



## COINS AND COINAGE

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**COINS AND COINAGE** (Arabo-Pers. *sekka*, سکه), standardized units of metal used as a medium of exchange, first introduced into Persia by the Achaemenid [Darius I](#) (521-486 B.C.E.)

Coins differ from earlier media of exchange in that they are usually uniform in weight and purity of the metal and are recognized by the state as valid currency for discharge of tax and other financial obligations. Their introduction simplified exchanges, for people who did not know how to calculate in fractions or decimals and had no knowledge of metallurgy could rely on them without having to weigh and test them in every transaction. Standardization also simplified public finance, particularly the collection of taxes and tribute from widely differing regions. In order to maintain the standard of its coins and a degree of equilibrium between supply and demand for money, each state attempts to exercise a monopoly over minting. Nevertheless, because throughout most of Persian history coins were made of metals that were also traded as commodities subject to market forces, a monopoly of minting did not guarantee control either of the circulation or of the value of the coins, both of which fluctuated in relation to coins of other states and to the market value of the component metals (see Hennequin, 1972; idem, 1977). Furthermore, before modern times the Persian economy consisted of a conglomeration of regional economies, each with a mint and a currency system geared to local commerce, rather than an integrated national economy. For this reason it is more sensible to study changes in the output (weight, fineness) of a single mint over time, rather than trying to arrive at an



estimation of a nonexistent national norm. As the output from local mints and the “exchange rates” often differed sharply from region to region, the standard monetary unit thus functioned primarily as a unit of reckoning (Ederer, p. 79; Olmstead, p. 189). Sometimes, in fact, the standard of value used in everyday calculations was not embodied in actual coins at all. It is important to distinguish in the historical sources between real circulating coinage and “ghost money” of this kind.

### Coinage in ancient Persia

*The Achaemenids* (550-331 B.C.E.). Before the Achaemenids bronze and silver units of exchange were known in [Babylonia](#). The weight system was based on the *še* (“measure” of barley): 160 *še* = 1 *šiqu* (> Hebrew *šeqel* > Eng. “shekel”; cf. Gk. *siglos*), 60 *šiqu* = 1 *manū* (> Hebrew *māneh* > Eng. mina; cf. Gk. *mna*), and 60 *manū* = 1 *biltu* (> Gk. *tálanon* > Eng. “talent”) = ca. 66 pounds. The *manū* thus weighed about a pound. In western Asia the earliest coinage is believed to have been issued at Sardis in Lydia in the 6th century B.C.E.; the first examples were of electrum, a naturally occurring alloy of gold and silver. The first coins of pure gold and pure silver are believed to have been produced at the same mint. They carry the confronted foreparts of a lion (left) and a bull on the obverse and two square incuse punches on the reverse, a symbolism generally associated with Persia. For this and other reasons some scholars have argued that all these coins were issued after the conquest of Sardis by Cyrus II in 547 (Price, p. 214; Vickers, pp. 5-8). Others, however, accept the traditional view that the gold coins at least may have been introduced earlier, during the reign of the Lydian king Croesus because of several references in ancient Greek texts to the gold “Croesus stater” (Carradice, pp. 91-92), which it is believed could have been only these coins. At any rate, these coins were issued either from the middle of the 6th century B.C.E. or between 521 and 500.

They were followed in about 500 B.C.E. by another series, which is beyond doubt Persian royal coinage, known to the Greeks as “Daric staters” (gold) and “Daric sigloi” (silver), both with the characteristic image of the archer on the obverse. The purpose was apparently to provide a uniform standard of value throughout the empire and also, according to Herodotus (4.166), to demonstrate Darius’ own power, “to leave a memorial of himself, such as no king had ever left before . . . . He had refined gold to the last perfection of purity in order to have coins struck of it.” The minting of the gold [daric](#) continued until the conquest of the empire by Alexander in 331 and perhaps also under his authority (Carradice, p. 92), but production of the silver



coins seems to have ceased in the early 4th century. The Babylonian weight standard, which was already in use on the Persian plateau, was adopted in general outline (Mitchiner, 1973, p. 8), but Darius did introduce certain reforms (Bivar, pp. 621-25). For example, a papyrus document from Egypt dating from the 5th century B.C.E. confirms that merchants paid “according to the stone (weight) of the king”: 1 *kereš* (O.Pers. *karša*) = 10 shekels, 1 shekel = 4 quarters, 1 quarter = 2 *dānaka* (O.Pers. \**dānaka*; attested in El. *da-na-kaš*; Cameron, p. 132; > Gk. *dana'kē* “obol,” i.e., one-sixth *drachmé* “drachma” > Mid.Pers. *dāng*, Pers. *dāng* “one-sixth”; Horn, *Etymologie*, no. 536; Bivar, p. 622), and 1 *dānaka* = 5 *ħalluru* (Olmstead, p. 186; Hill, p. 4; Bivar, p. 636 Table II). The daric weighed 8.4 g (= 1 shekel) and was 98 percent pure gold. The siglos weighed 11.2 g, and the silver content was more than 90 percent. Twenty sigloi were equivalent to 1 daric; the ratio of value between silver and gold was thus theoretically 13.3:1. The siglos was also struck in thirds, fourths, sixths, and twelfths (Hill, p. 397; Olmstead, p. 188; Head, p. 25; Dandamayev and Lukonin, p. 197).

The darics and sigloi were trade coins, which enjoyed great prestige everywhere and were often imitated in weight, purity, and even design. The darics in particular served as the gold standard throughout the western part of the Persian empire and Asia Minor (Olmstead, p. 189; Ghirshman, p. 181; Dandamayev and Lukonin, pp. 197, 199-200). At first there seems to have been only one Achaemenid imperial mint, at Sardis (Bivar, p. 619), though many of the imperial coins bear counterstrikes, probably by local bankers (Burns, p. 83), but another mint for gold was established some time in the 5th century, probably in Babylonia, and there may have been several mints for gold in the 4th century (Carradice, p. 92). It has been suggested that a large proportion of Achaemenid currency was struck exclusively to pay for the military establishment, gold for the army, silver for the navy. This curious division may have reflected the fact that silver was the common currency in the Mediterranean, whereas the army operated mainly in western Asia, where gold was preferred (Burns, p. 324). The Achaemenid royal coinage was neither the unique nor the universal medium of exchange in the empire, however. Initially, it was probably in use primarily in Lydia itself (although gold darics were found in a 6th century deposit at Persepolis). In the 5th and 4th centuries the use of coinage spread to the east, though transactions continued also to be made in gold or silver bullion, the weight determined by notions of the value of the commodities involved. Furthermore, the bulk of all commodity transfers continued to be nonexchange transactions: tribute, taxation, and gifts. From



the 6th to the 4th century coinage also spread west to Greece and Italy and south and east along the Mediterranean littoral to the city-states of Persian Syria (Lycia, Caria, Pamphylia, Cilicia, Tarsus, Tyre, Byblos, Sidon, Aradus, and others) and to the satrapy of Egypt (ca. 361 ). The Athenian tetradrachm and some other Greek coins were also widely used in lands under Persian rule. In mercantile centers they were used as money, each issue with its own value, but often they were treated simply as another species of bullion and are found in hoards mixed with silver ingots of different forms. Although little is known about the organization and staffing of mints in the Achaemenid period, it seems clear that the emperors reserved to themselves the right to coin gold in their empire and that satraps and tributary rulers were allowed to coin silver in their own names for local circulation (Dandamayev and Lukonin, pp. 198-99; Bivar, pp. 619-21). All were, however, based on the Persian reformed weight standard, which had also been adopted in the kingdoms of [Choresmia](#), [Bactria](#), and Sogdiana (Mitchiner, 1973, p. 8). In contrast, on the Persian-Afghan plateau trade seems to have been conducted largely by means of bullion transactions, with the silver ingot as the weight standard and the gold shekel as the unit of account (Mitchiner, 1975, I, pp. 1, 3; Burns, p. 324). Darics and sigloi remained archaic in form, with a stamped impression on one side only and no inscription, but coinage on the Mediterranean littoral took on the more familiar modern form with impressions on both sides and inscriptions identifying the issuing authority. Despite the wide acceptance of Achaemenid trade coins, the development of monetized relations was severely hampered by limits on the available supply of specie (Dandamayev and Lukonin, pp. 200-01, 205). There were no important gold or silver mines in Persia, and even [copper](#) usually had to be imported. Furthermore, the practice of hoarding in the treasury drained gold and silver from the market and increased demand. The Achaemenid rulers, for example, customarily had precious metals melted down and poured into jars; the molds were subsequently broken and the bullion stored.

As a result, although tax levies were expressed in monetary units, actual payments were usually in kind (Dandamayev and Lukonin, p. 206). Equally, at Darius' palace at Persepolis the workmen were paid in kind: "Sheep and beer are the equivalent, one sheep for three shekels, one jug for one shekel" (Olmstead, p. 191). Officials were also often paid with claims on the produce of land, rather than in currency (Dandamayev and Lukonin, pp. 202, 205). From a tablet found at Persepolis it is clear that already during the reign of Xerxes I (486-65 B.C.E.) one-third of the wages were accounted for "in cash" and toward



the end of his reign two-thirds (Ghirshman, pp. 181-82), but the actual payments continued to be made in kind. Roman Ghirshman (p. 218) contrasted this system with the behavior of [Alexander](#) (356-23 B.C.E.), who, instead of hoarding the bullion that he captured from the Achaemenids in 330 B.C.E., shared it out among his officers.

*Alexander and the Seleucids* (331-171 B.C.E.). After his conquest of the Achaemenids Alexander established the Attic weight standard throughout his own empire, which also included Choresmia, Bactria, and Sogdia (Mitchiner, 1973, p. 9). His standard coinage consisted of the gold stater, weighing 8.6 g, and the silver tetradrachm (four drachmas) with the head of Hercules draped in a lion skin on the obverse and a seated Zeus on the reverse, weighing 16.8 g. The Achaemenid daric and siglos and Athenian “owl” coins also continued to circulate freely, as did satrapal issues. At first the satraps and city governors also minted coins in both gold and silver, some bearing Greek letters next to the Achaemenid archer on the obverse (Hill, pp. cxliii, 176-79; Bivar, pp. 619-20; Mitchiner, 1975, I, pp. 5-10). With the accession of Seleucus I Nicator (312-280 B.C.E.), however, the satraps in his territory, which included Babylonia and the former eastern provinces, lost the right to mint coins. In 305 he began to issue a fairly uniform coinage, with a diademed head of the bearded Zeus on the obverse and a quadriga of elephants on the reverse, which circulated throughout his territory (Mitchiner, 1975, I, pp. 6-12). A few small, independent rulers in northeastern Persia, Fārs, and Susa also continued to mint their own coins (Hill, pp. 401-05).

*The Arsacids* (iii; ca. 247 B.C.E.-224 C.E.). The Arsacids did not mint gold coins, except perhaps as ceremonial medallions. Their most important coin was the silver drachma, based on the Attic standard and weighing about 4 g, which remained virtually unchanged throughout the Parthian period. Tetradrachms were also struck, though with the passage of time they became considerably debased and in addition often weighed less than 16 g (Mitchiner, 1973, p. 9). Smaller denominations were relatively rare (Sellwood, *Camb. Hist. Iran* III/1b). As there was no official gold coinage, there was no fixed monetary relation between gold and silver coins, though on the market the ratio of value fluctuated between 1:15 and 1:13. The market ratio between silver and copper was similar (Göbl, 1971, p. 30). The main Arsacid mints were at Ecbatana and Seleucia on the Tigris, though others functioned sporadically. The legends on the coins were usually in Greek, and for a considerable time the Arsacids continued the Seleucid dating system (Sellwood, 1980, pp. 15-17; see [calendars](#)



i). Mint names are not included on the coins, though many carry monograms and counterstamps, which may have been related to internal mint administration or specific officials. Mithradates I (ca. 171-38 B.C.E.) added the title “philhellene” (*philéllēnos*) to the traditional “great king” (*basiléōs megálou*), a practice followed, with variations, by his immediate successors (Ghirshman, pp. 246, 266). Coins struck on the Persian plateau and in Choresmia, Bactria, and Sogdia bore additional inscriptions in Aramaic (Sellwood, 1980, p. 12; Hill, pp. 476-79; Mitchiner, 1973, p. 14). After Orodes II (ca. 58-39 B.C.E.) the Greek legends become so conventional as to be unintelligible (Sellwood, 1980, p. 12; Hill, p. 486). Under Vologases (Balāš) I (ca. 51-80 C.E.) an early form of the Parthian script was introduced for names and titles, at first only in abbreviated form (Ghirshman, p. 256; Alram, pp. 122, 127-28, 131).

In the Arsacid period satraps and cities were again allowed to strike coins (Sellwood, *Camb. Hist. Iran* III/1b, pp. 296-98; idem, *Camb. Hist. Iran* III/1a; cf. Mitchiner, 1973). For local use copper and bronze coins, originally based on the Greek *chalkós* of 2 g (8 *chalkoi* = 1 obol), were issued (Sellwood, 1980, pp. 10-11; Hill, pp. 479-92). These coins also became debased, and by the time of the Sasanian conquest in 224 C.E. they contained hardly 1 g of metal (Sellwood, 1980, pp. 8-9).

