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COINAGE AND THE MONETARY SYSTEM

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Part One

CENTRAL ASIA

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The minting of coins and the circulation of money in the major sub-regions of Central Asia in all the periods between the eighth and the fifteenth century show both similarities and differences. Local variations in the composition and supply of currency were due to a number of factors (economics, politics, traditions, the psychology of the people), among

which state borders were no longer the most important. For example, even in the relatively centralized Samanid state (late ninth and tenth centuries) there existed a number of variants in monetary circulation. The local variants cannot all be compared on equal terms, both because of constraints of space and because of the differing degrees to which these variants have been studied. We shall thus concentrate on one sub-region, that of Transoxania. For other regions, the main differences *vis-à-vis* Transoxania will be noted.

Coinage and the circulation of money from the eighth to the tenth century

After the conquest of Central Asia by the Arabs, the local mints started issuing gold, silver and bronze coins inscribed in Arabic on both sides. These coins came to be known technically as 'Kufic', from the type of Arabic script used for their legends. Kufic gold coins (dinars) were not minted regularly or on a large scale in Transoxania. Under the Tahirids (821–73), dinars were minted periodically in Samarkand and Chach (Tashkent). Even under the Samanids (tenth century), whose capital was Bukhara, the issue of dinars in Bukhara, Samarkand and Chach remained only occasional. Samanid dinars were minted on a markedly larger scale beyond the borders of Transoxania, particularly in Nishapur and Muhammadiyya (Rayy). Hoards of gold coins found in Transoxania consist mainly of externally minted Samanid dinars (mostly from Nishapur).

There was clearly more than one legal standard of fineness for dinars.¹ The bulk of the Samanid dinars from Nishapur are of the highest standard (93–98%, and usually 96% fine gold). Muhammadiyya issued dinars both of that high standard and of lower standards. The official weight-standard of the dinar is known (4.26 g) and the mean weight of 4.2 g corresponds to this. Noteworthy, however, are a significant number of coins that exceed the weight requirement.

Tenth-century Arab geographers such as al-Istakhrī and Ibn Hawqal point out that gold coins fulfilled different functions in the various regions of the caliphate. In some (e.g. Jibal and Tabaristan), dinars were the medium of exchange; in others (e.g. Kirman, Fars and Transoxania), they were not. When describing the money of Bukhara, al-Istakhrī notes, 'Dirhams are their coinage; they do not deal among themselves in dinars, which they treat as goods.'² The geographer and traveller Yāqūt explained this matter in more detail for the enlightenment of his thirteenth-century contemporaries: 'In the time of the Samanids, the inhabitants of Bukhara used dirhams for trading purposes and did not deal among

¹ Ehrenkreutz, 1963, pp. 253–4.

² Al-Istakhrī, 1927, p. 314.

themselves in dinars. Gold was just another commodity.³ Gold coins were, until the tenth century, clearly used in Transoxania for rewards or gifts alone. They served as treasure and universal currency but not as a medium of exchange in domestic trade. This is attested by the composition of the hoards, the well-preserved state of the coins, the peculiarities of their real weights and the fact that the local mints of Transoxania issued dinars only periodically.

Monetary circulation in the territory of Transoxania was marked by the long coexistence of two groups of quite dissimilar dirhams: the Kufic and what are termed the Bukhār Khudāt dirhams. The Bukhār Khudāt dirhams were modelled on the drachm of the Sasanian king Bahrām V (420–38). The representation in the eighth century of the monarch's crowned bust (obverse) and fire-altar and two guards (reverse) was quite different from the fifth-century design, the former being schematized and executed in dots and dashes. The Pahlavi inscriptions on both sides of the coin have disappeared (with only the rudiments left), but what remains is something that was featured earlier on the obverse in front of the face of the monarch, namely a Sogdian inscription (three words), and in one issue it is replaced by a shorter (one-word) inscription. Behind the monarch's head, the rudiments of a Pahlavi inscription have been changed into four barbed spikes (Fig. 1:1 – see p. 444). In the second half of the eighth century, these rudiments were replaced in some issues by Arabic inscriptions (Fig. 1:2–4). In the final quarter of that century the Bukhār Khudāt coins were called 'Mahdiyya' after the caliph al-Mahdī (775–85). Manuscript sources do not record this name but it occurs in coin inscriptions. The Mahdiyya dirhams were of a high standard (over 70% silver). All or most were *nummi subaerati* (fine silver coating on a copper core). The mean weight (3.2 g) of the eighth-century Bukhār Khudāt dirhams shows that they were minted in accordance with the local weight-standard. They were issued by three mints: those of Bukhara, Samarkand and Chach.⁴

In the eighth century there was an abundance of Kufic dirhams of the Umayyads (Fig. 1:6) and early ^cAbbasids in the territory of Transoxania, minted in many cities beyond its borders. The hoards pertaining to the late eighth century include both Bukhār Khudāt and Kufic dirhams. The latter were minted from very high-standard silver and their official weight-standard was 2.97 g. An unpublished hoard found near Samarkand contains, together with Kufic and Bukhār Khudāt dirhams, a number of drachms of the Sasanians. Late Sasanian drachms were probably still to be found in the markets of Transoxania in the eighth century.

³ Yāqūt, 1866–73, p. 519.

⁴ Davidovich, 1979, pp. 92–117.



Fig. 1. 1–5: Bukhār Khudāt dirhams, eighth century (obverse, behind the king's head: 1: rudiments of a Pahlavi inscription; 2: Arabic inscription, 'Khalid'; 3: Arabic inscription: 'Muhammad'; 4: Arabic inscription, 'Mahdī'; 5: reverse). 6: Kufic dirham from Darabgird, 96/714–15. 7: *fals* of the Samanid sovereign Ismā'īl b. Ahmad, 288/900–1 (enlarged).

It might have been expected that, in the ninth century, when the local minting of Kufic dirhams in Samarkand, Chach and Bukhara became fairly regular and abundant, these Muslim coins inscribed with quotations from the Qur'an would have supplanted the Bukhār Khudāt dirhams with their pre-Islamic legends. In fact, the opposite happened since the position of the Bukhār Khudāt dirhams became consolidated in the ninth and tenth centuries. Written sources from those centuries distinguish three types of Bukhār Khudāt coins: Musayyabī, Muhammadī and Ghitrīfī dirhams. The tribute received by the caliphate from various cities and regions of Transoxania was initially reckoned in silver, but in the first quarter of the ninth century it was recalculated in terms of these dirhams. It is particularly interesting that the recalculation was carried out in a particular form for each region. The table below summarizes the data provided by Ibn Khurradādhbih for the year 826:

Musayyabī (total annual production: just under 755,500)	Muhammadī (total annual production: 1,417,000)	Ghitrīfī (total annual production: 1,189,200)
Chach with mines, Khujand, Ustrushana (partial), Turk cities on the Syr Darya (partial)	Sogdiana (Samarkand), Buttam and Kash with mines, Nasaf, Ferghana, Ustrushana (partial)	Bukhara

What, then, was the difference between Musayyabī, Muhammadī and Ghitrīfī dirhams? This question has occupied many numismatists and historians, all reckoning the distinction to lie in the Arabic inscriptions on the obverse, but this has proved a blind alley for research⁵ since no account was taken of the pattern of monetary circulation, the clear information provided by some written sources and the mistakes of others, compared with numismatic facts. The distinction has proved to lie not in the inscriptions but primarily in the metal, together with weight, dimensions and appearance.⁶

In the last quarter of the eighth century, the Bukhār Khudāt dirhams underwent two local reforms. The first concerned their issue in Samarkand and Bukhara, with a reduction in their silver content, weight-standard and size. The reformed dirhams – also *nummi subaerati* but with two coatings – were no more than 40% silver. These were to be the Muhammadī dirhams, some issues of which later bore the name ‘Muhammadiyya’. The second reform was conducted in Bukhara alone and legend ascribes it to Ghitrīf b. ʿAtāʾ, governor of Khurasan in 792–3. Tradition has it that the inhabitants of Bukhara presented him with the clear task of giving the market a coinage that would not circulate beyond the city limits.

⁵ The findings are, not unnaturally, contradictory. Dirhams with the legend ‘al-Mahdī’, for example, have been identified by some as Musayyabī, by others as Muhammadī and by still others as Ghitrīfī.

⁶ Davidovich, 1966, pp. 49–125, 131.

