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MONETARY SYSTEMS AND PRICES

E. A. Davidovich, E. V. Rtveladze and S. Moosvi

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Part One

NORTHERN PARTS OF CENTRAL ASIA: MONETARY POLICY AND CURRENCY CIRCULATION UNDER THE SHAYBANID AND THE JANID (ASTARKHANID) DYNASTIES

(*E. A. Davidovich*)

The sources available for a study of currency and currency circulation in Central Asia between the sixteenth century and the first quarter of the nineteenth century are relatively numerous. The most important sources of information are the coins themselves, individual pieces as well as coin hoards, but there are also hundreds of documents (*wasīqa*s, or deeds of purchase, and *waqf-nāma*s, or deeds of endowment) that shed light on the subject. The information contained in narrative written sources is also useful, although it tends to be too brief, generally indirect and often in need of interpretation.

The monetary reforms of Muhammad Shaybānī Khān, 1507–10

Once, after much strife, Shaybānī Khān (1500–10) had subjugated the central part of Transoxania in 1501, he attempted to normalize the situation and even tried to introduce a new currency. However, his new wars called for further spending. Having conquered Khwarazm and the Hisar principality, he entered Khurasan and captured Herat, their main capital, in 1507. In May of that year, Shaybānī Khān entered Herat. The very first Friday after his arrival, the *khutba* (sermon) was recited in the city's Friday mosque (*masjid-i jum*^{c}*a*) in his honour as sovereign. It was during this same ceremony that his monetary reforms were announced. Why was it considered so important to link the two acts, one political and the other economic? An answer to that question is to be found in the pre-reform situation in Khurasan and in the nature of the reforms themselves.

Shaybānī Khān's military successes in Transoxania and expectations of his inevitable sweep into Khurasan gave rise to inflation and may have sparked off a crisis. One indication is to be found in the exchange rate for the silver *tanga* in relation to the copper coins (*dīnār*s). The Timurid silver 1- *tanga* piece, which weighed 1 *misqāl* (4.8 g), was still worth 18 copper Herat *dīnār*s in 1504–5, but by 1506, the exchange rate had risen to 36 *dīnār*s.[1] The retail trade in food and consumer goods was conducted in *dīnār*s. Thus, even before Shaybānī Khān's conquest of Herat, retail prices had practically doubled and must have risen still further. This would imply that the announcement of monetary reforms at the same time as the announcement of a new ruler was intended to stabilize prices and to make the population favourably disposed towards the conqueror.

Khwānd Amīr, the contemporary historian, provides a fairly detailed description of the content of the reforms. Shaybānī Khān is said to have directed that half a *dāng* should be added to the former *tangacha*, that 'the coins having received the imprint of the most august die should each be considered to be worth 6 *kebeki dīnār*s, and that the former 1-*misqāl tangacha* should be accepted against 5 *dīnār*s.'[2]

Various questions arise, however, if this text is taken in isolation. Clearly, 'former *tangacha*' refers to the silver coinage of the Timurid rulers. But why does Khwānd Amīr use the term '*tangacha*', which means 'small *tanga*', rather than '*tanga*'? What does receiving 'the imprint of the most august die' mean? Does it imply the issuance of a new coinage bearing the name of Shaybānī Khān, or does it imply the overstamping of the Timurid coinage with the name of Shaybānī Khān?[3] What is meant by the phrase 'half a *dāng* should be added' (half a *dāng* is one-twelfth of any other denomination)? Does it imply increasing the entire coinage by half a *dāng* (which would imply the casting of new coins) or increasing the exchange rate (which would imply the overstamping of the old Timurid *tanga*)? And what is the kebeki *dīnār*, to which the *tangacha* exchange rate is pegged?

It has sometimes been incorrectly surmised that a *tangacha* was a 'small *tanga*' (quarter) and that a *kebeki dīnār* was a copper coin. The rest of Khwānd Amīr's text has been interpreted in two different ways. According to the first, the directive was for the minting of new silver coins bearing the name of Shaybānī Khān, the weight of which was to be greater than that of the Timurid coins by half a *dāng*.[4] According to the second, Shaybānī Khān intended the old Timurid coinage to be overstamped with his name, and the exchange

[1] Davidovich, 1983, pp. 48–9.
[2] Khwānd Amīr, p. 359.
[3] Overstamping means a small stamp with an inscription or design in a cartouche on coinage at various times after minting.
[4] Davidovich, 1954, pp. 85–108.

rate for these overstamped coins to be raised above the former rate by half a *dāng* (other amounts by which the exchange rate was to be increased have also been mooted).[5]

Other written sources, but above all the numismatic evidence, make it possible to understand what Khwānd Amīr meant, and also shed substantial new light on the nature of Shaybānī Khān's reforms.[6] The term *dīnār* has many meanings. Initially it was used to refer to gold coins, then to gilded silver coins, then to silver coins, and finally, in the fifteenth century, to both silver and copper coins. How did contemporaries in the fifteenth century establish the exact meaning of the term? The answer is by means of epithets. The epithet *kebeki* meant that the *dīnār* was silver. The value of a *kebeki dīnār* was established by reference to its weight (for example, the weight of 6 *kebeki dīnār*s was equivalent to 1 *misqāl* of silver) and its equivalence to a certain quantity of copper *dīnār*s. Many epithets were used to qualify the copper *dīnār*. These included names of cities (e.g. Herat *dīnār*) and the term *fulūs* (sing. *fals*) (*dīnāri fulūs*=copper *dīnār*). Khwānd Amīr describes a *kebeki dīnār* as having the weight of one-sixth part of a *misqāl*.[7] The terms *tanga* and *tangacha* are synonymous, as attested by documentary and other sources from the fifteenth and sixteenth centuries.

Once the meanings of the terms have been established, it is possible to understand Khwānd Amīr's text and the numismatic data enable us to appreciate the original nature of Shaybānī Khān's reforms and their significance:

First, 'the coins having received the imprint of the most august die' must refer to the stamping of silver coins bearing the name and titles of Shaybānī Khān, and not the overstamping of old Timurid coinage. This is made clear by the simple fact that not a single coin overstamped with the name of Shaybānī Khān has been found to date, while more than 1,000 pre-reform (types 1–3) and post-reform (type 4) issues bearing his name have been identified.[8]

Second, 'half a *dāng* should be added to the former *tangacha*' means that the standard weight of coins issued under Shaybānī Khān was increased by half a *dāng* (one-twelfth) as compared with those issued under the Timurids. That is borne out by the fact that the standard weight of the last of the Timurid *tangacha*s (and of the pre-reform *tangacha*s of Shaybānī Khān) is 1 *misqāl* (4.8 g). Accordingly, the coins that were to be issued under Shaybānī Khān should have weighed 1 *misqāl* (4.8 g) plus half a *dāng* of 1 *misqāl*(0.4 g), i.e. 5.2 g in total. The *tangacha*s issued under Shaybānī Khān were indeed issued in

[5] Masson, 1972, pp. 27–36.
[6] Davidovich, 2001, pp. 129–85.
[7] See Davidovich, 1983, pp. 32–57, for further information on these and other coinage-related terms.
[8] *Description, Classification& Catalogue of Coins Issued under Shaybānī Khān*, see Davidovich, 1992, pp. 77–80, 181–3, 268–95, 401.

