piles of *akçes*.[27]

Foreign coins circulated extensively and without any form of government intervention. In local markets, Ottoman and foreign coins changed hands on the basis of their market rates of exchange, which closely reflected their specie content. For example, the Ottoman *sultani* and the Venetian ducat, with identical gold contents, exchanged at par until late in the sixteenth century. The government often announced the official rates at which gold and silver coins, Ottoman as well as foreign, would be accepted as payment. For the most part, the mints were kept open for the coinage of both silver and gold subject to seigniorage payments to the state.[28]

State Finances

Until the last quarter, the sixteenth century was a period of fiscal and monetary stability coupled with demographic and economic expansion in the Ottoman Empire. During the earlier part of the century new territories including Hungary, Syria, Mesopotamia, and Egypt had been incorporated into the empire. State finances benefited from these successful campaigns and the

[25]See Table 2 and Pamuk, "Money," for greater detail.

[26]It is not clear what "clean" meant in practice. The specie content of the available coins have not been studied in detail. Most specialists assume that standard *akçes* were minted from silver approximately 90 percent pure silver.

[27]This gap becomes more evident when compared with the coinage patterns of sixteenth-century Europe, for example. Grierson, "Monetary Pattern."

[28]Pamuk "Money," pp. 950–61; and Sahillioğlu, "Role."

inflows of annual remittances from these provinces, most importantly from Egypt. Along with increases in population and land under cultivation, internal and long-distance trade expanded. With growing commercialization, economic ties between the countryside and urban areas became stronger. The increasing monetary needs of this economy were met by the increased availability of gold, primarily from Egypt, and silver arriving from the Americas by way of Europe.

These favorable fiscal and economic trends were reversed, however, during the last quarter of the century. One important change was the deterioration of state finances. As military campaigns against Iran in the east and the Habsburgs in the west turned into long, protracted affairs, the budget surpluses enjoyed in the earlier part of the century began to disappear. Since some of the state revenues were fixed in nominal terms, the silver inflation of the sixteenth century also had adverse consequences for state finances.[29] A compilation of the available imperial budgets as summarized in Table 1 shows that deficits became more or less permanent by the end of the century. This new pattern lasted for most of the seventeenth century, eventually exhausting the reserves of the imperial treasury accumulated during earlier periods. The inflation-adjusted series presented in Table 1 indicates that revenues entering the imperial treasury failed to keep pace with inflation while nominal expenditures rose faster than inflation after the middle of the sixteenth century. At the very least, it is clear that expenditures rose faster than revenues during this period.[30]

Social and political upheavals known as the *Celali* rebellions that began late in the sixteenth and lasted well into the seventeenth century only exacerbated these fiscal difficulties. As the peasants took flight or returned to nomadism, agriculture, especially commercial agriculture, was adversely affected. Moreover, the discovery of the sea route to Asia finally began to show its effects on the intercontinental trade routes during the early decades of the seventeenth century. While the ocean triumphed over the mainland, after a lag of one century, many towns of the Levant as well as Ottoman state finances began to feel the decline in commercial activity.[31] As a result of these developments, it appears that in the Balkans and Anatolia and perhaps even in Syria, the demographic and economic expansion of the sixteenth century came to an end in the 1580s or soon thereafter. Population and economic activity stagnated and may have even declined in many parts of the empire during the seventeenth century.[32]

[29]Barkan, "Price Revolution"; and Inalcık, "Military and Fiscal Transformation."

[30]See Table 1, note 3.

[31]Steensgaard, *Asian Trade Revolution*, p. 9.

[32]Faroqhi and Erder, "Population"; Inalcık, "Military and Fiscal Transformation"; and, most recently, Faroqhi, "Crisis."

TABLE 1
A COMPILATION OF THE AVAILABLE BUDGETS OF THE OTTOMAN CENTRAL GOVERNMENT, 1523–1688

Year	Revenues		Expenditures		Balance
	Current *Akçes* (millions)	Index in Constant *Akçes*	Current *Akçes* (millions)	Index in Constant *Akçes*	Current *Akçes* (millions)
1523–1524	116.9		118.8		−1.9
1524–1525	141.3	100.0	126.6	100.0	+14.7
1527–1528	221.6		150.2		+71.4
1546–1547	241.7		171.9		+69.8
1547–1548	198.9	128.4	112.0	111.3	+86.9
1565–1566	183.1		189.7		−6.6
1567–1568	348.5		221.5		+127.0
1582–1583	313.7		277.6		+36.1
1592–1593	293.4	70.4	363.4	95.4	−70.0
1608	503.7		599.2		−95.5
1643–1644	514.5		513.8		+0.7
1650	532.9		687.2		−154.3
1652–1653	517.3		528.9		−11.6
1654	537.4	92.8	658.4	127.4	−21.0
1661–1662	581.3		593.6		−12.3
1666–1667	553.4		631.9		−78.5
1669–1670	612.5		637.2		−24.7
1687–1688	700.4		901.0		−200.6