This was the origin of the Bukhār Khudāt dirhams of copper or non-precious alloys with no silver at all. These copper coins came to be called Ghitrīfī (although this name did not appear on the actual coins), and in the ninth and tenth centuries they were only minted in Bukhara. The Musayyabī dirhams, the highest standard of the Bukhār Khudāt coins, were in fact the direct successors of those pre-reform dirhams of the eighth century containing over 70% silver. The most detailed description of the Muhammadī dirhams is given by al-Istakhrī, according to whom they were minted ‘from various metals: from iron, copper, silver and others’.⁷ In other words, the Muhammadī were low-standard silver coins, as confirmed by assaying (over 40% silver). Concerning the Ghitrīfī dirhams, all sources agree that they were made of an alloy of non-precious metals and resembled copper coins minted from various sorts of copper or from copper with an admixture.⁸

Alongside the Bukhār Khudāt dirhams, the late eighth century saw the start in Transoxania of the systematic issue of locally minted Kufic coins. The Samanids struck particularly regular and abundant quantities of Kufic dirhams there. These were named Ismā^cīlī after the Samanid amir Ismā^cīl b. Ahmad (892–907). The hoards of Kufic dirhams found in Transoxania do not just consist of local coins, however; and similarly, the hoards found beyond its borders in other regions of the Muslim East contain a fair number of dirhams from Samarkand and Chach. The most important feature of the period, however, was the fact that the bulk of Kufic dirhams (including Samanid coins) circulated well beyond the limits of the Muslim East, so that hundreds of hoards of Kufic coins have been discovered in Europe.

Ismā^cīlī dirhams are of a high standard. The real standard has been studied by means of two methods: atomic absorption spectrometry (6 specimens)⁹ and quantitative chemical analysis (104 specimens).¹⁰ Samanid policy regarding the official standard of fineness clearly underwent changes. The silver content of the bulk of dirhams of the early group (Samarkand and Chach coins) fluctuates within the 89–96% range; lower-standard (owing to the presence of lead) and higher-standard specimens are exceptions. The official standard of fineness was no less than 92.5%. Characteristic of the later group is a general lowering of the standard, coupled with a wider range of fluctuation and more random

⁷ Al-Istakhrī, 1927, p. 323.

⁸ Apart from Narshakhī, who states that the Ghitrīfī dirhams fluctuated between high- and low-standard silver. But his tenth-century *Tārīkh-i Bukhārā* was abridged and revised in 1128 by Qubawī, which gave rise to errors and contradictions; in particular, two reforms of Bukhār Khudāt coins in Bukhara were ‘telescoped’ by Qubawī into one.

⁹ Lowick, 1975, p. 124.

¹⁰ Davidovich, 1966, pp. 132–4.

deviations from even those limits. The real standard of the late Samanid dirhams has not been studied, but outwardly they look to be of even lower standard.

The average weight of the early *Ismāʿīlī* dirhams corresponds to the official standard of 2.97 g, but there was a gradual increase in the range of variations. In addition to whole coins, the sources make mention of fragments. The composition of the hoards found in Transoxania is specified as follows: the dirhams were split not only in Samarkand and not only ‘into basic fractions’ (i.e. halves and quarters). The hoards contain a great many fragments of the most varied sizes, shapes and weights, including very small ones. Clearly, the splitting of *Ismāʿīlī* dirhams into fractions answered two purposes: the pieces stood for lower denominations than the face value and were added to full dirhams as makeweights, sometimes making good a substantial difference between their actual and their official weight. Clearly, too, the question of the circulation of *Ismāʿīlī* dirhams as monetary units or by weight cannot yet be resolved unequivocally. It is more plausible to speak of the coexistence of these two forms and the preponderance of one form within different time spans. In the early decades, dirhams clearly circulated as whole coins (which did not rule out weight checks, especially for large sums). The criterion of weight became prevalent later – hence the accumulation of small fragments, which in some hoards far outnumber whole coins.

The coexistence and differing functions of the four groups of coins designated for silver circulation (Kufic *Ismāʿīlī*; and Bukhār Khudāt Musayyabī, Muhammadī and Ghitrīfī) were determined to a great extent by the financial and fiscal policy of the state, which rested both on objective market requirements and on a knowledge of the people’s psychology. An important component of this policy was the recalculation of the *kharāj* (land tax) into Bukhār Khudāt coinage and the firm establishment of the extent of the *kharāj* in each region of Transoxania, either in Ghitrīfī dirhams (Bukhara), Muhammadī dirhams (Samarkand, Ferghana, etc.) or Musayyabī dirhams (Chach, Khujand, etc.). Another important ingredient was the free exchange of Bukhār Khudāt for Kufic dirhams. The exchange value of the Bukhār Khudāt coins fluctuated, but by the ninth century it was usually higher than that of the Kufic dirhams. In 835, for instance, 100 fine-silver Kufic dirhams weighed out were worth at most 85 Ghitrīfī dirhams despite the fact that the latter contained no silver at all. The rate for Muhammadī and Musayyabī coins was higher still. The public considered the Bukhār Khudāt coins to be more stable, less susceptible to market fluctuations, and therefore preferred them for domestic trading purposes to the Kufic dirhams.

A certain demarcation of functions occurred that provided the best response to both the domestic and the external trading requirements of Transoxania. The Kufic dirhams fulfilled all monetary functions, but the universal currency function prevailed and, as a result, the

bulk of them ended up in Europe, beyond the bounds of Central Asia. The Bukhār Khudāt coins were not involved in this flow, which would have hurt the local population (since their exchange value exceeded the silver rate), and they would in any case have been unusable for trading with Europe on account of their metal content. In other words, the Bukhār Khudāt dirhams did not possess inherently the function of a universal currency but served the needs of domestic commerce, the overriding function being that of a medium of exchange.

Under the Samanids, outsize Kufic dirhams were minted beyond the bounds of Transoxania. They differed from Ismāʿīlī dirhams in weight, thickness, size, standard of fineness, and aspect. Their weight was very variable (usually falling within the 10–13 g range)¹¹ and they were struck from an alloy of silver (about 70%) and copper.¹² With the large size of the coins, the inscriptions occupy only part of their field, leaving a free strip round the rims. These outsize coins occur in hoards found in the territory of Transoxania, which means that they entered into the province's monetary circulation.

A considerable place in monetary trading was occupied by copper coins (*fulūs*, sing. *fals*), which were issued in markedly increased numbers under the Samanids (Fig. 1:7). In retail trading, *fulūs* predominated, as Ibn Hawqal (mid-tenth century) particularly emphasizes. Under the Samanids, *fulūs* were as a rule issued in two denominations, the basic unit being called an *ʿadlī*, which divided into *pāshīz*. Copper coins were struck in many cities of Transoxania, being intended for trade within the cities and the province, but the composition of hoards indicates that *fulūs* crossed the borders of their regions. At the same time, a particular feature of the circulation of copper coins was that local *fulūs* and those from other cities (whether always or at specific times is not known) were at different parities. In Bukhara in 921, for example, a fine-silver dirham fetched 24 Bukhara *fulūs* but 36 Samarkand *fulūs*. In other words, in Bukhara a *fals* from another city was worth two-thirds of the local *fals*.¹³

The circulation of money in other sub-regions of Central Asia differed from the variants that had arisen in Transoxania. The main difference lay in the Bukhār Khudāt dirhams of the province. Furthermore, in some sub-regions the general level of trading and monetary relations was different. In northern Tukharistan, for instance, Kufic dirhams and even copper coins were struck only occasionally, as borne out by the number of coin finds. In overall terms of trading and monetary relations, northern Tukharistan lagged behind Transoxania.

¹¹ Mitchiner, 1973; Lowick, 1977, pp. 205–7.

¹² Sellwood, 1980, pp. 176–7.

¹³ Davidovich, 1966, pp. 125–30.

Coinage and the circulation of money from the eleventh century to the beginning of the thirteenth

The 'silver coin crisis' (the causes of which are not examined here) relates to a situation that studies have already confirmed regarding the minting and circulation of coins in the Muslim East from the eleventh to the thirteenth century. The situation displays general features over the whole of that immense territory, and local features in various regions and sub-regions. The general features of the silver coin crisis are: the debasing of silver dirhams with alloys (even involving various copper or non-precious metal alloys); the activation of gold coins even in regions where they had previously played no significant role in monetary circulation; and the persistence of this situation for some 200 years. Local variants are characterized, first, by the variable duration of the silver coin crisis and by the time taken and the means employed to overcome it; and, second, by the differing composition of the money supply as regards both silver and gold circulation, not only in different states but in individual sub-regions of one and the same state. The composition of the money supply depended primarily on the kinds of debasement of silver dirhams and the technical methods used, and the time of introduction and organization of the circulation of silver substitutes. It also hinged on disparities in the minting of dinars (gold coins of different standards of fineness and gilded silver coins). Local variants of the silver coin crisis stemmed from interaction between the local level of trading and monetary relations and the socio-political situation, the status of silver reserves and the possibilities of replenishing them, the monetary and fiscal policy of the state (and sometimes of particular rulers) and social psychology (in particular, the solidity of the traditions of monetary circulation in the preceding period).