TABLE 1. Weight of post-reform *tanga* of Shaybānī Khān (type 4)

Weight (g)	5.4	5.3	5.2	5.1	5.0	4.9	4.8
Quantity	1	12	65	62	10	6	1
Percentage		7.6	41.4	39.5	6.4	3.8	

accordance with that standard (see Table 1): out of 157 coins, around 90 per cent weigh 5.1–5.2 g (average: 5.15 g). Taking into account wear from circulation, this fits in exactly with the new standard weight: 1 *misqāl* plus half a *dāng* (5.2 g).

The reform was announced during May 1507. However, it did not come into effect immediately and simultaneously in all cities. The post-reform *tanga* appeared in Herat in 913/1507, while Samarkand and Bukhara continued to issue the 1-*misqāl tanga*. It was only in the following year (914/1508–9) that the post-reform *tanga* (type 4) began to be issued everywhere in accordance with the new weight standard (see Table 2). It is worth noting that the standard post-reform *tanga* minted in various cities circulated at the same exchange rate throughout the territories controlled by Shaybānī Khān, regardless of the place of issue.

Khwānd Amīr also states that the exchange rate for the old Timurid *tangacha* (4.8 g) was to be reduced to 5 *kebeki dīnār*s (i.e. the equivalent of 4 g of silver). This would appear to be feasible, given that the silver content was slightly undervalued (not by very much, when the wear and tear from circulation is taken into account) and this would have encouraged the elimination of the old *tangacha* from the market by economic forces. Khwānd Amīr states that the exchange rate for the new *tangacha* (5.2 g) bearing Shaybānī Khān's name was to be set at 6 *kebeki dīnār*s (4.8 g), which is quite impossible: why issue new high-weight coins and immediately doom them to hoarding? There is probably an error or omission here: the word '*nīm*' (half) has presumably been left out. The new *tanga*s were equivalent not to 6 *kebeki dīnār*s (4.8 g), but to 6.5 *kebeki dīnār*s (5.2 g). Omissions are not a rare occurrence in medieval manuscripts, still less in later transcripts.

One wonders, however, if it is possible for the exchange rate for one group of silver coinage (type-4 Shaybānī Khān *tanga*) to correspond to the weight of the metal, while the exchange rate for the other group (Timurid *tanga*) has been reduced by almost 16 per cent. The evidence shows that it was possible, and that it was not a unique occurrence. We shall see that the circulation of Shaybānī *tanga*s was organized in exactly the same manner following 1525.

The nature of the reforms and their later development are not described exhaustively by Khwānd Amīr. In fact, the reforms were continued and expanded. For example, part of the Timurid *tanga* issue was subsequently overstamped (one of the anonymous overstamps

TABLE 2. Year and place of mint of the post-reform silver *tanga* of Shaybānī Khān (type 4)

Year	Place of mint												
	Astarabad	Balkh	Bukhara	Herat	Mashhad	Merv	Nimruz	Nisa	Nishapur	Qain	Sabzevar	Samarkand	Sarakhs	Tun
913/1507				*										
914/1508–9	*		*	*	*	*	*	*	*		*		*	
915/1509		*	*		*	*			*			*		
916/1510			*									*		
n/a				*		*	*			*			*	

bearing the word '*shirmard*'). As a result, in the khanate as a whole, there were three groups of silver coins, each with its own exchange rate: the Shaybānī Khān *tanga* (equal to 6.5 *kebeki dīnār*s, and in Herat to 39 copper Herat *dīnār*s); the old, i.e. Timurid, *tanga*(5 *kebeki dīnār*s, or 30 Herat copper *dīnār*s); and the Timurid *tanga* bearing the anonymous overstamp (exchange rate lower than the first group but higher than the second).

The reforms of Shaybānī Khān also concerned gold coinage (*ashrafī*). Although the known specimens bear no date, the use of the post-reform title of Shaybānī Khān identifies the period during which they were issued.

Khwānd Amīr makes no reference to copper coinage either, despite the fact that it was also affected by the reforms. For example, in 914/1508–9 Samarkand and Bukhara began issuing new copper *dīnār*s of the same weight as the post-reform type-4 silver *tanga*. The coinage issued by Samarkand even bears an inscription giving the new weight: '1 *misqāl* and half a *dāng*'. Shaybānī Khān's reforms, which were begun in 1507 and subsequently expanded, created stable conditions for monetary transactions. No subsequent ruler managed to repeat this achievement until 1785 (see below).

The currency crisis and the reforms of Kuchkunchī Khān

The death of Shaybānī Khān in 1510 was followed by a ruinous war in Transoxania between the Safavids, the Timurid Bābur and the Shaybanids. The situation was aggravated by the severe winter and heavy snows of 1512, and the result was economic collapse, with prices for goods and food rising. Wāsifī, the renowned diarist and poet, who was living in Samarkand in 1512–13, wrote: 'This year price rises and hunger have reached such levels in Samarkand that the people have seen no [other bread] than the flatcakes of the moon and of the sun on the table of the sky.'[9] Wāsifī's ode entitled *Hunger* provides a particularly vivid description of the gravity of the situation.

The numismatic data reflect the troubles of the time. The silver and copper coinage issued under Shaybānī Khān disappeared from circulation, and conditions were not conducive to the regular minting of new silver coins. In 1511 and at the beginning of 1512, new copper coins with their standard weight reduced to 3.2 g (two-thirds of a *misqāl*, or 4 *dāng*s) began to be minted in abundance as a replacement for Shaybānī Khān's copper *dīnār* weighing 1 *misqāl* and half a *dāng* (5.2 g).

In 1512 the Shaybanids won their victory over Bābur, elected Kuchkunchī Khān (1510–30) as head of the dynasty and divided the khanate into principalities; but this,

[9] Boldyrev, 1957, p. 122.

instead of normalizing the economic situation, aggravated it still further. The standard weight for copper coins was further reduced to 2.8 g (3.5 *dāng*s) and the coins were minted in abundance. However, since the end of the fifteenth century, the weight of copper coins had been regarded as having the same significance as the weight of silver coins. The sudden halving of the standard weight for the copper *dīnār* thus pushed prices still higher. To add to the confusion, the new copper coins were not traded on a uniform basis throughout the state, as the rulers of the principalities pursued their own separate monetary policies. This meant that different exchange rates were applied to local and non-local copper coins having the same weight.

During this period of inflation, the market absorbed an enormous volume of copper coins. The year 919/1513–14, however, ushered in a period of stabilization and falling prices for at least some foodstuffs and consumer goods, as indirectly witnessed by the fact that in that year the volume of low-weight coins minted fell drastically, and in 920/1514–15 such coins began to be included in hoards.

The first stage of the reforms[10] began with the issuance of new high-weight copper coins, thereby eliminating one of the reasons for inflation and lack of public confidence in the monetary system. However, there was a lack of consistency, as Kuchkunchī Khān proved unable to ensure the circulation of the new copper coins throughout the khanate. The fairly regular minting of silver coinage bearing the name of Kuchkunchī Khān between the years 1515 and 1519 did not affect the whole of the khanate. This was due to the fact that a uniform standard weight for the *tanga* was not applied at that time (for example, in Samarkand and Bukhara).