Notes: These budget documents do not include all revenues and expenditures of the state. Most notably, they exclude revenues and expenditures collected and spent in the provinces including most of the taxes in kind collected from agricultural producers and spent to equip and train a cavalry-based provincial army. The provincial revenues that did not reach the capital were roughly equal in magnitude to the figures appearing in these budgets.

The revenue and expenditure figures given in current *akçes* are adjusted for inflation with the help of a food price index for the Istanbul region constructed by Barkan. His index, which begins with 100 for the base year 1489–1490, rose to 142 in 1555–1556, 180 in 1573, 182 in 1585–1586, 442 in 1595–1596, 630 in 1605–1606 and then declined to 504 in 1632–1633, 470 in 1648–1649, and 462 in 1655–1656. Since Barkan's price index is available for selected years only, I chose to provide, for the revenue and expenditure indices above, average values only for each of the subperiods.

It is well known that the terms of trade moved in favor of agriculture during the sixteenth-century Price Revolution in Europe. Available evidence suggests that this was the case in the eastern end of the Mediterranean as well. Barkan, "Price Revolution"; and Çizakça, "Price History." If so, then the food-price index above tends to overstate the extent of overall price increases.

Sources: The budgetary figures are taken from Tabakoğlu, *Gerileme Döneminde*, pp. 14–15. For a shorter list of budgets that point to the same pattern and a detailed discussion in English, see Barkan, "Price Revolution," pp. 17–21. The food-price index for Istanbul was taken from ibid, pp. 10–11.

Debasements

These adverse trends culminated in the debasement of 1585 or 1586, which reduced the silver content of the Ottoman unit by 44 percent after one century of stability.[33] This operation did not end the fiscal and monetary

[33]Whereas the mints used to strike 450 *akçes* from 100 *dirhams* of "clean" silver, they were now instructed to mint 850 *akçes* from the same amount. See Table 2 and also Kafadar, "Les Troubles Monetaires," pp. 381–89. The exact date of the debasement remains unclear.

TABLE 2
THE OTTOMAN *AKÇE* AND ITS EXCHANGE RATE AT ISTANBUL, 1500–1640

Years	Akçes minted from 100 dirhams of silver	Weight in Grams	Venetian Ducat	Spanish Piece of Eight
1500	420	0.73	54	—
1550	420	0.73	60	40
1584	450	0.68	65–70	40–42
1586	800	0.38	120	80
1596	—		220–230	
1600	950	0.32	125	78
1618	1,000	0.31	150	100
1620	—		160	100
1622	—		180–210	120–150
1623	—		210–280	120–170
1624	—		330–420	170–320
1624	1,000	0.31	130	
1628	—		190	100–110
1634	—		230	110–120
1640	—		270	125
1641	1,000	0.31	168	80
1650	—		175	90

Notes: The Ilkhanid dirham of Tabriz used by the Ottomans in monetary practices equaled 3.072 grams. Pamuk," Money," p. 954.

Until 1585 the standard *akçe* was minted from "clean" silver without any alloys. See note 26. For this early period, the standards of the *akçe* are available from mint records and imperial orders to the mints.

After the debasement of 1585–1586, however, unknown amounts of copper began to be added to the silver. For this latter period, the standards of the *akçe* are available from archival evidence for the years 1600, 1618, 1624, and 1640 since these were years of correction of coinage operations. For other years the silver content of the *akçe* can be approximated but not determined precisely from its exchange rates against the Spanish pieces of eight since European coins may have enjoyed a premium against the Ottoman unit based on respective specie contents.