*The Sasanians* (224-ca. 650). The Sasanians minted both gold and silver but very little copper. They did, however, retain the Attic weight standard. The gold dinar (Mid.Pers. *dēnār* < Lat. *denarius aureus*), weighing 7-7.4 g, was struck by some Sasanian rulers, mainly for ceremonial purposes (Göbl, 1971, pp. 27-28; idem, *Camb. Hist. Iran*, pp. 328-29). Occasionally double dinars were also struck, as well as one-third and one-sixth dinars, the latter corresponding to the Roman tremissis of 1.5 g. By the time of Pērōz (459-84), however, the Roman *denarius aureus* (the Byzantine gold solidus) had become the dominant trade coin in western Asia (Göbl, 1971, p. 28).

The main currency of Sasanian Persia was in fact the silver *drahm* (drachmé). [Ardašīr I](#) (224-40) continued to mint the debased Arsacid tetradrachm of billon, an alloy of copper with a small amount of silver, as well as introducing fractional silver coins, specifically the half-drachma and the *dāng* = one-sixth drachma. Production of the tetradrachm and half-drachma ceased during the reign of [Bahrām II](#) (274-93; Göbl, 1971, p. 27), but the *dang* was minted until the end of the reign of Kavād I (488-96, 498-531), becoming gradually debased to less than 0.3 g and circulating mainly as token currency (Göbl, 1971, p. 27). A



major innovation in coin technology occurred in the early Sasanian period: The first thin-flan coins, cut from rolled sheet metal, were issued. They weighed 4.10 g or more, conforming to the standard of 4.12 g for the Attic drachma, but, owing to the thinness of the metal, were of much larger diameter (Göbl, 1971, p. 34).

The Sasanians discontinued the types of the Hellenized Arsacids and included Zoroastrian symbols and various effigies on their coins (Aram, p. 816). On the obverse there is always a bust of the crowned and bearded king in profile facing right, combined in rare instances with images that have been interpreted as the queen, the royal heir, or both; these additional small figures on coins of Bahrām II have recently been interpreted as divinities, however (Choksy). As each Sasanian ruler had one or more distinctive crowns (Lukonin, p. 116), this element is often useful in identifying rulers depicted in other media (Göbl, pp. 715). The ruler's titles were inscribed in Middle Persian epigraphic script (Lukonin, p. 116; cf. Göbl, Table XV). On the reverse one of three variant types of the Zoroastrian fire altar with flames is depicted: plain, flanked by two attendants, or flanked by two attendants and with a bust in the flames. Each type occurs with many variations in detail (Göbl, pp. 5, 17-20; cf. Lukonin, p. 116, for a slightly different interpretation).

Identifiable mint names first appeared on coins struck by Bahrām II (Gyselen, 1983, p. 236; idem, 1984), but they apparently became obligatory only under Bahrām IV (388-99). About 100 Sasanian mint marks are known, though, as they are generally in abbreviated form, many have not yet been identified; some are variants or homonyms for single mints (Göbl, 1971, pp. 22-23 and Table XVI). At any one time the number of active mints must have been much lower than 100. Many were in operation for only short periods, to serve the army, for example (Göbl, *Camb. Hist. Iran*, pp. 331-32), and even at major mints coins were not necessarily struck every year (Göbl, 1971, p. 33). Šāpūr II (307-79) transported minting equipment on his eastern campaigns; the court mint (heterogram BBA = *dar* "court") is also thought to have remained ambulatory for some time (Göbl, 1971, p. 32). Sasanian coins are often countermarked, probably by later Sogdian and Muslim rulers, certifying that they remained valid currency in regions under those rulers' control (Göbl, 1971, p. 56; idem, *Camb. Hist. Iran*, p. 334). There are also a few special marks, for example, three points above one of the figures or a sign on the fire altar, which may be interpreted as *hwpy* "good" (having ample weight?; Lukonin, pp. 117, 119; cf. Göbl, 1971, p. 21).



The mints were probably rather simple operations. In the Manichean *Kephalaia* (see [coptic manichean texts](#)) there is an extended metaphor in which the minting process is compared to the minting of the Word. It is said to have involved five craftsmen: one who “poured” the coin, one who “struck” it, one who “cut” it, one who “sealed” it, and one who “cleaned” it (Hommel, pp. 34-35). These successive processes are quite similar to those known to have been involved in minting coins under the Safavids (907-1145/1501-1732; see below). The Sasanian mints were probably under the jurisdiction of the *wāstaryōšān sālār* “minister of finance” (see [class system iii](#); Göbl, 1971, p. 31 ). Robert Göbl has drawn further conclusions about Sasanian minting practices from careful examination of the coins themselves (Göbl, *Camb. Hist. Iran*, p. 335; idem, 1971, pp. 34-35; Hill, p. 400); in addition, one Sasanian seal in the Bibliothèque Nationale, Paris, bears an image of a mint master wearing an unusual hat and holding a balance, with an anvil, a hammer, and a die at hand (Göbl, 1971 , p. 32).

As in the Achaemenid period, most of the coins minted by the Sasanians were used for the payment and provisioning of troops, as is clear from the vastly increased production during periods of war. At other times the kings tended to hoard silver. Kōsrow II (590-628) even boasted of the annual inventory of his treasury and the fact that the number of *drahms* had doubled more than once during his reign (Göbl, 1971, p. 26). Between the reigns of Šāpūr II (307-79) and Bahrām V (420-38) tributary rulers were not allowed to mint coins (Burns, pp. 85, 322; Ghirshman, pp. 263, 269; Göbl, *Camb. Hist. Iran*, p. 334), in keeping with the rulers’ policy of centralized control, which resulted in a quite uniform coinage. By the time of Kōsrow II the practice of “hubbing,” in which duplicate dies, usually cast or punched from a single master die, were sent from the court to each operating mint, had been adopted; he was reported to have had new dies made in the thirteenth and thirtieth years of his reign (Ṭabarī, I, pp. 1056-57; Göbl, 1971, p. 31).

From the Islamic conquest to the Mongol invasions

As the Arabs of the Ḥejāz had used the *drahms* of the Sasanian emperors, the only silver coinage in the world at that time, it was natural for them to leave many of the Sasanian mints in operation, striking coins like those of the emperors in every detail except for the addition of brief Arabic inscriptions like *bismellāh* in the margins (Walker, 1941; Gaube; see [arab-sasasian coins](#)). The Persian *drahm* was called *derham* in Arabic. From about 29/650 to 50/670 all these issues continued to bear the name of a Sasanian emperor, usually



Ḳosrow II, the last emperor to have struck coins in quantity, and abbreviated mint names in Pahlavi. A minority have the name of the last emperor, Yazdegerd III (632-51); they are either the earliest issues under the Arabs or later imitations of uncertain origin, with the inclusion of Yazdegerd's name and his last regnal year for presumably nostalgic reasons. Depending on the mint and period of issue, the dates on coins after the Arab conquest are either according to the Yazdegerd era (see [calendars](#)) or, rarely, to a new era commencing with the year of his death or to the Muslim era dating from the hejra. As all these eras began in close chronological proximity (631, 651, and 622 respectively) and the era is not specified on the coins, it is not always easy to assign an absolute chronology to these issues. Between 42/662 and 52/672 the names of the Sasanian emperors were replaced by names of local, provincial, or regional governors or occasionally the caliph himself, always written in Pahlavi script. In this period the coinage of Persia seems to have been largely left to local authorities; irregular issues with false dates and mint names abound, and the work of identification and sequencing is still in progress.

Nevertheless, a great deal is known. About twenty mints have been identified securely, nearly all having operated previously under the Sasanians but also including Baṣra and Kūfa (under the pre-Islamic name *Āqūlā'*), the new administrative capitals of the Islamic east. At any given time the number of mints in actual operation was smaller. After 55/675 most of the Persian coinage was struck in the territories subject to Baṣra, that is, eastern and southern Persia; indeed, more than half the total coinage was probably issued in Fārs, with Kermān and Sīstān accounting for much of the rest. From about 62/682 production in Khorasan was also important. Metallurgical analysis has shown that the production from different mints probably reflected the relative abundance of locally mined silver (Gordus, 1972; idem, 1974). Many Arab-Sasanian dirhams have small counterstamps or countermarks, probably applied by neighboring non-Islamic kingdoms in the east, in order to revalidate the coins for local circulation. Similar counterstamps also appear on some dirhams struck during the Omayyad caliphate (41-132/661-750), suggesting that they were applied mainly in the 8th century (Gaube, pp. 109-18). In the 7th and 8th centuries the Transoxanian kingdoms also struck their own coins, mainly of Sasanian type but with local inscriptions and artistic styles. The chronology of these issues, probably minted in such centers as Samarqand, Bukhara, and Kabul, is still incompletely understood (Göbl, 1967). Some of them continued after the conquest of these regions by the



‘Abbasids in the second half of the 8th century (Walker, 1941; Frye).

In 72/692 minting began at the caliphal capital, Damascus. The coins evolved rapidly from imitations of Byzantine (gold and copper) and Sasanian (silver) issues, to coins with experimental Muslim images, to purely epigraphic dinars, dirhams, and *folūs* (< Gk. *phóllis* > Lat. *follis*, the Byzantine copper coin) with Muslim religious inscriptions in Arabic, introduced by the caliph ‘Abd-al-Malek (75-86/685-705) in 77/697 (Bates, 1986). The effects of this evolution were felt in Persia, where several experimental types with images appeared at different mints; ‘Abd-al-Malek’s governor in Iraq, Ḥajjāj, was the first to have his name inscribed on the coins in Arabic instead of Persian. In the year 79/698 reformed Islamic dirhams with inscriptions and no images replaced the Sasanian types at nearly all mints (Walker, 1956). During this transitional period in the 690s specifically Muslim inscriptions appeared on the coins for the first time; previously Allāh (God) had been mentioned but not the Prophet Moḥammad, and there had been no reference to any Islamic doctrines. Owing to civil unrest (e.g., the revolt of ‘Abd-al-Raḥmān b. Aš‘aṭ, q.v., against Ḥajjāj in 81/701), coins of Sasanian type continued to be issued at certain mints in Fārs, Kermān, and Sīstān, but by 84/703 these mints had either been closed down or converted to production of the new dirhams. The latest known Arab-Sasanian coin, an extraordinary issue, is dated 85/704-05, though some mints in the east, still outside Muslim control, continued producing imitation Arab-Sasanian types for perhaps another century.

The inscriptions on the new Islamic dirhams are uniform from all mints, except for the name of the mint itself and the date (Plate iii.a). They include the *šahāda* (profession of faith), “There is no deity but God alone; none is associated with Him,” on the obverse and in the center of the reverse verses 102:13 of the Qur’ān, denying that God was either begotten or begetter, and encircling it verse 9:33, referring to the Prophet Moḥammad and the superiority of Islam over all other religions. Verses 102:1-3 were rarely used on coins after the ‘Abbasid revolution in 132/750, but the other inscriptions remained standard on nearly all Islamic coins until the Mongol conquest in the 13th century (see below), as did the general format: several horizontal lines framed by circular inscriptions. All Omayyad reformed gold and silver coins were issued anonymously, with neither caliphs’ nor governors’ names included.

The reform included introduction of a new weight standard for dirhams. Persian dirhams in the period after the conquest had been struck according to



the late Sasanian weight standard, about 4 g, which was identified by the new Arab rulers of Persia as the *meṭqāl*. It should not be confused with the *meṭqāl* of the western caliphate, the standard for the gold coinage of the time, first the Byzantine solidus (ca. 4.5 g) and then the new Islamic *dinar* (4.25 g), issued in Damascus, North Africa, and Spain but not in Persia. The new dirhams were issued at .7 of the eastern *meṭqāl*, expressed at the time as the “weight of seven,” meaning that ten new dirhams should be equal in weight to seven old dirhams on the *meṭqāl* standard (Balāḍorī, *Fotūḥ*, p. 425). Later, probably in the 9th century, the Persian *meṭqāl* was assimilated to the western *meṭqāl*, 4.25 g, and the weight standard for the dirham was set in Islamic law at .7 *meṭqāl*, or 2.975 g, but the Omayyad dirham was more typically about 2.8 g, with local variations arising from differences in the precise standard of the *meṭqāl*.

The new dirhams were first issued at twenty-five or thirty mints, including most of those where Arab-Sasanian silver coins had previously been struck, as well as many new ones. With establishment of a new eastern capital, Wāseṭ, in 83-84/702-03, all minting for Persia was concentrated there. From 90/709 to about 100/719 decentralized minting was again allowed; as many as thirty-three mints have been recorded for a single year. By 104/723 minting was again centralized at Wāseṭ, but this limitation was apparently too extreme, and a mint was opened in Khorasan in 107/725. Except for a handful of exceptional issues, these two mints remained the only eastern mints of the Omayyads until the fall of the dynasty in 132/750; outside Persia four dirham mints continued to operate, in the Caucasus, at Damascus, in North Africa, and in Spain. Aside from minor local variations, the Arab-Sasanian and Arabic dirhams contained about 95 percent silver until 100/719, but in that year the fineness at Wāseṭ was raised to as nearly pure silver as the technology of the time allowed, a standard maintained until the end of the dynasty. The Khorasan mint continued to operate at the older, lower standard (Gordus, 1972). That the location of this mint shifted several times, mainly in and around Balk, is clear from the different mint names on the coins, but there were never two mints at the same time in Khorasan (Bates and DeShazo).