The second stage in the reforms involved a series of more co-ordinated measures aimed at organizing currency circulation on a khanate-wide basis. The silver *tanga* issues of 932/1525–6 and 934/1527–8, for example, were minted on the basis of a unified standard weight (1 *misqāl*, or 4.8 g). The nonstandardized silver coinage of the previous period was pegged to a standard exchange rate thanks to khanate-wide overstamps in 934/1527–8 and in 935/1528–9. By 930/1523–4 the weight of the copper coinage had also been standardized at over 1 *misqāl*.[11]

However, the varied changes in the minting of both copper and silver coins did not restore confidence in the monetary system, even after the completion of Kuchkunchī Khān's reforms. Inflation affected not only the coins themselves, but also their names. This is best illustrated by the descriptions of money contained in the *waqf-nāma*s in cases where

[10] Davidovich, 1972, pp. 174–204.

[11] The *dīnār* weight standard adopted under Shaybānī Khān, i.e. 5.2 g (1 *misqāl* and 2 *nukhud*s), may have been readopted. However, to prove this it would be necessary to examine the weight of copper coins in the best possible condition.

various disbursements and expenditures are envisaged in the form of cash. The directives contained in the *waqf-nāma*s were intended to be 'eternal', and therefore it was important to specify amounts of money in such a way as to ensure that at any time in the future, following whatever changes as might occur, it would be possible to convert the allocated amounts into any other currency. The following two examples show that there was still a lack of confidence in monetary stability following the reforms instituted by Kuchkunchī Khān.

At that time (in the mid-1520s), very substantial assets had been transferred to the two *madrasa*s of Shaybānī Khān. All cash disbursements and expenditures were expressed not in silver *tanga*s (as was usually the case subsequently), but in copper *dīnār*s, the value of which was specified in two ways: in the first place, 1 *dīnār* was deemed to be equal to 6 of the smallest coins – the *fulūs* (the usual exchange rate between the *fulūs* and the full-value, ordinary *dīnār*s); and in the second place, 20 *dīnār*s were deemed to be equal in value not to 1 silver *tanga* (which at that time weighed 1 *misqāl*), but to 1 *misqāl* of pure silver.[12]

The other example is just as interesting, as it shows that rapid inflation affected not only the very smallest copper coins, but also their name, *dīnār*. Copper coins are described as follows, a decade after the completion of the reforms of Kuchkunchī Khān, in a document dated 942/1535: 'a *fals* of a number of *fulūs* [weighing] 1 *misqāl* and 2 *nukhud*s [barley-grains], currently in circulation in Bukhara'.[13] The word '*dīnār*' does not figure at all. Instead, the weight of the copper coins is established as their most important and reliable characteristic.

Monetary policy following the reforms of Kuchkunchī Khān

There are numerous sixteenth-century documents (*wasīqa*s and *waqf-nāma*s) in existence that make plain the basic principles of the Shaybanids' monetary policy. The documents provide detailed descriptions of silver coinage (the terms *tanga*, *tangacha* and *khānī* are all synonymous), giving their weight, quality and exchange rate.

Any consideration of the real and average weight of the *tanga* would lead to the conclusion that the standard weight for this particular coin was frequently subjected to slight downward revisions (see Table 3). The average weight of the *tanga* under the first three rulers (1531–40?), as stated in the table, is 4.7 g. Under the following three rulers (1540–60), it falls to 4.65 g, and under the last two (1560–98) to 4.55 g and 4.6 g.

[12] Mukminova, 1966, pp. 222–3 (text), p. 311 (translation).
[13] *Waqf-nāma*, Rabi'1, 942/Sept. 1535, to the Haziyan *madrasa* at Bukhara.

However, the impression this creates is misleading, as the standard weight actually remained unchanged, at 1 *misqāl* (4.8 g), as stated in the hundreds of documents prepared after the completion of Kuchkunchī Khān's reforms. The differences in average weight are due to the different lengths of time the coins had been in circulation (as witnessed by the condition of the hoards). One example will make this clear: the average weight of an ᶜAbdullāh Khān II (1583–98) *tanga* minted in 991/1583 is equal to 4.5 g. The composition of the hoard shows that the coins had been in circulation not only under ᶜAbdullāh Khān II (15–16 years), but also under the first of the Janid (Astarkhanid) sovereigns (the following dynasty), or in other words, for not less than 30 years. Over the 30-year period, the coins shed 0.3 g, or 0.05 g for each 5 years in circulation.[14]

Regarding standards of purity, all of the documents stress that they are referring to 'pure, good' *tanga*s. Accordingly, contemporaries considered that provided no other metals had been added to the silver, it was pure. When assessing the quality of the metal, it is necessary to bear in mind the fact that certain base metals generally remained in the silver due to inadequate preliminary purification procedures. Abū'l Fazl (1551–1602), in his work the *Ā'īn-i Akbarī*, notes that Iran and Turan in particular do not know how to purify silver: he indicates that base metals make up more than 3 per cent of the weight of coins issued in these countries.[15]

Analysis of the purity of sixteenth-century *tanga*s carried out by the Numismatics Department of the State Hermitage Museum in St Petersburg using assay methods (the touchstone and needles method) has shown the high level of purity reached by the vast majority of *tanga*s issued under all Iskandar Khān's predecessors, viz. 960 carats. The

TABLE 3. Average weight of the *tanga* following the reforms of Kuchkunchī Khān

Ruler	No. of coins	Weight (g)							
		4.9	4.8	4.7	4.6	4.5	4.4	4.3	Lower
Abū Saᶜīd (1531–4)	84		10	48	17	–	–	–	–
ᶜUbaydullāh (1534–9)	148		8	96	34	4	–	–	–
ᶜAbdullāh I (1539–40)?	44	1	1	33	7	2	–	–	–
ᶜAbdul' Latīf (1540–51)?	372	1	11	181	148	18	3	4	6
Nauruz Ahmad (1552–6)?	81		1	31	33	7	5	–	4
Pīr Muhammad I (1556–60)	107	1	1	41	47	14	1	1	1
Iskandar (1560–83)	335	1	2	17	128	95	30	21	41
ᶜAbdullāh II (1583–98)	292	–	1	56	123	44	27	15	15

[14] That, incidentally, is the average rate of weight losses calculated on the basis of a large volume of coinage.

[15] Abūl Fazl, 1867–77, Vol. 1, p. 14; Vol. 2, pp. 18, 22.

reign of Iskandar Khān (1560–83) brought a major change: high-carat *tanga*s (960) do exist, but the majority had a higher base-metal content, their purity falling to 916 carats, 875 carats, 800 carats, and some even lower.

The situation improved under ᶜAbdullāh Khān II. The *tanga* issued in the capital, Bukhara (and in Herat, which was conquered by ᶜAbdullāh Khān in 1584), reached the highest level of purity – 960 carats. The Samarkand *tanga*s were initially 916 carats, and then rose to 960 carats. Lower-carat *tanga*s were issued in Balkh (875 carats, 916 carats) and in Tashkent. Nevertheless, even the *tanga*s issued under Iskandar Khān are referred to in documentary sources as 'pure'.

All *tanga*s that went into circulation can be divided into two categories: the 'new' *tanga* and the 'old' *tanga*.[16] Most of the documentary sources refer to the 'new' *tanga*, the exchange rate for which was linked to the copper *dīnār*. The 'new' *tanga* was initially valued at 20 copper *dīnār*s, and later, at 30. 'Old' *tanga*s are referred to as '*dah-nuhī*' ('nine-tenths'). That suggests that the exchange rate for the 'old' *tanga* was 10 per cent less than that for the 'new' *tanga*. Thus, if a 'new' *tanga* was worth 20 or 30 copper *dīnār*s, then an 'old' *tanga* would have been worth 18 or 27 copper *dīnār*s, respectively. This supposition is borne out by two documents dating from the end of the sixteenth century. A *wasīqa* dated 29 Safar 998/7 January 1590, prepared with respect to a property in the vicinity of Samarkand, describes the money as follows: 'the khan's *tanga*, silver, good, pure, stamped [and weighing] 1 *misqāl*, old, [equal to 27 *dīnār*s]'.[17] At that time, 1 'new' *tanga* was equivalent to 30 copper *dīnār*s.