Sources: Pamuk, "Money," tables A-2, A-3, A-5, and A-6 ; and Sahillioğlu,"XVII. Asrın," p. 233.

difficulties, however. The period until the 1640s was one of exceptional instability for the *akçe*; the fluctuations of the currency can be followed from a combination of sources. As shown in Table 2, the available mint records provide information about the weight and silver content of the standard *akçe* only for selected years of this period. For most years of this period, however, *akçes* produced by the mints fell below those standards. Although the silver content of the substandard or defective (*hurde*) coins can not be determined precisely, court records provide detailed information about their market exchange rates against the stable ducat and other leading European coins on a monthly basis. From these exchange rates, it is possible to approximate the sharp fluctuations in the silver content of the Ottoman unit. For example, from the last column of Table 2 it appears that during 1623 to 1624 the silver content of the *akçe* dropped to about one-third and during 1638 to 1640 to about half of its standard levels. Each time the deterioration of the *akçe* reached crisis proportions, the government attempted to return

to the old standard or establish a new one. These operations, called *tashih-I sikke* (correction of coinage), were carried out in 1600, 1618, 1624, and 1640. Adding to the confusion were the clipped versions of the standard *akçes* that circulated together with the substandard versions.[34]

Two related questions that have been debated in the recent literature on the monetary history of the late medieval and early modern periods are whether governments benefited from debasements and whether debasements were used as a long-term strategy for generating revenue.[35] In the Ottoman case, there is overwhelming evidence that the debasements were the result of fiscal difficulties and that the state benefited in the short run from the production of substandard coinage. The available evidence also indicates that there did not exist such a long-term strategy during this particular period. The frequency of correction of coinage operations that increased the silver content of the *akçe* also suggests that the government tried to maintain the standards of coinage but was unable to do so.[36]

Perhaps the most important reason for the government's struggle for a stable currency and the major constraint against a more systematic use of debasement as a fiscal tool was the opposition of the janissaries in Istanbul, who were paid with this coinage. After the debasement of 1585–1586, they revolted, demanded, and obtained the execution of the vizier responsible for the currency.[37] The janissaries remained a force to be reckoned with in the turbulent politics of the capital city during this period. They were involved in the deposition of three sultans in 1618, 1622, and 1623.[38] There is detailed evidence, at least for later periods, that guild members joined the soldiers in opposition to debasements. Of the four correction-of-coinage operations undertaken during this period, the last three took place after the accession to the throne of new sultans. It is clear that these operations repre-

[34]Sahillioğlu, "Role"; and Gerber, "Monetary System," pp. 310–14.These operations were similar to the *reinforcements* of western Europe. Munro, "Deflation," pp. 392–93. After each of these operations, the state faced the task of forcing the prices down. For this purpose, local governments prepared very detailed lists of price ceilings (*narh*) for hundreds of goods. These lists now constitute useful sources not only for price history but also for studying the range of economic activity in the urban centers. Kütükoğlu, *Osmanlılarda Narh*. For an interesting account of the Ottoman perceptions of these monetary difficulties, see Kafadar, "Les Troubles Monetaires."

[35]See note 9.

[36]Since the relevant mint records are not available, the volume of coin production for each subperiod can not be established. It appears, however, that the mint volume remained sporadic and that coins were produced whenever the state was able to acquire specie. Years of maximum debasement often coincided with the lack of specie and low output and not vice versa.

[37]Known as the "*beylerbeyi* incident," this was only the second time in Ottoman history that the janissaries organized to protest a debasement. The first had occurred in 1444 and had led to a pay raise. The reason for the long interim was the stability of the Ottoman currency. The specie content of the akçe changed very little from the 1480s until the 1580s. See Table 2.

[38]Shaw, *History*, pp. 193–94.

sented attempts by the sultans to win the good will of the soldiers, and more generally, of the urban population.[39]

Currency Substitution

In addition to the instability, the debasements reduced the *akçe* into an exceptionally small and thin coin. Its weight and silver content declined from about 0.7 grams until the 1580s to 0.3 grams in 1640. It thus became very difficult to handle; large numbers of *akçes* were needed even for small, daily transactions. Larger silver coins such as ten-*akçe* pieces were minted only occasionally and these disappeared quickly when substandard *akçes* flooded the markets.[40] The government also began to mint a new coin called *para*, which was based on the monetary unit in circulation in Egypt and parts of Syria and carried three times as much silver as the *akçe*.[41] The volume of *para* production remained limited, however.