No doubt as a reaction to the new Muslim dirhams with Arabic inscriptions, the *espahbads* of Ṭabarestān, which remained an unconquered enclave, began to issue *drahms* of Sasanian type in 711-12 (Unvala; Walker, 1941; Gaube). They bear the same images and inscriptions as Sasanian and Arab-Sasanian silver coins, except for the name of the reigning *espahbad*; the mint name Ṭabarestān in Pahlavi; and the date in the “post-Yazdegerd,” or Ṭabarestān,



era beginning in 651. The weight standard was a local one called “weight of five,” meaning that 10 *drahms* should weigh 5 *metqāls* (or about 2 g), in effect half as much as the older Sasanian and Arab-Sasanian coins. After the ‘Abbasid conquest of this province in 141/758 these coins continued to be struck with local governors’ names, mainly in Arabic, until about 193/808-09, when they were replaced by standard dirhams with Arabic inscriptions. Late in the Omayyad period the rebel Kharijites, the Shi‘ite claimant ‘Abd-Allāh b. Mo‘āwīya (Plate iii.c), and the adherents of the ‘Abbasids led by Abū Moslem opened new dirham mints; coins were struck with brief slogans proclaiming the sectarian doctrines of the various groups in addition to the usual Omayyad inscriptions (Wurtzel).

In the 8th century, and probably earlier, various mints in Persia also issued copper coins (Plate iii.b). The earliest combined traditional Persian images and inscriptions with Arabic inscriptions or names; later some also included Byzantine imperial and Christian symbols, no doubt borrowed from Syria, where Byzantine copper coinage was extensively imitated under the caliphs (Gaube, pp. 119-22; Curiel and Gyselen). Later in the Omayyad period there were also numerous issues with Arabic inscriptions similar to those on the dirhams or with local variations (Walker, 1956). This copper coinage was locally controlled and seemingly issued ad hoc, any single issue being struck only for a brief period of time. The organization and evolution of this coinage are very incompletely understood. Copper coins were presumably used for small-scale daily transactions at a value set by local authorities, whereas silver dirhams were used for all large payments and government transactions. Government accounts were maintained in dirhams only in the east, in contrast to Syria and the western caliphate, where gold dinars were the denomination of account; both numismatic evidence and Arabic texts indicate that dinars were not used at all in Omayyad Persia, but hundreds of thousands of surviving Omayyad dirhams, especially those of Wāseṭ, indicate that the economy was monetized to a high degree. Sums of tens of millions of dirhams are often mentioned in connection with governmental affairs.

After the overthrow of the Omayyad caliphate in 132/750 the ‘Abbasids perpetuated the late Omayyad monetary system in most essentials. At first the coinage remained anonymous, and the sectarian slogans of the ‘Abbasid revolutionary issues were dropped. Superficially the only change in the official coinage was substitution of the brief expression *Moḥammad rasūl Allāh* (Moḥammad is the messenger of God) for the longer passage from verses



102:1-3 in the center of the reverse (Miles, *Camb. Hist. Iran*, p. 369; cf. Bulliet, 1969). Baṣra and Kūfa were revived as metropolitan mint centers, replacing Wāseṭ, and the caliphal mint for dinars was transferred from Ḥarrān in northern Syria (the seat of the last Omayyad caliph, Marwān II [127-32/744-50]) to Iraq, where it moved from town to town with the caliphate itself until the establishment of a permanent capital at Baghdad (Madīnat-al-Salām) in 146/763-64. In 145/762 the mint at Ray (capital of Jebāl and the eastern provinces, near modern Tehran) was reopened, with an innovation that had permanent consequences: The heir to the caliphate, al-Mahdī, put his name on the dirhams issued there, breaking with the tradition of anonymity established by ‘Abd-al-Malek. Ray (mint name Moḥammadiya from 148/765) remained one of the most important Persian mints for the next three centuries (Miles, 1938b). When al-Mahdī became caliph in 158/775 he had his name inscribed on all dirhams issued in the caliphate, except those of North Africa, but the caliph’s name was not inscribed on dinars for several decades longer. On dirhams it became increasingly common under al-Mahdī’s successors to add the names of local governors and other officials to the caliph’s name or that of his heir (e.g., issues of Hārūn al-Rašīd at Moḥammadiya, containing as many as four local officials’ names). New mints for dirhams were opened throughout Persia and elsewhere in the caliphate, and the minting of dinars was decentralized with the establishment of a mint for gold in Egypt in 170/786-87.

The weight standard and metal alloy of early ‘Abbasid dinars and dirhams remain to be studied. Some 700 years after the establishment of the dynasty, the Egyptian historian Maqrīzī (d. 846/1442) described a series of reductions in the weight of 8th-century dinars and dirhams, in a passage the source of which is unknown but which has the ring of authenticity. These reductions, however, may have been too small to be detected within the normal range of variation of handmade coins; no one has yet undertaken a statistical analysis of the weights of ‘Abbasid coins. Until that is done, it can be said only that the standards seem generally similar to those of Omayyad gold and silver coins. Although ‘Abbasid dinars and dirhams of the 8th century survive in enormous quantities, some individual issues are quite rare, a few known only from single specimens.

In Persia, as elsewhere in the caliphate, local copper issues continued to be struck at various mints, but few general statements can be made about them; by the ‘Abbasid period, they bore only Arabic inscriptions. Despite the transfer



of the dinar mint to Iraq and its abundant production, the official accounts of the eastern caliphate continued to be maintained in dirhams.

The war for the caliphate between al-Amīn and al-Ma'mūn, two sons of Hārūn al-Rašīd, produced a plethora of issues after 193/809, as the two rivals used the coinage of their domains as a medium for proclaiming their respective political and religious positions. Once al-Ma'mūn was victorious, in 198/813, he instituted a number of changes in the coinage, which remained standard (except for one important later development; see below) in 'Abbasid domains, including Persia, for nearly 600 years. Although it took about fifteen years for his reforms to be spread through the caliphate as a whole, the first of the new coins appeared at Baghdad in 206/821-22. The changes included standardization of the inscriptions on all coins, both dinars and dirhams, including a new, outer marginal inscription on the obverse, verses 30:4-5 of the Qur'ān: "The command is God's, before and after, and on that day the believers will rejoice in God's victory" (first used in 198/809, perhaps to commemorate al-Ma'mūn's victory; Plate iii.d). As by that time there were several dinar mints, it was no longer possible to issue coins without mint names; the inner circular inscription on the obverse of both dinars and dirhams read "In the name of God this dinar [or dirham] was struck in [place] year [date, in words]," following the pattern established for dirhams only by 'Abd-al-Malek. The remaining inscriptions are purely religious, the same as those on the earliest 'Abbasid dirhams. The coins were once again anonymous, except for the issues from a few peripheral mints, until al-Ma'mūn's death. Al-Ma'mūn also initiated changes in the design and paleographic style of the coins, making them more clearly legible. To enforce uniformity in this and other respects, the number of mints was sharply reduced. Copper coinage was abolished; except for Jīroft, where copper coins continued to be issued until the 840s (e.g., specimens in the British Museum), the last copper issue in Persia proper is dated 210/825. Elsewhere in the caliphate copper coinage continued until some time in the 860s. Copper was not minted again until the later 13th century in most of Persia, though in Azarbaijan extensive copper coinage was issued in beginning in about 524/1130. In Transoxania, on the other hand, there were abundant and regular issues of copper at Bukhara and other mints from the mid-9th to the mid-10th centuries; Sauvair, 1882, pp. 25-26).

Al-Ma'mūn's successor, al-Mo'taṣem (218-27/833-42), placed his name on dinars and dirhams, and all subsequent 'Abbasid caliphs followed his example. When there was a designated heir to the throne his name was also usually included



on the coins (Plate iii.d-e). Governors and officials were not allowed to put their names on coins issued under direct ‘Abbasid authority. As a result, when autonomous dynasts like the Tulunids of Egypt (254-92/868-905), the Taherids of Khorasan (205-59/821-73; Plate iii.f), Samanids of Transoxania (204-395/819-1005), and later the Buyids, Ghaznavids (366-582/977-1186), Saljuqs (429-590/1038-1194), and a host of others put their names on coins despite this rule, their actions had significance; the appearance of a ruler’s name on coins was an expression of his autonomy from external control, even though nearly all Sunnite rulers also continued to place the name of the ‘Abbasid caliph on their coins as an indication of their religious allegiance (Plate iii.g-h). The rights of “*koṭba* and *sekka*” (respectively the ruler’s right to have his name mentioned in the invocation of God’s blessing at the Friday prayer service and the right to put it on his coinage) came to be the standard formula for announcing sovereignty, or at least autonomy under the (theoretical) sovereignty of the caliph.

With this final change, the pattern for coinage issued by Sunnite rulers, including those of Persia, was established until the end of the 13th century. Except for some occasional special issues of local significance, the inscriptions on the coins of the Buyids (Plate iv.b), Saffarids (253-618/867-1221; Plate iii.h), Samanids (Plate iv.a), Ghaznavids (Plate iv.f), Saljuqs (Plate iv.d-e), Ghurids (ca. 390-612/1000-1215), and Ḳvārazmšāhs (ca. 470-628/1077-1231), as well as of their less powerful contemporaries, were always the same as those ordered by al-Ma’mūn in 206/821-22, with the addition of the local ruler’s name. From the 10th to the 13th century it often happened that a ruler’s sovereignty was qualified by recognition of another secular overlord, whose name would also be placed on the coinage. Some issues of the Buyid ‘Ezz-al-Dawla (356-67/967-78), for example, have as many as five names, including that of the caliph. Another development reflected on coinage of the same period was the increasing use of complex titles, individual to each ruler, which had to be accommodated in the coin design. Because of this combination of complex political inscriptions with several religious slogans, a date, and a place name, each Islamic coin is a precious historical document in which the ruler speaks in his own words, rather than through the mediation of historians. Although the messages thus conveyed are fairly conventional—the Shi’ite Buyids, for example, never indicated their religious beliefs on their coins (Plate iv.b)—given the lacunae and uncertainties of the literary record, Islamic numismatics is an essential ancillary to historical study of the Persian past. In addition to the messages deliberately engraved on them, coins also carry



unintended information: in their design, style, weight, alloy, and fabric. The study of these aspects of the dynastic coinage of Persia in the 10th-13th centuries has, however, scarcely begun.

Although the inscriptions of the reformed 'Abbasid coinage were standardized, many minor variations were possible in design, enabling the experienced numismatist to place coins approximately, even before reading the mint name and date. In the 10th and 11th centuries the engraving of dies approached high art; it was not unusual for the die cutter's name to be inscribed in tiny letters somewhere on the die (Miles, 1938a; Bier; Rispling). Sometimes the religious inscription in the center of the reverse might be combined with that in the center of the obverse, in order to allow more room for the ruler's titles on the reverse. Elements of names were often inscribed in tiny script to the right or left, above, or below the main central inscriptions on the obverse and reverse, wherever they might be fitted in. The script might be elongated or compact; in the course of time it was progressively elaborated with foliate and floral decorations at the tips of letters and complex intertwining of ascenders and extended horizontals. True images were never used (except on a few extraordinary presentation issues for use within the palace), but ornaments of various kinds began to appear with increasing frequency in the 10th century. Most were merely decorative, but some had significance; for example, the Ghaznavid sultan Maḥmūd (388-421/998-1030), who bore the honorific Sayf-al-Dawla (sword of the state) struck some coins with one or two stylized swords, and most Saljuq coins include, above the inscriptions on one or both faces, an abstract symbol, which has been interpreted as a bow and arrow (Bulliet, 1969), probably a family or clan mark (*tamgā*; Plate iv.d).

One feature of the monetary history of the 9th and 10th centuries was the exportation through Transoxania of enormous quantities of Muslim silver coins of all kinds to the Baltic lands and Scandinavia, where literally tons of them have been found in graves of the Viking era and other hiding places (Miles, *Camb. Hist. Iran*, p. 374). They were first transported to settlements on the Volga river, where they were exchanged for furs, slaves, amber, and other products of the northern lands. In the first decades of the 11th century silver coinage disappeared from Persia (Plate iv.c). Although this disappearance has not yet been completely explained, it is clear that some change in the relative value of silver, possibly related to the earlier massive exports, made it no longer economical to mint silver coins. The silver mine at Panjšīr, which had produced massive quantities of silver for the mints of the Samanids, may have



become exhausted, or changes in demand for silver may have meant that working the mine was no longer economically feasible. Virtually no dirhams were struck in Persia until the mid-13th century (see, e.g., Plate iv.g), when silver began to be minted again in increasingly massive amounts. In eastern Afghanistan and northern India, as well as in the Muslim Mediterranean, silver coinage was maintained, but the dirhams were small and heavily alloyed with copper.

The fixed weight standard for gold coinage was also abandoned in the period between the 9th and 13th centuries, both in Persia and in the west (Nègre). The weights of gold coins struck at the same mint in the same year, sometimes even stamped with the same dies, can vary over a range of several hundred percent from lightest to heaviest, with absolutely no regularity. This variation should not be taken as evidence that gold coins were treated as a form of gold bullion; equal weights of dinars and bullion would still have had different values, because the purity of the coins, as well as their acceptability in payment of taxes, continued to be guaranteed. The variation may have originated accidentally at a mint that was not closely supervised. It spread and became general, however, no doubt because large payments in gold coins were normally weighed in bulk, rather than counted out coin by coin, in order to protect both parties from the minor (but significant in value) variations in weight normal for handmade coins. As broad variations in weight were therefore irrelevant to the monetary function of the coins, it made sense for mints to eliminate the expensive and time-consuming process of regulating the weight of each coin individually. The standard weight against which gold coins were measured for payment probably continued to be the *metqāl* of 4.25 g, though there is at present no evidence to confirm it; a number of weights for individual and multiple coins survive from medieval Persia, but none has inscriptions that would make it possible to attribute it to a time and place, nor has any study of them been undertaken. No doubt there were local and chronological variations in the precise standard of the *metqāl*.