'New' and 'old' *tanga*s were differentiated by examining the shape of the cartouche. The following rules for designing and positioning inscriptions finally emerged during the sixteenth century: cartouches were stamped on the centre of both the obverse and reverse of the flan. Sometimes the cartouche was simple in form (a circle, a square, a polyhedron, etc.), but it could be much more ornamental. On the obverse, the name and titles of the sovereign, valedictions to the sovereign, the place of minting, and often the date were shown inside and around the cartouche. The cartouche on the reverse always contained a symbol of the faith and around the edge the names of the first four caliphs, accompanied by various formulae. There was no need to read the inscriptions in order to distinguish an 'old' *tanga* from a 'new' one: it sufficed to know and remember the shape of the cartouche on *tanga*s declared to be 'new'. All other *tanga*s, whatever the shape of the cartouche, were deemed 'old', and hence forfeited 10 per cent of their purchasing power.

[16] Davidovich, 1950, pp. 137–70.
[17] Ibid., p. 143.

Naturally, the general trend was to hoard 'old' *tanga*s and spend 'new' *tanga*s, since the latter could be declared 'old' at any time. It is no coincidence that the hundreds of *wasīqa*s in existence specify payment in 'new' *tanga*s. Indeed, it is possible that in private transactions the price varied depending on which type of *tanga* was used as the means of payment. In any case, the difference in the exchange rates was most definitely observed in transactions among private parties and the treasury. The scale of those transactions, incidentally, was quite large. In the sixteenth century, taxes were levied in money on the exercise of professions and trade, lease payments for stateowned land and urban constructions, rental payments on gardens, plantations and clover fields, and special taxes payable to government officials, etc.

Money-based trade between different regions and cities was impeded for limited periods of time by the independent policies pursued by the rulers of the major principalities, which prevented the circulation of silver coinage on a standardized basis throughout the khanate. Those policies involved the establishment of different exchange rates for the *tanga* issued within the principality and the *tanga* issued in other principalities. One of the clearest examples is offered by the policies of the rulers of Tashkent, who were the main rivals of Iskandar Khān and his son ᶜAbdullāh Khān II. The Tashkent rulers overstamped the *tanga* with the name of their city, Tashkent (and occasionally with the date in figures: 980/1572–3 and 981/1573–4). Clearly, *tanga*s bearing overstamps of this nature had a special status within their principality.

The pre-reform situation and the monetary reforms of ᶜAbdullāh Khān II in the late seventeenth century

The Shaybanid khanate was divided into larger and smaller principalities ruled over by members of the dynasty. The head of the dynasty was a ruler of one of the principalities, but not necessarily the strongest or the most authoritative. His name and titles were carried on the silver coins issued by all the cities (with rare exceptions), and the principal city of his principality was considered the capital of the khanate. Thus, during the first half of the sixteenth century, the capital was located at various times at Samarkand, Bukhara, Balkh and Tashkent. However, these major cities were not the only ones to issue *tanga*s: after the reforms of Kuchkunchī Khān, mints opened in many towns and no restrictions were placed on their activities.

From the middle of the sixteenth century, the ruinous inter-principality wars began to intensify. ᶜAbdullāh Khān II began a sustained campaign of 'gathering land' and gradually came to assert his sovereignty over all the major principalities: Bukhara (1557), Balkh

(1573), Samarkand (1578) and Tashkent (1582). In 1583 he declared himself head of the dynasty and made great efforts to remedy the consequences of the wars and improve the conditions for trade between and within cities. Monetary reform formed part of the measures taken.

The Shaybanid silver *tanga*s were of good quality, and for that reason always managed to find their way into the currencies of other countries, as shown by overstamps affixed abroad. There are *tanga*s issued in the reigns of Kuchkunchī Khān (1510–30), ᶜAbdu'l Latīf Khān (1540–51), Nauruz Ahmad Khān (1551–6) and Pīr Muhammad Khān I (1556–60) that bear overstamps from Kabul. Certain Kabul overstamps give dates in figures: 962/1554–5, 964/1556–7 and 965/1557–8. Silver coinage began to leave the khanate in much greater quantities under Iskandar Khān, when his son, ᶜAbdullāh Khān II, began fighting with the other Shaybanids. While the coinage issued under Iskandar Khān often bears overstamps from Kabul, more frequent is the overstamp of Akbar (1556–1605), the outstanding ruler of the Mughal dynasty of India. Most of the Akbar overstamps are dated between 980/1572–3 and 984/1576–7. This massive flight of the *tanga* is the first evidence of the fact that silver was undervalued at that time in the Shaybanid khanate and that a more favourable exchange rate was applied in India.

The best evidence of the undervaluation of silver under Iskandar Khān is provided by the reforms of his son, ᶜAbdullāh Khān II. The most important element of the reform was the 150 per cent increase in the official exchange rate for silver coinage. Whereas 1 'new' *tanga* had previously been equivalent to 20 copper *dīnār*s, it was now valued at 30 copper *dīnār*s. The second element of the reform involved the use of purer silver. All *tanga*s issued under ᶜAbdullāh Khān II that have been subjected to assay are found to be 960-carat silver.

The third aspect of the reform concerned the reduction of the number of mints licensed to issue the silver *tanga*. Bukhara was the most prolific producer of silver *tanga*s, with a new issue every year. *Tanga*s were also minted on a regular basis in Balkh. Minting was carried on sporadically in Samarkand and Tashkent. Following his conquest of Herat and Mashhad, those cities also issued *tanga*s bearing the name of ᶜAbdullāh Khān II, primarily for political reasons.

The fourth aspect of the reform concerned the minting of gold coins (*ashrafī*s) of various denominations. We are currently aware of *ashrafī*s weighing 1 *misqāl* (4.8 g – the main denomination), a half-*misqāl* and a quarter-*misqāl*. Certain half-*misqāl ashrafī*s also bear the date of issue: 995/1586–7 and 1005/1596–7,[18] while the 1-*misqāl* and quarter-*misqāl*

[18] Davidovich, 1992, p. 267, nos. 3–6, types 1–43; denominations of *ashrafī*s weighing 0.90 and 0.93 g (ibid., nos. 7–8, types 5–6) unclear.

coins indicate the place of minting (Mashhad, Herat, Badakhshan).[19] The fifth element of the reform involved the resumption in certain cities of intensive minting of copper coins of various denominations, as these were needed for everyday purchases of food and consumer goods.

Monetary policy and currency circulation under the Janids (Astarkhanids) in the seventeenth century

Under the Janids, there were no changes as regards policy on weight. The standard weight for the base denomination remained at 1 *misqāl* (4.8 g), as stated in all documents that describe the *tanga* in the seventeenth century. However, the policy on purity standards for the *tanga* underwent radical changes.[20]

The documentary (*wasīqa* and *waqf-nāma*) descriptions of *tanga*s can be divided into two groups. Nine *wasīqa*s from the reigns of the Janid khans Walī Muhammad (1605–11), Imām Qulī (1611–41), Nadr Muhammad (1641–5) and ᶜAbdu'l ᶜAzīz (1645–80) dating from 1606 to the last quarter of the seventeenth century refer to the *tanga* as equal to 30 copper *dīnār*s. In other words, the *tanga* exchange rate was equal to that of the 'new' *tanga* of the last of the Shaybanids. The words 'new' and 'pure' crop up only rarely in the descriptions, however. It is interesting that the mints had stopped issuing copper *dīnār*s by that stage (they had turned into units of account). As units of account these were not subject to the exchange-rate fluctuations of real copper coins, and so were a more stable peg against which to fix the exchange rate for silver coins.