It appears that half a century of instability and the inconvenience of using *akçes* in daily transactions led to a considerable degree of currency substitution. The public became increasingly reluctant to hold the *akçe* or take bullion and foreign coins to local mints. Instead, there emerged greater demand for the more stable European coinage, especially the well-known and large silver pieces of the seventeenth century.[42] It is possible that during these extended periods of deterioration of the Ottoman unit, European coins began to circulate at a premium over their small Ottoman counterparts, measured in terms of their respective silver content. Since the precise mint records are not available, however, except for the years of correction of coinage operations, the existence and magnitude of these premiums can not be established from the available evidence summarized in Table 2.[43]

[39]Peter Spufford points out to similar struggles in many parts of western Europe during the fourteenth and fifteenth centuries between the monarchs who stood to gain and the landed aristocracy with fixed rent incomes who stood to lose from debasements. Spufford, *Money*, pp. 289–318.

[40]Schaendlinger, *Osmanische Numismatik*, pp. 100–12.

[41]It appears that the first minting of *para* in Istanbul was undertaken during the reign of Murad IV (1623–1640). Schaendlinger, *Osmanische Numismatik*, p. 110.

[42]There are a number of documented episodes of currency substitution in late medieval Europe. For a discussion of the consequences of the recurrent debasement-reinforcements cycles observed in fourteenth- and fifteenth-century France and Burgundy, see Bordo, "Money," pp. 344–45. Cipolla has examined another episode in the "Affair of the Quattrini," which occurred in fourteenth-century Florence. Cipolla, *Monetary Policy*, pp. 63–85.

[43]Until 1642 when its silver content was reduced by 20 percent, the Spanish real was minted at 67 per marc of 230.05 grams. The piece of eight thus contained 27.46 grams of silver. Motomura, "Best and Worst of Currencies," pp. 106–07; and Shaw, *History of Currency*, pp. 340–41. Considering that the *akçe* was minted from approximately 90 percent pure silver, the exchange rates given in Table 2 for the years of correction of coinage operations do not point to the existence of such premiums.

Intercontinental Monetary Flows

Another source of instability for the *akçe* was the decline of Ottoman silver mines. Until the sixteenth century the Ottoman mints had relied on the state-operated silver mines of Serbia and Bosnia as the principal source of specie.[44] The arrival of large amounts of silver from the New World, however, lowered the relative price of that metal, leading first to the decline of their output after the turn of the century and then to their closure during the 1640s.[45] When fiscal pressures began to intensify, therefore, the state could not fall back on the earlier sources to maintain steady supplies of coinage.

It is also possible that intercontinental monetary flows contributed to Ottoman monetary difficulties more directly. Despite the continued flows of silver from the Americas, Europe began to experience increasing scarcities of silver towards the end of the sixteenth century and this tendency lasted through most of the seventeenth century.[46] Recently, Dennis O. Flynn and Arturo Giraldez and Richard Von Glahn have put forward the thesis that a large part of the output of the American silver mines was absorbed by China, either by direct shipments to Asia or via Europe. The increased demand in China was due to the monetization of silver in the 1570s.[47] The Ottoman empire happened to be on the latter trade routes, and the growing monetary difficulties experienced in the Ottoman lands may have been due to these intercontinental flows as well as the fiscal deficits. At the moment, however, there is not sufficient evidence for or against this explanation. There is a good deal of evidence that the Ottoman government welcomed the arrival of silver and silver coinage from Europe, but it could not prevent their outflow towards Iran and India as the empire continued to run trade deficits towards the east. This overland transit trade of goods from Asia to Europe diminished after the turn of the century, however.[48] Although it is impossible to establish empirically the overall trade balance for the Ottoman Empire during the sixteenth and seventeenth centuries, the continued circulation of European groschen, especially the Spanish pieces of eight and the Dutch thaler, throughout the empire confirms that silver did not disappear from Ottoman markets.

[44]Sahillioğlu, "Role."

[45]Sahillioğlu, *Bir Asırlık*, p. 14; and Murphey, "Silver Production." Even though Rhoads Murphey argues that the output of silver mines did not decline until after the 1630s, the considerable drop in output after the turn of the century is in fact clear from the tables he provides. This is especially true of the mine in Üsküp (Skopje), which accounted for more than half of the total output of Ottoman silver mines in Serbia. Ibid., pp. 82–86. For the closure of European mines as a result of the arrival of American silver, see Spooner, *International Economy*, pp. 24–53.

[46]Ibid., pp. 33–53.