Transoxania, as part of the state of the Karakhanids, continued to display an extremely original variant of minting and monetary circulation.¹⁴ Typical here are three features, whose combination seems on the face of it paradoxical. The first is the lack, for a century and a half, of any regular minting of gold coins; the second is the maintenance of the positions of Bukhār Khudāt coins; and the third is the fast pace and variety of methods used for debasing the Karakhanid Kufic dirhams.

The Karakhanid silver coins were, from the technical point of view, debased in two ways. In some cases, a hardener (usually copper) was added to the alloy, and in others, *nummi subaerati* (consisting of a copper core and coatings of silver) were issued. A quantitative chemical analysis of a few dozen coins of different periods from hoards found in

¹⁴ Davidovich, 1960, pp. 92–117.

Transoxania makes it possible to trace the course of changes in the standard of fineness of Karakhanid dirhams.

In the first and early second decade of the eleventh century, dirhams were still of a high standard. For example, in the dirhams of Ferghana (minted in the cities of Akhsikat and Uzgend) there was a copper admixture of about 12%. In addition to locally minted dirhams, Karakhanid coins minted in Kashghar and Yarkand were in wide circulation in Ferghana. The early Kashghar dirhams were also of high quality, but the copper content increased later. It is noteworthy that the dirhams of Kashghar in 1019–20 and of Yarkand in 1026–7 belong to the *nummi subaerati* category. The silver coatings are worn (in some instances to the point of transparency) and in places they have come off altogether. Hence an analysis of the silver has indicated a considerable spread in the 40–60% range. No less than 30% of copper had thus been added. In the Chaghaniyan dirhams of 1034–5, the amount of copper reached 73–75%, and later (1041–2) more than 80%. In the chronologically close Samarkand coins (minted in 1046–7 under the Karakhanid Ibrāhīm Tamghach Khan) the respective proportions of copper and silver were 80% and 15–16%, but the coins were *nummi subaerati*, so that the silver content was originally somewhat higher.

In the mid-eleventh century, dirhams were minted from a copper and lead alloy in many cities of Ferghana. After the conquest of Ferghana by Ibrahim Tamghach Khan, the circulation of copper and lead dirhams was banned in the region and they were replaced by fresh dirhams bearing the name of the conqueror. The new coins were minted from a silver and copper alloy (specimens analysed from 1061 and 1067–8 contain 18–23% silver and 70–72% copper). Low-standard dirhams continued to be issued in the twelfth century. For example, two dirhams of Mas^cūd b. Hasan minted in Samarkand around 1166–70 proved to be 22–25% silver.

The exchange rate of Karakhanid Kufic dirhams depended on their standard of fineness. It was therefore customary for documents to contain detailed descriptions of them, making it quite clear which particular coins were concerned. In one of the *waqf* documents of Ibrāhīm Tamghach Khan, for example, his Samarkand dirhams are described thus: ‘*mu’ayyadī^c adlī* dirhams of the established model, liquid assets [i.e. legal tender – Ed.] in the district of Samarkand’ and ‘47 dirhams [are equivalent] to 1 *mithqāl* of pure, high-carat gold’ at the time of establishment of that *waqf*.¹⁵ Had silver circulation consisted solely of low-standard Karakhanid Kufic dirhams, this would certainly have prompted the regular minting of gold coins in Transoxania (a province with highly developed trading and monetary relations) and their use in monetary commerce. However, the feature of central Transoxania up to the mid-twelfth century was the already familiar Bukhār Khudāt

¹⁵ Khadr, 1967, p. 329.

dirham. Of these, the Muhammadī dirhams (*nummi subaerati*, over 40% silver) began to drop out of circulation over several decades of the eleventh century, often together with Karakhanid dirhams of differing standards. Ghitrīfī dirhams (of copper or non-precious alloys) remained legal tender and the recommended medium of exchange until the mid-twelfth century. As previously, the parity of the Ghitrīfī dirhams fluctuated but was usually either equivalent to or above the rate for fine silver. This particular point was noted with some surprise in the mid-eleventh century by the historian and polymath al-Birūnī.

Silver was expensive at that time. In 1128, for instance, the ratio of gold to silver was 1:7.5. Yet in that same year, 100 dirhams by weight of fine silver were worth no more than 70 or 72 Ghitrīfī copper dirhams.¹⁶ Significantly, the area of circulation of the Ghitrīfī dirhams had increased in comparison with the previous period. Under the Karakhanids, these dirhams went beyond the bounds of the Bukhara region and became the official medium of exchange in many regions of the state. Such an established situation, coupled with the high exchange value of the Bukhār Khudāt copper Ghitrīfī, was secured by deep-rooted tradition and the monetary policy of the Karakhanids that was built upon it.

Major changes took place in the mid-twelfth century, with the start of regular issues of gold coinage. The low-standard Karakhanid Kufic dirhams were replaced by dirhams minted without any silver at all, and with just the amalgamation of a thin silver film on the surface. These silver-coated copper dirhams were large, handsome coins (Fig. 2:1–4) issued in many cities, including Samarkand, Bukhara, Uzgend, Kasan, Marghinan, Binakat and Utrar. Some cities minted silver-coated copper coins of two values (distinguished by size, weight, outward aspect and sometimes inscriptions). Like any tokens of value with an imposed exchange rate, the silver-coated copper dirhams often suffered inflation, against which the financiers of the time had two weapons: one was economic (reducing the money supply through prohibitions and exchanges) and the other was psychological (increasing the weight of new coin issues). A particularly vivid picture of frequent inflation and such fiscal measures is provided by the coins of Ferghana in the second half of the twelfth century.¹⁷

The policy with regard to the minting of gold coins followed by the Ghaznavids, the Great Seljuqs, the Khwarazm Shahs of Anūshtegin's line, and the Ghurids, who ruled over various parts of eastern Iran and Central Asia, was quite different. The Seljuqs, for example, began issuing gold dinars even before the decisive victory in 1040 over the Ghaznavids at Dandanqan. After 1040, the issuing of both high- and lower-standard gold coins, and subsequently gilded silver dinars, was put on a regular footing.

¹⁶ Davidovich, 1960, pp. 93–8.

¹⁷ Davidovich, 1961, pp. 186–200.



Fig. 2. Drawings of silver-coated copper dirhams from the end of the twelfth century to the beginning of the thirteenth. 1–3: Karakhanid dirhams, from Uzgend, A.H. 594; from Marghinan, A.H. 602; from Binakat, A.H. 602. 4: dirham from Uzgend, A.H. 609, with the names of the Karakhanid Mahmūd b. Ahmad and the Khwarazm Shah Muhammad b. Tekish. 5–6: dirhams of Muhammad b. Tekish, from Termez, A.H. 617. 7: dirham from Samarkand, 622/1225.

Let us take a closer look at the initial stage of the emergence of the ‘Ghaznavid variant’ of the silver coin crisis. In every way (size, thickness, style of inscriptions, decorative motifs), the Ghaznavid coins differed from the Karakhanid Kufic coins. The debasing of

silver dirhams also proceeded more slowly than in the state of the Karakhanids. In the Ghaznavid dirhams of Sultan Mas'ūd I (1030–41), the silver content was thus over 70% and the admixture of copper did not exceed 25–27%. At that time, dirhams were still being issued at an official standard of fineness equivalent to ‘nine-and-a-half tenths’, i.e. 95% silver. In modern southern Tajikistan, some hoards of Ghaznavid coins have been found from the first half of the eleventh century (including local dirhams from the mint of Khuttalan). A tangible sign of their circulation is the fact that the hoards contain not only whole coins but fragments of differing sizes, shapes and weights. Together with small Ghaznavid silver dirhams, outsize heavy coins remained in circulation (with a broad free field around the centrally placed inscription) and the series was still in use under the Samanids.