The only Persian mints that have so far been studied in depth are those of Ray (Miles, 1938b) and Āmol (Stern), and there is also a study of the mint in Azarbaijan (Pakhomov); because of discoveries of new material, all of these studies are now somewhat dated.

Later Persian coinage

*From the Mongol invasion to the end of the Timurid period.* There are no



comprehensive studies of later Persian coinage, from the Mongol invasions in the early 13th century to the present. Only a very small proportion, 20 percent or less, of extant coins and coin types have been published, in a few museum catalogues and scattered journal articles. Furthermore, large numbers of errors have crept into the literature over the past two centuries; most of them could be readily corrected through study of the unpublished material. The most important collections are those of the British Museum; the Cabinet des Médailles in the Bibliothèque Nationale, Paris; the American Numismatic Society, New York; Universität Tübingen; the Hermitage, St. Petersburg, and the State Historical Museum, Moscow. Together they encompass most of the known issues. Although previously unknown types continue to be discovered at a rapid pace, it is probable that the currently accessible material is sufficient to permit reliable analyses. Nevertheless, the elementary task of cataloguing and publishing unedited collections remains a *sine qua non* for all further work.

In the period of the later Saljuqs and K̅v̅ārazmšāhs coinage was virtually eliminated throughout Persia, save the region corresponding to modern Afghanistan, where an extensive coinage in all three metals was maintained. By the time of the Mongol invasions the only coins still in production elsewhere in Persia were gold at Nīšāpūr, debased gold at Shiraz, and copper in Azarbaijan. No proper silver coinage had been struck since the middle of the 11th century (see above). The earliest Mongol coinage was derived from pre-existing types in Transoxania and eastern Khorasan and was intended for local circulation. Except for the gold coins these types were produced for only a few years; as the invasions had laid waste to most of those areas further coinage was pointless.

In about 636/1238 the new Mongol authorities saw the need to introduce a coinage of their own. It consisted of a silver dirham struck to the same standard as the contemporary Anatolian Saljuq dirham, about 2.95 g; indeed, Anatolian dirhams were often used as blanks for the new Mongol issues. The first such issue featured a bow and arrow and was completely anonymous (Plate v.a). It was replaced in 642/1244 by a dirham portraying a mounted archer shooting a bird or other animal (Lane-Poole, no. 1; Seifeddini, 1971). A hexagram type appeared at Tabrīz in the following year. All three issues were produced only in the mints of Azarbaijan and the Caucasus. The subsequent conquest of Iraq and the Jazīra led to introduction of additional types in those regions, which already had coinage of their own. A new set of Mongol issues



introduced at Baghdad and other mints in 656/1258, after the fall of the 'Abbasid caliphate, generally resembled prior issues but included acknowledgment of the great khan Möngke (Mangū) and the Il-khanid Hülegü (Hülāgū), rather than the caliph and the local ruler. Such currencies were struck principally in silver, but gold and copper are also known, as before the invasion. No clear imperial policy for coinage had yet been formulated. Various anonymous and named coinages were struck simultaneously in different provinces of Hülegü's domain, often to widely differing monetary standards. That circulation was highly localized is clear from hoards appearing frequently in the numismatic trade; they are composed overwhelmingly of issues from single provinces or parts of provinces. By the late 1270s silver coinage was in production in all parts of Persia, and the use of gold and copper was becoming increasingly frequent (Plate iv.h). All the gold and silver coins had inscriptions only in Arabic. The general pattern consisted of the ruler's name or title on one side and the Islamic profession of faith (*šahāda*) on the other. The mint and date could appear on either side. This pattern, once established, was to remain characteristic of most later Persian coinage: one side for royal protocol, the other for pious expressions. Western and Persian scholarly traditions differ as to which side should be considered the obverse and which the reverse. Persian numismatists generally designate the royal side as the obverse, and that designation has been adopted here.

The first attempt at unifying the local coinage was made by [Abaqa](#) (663-80/1265-82) in 674/1275, with the introduction at Tabrīz of a standard type bearing inscriptions in Uighur on the obverse and in Arabic on the reverse (Plate v.b-c). At first it was a local type at Tabrīz, but it was gradually extended over most of Il-khanid Persia during the following two decades. In 696-97/1297-98 Ġāzān Khan (694-703/1295-1304) introduced for the first time, as part of his general administrative reform, a uniform coinage for the whole of Persia, still with an Uighur obverse and Arabic reverse. Silver coins of the new type were struck to the standard of .5 *meṭqāl* (= 12 *noḳods*), about 2.16 g. There were also quarter-, half-, double-, and 6-dirham denominations. All but the single and double dirhams were struck in limited quantities and at a restricted set of mints (Rašīd-al-Dīn, *Tārīḳ-e ġāzānī*, pp. 282-86). The 6-dirham coin came to be known as a silver dinar (Plate v.d-e). Gold coins were struck in the same types as the silver but not to a fixed weight standard. The gold coins of Ġāzān and all later Il-khanids and their successors were struck to rather random weights, though somewhat clustered at 4.3 and 8.6 g (1 and 2 *meṭqāls* respectively; Smith and Plunkett, p. 281 ). Like the contemporary Mamluk gold



coinage of Egypt, these pieces were clearly intended to be weighed for each transaction, whereas the carefully standardized silver coins could be traded by count. There also developed an extensive copper currency, highly localized, with distinctive types and weight preferences at different mints.

A similar currency was continued by Gāzān's successors, though the use of Uighur script was largely abandoned after his death. In 709/1309-10 his successor, Öljeitu (Ūljāytū; 703-17/1304-17), reduced the weight of the dirham from 12 to 11 *nokods*, with other denominations lightened in proportion. Abū Sa'īd (q.v.; 717-36/1317-36) successively reduced the standard to 10, 9, and 8 *nokods*, and his ephemeral successors carried out further reductions (cf. Smith and Benin, p. 436). Gold continued to be struck to random weights, the coin impression being a guarantee of purity, rather than a confirmation of weight.

An important aspect of these weight reductions was that the new, lighter coins were always carefully distinguished by design from previous issues, in such a manner that even an illiterate peasant would have no difficulty discerning the difference (Rašīd-al-Dīn, *Tārīk-e gāzānī*, p. 283). It is not known how the changes in currency were effected in Mongol times, though the process was probably similar to that described in an 18th-century Safavid administrative manual (*Taḍkerat al-molūk*, ed. Minorsky, pp. 58-61). The older, heavier coins were probably exchanged at par for the lighter ones, which were given the same nominal value. The value of coined silver was thus artificially increased in inverse proportion to the reduction in weight, with the result that the nominal purchasing power of the available stock of silver was substantially increased. In theory, such a devaluation should have worked, so long as the state remained willing to accept the light coins in payment of dues and so long as the faith of the trading community persisted. The need to resort to this sort of devaluation time and again shows that it was at best a temporary expedient and that prices must have risen, in terms of the nominal currency, to restore the equilibrium between silver and other goods and services. Although it is presumed that with each devaluation the old coins were recalled and exchanged for new, the recalls were never complete. Hoards that are predominantly of one standard invariably also contain a complement of coins of older standards (e.g., Album, 1984; idem, 1985).

According to Rašīd-al-Dīn, who often described the ideal, rather than the reality, at the time of Gāzān Khan there were two treasuries, the *nārīn*, in which the gold ingots were kept, and the *bīdūn*, in which silver was kept. These treasuries levied a *rasm al-kezāna* (treasury fee) of 2 percent on all incoming



moneys from the provinces (*Tārīḳ-e ḡāzānī*, pp. 332-35; Seifeddini, 1968b, pp. 144-45). According to ‘Abd-Allāh b. Moḥammad b. Kīā Māzandarānī, when the ruler and his vizier issued a decree (*parvāna*) for the minting of coinage, the vizier’s assistant debited the records of the appropriate treasury for the amount of metal required, which was obtained from the money changers (*ṣarrāf*) and merchants (*tojjār*). They paid a certain minting fee to the ‘*āmel*, or administrator of the *dīvān*. The *dār al-żarb* itself was also staffed by an ‘*āmel*, a *kāteb* (secretary), and a *zāreb* (coiner), as well as a *sabīkasāz* (ingot maker), a *mošref*, a *najjār* (carpenter), and a *sekkakan* (engraver). The names and salaries of the staff of the Shiraz mint are also given by the same source (Hinz, 1952, pp. 228-34; cf. Seifeddini, 1968b).

The collapse of the Il-khanid dynasty upon the death of Abū Sa‘īd in 736/1336 was accompanied by the fragmentation of Persia into four principal currency zones for silver. Gold coinage all but disappeared, except for a few stamped bullion pieces of random weights; after about 740/1339 gold coins were normally issued with different designs from those on silver, perhaps to prevent silver coins from being gold-plated and foisted off on the gullible. Copper currency, as always, remained local. Three of the silver currency zones were known to the merchant traveler ‘Omarī as the Tabrīzi, Nīšāpūri, and Baḡdādi; the fourth might be called Šīrāzi after its chief town (Album, 1984, pp. 52-53). These zones were effectively closed areas of monetary circulation, which persisted, with only incidental variations, until Tīmūr’s reform of the coinage in 795-96/1393-94. Although politically separate parts of a zone usually had different designs and inscriptions, all coins in that zone, regardless of the rulers named on them, were struck to the same weight standard. When a given ruler controlled sections of more than one zone, he struck different coins to the local standard for use in each zone. Within each zone periodic devaluations were undertaken at intervals of from less than a year to about ten years, independently of the sequence in other zones. Only in the Nīšāpūri zone was this process halted, in the late 1350s. In Tabrīz the silver dinar, which had weighed nearly 13 g until Öljeitü’s first devaluation (see above), had shrunk to a coin of less than 0.5 g by the time of Tīmūr’s reform. During this period units of account were employed to ensure that certain kinds of payments would be protected from periodic reductions in value, but the mechanisms for maintaining fixed payments in what had become an inflationary economy are unknown (Smith, 1969, pp. 22-26).

Just how a devaluation was transmitted throughout a currency zone is also



unknown. Once initiated by one ruler within a given zone, it rapidly spread to the entire zone, probably within a matter of weeks (Album, 1984, pp. 79, 85, 102-03). Something akin to Gresham's law must have been in effect. Coin hoards of the period show that coins circulated widely within each zone, regardless of who issued them, but rarely traveled outside the zone. Each issuer must have been compelled to adopt each new devaluation, lest his coins be withdrawn and hoarded and he be left with only the lighter coins of other issuers. It was thus advisable for him to issue lighter coins himself.

During the Il-khanid period the number of mints gradually increased, to more than 100 at the time of Abū Sa'īd; perhaps half of them were in eastern Anatolia and the Jazīra, the rest in Persia and Iraq. After his death the number of mints within Persia continued to increase, though growing anarchy in Anatolia led to a sharp reduction in the number of mints and in coin production there. In the period following the fall of the Il-khanids (736-95/1336-93) the number of mints operating at any one time must have exceeded seventy-five, including those of the Jalayerids (Plate v.f), Muzaffarids (Plate v.g), Sarbadars, and minor dynasties within the former Il-khanid domain, excluding Anatolia. This decentralization was undoubtedly related to the nature of provincial political relations, in contradistinction to those of the contemporary Mamluk domain, where only six mints are known to have produced an extensive coinage in all three metals (Balog, pp. 50-52). Mints were not evenly distributed but tended to be clustered in certain provinces. The reasons why mints were established in certain towns and not in others are obscure. They tended to be located in provincial and district administrative centers, perhaps in order to provide some income for local leaders in exchange for their loyalty, which makes sense in light of the tendency for the number of mints to increase in times of fragmented political authority. There is further evidence for this hypothesis. Whereas Ġāzān, Öljeitü, and Abū Sa'īd maintained a single coin type at every mint, their successors did not. Not only were distinctive types used to mark issues of the various currency zones, but a ruler would also often permit multiple types to circulate within his territories in a single zone. This tendency is most apparent in the coinage of the Muzaffarid Shah Šojā' (765-786/1364-84); as many as six or more clearly differentiated types, all struck to the same standard, circulated simultaneously within the Šīrāzi zone (Plate v.g). From examination of the coins it is clear that these types corresponded to regions governed by local potentates, without whose consent and support Shah Šojā's throne would have been in danger. Local leaders were apparently permitted to issue special coin types as a sign of



their importance.

The stability and persistence of the major currency zones during the turbulent interval after the fall of the Il-khanids implies that trade and commerce were not sharply affected by the political disintegration and constant warfare that characterized the period, but a decline is mirrored in the gradual deterioration in the technical aspects of the coinage. Later Il-khanid coinage is among the most aesthetically appealing of all Islamic series, painstakingly manufactured from dies of high artistic standard, at least at the major mints. After Abū Saʿīd's death the quality of die engraving continued to match or exceed that of the previous period, but the quality of coin manufacture declined. By the 1360s fully struck coins revealing the engravers' talents were rare. During the next two decades even the die engraving deteriorated, though a few attractive coins were still being struck right up to Tīmūr's invasions.