[47]Flynn and Giraldez, "Born with a Silver Spoon"; and Von Glahn, "Myth."

[48]Steensgaard, *Asian Trade Revolution*.

Closure of the Mints

In addition to the problems associated with attracting silver and foreign coinage to the mints, the continuing fiscal pressures and the decline in mine output made it increasingly difficult for the state to supply the mints itself, thus leading to a deterioration in the quality of coinage, especially in the provinces. As a result of these difficulties, the government began to close down the mints. In orders sent to provincial mints, the government expressed its reluctance to maintain their operations in view of the poor quality of coinage being produced.[49] Evidence from numismatic collections and catalogues also indicates that the numbers of provincial mints producing the silver *akçe* declined sharply during the second quarter of the century, especially in the 1640s.[50] The output of the mint in Istanbul also remained sharply lower until the mid-1680s. The limited volume of gold and silver coins produced in the capital city during this period were used primarily as payments to soldiers at war and by the sultan and his retinue in ceremonial occasions.[51] Both archival and numismatic evidence thus point to a decline in the production of silver and gold coinage for at least four decades.[52]

When the Ottoman government could not or did not meet the economy's demand for money, this need was met increasingly by European coins, initially silver and gold. Although foreign coins had always circulated in Ottoman lands, they played a qualitatively different role during the seventeenth century. As Ottoman coinage disappeared, the *akçe* was reduced to little more than a unit of account. Gold and especially silver European coins became the leading forms of actual money from the Balkans and Istanbul to Anatolia and Syria. Local court records and recent studies by economic and social historians on Ottoman provinces provide ample evidence in this respect.[53] The Ottoman government did not attempt to restrict the circulation

[49] Sahillioğlu, *Bir Asırlık*, pp. 18–37.

[50] Since most Ottoman coins carried the name of the sultan, the year of his accession, and the location of the mint, it is possible to follow from the available coins the decline in the numbers of provincial mints active during each reign. At the same time, since the coins of this period did not feature regnal years, it is not possible from this evidence to establish how many mints were active during any given year. Most of this numismatic evidence is summarized in Schaendlinger, *Osmanische Numismatik*, pp. 102–13; and Erüreten, "Osmanlı Akçeleri," pp. 18–19. Rhoads Murphey also considers the reign of Ibrahim I (1640–1648) the critical period for the cessation of activity in Ottoman silver mines. Murphey, "Silver Production," pp. 76, 82–86.

[51] Sahillioğlu, *Bir Asırlık*, pp. 18–36.

[52] For more detail, see Pamuk "Disintegration," pp. 74–75.

[53] Tavernier, *New Relation*; and Chardin, *Voyages*. Robert Mantran was one of the first to point out the decline of the *akçe* in local markets. His account is especially striking since it describes the conditions not in the distant provinces but in the capital city. Mantran, *Istanbul*, book 2, chap. 2. With the appearance during the last decade of new studies on the economic and social history of the provincial cities that make extensive use of local court records, it is now possible to get a geographically detailed account of the disappearance of the *akçe* and the spread of European coinage. See Masters, *Origins*; Establet and Pascual, "Damascene Probate Inventories"; and Ze'evi, *Ottoman Century*, pp. 143–45.

of these coins. In fact, it regularly accepted and sometimes even demanded payment in European coinage.[54]

WHY NOT COPPER COINAGE ?

The popularity of debased European coinage was, therefore, closely related to the inability of the Ottoman state to supply silver coinage after 1640. This raises a second puzzle, namely the cessation of the production of copper coinage in addition to silver. Just as it was the case with silver and gold coinage, the numismatic evidence points to an almost complete absence of Ottoman copper coinage for almost half a century, from the 1630s until the late 1680s.[55] This is quite intriguing since many states in Europe, from Spain and France to Germany, Sweden, Poland, and Russia relied on copper coinage during this period both as a medium of exchange and to raise seigniorage revenue.[56]

The absence of copper coinage is all the more puzzling because towards the end of the century, during another fiscal crunch from 1689 to 1691, the government did exactly what it had failed to do earlier. It issued, within a 30-month period, as many as 600 million pieces of copper *mangır* weighing half *dirhams* (1.6 grams) each.[57] Initially, these pieces were given the nominal value of one-half *akçe,* but the government quickly raised that to one *akçe*. Even though some merchants in the provinces refused to accept the new coins, on the whole, this was a reasonably successful operation for the short period it was employed. It also provided the state with much needed seigniorage revenue.[58]