The Ghaznavids at once began regularly issuing gold coins as well, at various standards of fineness. For instance, the dinars of Nishapur maintained their high standard (most of those assayed being 93–96% gold), while the dinars of Herat were no more than three-quarters gold (the assay results being in the 67–75% range). Dinars of various standards were variously named. For instance, Bayhaqī and al-Birūnī refer to both the Nishapur and the Herat varieties, which bears out the above factual data on the difference in their standards of fineness. However, the mere fact of minting gold coins gives no idea of their functions and place in monetary trading (cf. dinars under the Samanids). Crucial material for understanding the objective changes in the position of Ghaznavid gold that began in the eleventh century is provided by the historian and official Bayhaqī. An examination of actual instances of purchases and sales, gifts and recompenses, supplies sufficient evidence that, even in the second quarter of the eleventh century, the value-measurement function was still fulfilled by silver dirhams, but gold dinars were already in use as a medium of circulation and payment.¹⁸

The Khwarazm Shah ^cAlā' al-Dīn Muhammad b. Tekish (1200–20) attached great importance to the political aspect of minting money. Coins were issued in his name from many mints of conquered territories, including Khwarazm itself, Bukhara, Samarkand, Uzgend (?) and Farab (Utrar); and, in the south, Tirmidh (Termez), Chaghaniyan and Wakhsh. However, Muhammad b. Tekish did not abolish the monetary systems established before him in various states and provinces, though the geographic limits of the variants sometimes shifted. In central Transoxania, the basis of the monetary system was, as before, the coexistence of gold dinars and silver-coated copper dirhams (Fig. 2:5–6). Tukharistan happened to be in the area of minting and circulation of those coins. We know of the many issues of silver-coated copper dirhams in Termez and Chaghaniyan (modern southern Uzbekistan) and hoards of such coins have been recorded in southern Tajikistan. In the territory of the

¹⁸ Davidovich, 1980, pp. 61–2.

former Ghurid empire, gold dinars and silver dirhams of various standards were issued in the name of Muhammad b. Tekish, but they retained their traditional appearance. There was no break in the tradition of also issuing *fulūs* – copper coins for retail trading – in a number of cities.

A considerable number of hoards have been found in Central Asia, consisting basically of gold dinars of Muhammad b. Tekish. They usually come with a small admixture of gold coins of other rulers and dynasties. These mixed hoards include, as a rule, not only whole and fragmented dinars but pieces of coin varying in size and weight. Clearly, gold coins (whose weight from the outset, at the time of minting, fluctuated markedly) could not circulate simply as coins. Weight checking at the time of payment required makeweights, the number of which increased in the process of gold circulation. It is no coincidence that some hoards contain more assorted fragments of dinars than whole coins.

Coinage and the circulation of money under the Mongols (thirteenth and fourteenth centuries)

The Mongol conquest, accompanied as it was by the destruction of cities and the devastation of entire regions, with the consequent reduction and ruin of the population, also did great harm to monetary trading. The changes in the minting of coins, the composition of the money supply and monetary circulation need to be divided into four stages.

The first stage (second quarter of the thirteenth century) is marked by a sharp drop in the number of mints, irregular issues of coins and a monetary circulation crisis.¹⁹ The coins of Samarkand provide a particularly vivid picture of the development and specific nature of the crisis. In Samarkand, gold dinars (both anonymous and bearing the name of Chinggis Khan) and silver-coated copper dirhams were at first minted – a system inherited from pre-Mongol times. But a change came about in the language and substance of the inscriptions. The outsize silver-coated copper dirhams (weighing about 6 g) started bearing non-standard inscriptions in Persian. First, they assure the inhabitants of Samarkand that the coins have been specially minted for them and so deserve their trust. In 622/1225 we find, ‘This money is for circulation in Samarkand and its district’ (Fig. 2:7). A repeated statement comes in 624/1226–7 that the money is for local circulation, but there is additional psychological pressure in the legend: ‘Chinggis currency’, ‘Khan’ and once more the name of the fearsome conqueror ‘Chinggis Khan’. Clearly, the ‘prompting’ was to no avail since in 1232–3 and 1233–4 the inscription became admonitory: ‘Non-acceptance of this currency in Samarkand and its district shall be a criminal offence.’ As a result, there

¹⁹ Davidovich, 1972, pp. 37–47, 127–35.

was no inflation, but a deeper crisis when the population would have nothing to do with the money. However, the threats made no impression and, as a result, the minting of silver-coated copper dirhams had to be halted in Samarkand. The minting of small silver coins in 1236–7 did not improve the situation since they promptly disappeared, and Samarkand entered its moneyless decades. In Bukhara, the minting of small silver-coated dirhams was also discontinued. In other cities of Transoxania, none were issued at all. This means that, to begin with, commerce within cities and within the region (the volume of which certainly fell) was mainly based on barter.

The situation in the eastern part of the possessions of Chaghatay (Chinggis Khan's son) was somewhat different, but for special reasons. The Mongols had brought in a number of craftsmen from Transoxania, and Chaghatay had his summer residence near the city of Almalik, where commerce thrived. High-standard silver dirhams and copper *fulūs* were regularly minted in Almalik.

The second stage (up to 1270)²⁰ was marked by the regular minting of gold coins throughout the empire and of silver-coated copper dirhams in the north-east. At the *kurultay* (general council) of 1251, Möngke (Mengü) was elected chief of the Mongols. The new leader proclaimed a comprehensive reform in order to stabilize the situation. One of its points was the cash payment of a standard per capita tax, the *qubchur*, which Möngke ordered to be collected annually in gold dinars. In Khurasan, *rukni* dinars were in circulation at the time and their standard of fineness was equivalent to 4 *dāngs* (four-sixths, i.e. two-thirds fine gold). The *qubchur* was recalculated in *rukni* dinars. However, since there were no gold coins in Transoxania to comply with Möngke Khan's command, it became urgent to start minting them. Mas^cūd Beg, a merchant governing Transoxania and other regions of Chaghatay's realm, succeeded in this task. Many mints (in Bukhara and Samarkand, in Khujand and Utrar, in Urdu al-A^czam, Almalik, Shafurqan and elsewhere) started minting small, slim dinars of low-standard gold (about 60% gold and 40% alloy). The weight-standard was not strictly laid down. Not only whole coins but halves and small fragments of various weights were in circulation. Because of the low standard and the existence of fragments, the gold dinars practically supplanted the silver coinage by meeting the requirements of the various levels of monetary trading. The gold coins thus made their appearance among the population and the *qubchur* was recalculated in them (by weight).

A further sign of the revival of monetary trading in the second stage was the renewed minting of silver-coated outside copper dirhams. In Utrar they were struck annually starting in 1251–2, and they were used for commerce not just in Utrar but in the whole of Ferghana and the Tashkent region. Ferghana (i.e. the city of Khujand) subsequently, in 1264–5

²⁰ Davidovich, 1972, pp. 29–36, 48–50, 136–41.

and 1266–7, issued its own coins of this type. The minting was resumed of silver-coated copper dirhams even in Bukhara and from 1261–2 this was done on a regular basis. Only Samarkand had not recovered from the crisis affecting the silver-coated copper dirhams. When such coins were finally issued there in 1264–5, they once more bore admonitory inscriptions (but this time in Turkish). No further attempts were made, for in Samarkand nobody was any more willing than before to deal in silver-coated copper dirhams.

The third stage (starting in 670/1271–2)²¹ begins with the monetary reform of the governor Mas^cūd Beg, who banned the further circulation of silver-coated copper dirhams, put an end to the minting of gold dinars and organized the issue of high-standard silver coins in many cities. This was one of the most difficult reforms in the whole history of Central Asia. For over two and a half centuries, there had been no regular minting there of high-standard silver coins and isolated attempts to overcome the silver coin crisis had come to grief. It took Mas^cūd Beg two decades of systematic effort to succeed with the reform. In Almalik, as already noted, silver coins were issued in the first and second stages, but this was an exceptional occurrence. Mas^cūd Beg began the reform in 1271–2, which was the very year when silver dirhams were first issued in Utrar. By the following year, 1272–3, the silver coins were already being produced by five mints, those of Utrar, Kanjida, Taraz, Burkhan and Almalik.