The *waqf-nāma*s and *wasīqa*s of the seventeenth century also describe other 1-*misqāl tanga*s, which in most cases are referred to as 'old'. However, their copper–*dīnār* exchange rate is not mentioned. All of these descriptions contain fraction-of-ten definitions:'nine-tenths', 'eight-tenths', etc. (Table 4), which primarily refer to the purity of the metal. According to various sources from different periods, the purity of the metal was indeed described in this way. Pure silver was referred to as '*dah-dahī*' ('ten-tenths'). There is also material evidence that the fraction-of-ten determinations contained in the documents referred to above with regard to the silver *tanga* (Table 4) concerned the purity of the metal. Here we will examine just three of those pieces of evidence.

In documents dated 1052/1642 and 1067/1657, the fraction-of-ten definitions ('six-tenths') are followed by the phrase 'decreased by 10 *nukhud*s'. As stated above, 1

[19] Album, 1998, p. 141, nos. 2992, 2994.

[20] For further information on Janid coins and issues related to monetary policy and currency circulation, see Davidovich, 1964.

TABLE 4. Seventeenth-century definitions of the 'old' *tanga* in fractions of ten

No.	Date of document	Epithet 'old'	Definition in terms of 'tenths' and %	Dynasty head
1	1017/1608	'old'	$^{9}/_{10}$=90%	Walī Muhammad (1605–11)
2	1018/1609	'old'	$^{9}/_{10}$=90%	Walī Muhammad
3	1024/1615	'old'	$^{8}/_{10}$=80%	Imām Qulī (1611–41)
4	1027/1618	'old'	$^{7}/_{10}$=70%	Imām Qulī
5	1032/1622–3	–	$^{8}/_{10}$=80%	Imām Qulī
6	1032/1623	'old'	$^{6.5}/_{10}$= 65%	Imām Qulī
7	1052/1642	'old'	$^{6}/_{10}$=60%	Nadr Muhammad (1641–5)
8	1066/1656	–	$^{3.5}/_{10}$=35%	ᶜAbdu'l ᶜAzīz (1645–80)
9	1067/1657	'old'	$^{6}/_{10}$=60%	ᶜAbdu'l ᶜAzīz
10	1088/1677	'old'	$^{7}/_{10}$=70%	ᶜAbdu'l ᶜAzīz
11	1091/1680	'old'	$^{2.5}/_{10}$=25%	Subhān Qulī (1680–1702)
12	1099/1687–8	'old'	$^{2.5}/_{10}$=25%	Subhān Qulī
13	1100/1689	–	$^{2.25}/_{10}$=22.5%	Subhān Qulī
14	1103/1692	–	$^{2.25}/_{10}$=22.5%	Subhān Qulī
15	1106/1695	–	$^{2.25}/_{10}$=22.5%	Subhān Qulī
16	1111/1699	–	$^{3}/_{10}$=30%	Subhān Qulī

nukhud (barley-grain) in Central Asia was equal to 0.2 g. Thus, 10 *nukhud*s were equal to 2 g. However, this does not refer to a reduction in the weight of the *tanga*, since in the same documents it is stated that the *tanga* weighed 1 *misqāl* (4.8 g). The natural conclusion therefore is that the documents are referring to a 2 g reduction in the silver content of coins that have a total weight of 4.8 g. It follows therefore that the *tanga* contained around 58 per cent silver and around 42 per cent base metal. Clearly, in the two documents, the purity of the silver is determined twice, since 58 per cent silver and 'six-tenths' *tanga* are one and the same thing (with an inevitable small difference arising due to the two different systems of determining the quality of the metal).

The second piece of evidence is provided by chemical analysis of the coins. Analysis of large quantities of hoarded *tanga*s issued under Imām Qulī and Nadr Muhammad has revealed a silver content close to 65 per cent in certain coins and 60 per cent in others (with a copper content varying around the 40 per cent mark accordingly). These, therefore, are 'six-and-a-half-tenths' and 'six-tenths' *tanga*s.

The narrative sources provide direct and indirect evidence of the existence of *tanga*s of various levels of purity. One such source is Mahmūd b. Walī, whose work entitled *Bahr al-asrār* [The Ocean of Secrets] was written in Balkh between 1634 and 1641.[21] Mahmūd

[21] Akhmedov, 1977, p. 7.

writes: ‘The minted silver of Balkh and *mā warā’ al-nahr* [Transoxania] is called the *tanga*, and it is close to a *misqāl*. But the purity is almost one quarter less than perfect.’[22]

Thus throughout the seventeenth century and under the Janids, the silver *tanga* contained base metal (copper) on a perfectly legal basis. The process whereby base metal came to be added to minted silver may be divided into three stages, as witnessed by the composition of hoards. In the first stage, the *tanga*s were still minted from very pure silver. In the documentary sources, these *tanga*s are referred to as ‘old’ or ‘pure’ or ‘free of base metal’. These were the high-purity Shaybanid *tanga*s. Then we begin to see mixed hoards of Shaybanid and early Janid coins. The *tanga*s that were minted during this second stage were less pure, but nevertheless their silver content was not less than 60 per cent. Hoards have been found that are made up of coins minted during that phase with 60–65 per cent silver content. During the third stage, *tanga*s were minted with 35–22.5 per cent silver content.

Gold and silver in the eighteenth century. The reforms of 1785

While the silver content of the *tanga* tended to fall by 5–10 per cent at a time in the seventeenth century, this was not a linear process: a comparative analysis of the data shows that the population desired ‘good-quality coinage’, and that for that reason the silver content sometimes went up before falling again. However, an unprecedented event occurred in 1708. ᶜUbaydullāh Khān (1702–11) was the last of the Janids to attempt to take on the powerful emirs of the Uzbek tribes and the tribal nobility in order to centralize authority and increase tax revenues. He took the preliminary step of increasing the silver content of the *tanga* to 35 per cent. When the treasury had collected a large quantity of these ‘good’ *tanga*s, they were secretly melted down, and from each were cast four. Thus, each of the new *tanga*s had a silver content of around 9 per cent.

It was then announced that despite the difference in quality, the two categories of *tanga* would circulate at the same exchange rate. That gave rise to stormy reactions. First, artisans and traders closed their shops. Then a crowd of poorer people approached the Ark (the fortress and residence of the khan), began throwing stones and demanded that the order be rescinded. According to a court historian, they were dispersed, several people were hanged and the order was reinforced. The court historian could not have written otherwise. In actual fact, ᶜUbaydullāh Khān compromised by declaring that good coinage (35 per cent silver content) should be treated as equal to not one, but two of the new coins.

[22] *Bahr al-asrār*, MS no. 2372, fol. 276.