It appears that the failure or inability of the central government to issue copper coinage during the midcentury was not due to one single reason but to a combination of factors. One possibility is that adequate supplies of

[54]One of the more prominent silver coins in circulation from the Balkans to Egypt was the Dutch thaler. Even more important was the Spanish piece of eight (*reales de a ocho).* There were others such as the Austrian rix-thaler and the Polish isolette. Most of these European silver coins were called *gurush*, which was the local adaptation of groschen, a diminutive for gross or grosso, terms used for large silver coins in Europe since the thirteenth century. The Venetian ducat together with the Hungarian piece in the Balkans remained the most important gold coins. Fractions of these coins also circulated but in a more limited fashion. Pamuk, "Money", pp. 950–66.

[55]Tavernier, for example, is unequivocal: "In all the Ottoman Empire, there is not any money of copper to be seen." Tavernier, *New Relation*, p. 15. For a summary of the numismatic evidence on copper coinage in the seventeenth century, see Schaendlinger *Osmanische Numismatik,* pp. 106–14.

[56]Spooner, *International Economy*, pp. 10–86.

[57]About one-third of this amount was due to the reminting of the same coins with the accession of a new sultan, Ahmed II, in 1691.

[58]The detailed account books of the mint at Istanbul indicate that after all expenditures, including the share of the private entrepreneurs who managed the mint are subtracted, as much as 70 percent of the nominal value of the coins thus struck was left as net revenue for the state. Sahillioğlu,"Bakır Para," pp. 16–19. The seigniorage revenues obtained over this two-and-a-half-year period exceeded 10 percent of the total revenues of the imperial treasury during the same period. There is no doubt that this experiment provided a significant boost to the hard pressed treasury.

copper were simply not available. Of the two Anatolian mines in Gümüşhane and Küre, which were active during the 1690s and which supplied part of the copper for that experiment, the latter was not active in midcentury. The availability of copper was not a significant bottleneck, however, since the government could have acquired, at least in the short run, substantial volumes of used copper from the local markets as it did in the 1690s.

The organizational and technological reasons were probably much more important. The right to issue copper coinage in the provinces were typically auctioned off by the government to private entrepreneurs as was the case for some of the mints producing silver coinage. Since the nominal value of the *mangır* had always been in fractions of the *akçe*, such as one-eighth or one-fourth, the decline in the value and purchasing power of the *akçe* after the debasement of 1585–1586 brought the costs of production of copper coinage closer to their nominal values and reduced the margin for seigniorage. The private entrepreneurs were thus reluctant to purchase the regional *mangır* monopolies under those circumstances. This was probably the most important reason for the breakdown of the network of provincial mints producing copper coinage. One possible solution would have been to raise the nominal value of copper coins to at least one-half *akçe* or even to one *akçe*, which was done in the 1690s when the mint in Istanbul and not the regional mints issued the copper coinage. The provincial markets may not have accepted locally produced copper coinage with higher nominal values, however.

Another important shortcoming of the Ottoman mint system around midcentury was technological. Until the 1690s the Ottomans continued to use the traditional hammer and produced coins of inferior quality. Perhaps more importantly, this technology limited the volume of production and dictated a more decentralized approach to the coin supply. There existed a network of copper mints in the provinces and these were able to supply copper coinage in sufficient quantities until the seventeenth century. After the government decided at the end of the 1680s to adopt the mechanical technology and build new minting equipment with the help of a European convert, it was possible to issue a much larger volume of higher-quality coinage from the central mint in Istanbul. The government was able then to raise the nominal value of the copper coins and distribute them in the provinces as well as in the capital.[59]

Finally, the 1650s and 1660s, when this episode took place, was an especially difficult period for the Ottoman government because it was engaged in a long and protracted war with Venice over the island of Crete. It is clear that the Ottoman bureaucracy could not bring together the time, energy, and resources to devise a solution to their monetary problems during these years.

[59]Sahillioğlu, "Bakır Para."

The willingness of the Ottoman public to accept the debased European coinage, then, can not be understood without this context. The Ottoman markets were in need of money, especially the small denominations for daily use. They were willing to pay a premium for these coins. The Ottoman government had earlier supplied this subsidiary coinage and enjoyed the seigniorage. When it could not or did not fulfill this function, European entrepreneurs were only happy to serve as suppliers of money.