There was an increase in the number of mints and the reform achieved its greatest success in the course of the second decade (the 1280s), when at least fifteen mints were in operation. In the north-east and east of Central Asia, silver coins were minted in Utrar, Taraz, Kanjida, Burkhan, Almalik and Bulat. In Ferghana, dirhams were issued by the cities of Khujand, Marghinan, Andijan and Ush. The single mint in the Chach region had three names: Chach, Binkath and Tashkent. The Mongols repeatedly sacked Bukhara in 1263, 1273 and 1276, massacring its population. The city stood empty. By 1283 Mas^cūd Beg had retaken Bukhara and forthwith organized the minting of silver dirhams there. At the same time, the Samarkand mint started operating (Fig. 3:1–2). An important ingredient of Mas^cūd Beg's reform was the unification of the weight-standard (2.1 g) and the standard of fineness (approximately 80% fine silver) for all the mints. These small, high-standard silver coins circulated at the same parity throughout the province, regardless of the place of issue. The silver coin crisis in Central Asia lasted longer than in the other regions of the Near and Middle East. The consistent and firm policy of Mas^cūd Beg helped to stabilize and somewhat stimulate domestic trade and the life of the cities in general. The monetary reform, restoring silver coinage to the market, was a key component of his policy.

²¹ Davidovich, 1972, pp. 51–114, 141–51.



Fig. 3. 1–2: Chaghatayid silver dirhams after the reform of the third stage: Andijan, Bukhara (enlarged). 3–7: Timurid silver *tanga*, fifteenth century (3–6: Shāh Rukh from Abarkuh, Samarkand, Herat and Sabzavar; 7: °Abd Allāh from Samarkand, 854/1450–1). 8–14: anonymous copper coins from the reform of Ulugh Beg (8: one coin from a series dated A.H. 832; 9–14: coins from Bukhara, Samarkand, Karshi, Andijan, Shahrukhiyya and Termez).

A fresh reorganization of the minting of silver coins was carried out by Kebek Khan (1318–26).²² This was the fourth stage of the circulation of money in the Chaghatay *ulus* (domain). Kebek's reform repeated the system introduced much earlier in Persia by Ghazan Khan (1295–1304). The basis of the system was the outsize silver coin (dinar), equivalent to six small silver coins (dirhams). Under Kebek, the dinar weighed just over 8 g and the dirham therefore about 1.4 g. The dinars were dubbed *kebeks* and the name stuck. Kebek's reform obviously prohibited further circulation of the anonymous dirhams of the third stage, whose weight-standard (2.1 g) did not fit into the new scale of values.

Coinage and the circulation of money in Transoxania under Timur and the Timurids (late fourteenth and fifteenth centuries)

Surprisingly, the minting and circulation of gold and silver coins during this period have not attracted the attention of numismatists and historians. No study has even been made of such basic ingredients of monetary policy as official weight-standards and standards of fineness of gold and silver coins. The scientific literature contains only isolated observations, and, in essence, all writers on the subject repeat Vasmer's notion regarding the weight of silver coins: in approximately 1390, in Transoxania and eastern Iran, Timur began minting *tangas* of about 6.0 g and 1/4-*tangas* (dirhams) weighing some 1.5 g. Under his son and successor Shāh Rukh (1405–47), the weight of the *tanga* dropped to 4.72 g.²³ Meanwhile, there is information in the written sources indicating the existence of at least five weight-standards. Some are expressed in eastern units of weight and others are compared with the weights of non-Muslim coins. A comparative analysis of all these data enables five weight-standards to be singled out, both in eastern units of weight and in grams: the Timur *tanga*, equivalent to 1 *mithqāl* and 2 *dangas* of a *mithqāl* (6.4 g); the Shāh Rukh *tanga*, equivalent to 1 *mithqāl* and 1 1/2 *dangas* (6.0 g), to 1 *mithqāl* and 1 *danga* (5.6 g), to 1 *mithqāl* and 1/2 *danga* (5.2 g); and the post-Timurid *tanga*, equivalent to 1 *mithqāl* (4.8 g) (Fig. 3:3–7). Other weight-standards were quite possibly used as well. The early coins of Timur, for instance, were probably minted in accordance with a higher weight-standard. The underlying trend of the changes was clearly in the direction of a lowering of the weight-standard. It is not clear, however, what the general policy was regarding the weight of silver coins and whether the weight-standards applied to the entire province or were regional. To resolve this question,

²² Masson, 1957, pp. 41–108.

²³ Vasmer, 1930, pp. 680–1.

it would be necessary to study the real and mean weight of a large number of coins from each major mint separately.

Under Timur and the Timurids, besides silver coins of the basic face value, fractions of that value were issued. In Samarkand under Timur, for instance, small coins worth 1/4 *tanga*, called *mīrī* (their weight-standard being 1/3 *mithqāl*, i.e. 1.6 g), were minted in vast quantities. In Khurasan under the last Timurids, the small coins worth 1/3 *mithqāl* (1.6 g) and 1/6 *mithqāl* (0.8 g) were called *kebekī* dinars and *ᶜadlī kebekī*.²⁴ Halves and other fractions were minted. The silver coins of Timur and the Timurids were of a high standard. In a number of fifteenth-century *wathīqas* (deeds of purchase), the standard of fineness of the coins is defined as *dah dahi* ('ten-tenths', i.e. 100% silver), as reckoned at the time. Many coins are overstruck with small cartouches bearing an inscription (rulers' names, cities, words). Coins so modified were worth more than the plain version.

Particularly noteworthy are copper coins, since their importance in monetary trading grew steadily throughout the fifteenth century. Four names were in use for the copper coins: *fulūs*, *ᶜadlī*, *dīnār* and *dāngī*.²⁵ In coin inscriptions and legal documents (*wathīqas*, *waqf* documents, etc.) they occur sometimes in isolation and more often in a variety of combinations. The term *fulūs* lost its plural sense and in the fifteenth century was applied to any copper coin regardless of its value. If the terms *ᶜadlī* or *dāngī* (*fulūs-i ᶜadlī*, *fulūs-i dāngī*) were added to the term *fulūs*, this meant that the basic face value was implied in the copper issue. In the second half of the fifteenth century, the term *dinar* became the principal name of the basic face value and in order to distinguish the copper *dinar* from the silver and gold *dinars*, epithets were added to it. The most common epithet became the term *fulūs*. *Dīnār-i fulūs* was thus a 'copper *dinar*'. Local epithets were also used, like the *harawī* *dinar*, the *tabrīzī* *dinar* and so on. The early copper coins bear the names of Timur and his first heirs, Jahāngīr and Khalīl Sultān. Subsequent issues are anonymous and most of the inscription space is taken up by the name of the mint, the date of minting and words.

Examination of the many hoards of fifteenth-century copper coins has made it possible to pinpoint periods of inflation, crises, reforms, general development trends regarding the minting and circulation of copper coins, the period of the maximum production of consumer goods and of retail trading, the features of tax policy, and much else. Because of the way the changes took place, the minting and circulation of copper coins in the dominion of Timur and the Timurids must be split up into five stages.²⁶

²⁴ Davidovich, 1983, pp. 40–50.

²⁵ Ibid., pp. 32–57.

²⁶ Ibid., pp. 129–322.

The first stage (until 832/1428–9) was marked by a growing number of mints and an increase in the money supply. Basic denomination copper coins were issued in Samarkand, Bukhara, Karshi, Shahr-i Sabz (central Transoxania), Termez and Khuttalan (in the south), Utrar and Shahrukhiyya (in the north) and Andijan (Ferghana valley). The biggest issue was that of 823/1420, the average weight being approximately 4.4 g. No importance was attached to accuracy regarding the weight of individual coins as the variance on either side of the mean was considerable.

The second stage (starting in 832/1428–9) was the monetary reform of Ulugh Beg (1409–49), on whom his father Shāh Rukh had bestowed a huge appanage, essentially an entire province with Samarkand as its capital. The main aim of the reform was to give the market a constant and stable copper coin for retail trading and, at the same time, to increase revenue from the minting of such coinage. The reform worked. In 1428–9, many mints produced coins that were identical as regards design, content and the layout of the inscription (Fig. 3:9–14). Their mean weight was one and a half to twice that of the pre-reform coins of 823/1420. The ‘old’ coins were prohibited and new ones offered in exchange. The terms of the exchange are not known but they were evidently not ruinous for the population since the operation went ahead smoothly. After the massive exchange, the minting of copper coins in many cities was centralized in Bukhara and serialized. This means that for several decades, identical coins were minted in Bukhara, without even any change of date in the legend, since they all read 832/1428–9 (Fig. 3:8). Coins of this series found their way into every corner of Central Asia and were used in all markets. In addition, their centralized minting certainly increased Ulugh Beg’s revenue many times over.