The new coins, which were similar in appearance to copper coins, subsequently gained the appellation ‘singles’, while the old coins (35 per cent silver content) were nicknamed ‘doubles’. Descriptions of exchange rates contained in the *wasīqa*s often define ‘singles’ in terms of ‘doubles’, and vice versa. For example, a payment made in ‘singles’ was described in a *wasīqa* dated 1132/1720 as follows: ‘An amount of 6,000 *tanga*s in singles of the established type, generally accepted, which are equal in amount to 3,000 *tanga*s in doubles of three-and-a-half-tenths, such as are in circulation at present.’ A payment made in ‘doubles’ was described in a *wasīqa* dated 1131/1719 as follows: ‘An amount of 12,000 *tanga*s of three-and-a-half-tenths, doubles, which are equivalent to an amount of 24,000 *tanga*s in singles, worthy of trust.’

No further major changes took place with regard to the composition or circulation of silver coinage in the subsequent decades of the eighteenth century. Some *tanga*s minted in the previous century continued to circulate. New *tanga*s, minted after the reign of ᶜUbaydullāh Khān, were of relatively high purity and indeed approached the ‘double’ *tanga* of ᶜUbaydullāh Khān in terms of quality. For example, the *tanga*s minted under Muhammad Rahīm Khān (1753–8) had around 30 per cent silver content and 70 per cent copper content.

Two major changes took place in terms of currency management in the eighteenth century. The first involved the regular minting of gold coins (*ashrafī*s), and the second was the reform of 1785, which completely altered the minting and circulation of silver coins.

Gold coins began to be minted at the end of the seventeenth century, but this did not become a regular occurrence until the eighteenth century. In terms of appearance, there were great differences between the silver and gold coinage. The inscriptions on the gold coins (unlike those of silver) were not divided into two parts, one inside and the other outside the cartouche. On the obverse side, the name and titles of the sovereign were all stamped in a field encircled by a plain thin rim or sometimes by a more decorative frame. The date in figures was often stamped alongside the name and titles of the sovereign. On the reverse side was a symbol of the faith and frequently the date in figures, encircled by a thin rim or frame. Changes were made later, during the reforms of 1785.

Throughout the eighteenth century, the standard weight for gold coins remainedunchanged at 1 *misqāl* (4.8 g). The quality of the gold in the *ashrafī* was good. An examination of nine coins carried out by the State Hermitage Museum (using a touchstone and needles) revealed that all of the coins had the same level of purity – 958, the highest possible.

The minting of gold coins in the eighteenth century was not just a political move aimed at enhancing dynastic prestige (as had been the case earlier). The *ashrafī*s became a real

means of settlement in major transactions. For that reason, they are referred to in *wasīqa*s. For example, a deed of purchase dated 1121/1709 describes the money paid as follows: '*Ashrafī*s of the best red gold, 1-*misqāl*, new'. An examination of the real and average weight of gold coins shows that they began to be used in major transactions at a gradually increasing rate. The average weight of *ashrafī*s minted under Abū'l Fayz Khān (1711–47) was equal to 4.7 g, while the average weight of *ashrafī*s minted in the second half of the eighteenth century was 4.6 g, although the opposite would be expected, given that the *ashrafī*s issued in the first half of the century were in circulation for longer periods. That would imply that the speed of circulation of gold coins increased sharply in the second half of the century, bringing down their average weight to 2 g below the standard weight.

The monetary reforms of 1785 made by the Manghīt rulers in the name of Abū'l Ghāzī Khān (1758–85), the nominal khan of Bukhara, altered the silver coinage in all respects. The characteristics of the post-reform *tanga* may be categorized as follows:

1. *Size and appearance*: the coins are smaller than their predecessors, with a diameter of 18–19 mm. Their shape is exactly, or almost exactly, circular; the inscriptions on both faces are neatly distributed, taking up all or nearly all of the space on each side of the coin.

2. *Content and relative positions of the inscriptions*: the post-reform coins do not bear a symbol of the faith or the names of the first four caliphs. The title of the ruler and valedictions are also omitted. Thus the inscriptions are completely different in terms of content to those found on coins from the previous century. The post-reform *tanga*s bear only the name of the ruler with a short title (obverse), the name of the mint (reverse) and the date in figures on either side of the coin.

3. *Minting technique*: without going into the technical details,[23] we can state that the minting technique used for the post-reform *tanga*s represented an improvement on that previously used.

4. *Standard weight*: while for nearly three centuries (following the reforms of the Shaybanid Kuchkunchī Khān), the standard weight for the *tanga* had been equal to 1 *misqāl* (4.8 g), the standard was now brought down to seven-tenths of a *misqāl*. The *wasīqa*s sometimes refer to 'the weight of seven'. This was the weight of a *dirham* – 3.36 g. The weight standard was retained by the new Manghīt dynasty (see below).

5. *Purity standard*: a visual analysis is sufficient to show that the postreform *tanga*s have a higher silver content than their predecessors. This is confirmed by assay analysis

[23] Davidovich, 1964, pp. 224–31.

(using touchstone and needles) of the coins of the collections of the State Hermitage Museum, which are 960 carat.

6. *Minting procedures*: the high precious-metal content of the coins, as well as information drawn from documentary sources, suggests that a completely new approach was adopted to minting – that of free minting. The high precious-metal content of the post-reform *tanga* and the free minting arrangements are the clearest evidence of the significance of the reforms of 1785.

7. *The mīrī*: the pre-reform *tanga*s of the seventeenth century, which had a silver content of 30–35 per cent, were not withdrawn from circulation. Instead they were declared to be equal to 4 new *tanga*s and were renamed *mīrī*s.[24]

The coexistence of high precious-metal content gold and silver coins which were both used as legal tender leads to the conclusion that the monetary system was based on two metals. The ratio of gold to silver was in the region of 1:16.

Part Two

EASTERN AND NORTHERN CENTRAL ASIA (*c.* 1750 TO *c.* 1850)

(*E. V. Rtveladze*)

East Turkistan (Xinjiang)

The establishment of the Qing dominion over East Turkistan in the mid-eighteenth century led to the minting of copper coins on the Chinese model, with a square hole in the middle, which were known in Uighur as *yarmak*s. They were threaded on cords into bunches, and the monetary unit was not one coin but a bunch of 500 or 1,000 *jian*s in weight. There were also silver *lian*s of varying weights in circulation, the most common being 'the treasury *lian*', weighing 37 g.

[24] The term '*mīrī*' was used from the reign of Timur to denote small silver coins, which were exchangeable at a rate of 4 to 1 for *tanga*s issued under Timur. The term was retained through to the nineteenth century to refer to any coin that was equal in value to a quarter of another.

Copper coins began to be minted on a regular basis in the city of Yarkand (Yārqand) in 1760 in order to support trade in East Turkistan, and later in the reign of the Qing emperor Qianlong (1735–96), mints were opened in Aksu, Ili, Osh (Uch Turfan), Khotan and Kashghar. The coins were minted out of cuprite (red copper). They were small and thick with a square hole in the middle; on the obverse, the caption 'Qianlong Dong Bao' was set down in Chinese characters; the legend on the reverse was in the Uighur language, with the sign of the mint. One coin weighed 2 *jian*s (that is, 3.73 g) and was the equivalent at the rate for silver of 1 *fen* (weight 0.37 g). All old coins were withdrawn from circulation and smelted into new, Chinese-style coins. In all, up to 500,000 coins were struck.[25]

In the 1820s and 1830s, money circulation in the region fell into disorder due to the shortage of small copper coinage; the subsequent rising prices also brought about a rise in the silver rate. There was a large amount of silver in circulation but little copper due to the arrival in Xinjiang of Chinese troops who were paid in silver.