CONCLUSION

The arrival of enormous volumes of debased coinage eventually glutted the Ottoman markets and created adverse consequences for the economy and for European trade. European accounts emphasize that while merchants who brought debased coinage were willing to offer high prices for Ottoman goods, those that did not could not compete for Ottoman exports. The English merchants who were prohibited by the English consul in Izmir from participating in this trade were thus driven out of Ottoman markets. In turn, they and the English representatives began to pressure the Ottoman authorities to prohibit the circulation of base coinage. Other unfavorable consequences were being felt in those regions of southern Europe exporting the base coinage. Faced with a net outflow of silver, the parliament of Provence as well as the Chamber of Commerce of Marseilles attempted to ban this traffic in 1665.

The Ottoman authorities were not necessarily pleased with the outcome, but they were deeply involved in a long and protracted war with Venice over Crete. As long as the war continued, the government could not mobilize the necessary financial resources to stabilize or reform the currency. Until that time debased coinage was better than no coinage. The economy had come to depend on the debased coinage for its daily functioning. Similarly, the state continued to receive tax revenues and make payments with the debased coins. This pragmatism may help explain why so little material has so far been located in the Ottoman archives about the debased coins while European observers paid so much attention to the same phenomenon. Ottoman authorities did make several attempts to restrict the importation of these coins and seized some of the cargoes. As long as the war continued, however, these half-hearted attempts to ban base coinage proved unsuccessful.

As the war came to an end, the government moved to take more serious action. In 1669 it was announced that base coinage would no longer be accepted in tax payments. The government also demanded that all debased coinage be brought to the mints and reminted at the earlier standards. Later in the same year, riots broke out in Bursa and Ankara when defaulters who could not find "good" money to pay their taxes were imprisoned by the local authorities. "The torrent of the peoples' rage was not appeased without the

blood and lives of some of their officers, alleging with good reason that their ministers and governors, having introduced or permitted this money amongst them, and allowed it as current in that manner, as they had for some years known no other for all the fruits of their labour and their possessions, they ought not now refuse to receive that which they themselves had made passable."[60]

The apparent reluctance of the Ottoman administration to prohibit the circulation of debased coinage need not imply that the decline and disappearance of the *akçe* did not pose serious challenges to them. Without control over the currency, their control over the economy diminished considerably. In addition, without its own currency the state could not use debasement as a means of obtaining fiscal revenue in times of difficulty. It is for these reasons as well as the more obvious reason of coinage as a symbol of sovereignty that the Ottoman government attempted to establish a new currency as the series of demanding wars began to wind down towards the end of the century. Not surprisingly, this new unit was called the Ottoman *gurush*, after the large European groschen in circulation. The first Ottoman *gurushes*, containing roughly the same amount of silver as their European counterparts, began to be minted after 1690. In financing this major effort, the government received considerable support from the large volume of copper coinage it issued during the years 1689 to 1691. In the early part of the seventeenth century a new standard in which 1 *gurush* equaled 120 *akçes* was adopted. Fractions of the new *gurush* were also issued to facilitate small transactions.[61] Because of fiscal and economic difficulties, however, it took a long time for the new coinage to be established in the provinces.

The study of this episode should serve as a reminder that the eastern end of the Mediterranean was subject to many of the same fiscal and monetary forces that affected Europe and Asia during the sixteenth and seventeenth centuries. Although the underlying forces were similar, however, the outcomes were very different in the Ottoman case. The invasion of the Ottoman markets by debased European coinage, their widespread acceptance and the premia they fetched over and above their specie content were due to the absence of subsidiary coinage for the daily functioning of the economy. If the government had been able to issue copper coinage in sufficient volumes as the silver *akçe* began to disappear in the 1640s, it would have met the economy's demand for a medium of exchange and, at the same time, raised substantial amounts of revenue for the much deprived imperial treasury, especially during the war. In the absence of copper coinage, however, those seigniorage revenues were captured by the mints and merchants from the other end of the Mediterranean.

[60]Hasluck, "Levantine Coinage," p. 61, citing Rycault, *History of the Turkish Empire*, App. VIII.
[61]Sahillioğlu, *Bir Asırlık*, pp. 90–122 and "Role"; and Pamuk, "Disintegration."

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[Footnotes]

[8] **The Price Revolution of the Sixteenth Century: A Turning Point in the Economic History of the near East**

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