Some features of the reformed minting also paved the way for inflation. In the first place, the mean weight of the reform coins was repeatedly lowered. Over a few decades, this led to the accumulation of coinage that was too divergent in weight, with coins of the main denomination ranging from 1.8 to 8.6 g. Secondly, the total volume of such coin issues was far in excess of market demand. The third stage was the elimination of inflation. The usual method was to withdraw current copper coins and substitute specially minted new ones, but the minting of new coins for a complete exchange is a costly and lengthy operation. During the third stage the problem was overcome in another way, by means of overstriking. Circulating coins of the series were for several years overstruck in many cities. The overstrike was a square cartouche with the inscription of the name of the mint (Samarkand, Bukhara, Karshi, Termez, Hisar, Khuttalan, Andijan, Shahrukhiyya, etc.) and the word *dāngī*, the latter indicating that only coins with this overstrike had acquired the basic face value. The market also received halves of the mam denomination by means of another overstrike: in a lenticular cartouche the name of the mint (Samarkand, Bukhara, Karshi, Termez, Andijan,

Shāh Rukh (?)) and the word *nīmdāngī* ($1/2$ *dāngī*) were inscribed. Coins without overstrikes were not withdrawn but served as the smallest fractions of the main denomination. The market received copper coins of three denominations, which testifies to the expansion of retail trading. The transformation of part of the coins of the series into lesser fractions of the main denomination reduced the volume of surplus money. Inflation was thus eliminated or checked. There was one miscalculation, however, in the overstriking operation: no selection by weight was made, and the coins of the main denomination (with the *dāngī* overstrike) continued to be extremely variable in weight. This was one of the causes of the destabilization of monetary circulation.

The most conspicuous signs in Transoxania of the fourth stage (final decade of the fifteenth century) lay in the change of policy regarding the weight of copper coins and the range of values. Copper coins were for the very first time subjected to a definite weight-standard (first, 1 *mithqāl* and 2 *nukhuds*, i.e. 5.2 g; later, 1 *mithqāl* and 1 *nukhud*, i.e. 5.0 g) with a very small tolerance. The regular minting in Samarkand, Bukhara and other cities, starting in 897/1491–2, of new coins of a fixed high weight, coupled with the large-scale withdrawal of the coins of dissimilar weights struck in the second and third stages (i.e. coins of the 832/1428–9 series with and without overstriking), reduced and renewed the money supply and created the important sensation of solidity. A no less perceptible sign was the increase in the range of values. Instead of copper coins of two or three denominations (the usual pattern of the previous period), the market received coins of five or six denominations of distinct weights and sizes. In Samarkand, for instance, copper dinars were issued in 1 $1/2$ -, 1- and $1/2$ -dinar pieces, together with coins worth two-thirds and one-third of a copper dinar.

The situation was quite different in another district, that of northern Tukharistan. The local minting of copper coins (in Hisar) was of secondary significance since it accounted for only a small part of the district's money supply. The main feature was the long-term and repeated overstriking of the copper coins of Transoxania, which indicated a change of coinage. For the sake of convenient and full exchange, temporary mints were even opened in small cities and population centres. During one of the overstriking periods, lasting a number of years, exchange mints were opened in nine centres of the relatively small territory of northern Tukharistan. Each new overstrike invalidated the previous one, and only coins with the new, most recent modification were accorded full-dinar status. On each occasion, the holders of the old coins forfeited part of their assets, and there were at least seven such operations in the course of the decade. At the beginning of the sixteenth century, the circulation of copper coins and retail trading in northern Tukharistan was consequently

in a crisis situation, with the prices of staples and commodities constantly rising and the effectiveness of such a fiscal policy decreasing as far as the revenue was concerned.

The year 907/1501–2 marked a political watershed and the start of a new, fifth stage in the minting and circulation of copper coins. In that year, Muhammad Shaybāni Khan (1500–10), the founder of the new dynasty of the Shaybanids, definitively conquered Samarkand. Northern Tukharistan, however, still belonged to the Timurids and was the scene, in 907/1501–2, of a far-reaching monetary reform. It bore the stamp of a talented, albeit anonymous, financier who grasped the extent and danger of the current monetary circulation crisis, together with the need to take account of the psychology of the populace in overcoming it, but did not overlook considerations of public revenue. The success of the reform required a clear and universally comprehensible divide between old and new, past and future, plus a range of denominations that would not ignore the steady increase in prices. To begin with, all the old discredited coins were withdrawn. In other words, the past was ‘closed down’. In their place, the market was supplied with coins of three denominations which differed in every respect (legend, language, image, weight, size, thickness) from those withdrawn. On the 1- and 2-dinar pieces, the inscriptions were in the Persian familiar to the local population, with the value of the coin also stated in Persian: ‘1 dinar’, ‘2 dinars’. The 2-dinar pieces were larger and thicker, and their mean weight was twice that of the single dinars. A particularly noteworthy point is that the reform determined that the basic coin would be not the single dinar but the 2-dinar piece, since it tallied better with the steady increase in prices. The 2-dinar pieces depicting a gazelle and bearing a Persian inscription constituted a series issued without any change for a number of years by three mints, those of Hisar, Qunduz and Termez. The population at last had a steady and enduring currency for retail trading, and the public coffers were swelled considerably by its production.

Part Two

AFGHANISTAN, PAKISTAN AND NORTHERN INDIA

(A. H. Dani)

The first series of new coins found in this region belongs to the Arab caliphate – the Arab-Sasanian coins, found in southern and western Afghanistan.²⁷ Together with Arab-Byzantine coins, they have also been recovered in excavations at Banbhore, a port town on the Arabian Sea coast in Sind (Pakistan). The town is generally identified with Daybul, the city captured by the Arab general Muhammad b. al-Qāsim in c. 711. One gold coin of the caliph al-Wāthiq (842–7) has been recovered.²⁸ The second site, al-Mansura, was established as a mint town by the Arab governors. Here the coins were minted by the Habbārī rulers, such as al-Mansūr b. Jumhūr al-Kalbī and his successors. Copper coins minted at Banbhore have also been found in large numbers. However, the most remarkable is the local coin type of the caliph al-Muqtadir (908–32), a silver dirham, copying the bull-and-horseman type of the Shāhi rulers of Kabul. The obverse shows the figure of the caliph on horseback and the reverse has a recumbent bull with his name above it. The Kabul ruler is taken to be Spalapati Deva, now assigned to the Turk-Shāhīs and possibly defeated by the Muslims in the time of al-Ma'mūn (813–33).²⁹ This type is later found also in the coins of Muhammad and Mas'ūd I, the two sons of Sultan Mahmūd of Ghazna. The coins continued the older design, fabric and weight-standard of the Shāhī originals. The type reaffirms the continuity of monetary tradition.

The Ghaznavid rulers, initially as governors of the Samanid amirs of Bukhara, introduced the coin types of the Samanids. Alptegin's coins are known only from the Andarab mint,³⁰ but Sebüktegin issued coins from Ghazna in 969, recognizing Mansūr I b. Nūh as his overlord. The coins of Sebüktegin, who acknowledged Nūh II b. Mansūr as his overlord, were struck in Balkh, Bamiyan and Farwan. But those minted at Bamiyan vary

²⁷ Walker, 1941.

²⁸ Khan, 1969, p. 43.

²⁹ See Abdur Rahman, 1979, Ch. 6.

³⁰ Thomas, 1848b, p. 295.

considerably from the currency of his Samanid masters, and approximate in weight and size to the local coinage of the Hindūshāhīs of Kabul.

More varieties are seen in the coins of Sultan Mahmūd (998–1030), who struck coins in Nishapur, Herat, Farwan and Ghazna. His coins come in the same category as those of Sebüktegin, though his Nishapur mint coins differ materially from others in form and value. Mahmūd's coins began with displaying the simple title of *sayf al-dawla*, conferred on him by Nūh II b. Mansūr in 994, but in 998 he broke away from the Samanid amirs when he assumed for himself on his coins the fully independent titles of *al-amīr* and *al-sayyid*. To these were added the titles of *yamīn al-dawla* and *amīn al-milla*, conferred on him by the ^cAbbasid caliph al-Qādir (991–1031), duly recognized on his coins. Later, he assumed the titles of *nizām al-dīn* and also *malik al-mamālik* and *malik al-mulūk*.

A special bilingual variety of Mahmūd's coins is worth noting. The obverse shows the usual *kalima* and ruler's name with his titles in Arabic, while the reverse has the Sanskrit legend in Nāgarī showing an attempt to translate the *kalima*. The margin names the coin as a *tankā* and the mint as Mahmudpur.³¹ The translation of the *kalima* is not exact, but is understandable in the local philosophical concept. The words *avyaktam-eka* (Invisible and the One) stand for *lā ilāha ilā Allāh* and *avatāra* (Incarnate) stands for *rasūl* (Messenger).