In order to restore order to money circulation in the area at the end of the 1830s, Na Yanchen carried out a monetary reform: copper coins were minted above the standard, and a new and heavier coin was introduced with an increased face value. While before the reform the weight of one coin had been 3.73 g, afterwards it became the equivalent of 1 *jian*, 2 *fen*s (around 4.47 g). The denomination also changed, as the 'fivefold coin' (*dang u*) weighing 1 *jian*, 5 *fen*s (around 5.5 g) was renamed *dang shi* ('tenfold').

In the mid-nineteenth century there was an abrupt fall in demand for copper coins; at the same time there was a growing demand for silver, needed to pay for the import of opium into China, forced upon it by Britain.

Money in the Kokand khanate

Gold, silver and copper were all used in the monetary system of the Kokand (Khoqand) khanate. Gold coins were called *tillā*s; the silver coins, of various denominations, were termed *tanga*s, *dirham*s and *mīrī*s; and the copper were designated *fulūs* or *pūl*s. The legends in Arabic script on the coins give the name of the ruling khan, his titles, the mint sign (Kokand was the only mint), often also with a title, and the date according to the Islamic calendar. Not all the rulers of the Kokand khanate struck gold coins. They were first issued under Muhammad ᶜUmar (1810–22), when he carried out a monetary reform near the end of his reign. The weight of the *tillā* was 4.47–4.6 g, with a diameter of up to 2 cm. One *tillā* was the equivalent of 21 *tanga*s.

[25] Tukhtiev, 1989.

Under the first Kokand khans, Nārbūta (*c*. 1774–98) and Muhammad ᶜĀlim (1798–1810), silver-plated copper *dirham*s came into circulation. Only under Muhammad ᶜUmar was the minting undertaken of high-quality silver *tanga*s, weighing 4.0–4.6 g. Subsequently, they weighed between 2.9 and 3.2 g and the diameter was 1.6–2.0 cm. One *tanga* was the equivalent of 4 *dirham*s or 45–60 *pūl*s. In the mid-nineteenth century 1 *tillā* was the equivalent of 3 roubles, 60 kopeks in Russian silver and 1 *tanga* was worth 20 silver kopeks.[26]

Copper *fulūs* were issued in great quantities by all the Kokand khans. They weighed between 2.6 and 4.9 g and their diameter was 13–22 cm; the fluctuations in weight and diameter probably reflect the different values of copper coins.

The last issues of coins in the Kokand khanate belong to the reign of Nasru'ddīn Khān (1875–6), when gold, silver and copper coins were still being struck. The Russian conquest in 1876 naturally terminated the Kokand currency.

Money in the Bukhara emirate

In the Bukhara emirate gold, silver and copper coins were minted on a regular basis under all the members of the Manghīt dynasty (1753–1920). The gold (*tillā* or *ashrafī*) and silver (*tanga*) coins of the Manghīts' own mints were issued as early as the reign of Muhammad Rahīm Khān (1750–8). The silver *tanga*s of Muhammad Rahīm Khān were of low quality, consisting of 30 per cent silver and about 70 per cent copper.[27] Their weight varied from 2.4 to 3.9 g, although initially it had been fixed at 1 *misqāl*, or 4.8 g.[28] According to Philip Efremov, a Russian slave who wrote an account of his time in captivity from 1774 to 1782, the Bukhara *tanga* was about half copper, and 1 gold coin was worth 30 *tanga*s.[29] Furthermore, until the reform during the reign of the last puppet khan, Abū'l Ghāzī (1758–85) in 1785, silver *tanga*s of the last Janids were still in circulation.

Abū'l Ghāzī Khān's monetary reform, described by Davidovich, introduced major changes into the monetary system of the Bukhara khanate. Essentially, the weight and dimensions of the silver coins were reduced (18–19 mm; 3.1 g) and the profession of faith, name of the caliph and honorifics were removed from the inscription. Only the name of the khan remained with a brief title, Bahādur Khān, the designation of the mint and the date in figures, and a high standard was established for the minting of silver coins.[30] There was also a transition to the free minting of coins – any private individual could take silver to the

[26] Ishankhanov, 1976, pp. 4–5.
[27] Davidovich, 1979, p. 407.
[28] *Stranstvovaniye Filippa Efremova*, 1811.
[29] Davidovich, 1964, p. 164.
[30] Davidovich, 1964, pp. 164–5.

state mint and receive silver coins in exchange. Semyenov cites reports of such free mints, stating that gold and silver in the form of minted coins were worth considerably more than in their raw state. For example, in Bukhara prior to the Soviet Revolution, the silver used in a *tanga* was worth 11 kopeks, while the *tanga* was worth 20 kopeks before 1901, and 15 kopeks after 1901. Such prices allowed the government to make 181.8 per cent profit on each coin minted. The behaviour of the Uzbek emirs and *beg*s, in handing over their silver to the mint and receiving coins in exchange, meant that they enriched themselves considerably.[31] Furthermore, the illegal manufacture of coins was a capital crime: coins could be struck only at the government's mint, situated near the Ark of Bukhara.

According to Davidovich, there were often shortages of current coins in Bukhara in the first half of the nineteenth century, and commerce frequently took place through barter and credit, guaranteed not by any kind of financial documentation but by witnesses. According to the eyewitness accounts of Russian travellers, several kinds of coins were in circulation in the Bukhara emirate at the time: a gold *tillā* weighing 1 2/35 *zolotnik*s (a Russian unit of weight equivalent to 4.266 g); a gold *tillā* weighing 1 1/20 *zolotnik*s; a gold *tillā* weighing 6/7 *zolotnik*; a silver *tanga* weighing 5/4 *zolotnik*; a copper *pūl*, weighing 1 5/4 *zolotnik*s; a copper *pūl* weighing 1 1/35 *zolotnik*s; and a copper (white copper) *pūl* weighing 1 *zolotnik*. The records of Russian travellers and diplomats also contain information on the exchange rates between monetary units in the Bukhara emirate.

According to Captain Meyendorff, who visited Bukhara as a member of the Negri diplomatic mission in 1820–1, 1 gold *tillā* was worth 16 Russian roubles in assignats or 16 French francs. One silver *tanga* was the equivalent of 76 copper kopeks or 76 centimes, and a copper *pūl* was worth 1.38 kopeks or 1.38 centimes. In relation to the local Bukharan coins, 1 *tillā* was worth 21 *tanga*s, and a *tanga* was worth 55 *pūl*s. According to Budrin, who was in Bukhara in 1820, there were 22 *tanga*s to the *tillā*, and a *tanga* was worth 50 copper *pūl*s.[32] The silver to gold ratio was 1:14.7.

According to Meyendorff, 1 *tillā* weighed 1 *misqāl*, that is 4.8 g; the *tillā*s were heavier and bigger than ducats; *tanga*s were the same size as 50-centime coins, but slightly thicker; *pūl*s were the same size – they only began to be struck in brass from 1816, when they replaced the copper *pūl*, now known as the *karapūl* (black *pūl*) and worth one twenty-fourth of a *tanga*.[33]

[31] Abdurakhman-i Tali, 1959.
[32] *Istoriya Uzbekistana*, 1993, Vol. 3.
[33] Meyendorff, 1975, p. 112.

Money in the Khiva khanate

The minting of coins in the Khiva khanate began in the early seventeenth century, when, under Abū'l Ghāzī Khān (1643–63), debased silver coins were issued. Until the end of the century only copper coins were minted. In the first half of the eighteenth century, the khanate experienced a serious political and economic crisis, which had repercussions on the quality of coinage.