Unlike Čengīz Khan 180 years earlier, Tīmūr found a host of local coin issues current in the lands he seized. In virtually all regions his administrators simply continued the local coinage, replacing the names and titles of the previous ruler with those of Tīmūr. In some instances, as at Tabrīz and Shiraz, even the designs were unaltered. An illiterate person would thus not know or care whether the coins were those of Tīmūr or of a predecessor, for all would have the same design, weight, and fineness. In both the Šīrāzi and Tabrīzi monetary zones further weight reductions occurred under the tutelage of Tīmūr, who seems to have been concerned with maintaining the economic health of conquered territories. Although the chronicles are silent about the matter, a major coin reform was promulgated throughout the nascent empire in 795-96/1392-94, just after Tīmūr's three-year campaign. Except at the capital, Samarqand, and a few peripheral localities, all the old currencies were swept away and replaced with a standard denomination, the *tanga*—the word is of Sanskrit origin (Gopal, p. 15; cf. Mirashi, III, p. 167; see also Doerfer, II, pp. 587-92)—weighing about 6.2 g, thus exactly equivalent to 4 Samarqand dirhams (Plate vi.e). The coin designs were not made uniform, and local designs persisted, in many cases adaptations of prereform types to the larger module of the *tanga* (Plate vi.a). Shortly after Tīmūr's death in 807/1405 the weight of the *tanga* was reduced to about 5.65 g, and in 827/1424 Šāhroḳ (807-50/1405-47) introduced a still lighter version weighing approximately 5.15 g, which came to be known as the *šāhroḳī* or *tanga-ye šāhroḳī* (Plate vi.f), the latter term having been noted in a context referring to the year 837/1433-34 (Maṛ'asī, p. 288). At the same time the design was standardized at most mints,



though some local variation was still tolerated, particularly on the reverse (Plate vi.c). This standard was retained in the western parts of Persia by all later Timurid, Qara Qoyunlū (Plate vi.b), and Āq Qoyunlū rulers until the emergence of the Safavids in 907/1501 and in Khorasan until 895/1490, when Sultan Ḥosayn Bāyqarā (Supplement) reduced the *tanga* by 1/13, to about 4.78 g, the weight of the local *meṭqāl*, according to K̄vāndamīr (*Ḥabīb al-sīar* [Tehran] IV, pp. 378-79).

During the 15th century currency devaluation was replaced by a kind of tax on money, in the form of the countermark, a small design punched into existing coins. Although countermarking had been known in the Middle East since antiquity, it had died out in Persia during the early 14th century. There was some countermarking in the peripheral Anatolian provinces of the Ilkhanids from about the year 700/1300, but it did not occur again in Persia until the time of the Jalayerid Shaikh Oways I (757-76/1356-74) in Azarbaijan. A more general episode of countermarking took place under Šāhroḡ, in about 814-818/1411-15. The Chinese traveler Chen Cheng, who visited the Timurid court in 1413 (815-16), described the countermarking of the coinage as a tax on money: “They pay taxes on the coins to the ruler and then the ruler stamps the coins with the official seal. Those without the official seal are illegal” (Rossabi, p. 51). It is no coincidence that this episode occurred during Šāhroḡ’s difficult and costly wars in central and western Persia, which must have strained his specie resources.

In his memoirs the Mughal emperor Zāhīr-al-Dīn Bābor (932-37/1526-30) mentioned the coin die (*sekka*) and the countermark (*tamḡā*; I, p. 276). *Tamḡā*, or *damḡā*, was also the term for stamp and had come to denote certain taxes, specifically those requiring the impression of a stamp or seal (see customs i). Although there are no reports on how countermarking was promulgated and regulated, the net effect seems to have been identical to that of devaluation: The value of silver was artificially raised, so that the total purchasing power of the available stock was augmented in terms of some nominal unit of account. The inflationary concomitant must have been similar, though, as in the 14th century, there is insufficient information on prices to determine what actually transpired. There is, however, clear evidence that the value of the nominal unit, the *dīnār kepakī* (named for the Chaghatayid Kebek Khan [718-26/1318-26], who had originally introduced it; Fragner, pp. 558-59; Plate v.h), had fallen considerably. In the year 809/1406-07, 2 *meṭqāls* of silver were worth 3 *dīnār kepakī* (*Maṭla‘-e sa‘dayn*, ed. Šafī‘, I, p. 80), but a century later, in



the year 913/1507, a *tanga* of 1 *metqāl* was equivalent to 6 current *dīnār kepakī* (*Ḥabīb al-sīar* IV, p. 378). The nominal value of a *dīnār kepakī* had thus fallen fourfold, from 2/3 to 1/6 of a *metqāl*.

The onerous fee for countermarking must have made such a measure highly unpopular and somewhat risky for any ruler who employed it as an extraordinary means of raising revenues. It is thus not surprising that until late in the 15th century countermarking was ordered primarily upon the accession of a new ruler, as a kind of inheritance tax on his predecessor's coinage. Beginning in about 890/1485 in the lands of the Āq Qoyunlū and within a decade in Timurid domains, the practice got out of hand. New countermarks were ordered frequently (Plate vi.g), and coins can be found with as many as six or seven different marks (e.g., an unpublished example in the American Numismatic Society collection, with six identifiable countermarks, the latest dated 904/1498, on a type ascribed to Moḥammad-Ḥosayn of Astarābād). The nominal value of the Herat *šāhroḳī tanga* fell precipitously, so that by 908/1502-03 Ḥosayn Bāyqarā struck a coin of 2 Herāti *tangas* that weighed only 1/3 what his earlier *tangas* had weighed (Universität Tübingen). Both the Safavid Shah Esmā'īl I (907-30/1501-24) and Moḥammad Šaybānī Khan (905-16/1500-10) at first resorted to this practice but soon abandoned it (Lowick, 1965; Biddulph, 1964). After the Safavid conquest of most of Persia later Timurid, Shaybanid, and Janid rulers continued striking coins on the Timurid pattern at their mints in eastern Khorasan and Transoxania (Plate vi.h). The *tanga* was last struck in 1323/1905 at Bukhara and 1337/1918-19 at K̄vārazm.

Copper coinage had become generally scarce in Persia after 736/1336, except in Fārs, where abundant issues seem to have persisted until shortly after the accession of Šāhroḳ. Scattered surviving examples suggest, however, a more extensive use of copper coins than has been suspected. By the later 14th century rulers were only rarely cited on coppers; the royal inscription was replaced instead with a geometric or floral pattern, a short pious inscription, or a pictorial device. Nothing is known of the metrology or precise monetary function of these coppers. In eastern Khorasan and Transoxania, however, copper circulated to the exclusion of silver coins in the 15th and 16th centuries. According to Bābor's memoirs (I, p. 93), in the year 903/1497-98 Sultan Mas'ūd Mīrzā granted to his father-in-law, Shaikh 'Abd-Allāh Barlās, the town of K̄ottalān, in the Ḥesār district of Transoxania (near modern Dushanbe), for 1,000 tomans (*tūmān* < Mong. *toman* "10,000," originally



designating a value of 10,000 dinars) of copper coins (*folūs*) per year.

In Islamic polities the *sekka*, the right of the ruler to have his name inscribed on coins, and the *koṭba*, his right to have his name mentioned in the sermon at the congregational worship service on Friday, were the two formal prerogatives of sovereignty. From the time of Öljeitü until the end of Timurid and Āq Qoyunlū rule the royal inscription on coins was relatively standard (Plate vi.d). Rulers of recognized legitimacy took the titles *solṭān* and *kān*, usually followed by the benediction *kalada Allāh molkahu wa solṭānahu* (may God perpetuate his sovereignty and his might) or something similar. The coins reveal that a ruler was deemed legitimate through either inheritance or adoption (Album, 1976). Others, in order to avoid being accused of usurpation, struck coins with lesser titles, anonymously, posthumously in the name of a recognized ruler, or in the name of a legitimate neighbor; the Qara Qoyunlū Qarā Yūsuf (791-823/1389-1420) even struck coins in the name of his son Pīr Būdāq, whom he had arranged for the Jalayerid sultan Aḥmad to adopt formally. Sometimes even a recognized ruler might choose for political reasons to mint his coins in the name of another ruler (Album, 1976, pp. 121-31, 153; idem, 1974). Shah Maḥmūd, the brother of the Muzaffarid Shah Šojāʿ, struck his later coins at Kāšān, Isfahan, and elsewhere in the name of the Jalayerid Shaikh Oways I, in exchange for received or anticipated military assistance, even though earlier (761-62/1359-60), he had struck coins in his own name (Markov, p. lv).

In general, local or subordinate dynastic rulers did not place their own names on the coins, as they typically had done in pre-Mongol times; rather they struck coins bearing only the names of genuine, nominal, or adopted suzerains. For example, there is a long series of coins struck at the mints of the atabegs of greater Lorestān (Īdaj, Bāzoft, Gandomān, etc.), all with the names or anonymous types of nearby rulers, save for a few anonymous issues specific to Nūr-Avard (Album, 1977). Other local rulers distinguished their coins visually by means of types, with distinctive ornamental borders, calligraphy, or arrangements of the legends. At any given time the complex web of names, mints, dates, weight standards, and types (designs) yields a map of the prevailing political configuration, obviously most complete for those regions, like Fārs and Jebāl, where minting was highly decentralized. Together with literary and epigraphic sources, the coins thus provide a remarkable amount of information that can greatly enrich understanding of political developments, particularly in the 14th century (cf. Album, 1984; Smith, 1970).



The coins, as contemporary witnesses, also allow modern scholars to assess divergent accounts in the chronicles, illuminating their biases and their relative accuracy.

One important but little understood phenomenon in 14th- and 15th-century Persian coins was the appearance of Shi'ite types, distinguished either by the formula *'Alī walī Allāh* ('Alī is the friend of God) after the *šahāda* or by citation of 'Alī, Ḥasan, and Ḥosayn instead of the first four caliphs. Most previous scholars have assumed that Shi'ite coins were struck by Shi'ite rulers; for example, Öljeitü included Shi'ite inscriptions on his second and third types, struck in 709-16/1309-16, when he was known to have accepted Shi'ism as the state-sponsored denomination. It is more common, however, to find coins of both Shi'ite and Sunnite type struck at mints where either the ruler or the population were adherents of Shi'ism. These mints were located principally in the sub-Caspian provinces of Gilān, Māzandarān, and Astarābād. 'Abd-al-Razzāq Samarqandī described (*Maṭla'-'e sa'dayn*, ed. Šafi', II, p. 1118) an incident during the reign of Abu'l-Qāsem Bābor in which the ruler was queried about the appearance of the names of the twelve Shi'ite imams on coins bearing his name. He replied in effect that he had allowed the local mints in Māzandarān to use Shi'ite inscriptions for political reasons. This practice was widespread, even under the auspices of the most staunchly Sunnite rulers like Šāhroḡ (see, e.g., Universität Tübingen collection, no. 91-1-268, struck at Ruyan in 828/1425) and Sultan Ḥosayn Bāyqarā.

*The Safavid period to the present.* Although it has generally been assumed that Shah Esmā'īl I introduced an entirely new coinage system, in fact he simply adapted Āq Qoyunlū (Plate vi. d) and Timurid prototypes. The *tanga* continued in circulation in the Caucasus, the Caspian provinces, and Hormoz until the mid-16th century (Membré, pp. 16, 61). Initially the official Safavid currency consisted of a silver coins (*šāhī*) and a gold coin (*ašrafī*). The former weighed 1 *metqāl*, presumably the local Tabrīz *metqāl* of just over 4.6 g (now the canonical *metqāl* of modern Persia), though some earlier writers presumed that the original *šāhī* weighed 2 *metqāls* (e.g., Farahbakhsh, p. 12). At first the *ašrafī* was struck to the standard of the Mamluk/Venetian ducat, though before the end of Esmā'īl's reign it was replaced by an *ašrafī* weighing 1 *metqāl*. The royal inscriptions were modeled on the Timurid pattern, with comparable titles and benediction, normally beginning with the formula *al-soltān al-'ādel al-kāmel al-hādī al-wālī*, appropriate for a ruler whose ancestors had constituted an important Shi'ite religious order. The reverse inscriptions



comprised the *šahāda*, the phrase *‘Alī walī Allāh*, and the names of the twelve Shi‘ite imams. These types and standards were extended to all the former Āq Qoyunlū possessions in Persia, the Jazīra, and Armenia.

Safavid monetary standards were expressed in terms of the toman, a unit of account reckoned as 10,000 dinars of account. After the accession of Esmā‘īl I the value of the toman appears to have been set initially at 200 *metqāls* (= 4,800 *noḳods*) of silver. The *šāhī* was formally reckoned at 50 dinars of account; this form of reckoning is attested only from the late 16th century onward but was most probably employed from the beginning of Safavid rule (cf. Ḥasan Rūmlū, ed. Navā‘ī, p. 122, who mentioned the payment of 300 *kepakī* tomans in the year 912/1506). Whenever a new monetary standard was decreed, the toman was described as equal to so many *noḳods* or *metqāls*.

Both gold and silver were struck in numerous denominations. In addition to the *šāhī*, quarter-, half-, double, and quadruple *šāhīs* were struck; the double *šāhī* (*do-šāhī*) predominated throughout most of the country (Plate vii.a-c). Quarter- and half-*ašrafīs* were also struck, the former apparently in massive quantities. There was no fixed relationship between gold and silver coins, which was also true in much of contemporary Europe.