The two contending successors of Mahmūd continued his types and, as mentioned earlier, they also copied the bull-and-horseman type. Muhammad first gave the name and titles of his father on the obverse before he issued his own coins. Mas^cūd first called himself *walī al-^cahd* (heir) before issuing his own independent coins.³² He later started a new type of brass coin, weighing 60 g and with the titles of *al-sultān al-mu^cazzam malik al-^cālam*, these titles apparently in imitation of those of the Seljuq sultan, who called himself *al-sultān al-mu^cazzam shāhanshāh* Toghrīl Beg Abū Tālib.³³ It is from the time of Mas^cūd's son, Mawdūd (1041–8), that we find another type in silver and copper with the name and titles in Arabic on the obverse, thus replacing the horseman, but the reverse has the bull and Nāgarī name *Śrī Sāmanta Deva*.³⁴ The mint name Lahore given in his coin³⁵ should be identified with Salature in the Swatī *tahsīl* (subdivision) of the modern North-West Frontier Province. Ibrāhīm b. Mas^cūd (1059–99) assumed still greater titles of *al-sultān al-^cazzam, qāhir al-mulūk* and *sayyid al-salātīn*. The title *al-sultān* henceforth became common and was used in the coins of Mas^cūd III and Malik Arslān. But the two subsequent rulers, Bahrām Shāh

³¹ Thomas, 1860, pp. 160–2.

³² Thomas, 1848b, p. 335, No. 58.

³³ Ibid., p. 337.

³⁴ Ibid., p. 349, No. 91.

³⁵ Ibid., No. 92.

and Khusraw Shāh, though calling themselves *al-sultān al-a^czam*, also acknowledged as their suzerain the Seljuq Sultan Sanjar on their coins.

The economic influence of the dynastic change on currency is not difficult to infer. The gold currency of the time was based on that of the Arab caliphate – on the dinar in standard and value – but the silver and copper currency adopted the local weight-standard, thus continuing the older exchange relationship.

The succeeding dynasty of the Ghurids followed this practice. However, the type was now different. Ghiyāth al-Dīn Muhammad b. Sām (1163–1203) has the horseman on the obverse and his own name and titles in Arabic on the reverse. His brother Mu^cizz al-Dīn Muhammad (1173–1206), the conquerer of northern India, shows new varieties and the adoption of the coin types of the Rajput rulers. The fundamental change in his gold currency is noticeable in the unusual appearance of the Hindu goddess Lakshmī on the obverse, with his name and title *Śrī mad Hamīr* in Nāgarī on the reverse. This type, as Nelson Wright pointed out, was based on a local standard of 72 grains (or 40 *rattis*) and differed from the Ghazna gold issues.³⁶ The sultan also inaugurated a new ‘Indian gold *tankāh*’ of double the weight but following the same standard, having a Chawhān horseman on the reverse and his name and title in Arabic on the obverse. His billon coins show the bull-and-horseman type with the name and title written in Nāgarī. Sometimes the bull is replaced by the name in Arabic. They are based on a 32-*ratti* standard, different from the standard known in Ghazna and the sultan’s northern territories.

In Ghazna and other parts of Afghanistan, the local currency was continued, even after the death of Mu^cizz al-Dīn Muhammad, by his son and successor Mahmūd b. Ghiyāth al-Dīn Muhammad and even by the Ghurid slave commander Tāj al-Dīn Yildiz, with the latter’s new mint possibly at Karman or Kurraman (near Parachinar in the modern North-West Frontier Province), showing a standing bull in silver and copper coins. In Ghazna, Yildiz gave his own name on the margin and that of his late master’s name on the obverse as *al-sultān al-shāhīd* Muhammad b. Sām on the gold coins. Later, when the Khwarazmian sultans advanced south of the Hindu Kush, they copied the local gold and silver coin types from the mints of Farwan, Bamiyan and Ghazna. The silver and copper coins of ^cAlā’ al-Dīn Muhammad show the horseman type with the name and titles in Arabic, while another variety adds the title of *Sikandar al-thānī*, and on the reverse either a bull with Nāgarī legend or a horseman with the Nāgarī title *Śrī Hamīra*.³⁷ His son Jālāl al-Dīn Mingburni also copied the horseman type. Later, when the Mongol conqueror Chinggis Khan advanced to Ghazna and the Indus, he continued the local silver and copper currency with Arabic

³⁶ Wright, 1907, p. 7, Nos. 1–3.

³⁷ Thomas, 1848b, p. 383, Nos. 15 and 16.

obverse titles: *al-nāsir li-dīn allāh amīr al-mu'minīn* and on the reverse *al-ādil al-a'zam Chink(g)īz Khān* or *adl kāqān al-a'zam*.

In northern India, the reign of the Delhi Sultan Shams al-Dīn Iltutmish (1211–36) marks a period of political consolidation and, as Wright observed, it ‘stands out as a landmark in the coinage of Delhi’. After refuting the earlier views of Edward Thomas, Wright claimed to have correctly established the value of the silver *tanga* of Iltutmish, which was equal to 1 *tolā*, i.e. 12 *māshās*, each *māshā* having 8 *rattis*. Hence the *tolā* was equal to 96 *rattis*, a weight-standard that has continued up to our own time in the case of the Indian rupee. The second innovation was the introduction of the *jital* in the billon currency of the time, replacing the old *dehliwal*. Wright argued that 48 *jitals* made 1 *tanga*, i.e. 1 *jital* was equal to 2 *rattis*, and thus he succeeded in relating both *tanga* and *jital* to the prevalent *māshā* and *ratti* weight-standard of gold that had been in use in northern India until the decimal system was adopted in our own time.³⁸

One may,³⁹ however, differ from Wright in attributing Iltutmish’s horseman type of gold currency to Bengal, in which Iltutmish assumed the title of *al-sultān al-mu'azzam* and called himself al-Qutbī.⁴⁰ This type is hardly known in Bengal and even the reading of the mint name Ba-Gawr is not above doubt. It could also be Nagawr in northern Rajasthan, to which region the coin type really belongs. If this is acceptable, Iltutmish’s horseman type of silver coins needs not be attributed to Bengal either, because it bears Nāgarī letters, a script that was hardly in use in Bengal. His use of the names of three Abbasid caliphs, al-Nāsir, al-Zāhir and al-Mustansir, may be connected with his investiture by the caliph, as this was relevant to the political conditions of the time. However, it is difficult to make a distinction of grades of exaltedness in the use of the titles *al-mu'azzam* and *al-a'zam*. Iltutmish’s billon coins show many varieties in Nāgarī legends; one remarkable variety gives the name of the defeated Hindu ruler Śrī Chāhada Deva.

The coins of the four sons and one daughter of Iltutmish all continue his silver, billon and copper currencies on the same standard, although types are restricted. The first three sons, Rukn al-Dīn Firūz Shāh, Jalālat al-Dīn Radiyya and Mu'izz al-Dīn Bahrām Shāh, are not known to have issued gold coins. The first two keep their father’s name on the coins. The new mint of Lakhnawti appears on the coins of Radiyya. Alā' al-Dīn Mas'ūd and Nāsir al-Dīn Mahmūd restarted the gold currency. In the time of Mas'ūd, the name of the new caliph al-Musta'sim (1242–58) occupies the place of al-Mustansir (1226–42). Mahmūd’s gold coins have greater artistic merit and their counterpart in silver

³⁸ Wright, 1936, p. 72.

³⁹ See Dani, 1955.

⁴⁰ Wright, 1936, pp. 15–16.

is also known. A new mint of Badā'ūn appears in his time. The billon coins of these rulers continued the *jital* varieties of bull-and-horseman, but sometimes the bull is replaced by a name in Arabic, while the reverse has the Nāgarī name. Mahmūd also issued tiny silver *māshās* and half-pieces of billon currency.

Ghiyāth al-Dīn Balban (1266–87) continued the gold and silver issues and struck at mints other than the capital, viz. Alwar, Lakhnawti, Sultanpur and Fakhrabad. He was the last to use the horseman type in billon, but he inaugurated a new bilingual type in mixed metal. He also revived the 40-*ratti* piece of copper so popular in the time of Iltutmish. While his successor Kay Qubād continued the gold coinage, he also issued 2- and 4-*māshā* pieces of silver coins. The copper issues of the next sultan, Kayūmarth, continued the 40-*ratti* standard which was passed on to the Khaljis. Another change from the time of Balban was in the reference to the caliph in the legend. Earlier, it used to be *fī °ahd al-imām al-mustac sim*, but after the latter's murder by the Mongols in 1258, the legend came to be simply *al-imām al-mustac sim*.