After the Safavids crushed the Uzbeks in 916/1510 the *šāhī* was also struck at the mints of Khorasan (Plate vii.a), Astarābād, and Qohestān. In Māzandarān (Sārī, Āmol, Bārforūš), however, a local currency of about 3.6 g was retained until about 940/1533 and for several decades thereafter was occasionally used alongside the regular Safavid currency. In the year 922/1516 or 923/1517 the Safavid currency was reformed, but the reforms were different in the western territories and in Khorasan. In the former the toman was reduced to 4,050 *noḳods*, whereas in Khorasan it was increased to about 5,400 *noḳods*, in order to compete with the heavier coins of the Shaybanids (a rare example of an increase in the weight standard, undoubtedly a response to a similar action undertaken by Moḥammad Šaybānī in 913/1507; cf. *Ḥabīb al-sīar* [Tehran] IV, p. 379). This pattern reveals that the two regions of the nascent Safavid empire had not yet been integrated monetarily. Only in 954/1547, during the long reign of Ṭahmāsb I (930-84/1524-76), was a unified currency adopted for the entire empire. In that year he reduced the toman to 2,400 *noḳods* (1 *šāhī* = .5 *metqāl*), after which the currency remained relatively stable for a considerable time. There were only four further weight reductions, to 2,000 *noḳods* in about 1005/1596, to 1,925 *noḳods* in 1054/1644, to 1,800 *noḳods* in 1123/1711, and finally to 1,400 *noḳods* in 1129/1717. The latter standard was retained until



Nāder Shah (1148-60/1736-47) reorganized the coinage in 1150/1737 (Album, October 1987, December 1987).

The tendency for a single silver denomination, out of many that were struck simultaneously, to serve as the dominant unit of currency remained characteristic of Persian currency until the early 20th century. Throughout Ṭahmāsb's reign the *do-šāhī* was generally favored, though there were occasional geographic differences; for example, in Gīlān and the Caucasus the lilliputian half- and quarter-*šāhīs* were preferred. In 976/1568-69 the language of the royal inscriptions was changed from Arabic to Persian, the first time Persian was consistently used on coins since Omayyad times. At first the change was rather subtle, and much of the Arabic was retained unaltered within a Persian syntactical framework. Upon the accession of Esmā'īl II in 984/1576, however, the *šahāda* on the reverse was replaced by a Persian distich: "Though there be imams from east to west/Alī and his family are sufficient for us" (Plate vii.b). The purported reason for this change was to keep the name of God from falling into the hands of infidels, but more probably it was intended to allay rumors that the shah had abandoned the Shi'a in favor of Sunnism (Eskandar Beg, I, p. 217). The innovation lasted for only one year. After Esmā'īl's death in 985/1577 his successors restored the Shi'ite form of the *šahāda* to the reverse of the coins, where it remained until the end of the Safavid period (Plate vii.d).

The following reign, of Moḥammad Ḳodābanda (985-96/1578-88), was anything but the zenith of Safavid fortunes. State finances must have become quite desperate, for in 990/1582, in preparation for a difficult campaign to regain possession of Khorasan, the only significant episode of countermarking in Safavid coinage occurred (Plate vii.c). The countermark normally consisted of the phrase *'adl-e šāhī* followed by the name of the mint, sometimes with the date; examples are known from all the years until 996/1588 and from at least twenty mints. As is often the case, this phenomenon was not mentioned either in indigenous chronicles or in foreign travelers' accounts. Although a few earlier Safavid countermarks are known, aside from widespread initial countermarking of Āq Qoyunlū and Timurid coins by Esmā'īl I, they seem to have been quite exceptional and generally localized to one or a few mints (Biddulph, 1964).

Immediately upon his accession 'Abbās I (996-1038/1588-1629) replaced the *do-šāhī* with a 4-*šāhī* coin, known as *'abbāsī*, which dominated the silver coinage until the late 18th century in Persia and until decimalization (1301 Š./1925) in



Afghanistan. Fractions of the *‘abbāsī* continued to be struck but ordinarily in much smaller quantities, perhaps only sufficient to allow the state to make payments in fractional amounts. *‘Abbās* also replaced the titles *solṭān* and *kān*, in use since the time of *Ġāzān Khan* 300 years earlier, with the simple expression *banda-ye šāh-e welāyat ‘Abbās* “*Abbās, servant of the ruler of the walīship*” (i.e., *‘Alī b. Abī Ṭāleb*). This and similar proclamations of humble piety graced the obverses of most subsequent Safavid coins. At first, additional titles and the benediction were retained in a marginal legend, which was omitted after the introduction of a new coin type in about 1014/1605.

The end of regular gold coinage occurred in the same decade. From that time gold coins seem to have been minted only for presentation or propaganda purposes until 1129/1717, when, despite the poor state of the Persian economy, large-scale output of gold *ašrafīs* was apparently resumed (S. Album’s observations in coin market). European visitors to Persia frequently noted the absence of indigenous gold coinage, the only commonly available gold being the Venetian ducat (see, e.g., Olearius in 1637-38, Tavernier in 1667, Fryer in 1677, quoted in Rabino di Borgomale, 1945, I, pp. 35, 38). The same visitors also reported foreign silver coins in circulation in Persia, notably the Spanish-American 8-*real* piece and the Dutch *leeuwendaalder*, though in principle foreign silver was supposed to be brought to the nearest mint for recoinage as *‘abbāsīs*. These European and American coins, as well as *oorts* from Danzig and a variety of German thalers, were still commonly to be found in the antique shops of Tehran and other Persian cities in the 1960s. When *‘Abbās II* (1052-77/1642-66) reduced the weight of the toman in 1054/1644, he also introduced a new version of the royal inscription, in the form of a panegyric Persian couplet.

Throughout the first century of Safavid rule the number of mints coining in precious metal had remained large; there were perhaps thirty or forty in operation at any one time and more under *Esmā‘īl I*. The distribution of these mints varied with the territorial vicissitudes of the Safavid kingdom and with other factors that periodically resulted in the establishment of new mints in certain provinces. By the end of the reign of *‘Abbās I* the number had been reduced to approximately twenty, though the Safavid domain itself had been greatly augmented. This number was gradually reduced still further, to eleven at the time of the fourth and last coinage of *Solṭān-Ḥosayn* (1129-35/1717-22). Shortly afterward, in 1153/1740, *Nāder Shah* closed all the Persian mints except those in Isfahan, *Tabrīz*, and *Mašhad*. Throughout the 17th and 18th



centuries there were additional mints operating solely for the production of copper coins.

The precise functioning of the Safavid mints remains somewhat obscure. The only extant indigenous account is a brief section in the late Safavid administrative manual, *Tadkerat al-molūk*, where the duties of the mintmaster (*ẓarrāb-bāšī*) and the imperial assayer (*mo'ayyer al-mamālek*), the various offices of the mints, and the assessment of minting and other fees are described in detail (ed., Minorsky, pp. 58-61). According to European accounts, anyone could bring gold or silver to the mint and have it refined and coined, for a fee comparable to those charged in contemporary European mints (Olearius, p. 562). The services of the mints were thus available to all comers and not restricted to the state, which did, of course, profit handsomely from the mint establishments. European travelers routinely reported incidences of what they called “mint farming,” the practice of subcontracting the production of coins to private individuals, with whom the profits were shared. Mint farming was, in theory, a rational system for securing reliable production facilities for coinage, but the removal of state supervision opened up avenues for abuse, for example, lowering the fineness of silver as reported by Franz Pechan (von Prägenberg), an official from the Vienna mint brought to Tehran during the reign of Nāṣer-al-Dīn Shah Qājār (see below). Copper mints were probably routinely farmed; less is known about the mints for precious metals.

In an especially revealing passage in *Tadkerat al-molūk* (p. 60) the implementation of a devaluation is described: In 1129/1717 the *'abbāsī* had been fixed at seven *dāngs* (equivalent to 11/6 *meṭqāls*), but “before the siege of Isfahan [in 1134/1722] the Mu'ayyir al-mamālik Muḥammad 'Alī-beg, in order to increase [the resources of] the Divan department and the emoluments of the Private Household, after a report to the Shah, diminished the weight of the *'abbāsī* by one dang and struck *'abbāsīs* of 6 *dāngs*. He then added the additional 1 dang of silver to the *vājebī* (seigniorage).” It may prudently be assumed that all devaluations of the currency were similarly handled and also served the purpose of raising revenue for short-term emergencies like the Afghan invasion. In this particular instance the devaluation was rescinded after a year by the new Afghan ruler of Isfahan, Shah Maḥmūd, who restored the *'abbāsī* to its previous weight of 7 *dāngs*.

Although local currencies had generally been discontinued at the time of the reform of Ṭahmāsb, there remained a few exceptions. In Māzandarān small silver coins, perhaps half-*tangas* on a standard of 1 *tanga* = 3.6 g, were struck



at least until the early years of ‘Abbās I. In the province of Kūzestān, which boasted as many as six mints, 2-*šāhī* coins, known as *moḥammadī* (sometimes shortened to *maḥmadī*) or *maḥmūdī*, were struck in preference to the ‘*abbāsī*, with designs different from those on coins of other regions, from 996/1588 until 1092/1681. These coins, which European traders called *ḥoveyzi maḥmadīs* after the chief provincial mint at Ḥoveyza, were minted in vast quantities and constituted a supraregional currency throughout the Persian Gulf region. Another local currency was the *larin*, named after the city of Lār, where it seems in fact never to have been coined. It consisted of a length of silver wire bent in two and then impressed with a regular circular or special rectangular die; the resulting object was shaped somewhat like a hairpin and weighed slightly more than one Tabrizi *meṭqāl*, or about the same as the reformed Timurid *tanga* of the period 895-911/1490-1506. The earliest examples were struck at Hormoz by local rulers in the late 16th century (Rabino di Borgomale, 1951, pl. 54). Beginning with Ṭahmāsb I, the Safavid rulers produced similar “coins” at various mints (Rabino di Borgomale, 1951, pp. 21-22: Tabriz, Kāšān, Ganja, and Qazvīn). The Ottoman sultans also produced them at Baṣra and the ‘*Ādelšāhī* rulers of Bijapur at their mint at Dapoli on the west coast of India about 80 miles south of Bombay. The *larin* was a popular trade currency from Arabia to Ceylon throughout the 16th, 17th, and 18th centuries and was copied extensively at private mints on the Coromandel coast and in Sri Lanka. The name survives today for a minor unit of currency in the Maldivian islands.

One other feature of later Safavid coinage was the occasional issue of multiple denominations in both silver and gold, large coins weighing from 18 to more than 100 g, intended not as currency but as presentation pieces for important officials and visiting dignitaries. The least rare among these pieces are silver coins of 2.5, 5, and 10 ‘*abbāsīs* struck during the reigns of Solaymān I (1077-1105/1666-94) and Solṭān-Ḥosayn (1105-35/1694-1722). They are characterized by extremely fine calligraphy and workmanship and must have been costly to produce. Nearly all known specimens show traces of mounting as jewelry or ornament. They are never found in the common circulation hoards in the numismatic trade (Rabino di Borgomale, 1951, pls. 37ff.). The practice of striking such presentation coins continued almost uninterrupted to the end of the Qajar period in 1344/1925.

Aside from the cited passage in the *Tadkerat al-molūk* and a similar passage in Mīrzā Rafī‘ā’s *Dastūr al-molūk* (pp. 313-14), no surviving indigenous documentary material on Persian mint practice is known until very late in the



Qajar period, after the closing of the local mints and the establishment of a modern mint at Tehran in the late 1870s. On one hand, the actual coins, which survive in large numbers, provide a remarkable portrait of Safavid and later Persian coinage, though scholarly attention to the series and its complexities has been virtually nil. On the other hand, numerous descriptions of Persian coinage and its attendant problems have been preserved in such European sources as travelers' accounts, trading-company records, and later embassy records. Many of these sources were quoted by H. L. Rabino di Borgomale (1945, *passim*), and more recently some scholars have begun the laborious task of extracting numismatic information from company records (e.g., Matthee). Without reference to the coins, however, company accounts provide a one-sided picture of the currency. For the entire later Safavid period and most of the 18th century, for example, they suggest that the stock of coins in circulation consisted largely of underweight and debased pieces and that few, if any, of the mints even operated correctly under Persian law. These accusations are not supported by extant coins, which are rarely underweight and, as far as can be determined by the eye and the touchstone, are of good silver or gold. Could it be that the surviving coins are those that were hoarded and withdrawn from circulation at the time and are not representative of the bulk of the coinage in use? The latter would have been melted down and recoined. Such questions cannot be adequately answered until the basic numismatic work of cataloguing and analyzing the coins has been completed, a task that has been barely begun.

The Gelzay Afghans who occupied Persia in 1135-42/1723-30 produced a coinage that differed little from that of the Safavids. They used Persian couplets on the obverse and the Sunnite form of the *šahāda* on the reverse (Plate vii.e). The only real exception was an *'abbāsī*, struck at Isfahan in 1140-41/1727-28 by Ašraf (Rabino di Borgomale, 1945, I, p. 307), on which the *šahāda* had been replaced by a formula giving the date and mint, a prototype for most post-Safavid Persian coinage until the reforms of the 1870s. It can hardly be said that Ṭahmāsb II (1135-45/1722-32) drove the Afghans out of Persia. It was, rather, his able general Ṭahmāsb-qolī Khan, the future Nāder Shah, who accomplished the deed, for which he was rewarded with a number of prerogatives, including the right to strike his own anonymous coinage in provinces over which he was named viceroy: Khorasan, Māzandarān, and later Gilān and Kermān as well. These coins bear a couplet with the names of 'Alī b. Mūsā, the eighth imam, who is buried at Mašhad: "From Khorasan the coin of precious metal became, by the grace of God, / succor and aid for the



king of the religion, ‘Alī b. Mūsā al-Rezā.” Having failed to examine the obvious connotations of this verse, earlier numismatists also failed to recognize that these coins were struck under the authority of Nāder Shah and attributed them instead to Ṭahmāsb and ‘Abbās III (1145-63/1732-49), depending on their dates (Rabino di Borgomale, 1951, nos. 274-78; no. 275 was minted at Semnān, not Isfahan, as indicated in the caption).