Jalāl al-Dīn Firūz Khaljī (1290–96) continued the gold and silver *tanga* and also billon and copper of Balbanid times. His son Rukn al-Dīn Ibrāhīm used his own name on the obverse and that of his father on the reverse of silver coins. It is from the time of °Alā' al-Dīn Muhammad Khaljī (1296–1316) that there was an abundance of gold and silver *tangas* because of his conquest of the Deccan. He started the new mint of Deogir. Old Delhi was called Dār al-Islām. All reference to the caliph's name was given up, but he himself assumed the titles of *Sikandar al-thānī*, *yamīn al-khilāfa* and *nāsir amīr al-mu' minīn*. He was the first to issue square forms of coins. In copper, 40-*ratti fulūs* were the principal coins. The coinage of Qutb al-Dīn Mubārak Khaljī (1316–20) is remarkable for the variety of inscriptions. He usurped for himself the position of *khalīfat allāh* and designated himself as *al-imām al-°zam khalīfat rabb al-°alamīn*. On the reverse of his coins he called himself *Sikandar al-zamān*, *yamīn al-khilāfa* and *nāsir amīr al-mu' minīn*. From his time, the square form of coins in gold, silver and billon become more common. Among the mints, we find the addition of Qutbabad fort and the practice of recording Hazrat Dihli, or Hazrat Dār al-Khilāfa or Hazrat Dār al-Mulk. Qutbabad has been identified with Deogir. Nāsir al-Dīn Khusraw continued all the three currencies and adopted the title of *walī amīr al-mu' minīn*.

The coinage of the Tughluqids makes an interesting study. The gold and silver *tankās* continued the older tradition by Ghiyāth al-Dīn Tughluq (1320–25), but the obverse of his coins has for the first time the title of *al-sultān al-ghāzī*.⁴¹ After the conquest of Telingana, a commemorative medal gives the mint as Mulk-i Telingānā. The second commemorative medal was issued by him as suzerain of Bengal, in which the name of the sultan on the

⁴¹ Wright, 1936, pp. 58–63, 80–1.

obverse has the title of *al-sultān al-a^czam*, while the reverse gives to the local ruler of Bengal, Nāsir al-Dīn Ibrāhīm Shāh, the title of *al-sultān al-mu^cazzam*. Ghiyāth al-Dīn's billon coins have bilingual legends in Arabic and Nāgarī.

Muhammad b. Tughluq (1325–51) has been designated as the 'prince of moneyers' because of the variety of his coins and the great interest that he took in their minting. No less than fifty-one different types of his coins have been described. These are subdivided into four classes: (a) those struck in memory of his father and recording only the latter's name, i.e. commemorative issues; (b) those issued in his own name, i.e. normal issues; (c) the forced currency, i.e. copper or brass token issues; and (d) those recording only the names of the caliph, i.e. caliphal issues.

In class (a), the title of the late sultan is given as *al-sultān al-sayyid al-shahīd al-ghāzī*. In one coin, the mint is read as Mulk Ma^cbar. In class (b) coins, the obverse has the *kalima* and the reverse shows the title of the ruler as *al-mujāhid fī sabīl allāh*, and its margin has the names of the first four caliphs, i.e. Abū Bakr, ^cUmar, ^cUthmān and ^cAlī. The significant feature of this period was the assimilation of South India into the monetary system of the Tughluqids. For this purpose, special types of coins were issued, e.g. the coin of the Ma^cbar mint with an extraordinary weight of 245 grains, which is said to represent a 4-pagoda piece, well-known in the fourteenth century in the kingdom of the Hoysalas of South India. Muhammad b. Tughluq's novel issues include one 16-*rattis* (i.e. one-sixth) higher in weight in gold, called *dīnār*, and the other 16-*rattis* or one-sixth lower than the *tanga* in silver, called *adlī*. He also issued a dumpy type of coin having traces of South Indian influence at a time when the capital was transferred to Deogir (or Dawlatabad).

The silver coins of Muhammad b. Tughluq are scarce. He commenced his reign with a single billon type of 32-*ratti* weight and the title of *al-mujāhid fī sabīl allāh*. He is known to have issued 4-*jital* pieces (known as *chawghānī*) and also 8-*jital* pieces (*hashtgānī*). But from a numismatic point of view, the most important is the introduction of 80-*ratti* billon in 1326, a mixed-metal currency probably issued as a regular currency for the Deccan, and an issue to replace the original silver *tanga*. According to Wright, this was the first step in the degradation of the silver *tanga* of Ilutmish.

There are several other varieties of billon issues of Muhammad b. Tughluq, but his copper currency is scarce. This experiment in debasement probably led to the issue of copper or brass forced currency – class (c) – in 1329, with the name of the coin given as *tankāh-i-panjāhgānī*, *dirhām-duvazdihgānī*, *hashtgānī* and *dūgānī*, thus fixing the value by law (*shar^cī*). It appears that this novel experiment aimed at bringing into line the different monetary systems that then prevailed in northern India and the Deccan, but the attempt collapsed because of market forgery, so that the token currency failed. It was withdrawn,

and the value was paid by the government, proving that the experiment was not due to lack of gold reserves but for some other reason; the chief aim might have been to balance the monetary standard throughout the empire. The last class of Muhammad b. Tughluq's – coins class (d) – are the caliphal issues, in which he acknowledged the °Abbasid shadow caliphs in Mamluk Cairo, first al-Mustakfī and later al-Hākīm, after he received the patent and insignia, thus assuring his legal sovereignty.

Fīrūz Shāh Tughluq (1351–88) continued the name of the caliph on his gold coins right up to 1383, recording the name of Abu 'l-°Abbās Ahmad, then of Imām Abu 'l-Fat'h and finally Abū °Abd Allāh. We also have his gold and silver coins without the name of the caliph, in which he called himself *nā'ib amīr al-mu'minīn*. Fīrūz Shāh also associated his sons with himself and allowed them to issue coins, first Fat'h Khan, then Fīrūz Shah Zafar and finally Muhammad Shāh. Gold and silver *tangas* of the earlier time continued in this period, though silver was rare. The most popular coin was the 32-*ratti* billon. However, it seems that Fīrūz Shāh further debased the *tanga* and his new standard was maintained by his successors right up to the time of Sikandar Lōdī (1489–1517).⁴²

Fīrūz Shāh's subordinate rulers and successors included his three sons and five grandsons: Fat'h Khan (d. 1371) and the latter's son Ghiyāth al-Dīn Tughluq II; Fīrūz Shāh Zafar, who probably issued coins after the death of Fat'h Khan, and his son Abū Bakr, who succeeded his father in 1389; and finally Muhammad the third son. Muhammad had two sons: Sikandar, who ruled for a few days; and Mahmūd, who had a long reign (1394–1412), with the interruption of Timur's invasion, and a rival in Nusrat Shāh, a second son of Fat'h Khan. All of them issued gold and billon coins except Sikandar Shāh, whose gold coinage is not known, while Muhammad and Mahmūd also issued silver coins. Mahmūd's stormy period of rule, because of the conflict with his cousin Nusrat Shāh, led to a weakening of the empire. After Timur's invasion of 1398–9, in particular, there was a depletion of the state treasury and of precious metals, hence a hiatus in the issue of gold and silver currency. For ten years, the government was left in the hands of leading nobles, who refrained from issuing coins in their own name. Before the time of Timur, the normal gold to silver ratio was 1:10, i.e. 10 silver *tangas* exchanged for 1 gold *tanga*, and the copper to silver ratio was 80:1, but later the value of silver to copper fell.

When Mahmūd died in 1413, his successors continued to issue the old currency of Fīrūz and Mahmūd posthumously until, in 1429, Mubārak Shah Sayyid initiated a coinage of his own. There was no change in the gold, silver and copper currency of this period, but gold and silver became scarce right through the time of the succeeding Lōdī rulers. Eighty-*ratti* billon became common from the time of Bahlūl Lōdī, a revival of the currency from the

⁴² Wright, 1936, p. 219.

time of Muhammad b. Tughluq; it is this currency which came to be known as Bahlūī. In the time of Sikandar Lōdī, it was the billon that remained common, but by this time its silver metal content was reduced. Twenty of these were equivalent to a 180-grain silver coin of the time of the Sayyids. It is the Bahlūī and Sikandarī *tangas* that were available in large quantities in the time of the last Lōdī ruler, Ibrāhīm b. Sikandar (1517–26), and this monetary system was passed on to his successors.