After his enthronement in 1148/1736 Nāder Shah added his own name to the coins. In the twelve years of his reign he produced four successive types at his Persian mints and, after his invasion of India in 1151/1738-39, two additional types at mints in that country, including those at Peshawar, Lahore, Tatta, Bhakkar, and the capital, Delhi, known on coins as Šāhjahānābād. On the first Persian type, struck in 1148-50/1736-38, the traditional *šahāda* was replaced with a chronogram of the year of his *jolūs* (enthronement): *al-ḵayr fī mā waqa‘* (whatever happens is good). None of Nāder Shah’s coins after his accession bears the *šahāda*, and all the couplets and other legends are entirely secular in their content, with no indication of sectarian preference. In 1150/1737-38 he promulgated his third type, with just *al-solṭān Nāder* on the obverse and the mint, date, and benediction *ḵalada Allāh molḵahu* on the reverse (Plate vii.f). On his fourth and last Persian type he called himself “shah of shahs, the *šāheb-gerān* (a title first taken by Tīmūr, though never found on his coins), and sultan over the sultans of the world” (Rabino di Borgomale, 1945, I, p. 336).

The most important of Nāder Shah’s monetary innovations was his successful attempt to amalgamate the Persian and Indian currency systems. In 1150/1737-38 the weight of the silver ‘*abbāsī* was reduced once again from 7 to 6 *dāngs* (i.e., to 1 *metqāl*, about 4.6 g), though no actual ‘*abbāsīs* were coined. Instead, coins of 1, 6, and 20 *šāhīs* were struck until 1152/1739, when they were superseded by coins of 1 and 10 *šāhīs*, the latter known as rupees. Nāder Shah’s rupee weighed approximately 11.5 g, within the range of the various rupee denominations then current in India, slightly heavier than the rupee of 11.3 g struck at Delhi during the reign of the contemporary Mughal emperor, Moḥammad Shah (1113-61/1719-48; Hussain, II, pp. 181-89), but identical to the standard issues from certain other Mughal mints, particularly those at Mumbai (Bombay), ‘Azīmābād (Bankīpūr), and Masulipatnam, all of which were by then under British control. Nāder Shah’s successors struck a whole range of denominations, though the ‘*abbāsī* of 4.6 g and the rupee of 11.5 g tended to predominate. This system prevailed until the introduction of the rial (< Span. *real*) in 1204/1790, though the coinage itself and late 18th-century European



accounts reveal that after about 1190/1776 the weight of the toman was reduced again. This time, however, instead of reducing the size of the actual coins, they were simply revalued against the currency of account, the toman. The details of these revaluations have not been studied, and relevant documents may well be preserved in Persian and European archives.

Nāder Shah also revised the gold coinage. Although some *ašrafī*s continued to be struck on the Venetian standard as late as 1165/1752, the principal coin after 1152/1739 was the Mughal mohur, known in Persia as *mohr-e ašrafī*, weighing almost exactly 11 g. Half-, quarter-, and eighth-*mohr-e ašrafī*s were added, and the quarter was the principal gold coin from about 1170/1757 until the extension of the toman standard to gold in 1201/1787. The quarter-*mohrs* of Karīm Khan Zand (1163-93/1750-79) are still found in large quantities and seem to have been the first really abundant Persian gold coinage since the time of Ṭahmāsb I more than two centuries earlier (Plate vii.h).

The twelve years following Nāder Shah's death in 1160/1747 were a time of political chaos; the coins provide a useful primary source, particularly for the provincial mints for which no continuous written chronicles are extant. Many petty rulers, wary of being labeled usurpers, struck coins either anonymously (i.e., citing either the eighth imam, 'Alī b. Mūsā, or the twelfth, Ṣāḥeb al-Zamān) or in the name of one or another Safavid scion. Some rulers, like ['Ādel Shah Afšār](#) (1160-61/1747-48), [Āzād Khan Afġān](#) (d.1195/1781), and Karīm Khan Zand, struck more than one anonymous or semianonymous (with an allusion to the ruler's name in the couplet on the obverse or as an evocation on the reverse) type simultaneously at the same mints. The principal coin type of Karīm Khan is an example; in the couplet there is reference to Ṣāḥeb al-Zamān, and on the reverse the evocation *yā Karīm* accompanies the mint and date. The evocation was not adopted simultaneously at all mints but was first introduced at Isfahan in 1172/1759 and gradually extended to other mints in the following six years.

Karīm Khan's death unleashed sixteen years of violent struggle between the Zands and the Qajars for hegemony over Persia, resulting in the ultimate victory of the latter. Later Zand coinage is nearly all semianonymous. The first Qajar issues of [Āqā Moḥammad Khan](#) (1193-1212/1779-97), on the other hand, were completely anonymous; later, however, the evocation *yā Moḥammad* was added to the reverse. Āqā Moḥammad struck several different anonymous types. In 1201/1787 he replaced the *mohr* of 11 g with the toman, though only quarter- and half-toman coins were produced for circulation until after his



death. The first gold toman seems to have weighed about 13.6 g (struck only in 1201/1787), which was lowered in 1202/1788 to about 11.5 g and in 1204/1790 or 1205/1791 to 8.2 g. The introduction of a gold toman standard, in addition to the silver toman standard, suggests an attempt at bimetallism, that is, at fixing the ratio between the two metals. That ratio had traditionally fluctuated in response to market conditions affecting the availability of the two metals inside Persia and the profits that could be extracted by shipping one or the other outside the country, principally to India. European records should provide sufficient information to chart the ratio from at least the middle of the 17th century, but the necessary investigations have yet to be carried out. It is doubtful that this experiment with bimetallism was successful, though it is probably not coincidental that it was attempted at a time when bimetallism was also coming into fashion in Europe and North America.

In 1204/1790 the rebel Aḥmad Khan Donbolī began to issue anonymous coins without the evocation *yā Moḥammad* at three newly opened or reopened mints, at Tabrīz, K̄v̄oy, and Urmia, to a new standard based on a toman of 528 *noḳods*. The principal denomination was the rial of 1,250 dinars (one-eighth toman), which weighed about 12.67 g. Despite its name, the Persian denomination bore no discernible relation to any Spanish or Spanish-American coin. After quelling Aḥmad Khan's rebellion in 1206/1791-92 Āqā Moḥammad adopted the rial and over the next several years extended its use to all of Persia (Plate viii.a). Silver coinage of Āqā Moḥammad is remarkably rare, and correlations among mints, types, and denominations have thus far eluded scholars.

After the death of Nāder Shah the Caucasian provinces had quickly slipped from Persian control. About a dozen khanates, as well as the revived Bagratid kingdom of Georgia, maintained tenuous autonomy during eighty years of warfare between Persia and Russia. Several of these khanates, specifically Ganja, Shemakha (Šamākī), Sheki (Šekī), Darband, and Karabakh (Qarābāḡ) and Georgia struck their own coins, usually posthumously in the name of Nāder Shah (Plate vii.g) or Karīm Khan, though after about 1210/1796 much of their coinage was completely anonymous. None of these local khans ever placed his own name on his coins, though a few rare issues of Darband bear an allusive reference to one of them. These coins were entirely in silver and copper and have never been properly catalogued or studied. The denominations of the silver coins remained the *‘abbāsī* and its fractions; those of the copper coins are not known.



There are also a considerable number of countermarked coins of the period from the reign of Nāder Shah to that of Āqā Moḥammad Khan, principally rupees and double rupees. The countermark ordinarily consists of the word *rāyej* (current) plus the *hejrī* date; it was not of Persian origin but was applied to Persian coins that came into circulation within the eastern portions of the Dorrānī empire, probably at the mints of the Punjab, though a report by the French scientist and traveler C. A. Court suggests the possibility that such countermarks were also applied at Qandahār (Biddulph, 1963b, pp. 44-45). Similar countermarks are also occasionally found on Mughal rupees.

With the accession of Faṭḥ-ʿAlī Shah at the end of 1211/1797 anonymous and semianonymous coinage came to an end in Persia. His earliest coinage, struck during the three months between the death of his uncle and his own formal enthronement, included his popular name, Bābā Khan, the first Persian coinage since 1168/1755 to bear the name and title of a ruler (Plate viii.b). The silver coinage remained on the rial standard but at a lower weight, 11.5 g, thus precisely equivalent in weight to the former rupee, but based on a toman of 480 *noḳods*. After his enthronement in Rabīʿ I 1212/September 1797 Faṭḥ-ʿAlī Shah had his name engraved on the coins, which retained the same standard. Later in the same year the silver toman was reduced to 432 *noḳods* and the gold toman to 32 *noḳods*, reflecting a theoretical ratio between gold and silver of 13.5:1. Over the next sixty years the toman and rial were devalued five and six times respectively, but not in unison, so that the nominal ratio varied as well.

The hammered coinage from the reigns of Faṭḥ-ʿAlī Shah and Nāṣer-al-Dīn Shah (1212-1296/1797-1878) is remarkably uniform in type, with the royal inscription on the obverse and the mint and date, usually inscribed within an ornamental cartouche, on the reverse. The mint name is often given a distinguishing epithet, for example, *dār al-salṭanat* (Isfahan), *dār al-ḳelāfa* (Tehran), *dār al-sorūr* (Borūjerd), *arż-e aqdās* (Mašhad). The use of such epithets on coins was undoubtedly borrowed from India, where it had been common at many mints since the late 17th century. The general quality of engraving and die making was quite high, though unfortunately most of the coins were too carelessly struck to reveal the full splendor of the diecutter's art. Before the inscriptions were engraved a vine-and-tendrill pattern was cut into the die, which appears as a background pattern on the coins. That technique had first been developed in India, during the reign of Akbar (963-1014/1556-1605) and had occasionally also been used on late Safavid and



other pre-Qajar coins. The finest examples, however, are from the reign of Fath-‘Alī Shah. Each mint had its own reverse designs and a distinctive style and ornamentation for the obverse. The former included the cartouche framing the mint name and epithet, which was changed periodically, sometimes several times a year, as at the mint of Astarābād under Nāṣer-al-Dīn Shah. Indeed, during his reign the range of variation in designs increased substantially, particularly at the mints of Mašhad, Kāšān, Astarābād, and Hamadān. Other mints, notably those at Tabrīz and Rašt, issued only a few types for the entire reign. The significance of these type changes is obscure. To some extent, they may have been left to the whim of local governors or mint officials.

As had become traditional, a single denomination normally dominated in both the gold and silver coinage. The preferred gold coin was the full toman, supplemented by small quantities of halves and quarters. The silver coinage was more complex. From 1211/1796 until 1240/1825 the principal denomination was the rial of 1,250 dinars, or 25 *šāhīs*, but the fractional coins, which are uncommon, were not halves and quarters as naively assumed by previous scholars (e.g., Rabino di Borgomale, 1945, I, p. 68); rather, they varied by mint and were either fractions of the rial or multiples of the *šāhī*. Half-rials (12.5 *šāhīs*) are known from many mints. Houshang Farahbakhsh (pp. 94-95) has suggested a large number of miscellaneous fractions, but his list is poorly correlated with observed examples. There are third-rials (8 *šāhīs*) from Tehran, quarter-rials (6 *šāhīs*) from Tabrīz, fifth-rials (5 *šāhīs*) from Isfahan and Yazd, and some even smaller denominations. Surviving fractions have never been closely examined, and too few have been published with weights to permit a meaningful analysis at this time.

In 1241/1825-26 Fath-‘Alī Shah changed the standard from a rial of 1,250 dinars, based on a toman of 432 *noḳods*, to the *šāḥeb-qerān* of 1,000 dinars (20 *šāhīs*), based on a toman of 384 *noḳods*. The *šāḥeb-qerān*, or *qerān* (usually rendered *kran* in European accounts), remained the principal denomination until the end of the hammered coinage (Plate viii.c). The name was derived from the title *šāḥeb-qerān* used in the royal inscription after the thirtieth year of Fath-‘Alī Shah’s reign, replacing the more mundane *al-soltān b. al-soltān* of the previous issues. The *šāḥeb-qerān* was supplemented by smaller numbers of half- and quarter-*qerāns*, together with small, thin silver coins known as *šāhī-e safīd*, or white *šāhī*, to distinguish them from the copper *šāhīs*. The white *šāhīs* were struck not for circulation but as gift coins for the New Year celebrations.



In late Qajar times they were reckoned at 3 1/8 *šāhīs* (156.25 dinars) and were last produced in 1342/1924. Since that time privately made tokens, at first of silver, later of silver-coated brass, have served as Nowrūz favors.

During the reign of Fath-‘Alī Shah the first steps toward a modern currency were taken. At the Tabrīz and Isfahan mints well-executed silver and gold coins were struck along with the normal, less carefully minted products, with full, even pressure and reeded edges similar to those found on contemporary British Indian coins. It is unclear whether these coins were intended only for presentation or as prototypes for a technically superior circulating coinage, though the circumstances of survival suggest the former. Late in his reign a machine-struck pattern for a silver *qerān* was prepared at the Heaton mint in Birmingham, England (Rabino di Borgomale, 1945, II, p. 573), but was never used. Other reforms were attempted under subsequent rulers. From 1258/1842 to 1263/1847 gold tomans and silver half-, single, and double *qerāns* were struck at the Tehran mint, with a lion-and-sun motif (Rabino di Borgomale, 1945, II, pp. 584-87), usually with crudely milled edges. A portrait half-*qerān* was struck at several mints under Nāṣer-al-Dīn Shah in 1271-75/1855-59 (Rabino di Borgomale, 1945, II, pp. 609-10), and a number of lion-and-sun types were produced in 1293-96/1876-79, at the end of the hammered series. These types are known to have circulated widely; other special issues and experimental types were rejected or used only for presentation purposes (Plate viii.d).

In 1875 Pechan was brought to Tehran to supervise the modernization of the coinage. He analyzed a number of circulating *qerāns* and found their fineness to vary from .760 to .900, the latter value being the official standard. His results should be accepted with some reserve, however, as his motive was clearly to obtain the contract for the new mint for the Austrian government. By 1294/1877 the mint was in operation, with machinery brought from Europe. During the following two years the provincial mints were suppressed and the hammered coinage replaced by machine-struck versions in all denominations; nevertheless, some of the hammered coins, known as *pūl-e kohna* (old money), were still in circulation at the end of the Qajar period. At the new mint the designs for the gold and silver coins were standardized, with the name and titles of the shah on the obverse, the lion and sun on the reverse of the silver, and the portrait of the shah on the reverse of the gold (Plate viii.f; some gold coins were struck with the same types as the silver; Plate viii.e). These types remained essentially the same until the Revolution of 1357 S./1978 (Plate



viii.h).

The new silver coins were based on a *qerān* of one *metqāl* (examples were still commonly used as *metqāl* weights in the 1960s) and a gold toman of just under 2.9 g, both .900 fine. The *qerān* was also known as *hazār dīnār* (thousand dinars). A new currency was promulgated in 1314 Š./1935 under Reżā Shah Pahlavi, based on a silver rial (copper and nickel after 1329 Š./1950) divided into 100 dinars and a gold *pahlavī* at first weighing 1.92 g but after five years at the exact weight and fineness of the British sovereign, 8.14 g. The rial remains the formal unit of currency in Persia today, though the term is rarely used outside financial circles. The colloquial term is either *qerān* or *hazār*. Amounts larger than 10 rials are expressed in tomans, 1 toman being equal to 10 rials, even though the toman has had no official status as a unit of currency since 1314 Š./1935. The half-rial coin, formally denominated 50 dinars, is ordinarily called *dah-šāhī* (10 *šāhīs*), based on the old concept of a *qerān* divided into 20 *šāhīs* or 1,000 old dinars. Dollar and other exchange rates are popularly expressed in tomans, in 1370 Š./1992 ca. 140 tomans (1,400 rials) = \$1.00. The persistence of formally obsolete terminology is not a specifically Persian phenomenon but can be observed throughout the world.

Little can be stated definitively about the copper coinage of the period from the Safavids through the Qajars. There is a bewildering variety of types, largely undated, struck at the same mints as the gold and silver coins, as well as at a few that seem to have been authorized only for the production of copper. Copper coins were generically known as *folūs* (Plate viii.g) and ordinarily were struck at each mint in more than one denomination. The traditional designations for these coins were the *gāz* or *qāz* of 5 dinars, the *gāzbeḡgī* of 10 dinars, the *bīstī* of 20 dinars, and, in the 19th century, the *šāhī* of 50 dinars, but at present it is impossible to categorize most extant coins by denomination.

The early Safavid coppers, struck before about 982/1574, seem to have resembled earlier Timurid and Āq Qoyunlū coppers, but so few specimens are extant, even in unpublished collections, that little can be said about them. In about that year, late in the reign of Ṭahmāsb I, a new copper currency was introduced, with multiple denominations and generally similar types from all mints. The obverse bore the name of the mint, usually with an animal device, and the reverse the couplet “May he who changes the royal *folūs* / [be condemned] to God’s everlasting curse.” About a dozen mints are known to have struck this currency over a period of about a decade. There are also



examples of this series and earlier Safavid *folūs* with countermarks, usually consisting of the word *ʿadl* followed by the mint name. Under ʿAbbās I the pattern of the copper coinage was altered in a way that survived until the end of the hammered coinage. The obverse was normally given a pictorial type: Large mammals of various sorts were most common at first, but the repertoire of acceptable types grew to include fish, birds, ships, human figures, and more complex scenes, in almost endless variety. The reverse normally bore the word *folūs* plus the date and mint.

Regulation of the copper coinage seems to have varied not only over time but also from mint to mint. Father Tadeusz Krusiński reported that in around 1700, when the copper currency was still the prerogative of provincial governors, as it had been since the coming of Islam to Persia, there was a tradition that each governor, upon his accession, would depreciate previous copper coins by half and would accept coppers from other cities at only half their nominal value (I, p. 89; cf. Rabino di Borgomale, 1945, I, p. 20). However widespread this practice may have been, it was clearly regarded as abusive. An inscription in a mosque at Astarābād dated 937/1531 praised the current governor for not altering the copper coinage (Rabino di Borgomale, 1928, p. 27). The couplet cited above clearly indicates that the copper coinage was meant to remain unchanged, presumably at full value, until it was worn out. The term for “he who changes” is *taḡayyordeh*, which does not mean counterfeiter and must therefore refer to the governor who might change the copper currency for personal gain. The overwhelming majority of extant coppers show heavy wear, often to the point of total obliteration of one or both faces, evidence of circulation over long periods. Krusiński’s observation may in fact have been based on an aberration, naïvely accepted as the general rule by most scholars. Although abuses must have been rampant from time to time in various provinces, there is insufficient evidence to suggest that they were the rule. European travelers regularly reported that the copper coins were officially rated against silver at a substantial premium over their metal value, as was quite normal for base metal currencies in most parts of the world. This premium alone would have assured the local governors of substantial profits and rendered superfluous the excessive depreciation of obsolete copper coins. Undoubtedly the introduction of new types, necessary from time to time to replace worn-out currency, was accompanied by some sort of redemption period, after which old coins would have been stripped of much or most of their value. Despite the ideal that copper coinage should be changed as infrequently as possible, there is evidence from travelers’ accounts (e.g., della



Valle, II, p. 85; Olearius, pp. 561-62) that annual recalls were commonplace. The depreciation of extraprovincial coppers was probably also commonplace but should have caused only a little hardship to merchants and the public, as copper currency was intended for local use only. Hoards of coppers are occasionally found and seem to consist solely of the products of single mints (one of the authors has seen two such hoards on the Tehran market, one from Rašt and one from Kāšān, each comprising several kilograms of coins).

Although it may be true that abusive practices marred the coinage in all metals from time to time, the currency system of Persia from Mongol times to the present must have been conceived as equitable, in conformity with the prescriptions of Islamic law and common sense. As in all preindustrial societies, wealth and prosperity were far more transitory than they are today. The opportunities for legitimate enrichment were fewer, the urge to take advantage of them greater. Wealth was regarded as a zero-sum proposition, one man's gain being another's loss. These circumstances surely encouraged abuses, in Europe as well as in Persia. The French currency debasements of the 14th and 15th centuries were far more abusive than any currency manipulations documented in Persia and, to the dismay of contemporary critics, were clearly intended to deceive: Coins of reduced weight and fineness were often not distinguished by design, as was customary in Persia. Why, then, did European visitors so frequently bemoan the Persian currency (for exceptions, however, see, e.g., Thévenot, II, p. 89)? Perhaps that question can some day be investigated, but only after the basic cataloguing and analysis of extant coins and a more thorough search for relevant documents in Persian archives have been undertaken.

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Plate iii. a. Omayyad dirham of Yazīd II, Azarbaijan, 105/724. b. Undated local copper coin in the name of Salm b. al-Moṣayyeb, Eṣṭakr, Omayyad period. c. Anonymous revolutionary dirham attributed to 'Abd-Allāh b. Mo'āwīya, Jay, 129/749. d. 'Abbasid dirham of al-Ma'mūn, citing the eighth Shi'ite imam, 'Alī b. Mūsā, as his successor, Eṣbahān (Isfahan), 202/818. e. 'Abbasid dinar of al-Mo'tamed, citing al-Mowaffaq, heir to the eastern half of the caliphate, Samarqand, 272/885. f. Dirham of Ṭāher b. Ḥosayn (as Du'l-Yamīnayn), with the name of a local official, Šok b. Ebrāhīm, Herat, 206/821. g. Broad dirham of Aḥmad b. 'Abd-Allāh Ḳojestānī, Nīšāpūr, 268/881. h. Saffarid dirham of 'Amr b.



Layṭ, citing his son Moḥammad as viceroy, Shiraz, 272/886. Photographs courtesy Stephen Album. Scale 1:1.

Plate iv. a. Samanid dinar of Nūḥ I, Nišāpūr, 339/951. b. Buyid dirham of Bahā'al-Dawla, Shiraz, 395/1005. c. Kakuyid dirham of Moḥammad b. Došmanzār, citing Koran 112, Isfahan (not named), 41(6)/102(5). d. Saljuq dinar of Toğrel Beg, Ray 447/1055. e. Saljuq dinar of Takeš Beg, citing Malekšāh as overlord, Balk, 471<sup>?</sup>/1078. f. Ghaznavid dinar of Ebrāhīm, Ġazna, 456/1064. g. Ildegizid billon dirham, citing Moḥammad II (548-55/1153-60) as overlord, Urmia, no visible date. h. Salghurid *fals* of Ābeš Kātūn, citing Abaqa (663-80/1265-82), with Chinese *bao* in obverse center, turned 90 degrees, Shiraz, undated. Photographs courtesy Stephen Album. Scale 1:1.

Plate v. a. Mongol dirham, Ögedei (624-39/1227-41), Varāvī in Azarbaijan, no visible date. b. Il-khanid dirham of Aḥmad with Uighur script on the obverse, Tabrīz, 683/1284. c. Il-khanid dinar of Bāydū (694/1295) with Uighur script on the obverse, Tabrīz. d. Il-khanid silver 6-dirham (dinar) piece, Öljeitu, Jājarm, 714/1314. e. Il-khanid silver 6-dirham (dinar) piece, Abū Sa'īd, Jorjān, 719/1319. f. Jalayerid silver dinar of Shaikh Oways I, Hamadān, 762/1361. g. Muzaffarid silver double dinar of Shah Šojā', Zaydān in southern Fārs, 762/1360. h. Chaghatayid silver dinar *kepakī*, Bayān-qolī Khan (749-60/1348-59), Šahr-e Sabz. Photographs courtesy Stephen Album. Scale 1:1.

Plate vi. a. Hosaynid silver *tanga* of the time of Razī Kīā (d. 829/1426), probably Lāhijān in Gīlān, undated. b. Qara Qoyunlū silver double *tanga* (?), Ḥasan- 'Alī, Tabrīz (not showing), 872/1467. c. Anonymous Baduspanid silver *tanga*, period of Eskandar (ca. 858-80/1454-76), Rūyān. d. Āq Qoyunlū silver *tanga*, Ya'qūb (883-96/1478-90), Fīrūzkūh in Māzandarān, after the design change in 890/1485. e. Silver *tanga* of Tīmūr, citing the Chaghatayid Maḥmūd (790-806/1388-1404) as overlord, style of Sabzavār. f. Timurid silver *tanga* of Šāhroḳ, Astarābād, 828/1425. g. Timurid silver *tanga* of Bāysonḡor, no mint (believed countermarked at Samarqand), 901/1496, on coin of Šāhroḳ, Yazd, with two earlier countermarks of Sultan Ḥosayn (875-912/1470-1506), the larger one at Marv. h. Timurid silver *tanga*, Solaymān Mīrzā, Badaḳšān, 939/1533. Photographs courtesy Stephen Album. Scale 1:1.

Plate vii. a. Safavid silver 2-*šāhī* piece, Esmā'il I (907-30/1501-24), undetermined mint in Khorasan. b. Safavid silver 2-*šāhī* piece, Esmā'il II, Qazvīn, 984/1577, with *dār al-mowaḥḥedīn*, one of the earliest city epithets on Persian coins. c. Safavid silver 2-*šāhī* piece, Moḥammad Ḳodābanda, Qazvīn,



992/1584, counterstruck on an earlier coin of Moḥammad. d. Safavid gold *ašrafī*, Solṭān-Ḥosayn, Isfahan, 1134/1721. e. Ġelzay Afghan silver 10-*šāhī* piece, Shah Maḥmūd, Isfahan, 1135/1722. f. Silver 20-*šāhī* (double rupee) piece, Nāder Shah, Qandahār, 1150/1737. g. Silver '*abbāsī*, Šāh-verdī Khan, Ganja, 1173/1760, struck in the name of Nāder Shah thirteen years after his death. h. Gold quarter-*mohr ašrafī*, Karīm Khan Zand, K̄voy, 1 192/1778. Photographs courtesy Stephen Album. Scale 1:1.

Plate viii. a. Qajar silver rial, Āqā Moḥammad Khan, K̄voy, 1205/1790. b. Qajar silver rial, Bābā Khan (later Faṭḥ-ʿAlī Shah), Tabrīz, 1212/1797. c. Qajar gold toman, Faṭḥ-ʿAlī Shah, with title *kosrow-e šāḥeb-e qerān*, Kermānšāh, 1241/1825. d. Qajar gold double toman, Nāšer-al-Dīn Shah, with title *duʿl-qarnayn*, Tehran, 1313/1896 on obverse, 1312/1895 on reverse. f. Qajar gold 2,000-dinar piece, Moḥaffar-al-Dīn Shah, 1319/1902, pattern struck at Brussels for coinage adopted in 1323/1906. g. Local copper *fals*, with scales of justice, Yazd, Qajar period. h. Gold pahlavī, Reżā Shah Pahlavi, Tehran, 1310 Š./1931. Photographs courtesy Stephen Album. Scale 1:1.