It was only as a result of the monetary reform carried out by Muhammad Rahīm Khān (1806–25), one of Khiva's strongest nineteenth-century rulers, that the regular issue of gold, silver and copper coinage was organized. The government mint moved into a summer mosque. (In 1873 the Russian traveller and civil servant Kun, acting on the orders of the governor-general of West Turkistan, removed 4 *pood*s [1 *pood*=16 kg] of stamps from there to St Petersburg, which are to this day conserved in the Hermitage.)

Important information on monetary circulation in Khiva is contained in the notes of Nikolai Muravyev, who visited Khiva in 1819–20.[34] According to him, there were gold (*tillā*), silver (*tanga*) and copper (*karapūl*) coins in circulation. The *tillā* was divided into 14 *abaz*s, which were not real monetary units but units of account to designate 2 *tanga*s. One *tillā* was the equivalent of 4 Russian silver roubles. The *tanga* was the same size as the Russian *grivennik* (10-kopek piece) and manufactured from high-quality silver. In value it was equivalent to 15 Russian silver kopeks. The name of the ruling khan was usually placed on the obverse of the *tillā* and the *tanga*, and on the reverse were given the name of the mint, the year and an Islamic religious phrase. The *karapūl* was minted from copper. The minting was very poor. Forty *karapūl*s were the equivalent of 1 *tanga*, and 1 *karapūl* was the equivalent of 1.5 Russian copper kopeks. It was the same size as the Russian *polushka* (quarter-kopek piece), but two or four times thicker.

In addition to locally minted coins, various foreign coins also circulated in the Khiva khanate. They included the Bukharan gold *tillā*, the Persian gold *riyāl*, the Dutch gold *chervonet* and Russian and Indian coins.

Prices

The history of prices in the states of Central Asia has not as yet been studied adequately. However, different kinds of testimony regarding the prices for various goods, materials and services are contained in the reports of a few Russian and European travellers and

[34] Ibid., p. 113.

diplomats, in particular the French-born Russian diplomat, Desmaisons, who was in Bukhara for four months in the winter and spring of 1834.[35]

Prices for the same goods varied throughout the different states. For instance, raw silk in Bukhara in the early 1830s cost 13–14 *tillā*s the *pood* (16 kg), while in Khujand it sold for 15 *tillā*s the *pood* and in Kokand 16 *tillā*s the *pood*.[36]

Depending on a range of circumstances (such as the shortage of ready money, supply of goods, etc.), there were significant changes in prices throughout our period. The history of indigo prices is particularly interesting. In Bukhara, indigo had always cost 12 *tillā*s the *pood* (1 *tillā* was equal to 15 roubles), but because it was delivered in large quantities and because of a money shortage, its price began falling from 11 to 10, 8, 6 and then 4 *tillā*s the *pood*, until in 1833 it was being sold for 2 *tillā*s, 4–5 *tanga*s. Bukharan merchants and dignitaries bought it in bulk, hoping for an advantageous deal, but with the arrival of a new caravan the price of indigo fell still further; they were obliged to sell at lower prices and were ruined.

We provide below (Tables 5 and 6) prices for the basic kinds of goods to be found in Bukhara (there is hardly any information for other states) in the 1820s and 1830s.

Horses and slaves fetched very high prices. Horses were sold for between 30 and 80 *tillā*s, and even as much as 100 *tillā*s, while an able male slave cost 50 *tillā*s and a female slave up to 80 or even more.

It is interesting to compare the prices cited below with the wages of members of the lower social classes. According to Meyendorff, a cobbler working a full day was paid 45 *pūl*s, when the bread needed by him and his family alone cost half that amount[37] and he

TABLE 5. Price of foodstuffs in Bukhara (1820s and 1830s)

Foodstuff	Price
Rice	42–44 *tanga*s per *batman* (1 *batman*=8 *pood*s=128 kg)
Wheat	12–14 *tanga*s per *batman*
Sesame	32–34 *tanga*s per *batman*
Lentils (*māsh*)	18–19 *tanga*s per *batman*
Barley	10 *tanga*s per *batman*
Joughara (*Sorghum cernuum*)	11 *tanga*s per *batman*
Peas	20 *tanga*s per *batman*
Oats	10.5 *tanga*s per *batman*
Murch (pepper)	20–21 *tillā*s per *batman*
Sugar (from India)	17–20 *tillā*s per *batman*

[35] *Istoriya Uzbekistana v istochnikakh*, 1988, pp. 180–1.
[36] *Zapiski o Bukharskom khanstve*, 1983.
[37] Ibid., p. 74.

TABLE 6. Price of materials in Bukhara (1820s and 1830s)

Materials	Price
Raw silk	13–14 *tillā*s per *pood*
Thread	30–32 *tillā*s per *pood*
Cotton seed	4–10 *pūl*s per *charyk* (2.268 kg)
Cotton boll	48–52 *tillā*s per *batman*
Cleaned cotton	6–8 *tillā*s per *batman*
Cotton thread	15–25 *tillā*s per *batman*
Cotton cloth	4–20 *tanga*s for 20 *arshins* (1 *arshin*=71 cm)
Astrakhan fur (small curls)	5–6 *tillā*s per *dast* (1 *dast*=1 hand=linear measure)
Astrakhan fur (large curls)	10–12 *tillā*s per *dast*
Astrakhan fur (poor quality)	1.5 *tillā*s per *dast*

had to provide for other foodstuffs, clothes and lodgings. The last was not cheap: just one room in the caravanserai in Bukhara cost 2–4 *tanga*s a month (1 *tanga* was worth 55 *pūl*s). These figures demonstrate the extremely poor conditions of life of the lower social classes in Central Asia at the time.

Part Three

THE MONETARY SYSTEM IN SAFAVID PERSIA

(*S. Moosvi*)

The Safavid rulers of Persia inherited a coinage from the preceding Turkmen dynasties that lacked a uniform standard, and was considerably debased during the fifteenth century. Under the first two Safavids, Shāh Ismāᶜīl I (1501–24) and Shāh Tahmāsp I (1524–76), the only silver coin actually minted was the *tanga*. In practice, the *tuman* and the *dīnār* were just moneys of account. During this period the Iraqi and Tabriz *dīnār*s were reckoned to be of equal value. Under Ismāᶜīl I, silver *tanga*s of three different weights and so of different values were issued: a *tanga* of 1 *misqāl* (4.7 g) valued at 50 *dīnār*s; a double *tanga* weighing 2 *misqāl*s (9.4 g) equal to 100 *dīnār*s; and a quadruple *tanga* of 4 *misqāl*s (18.7 g) reckoned at 200 *dīnār*s. The weight of the *tanga*s was later reduced by Ismāᶜīl.[38] Shāh Tahmāsp

[38] Fragner, 1986, pp. 561–2.

gave the name *shāhī* to the *tanga-i shāhī*, held to be worth 100 *dīnār*s. From 1540 it had a weight of 1 *misqāl* or 6.4 g.[39] During the reign of Muhammad Khudābanda (1578–87), the coin reckoned at 100 *dīnār*s came to be called *khudābanda*; in the seventeenth century it was designated *muhammadī* and weighed 1 *misqāl* or 4.7 g. During Shāh ᶜAbbās I's reign (1587–1629) the ᶜabbāsī was introduced, reckoned at 200 *dīnār*s. Its weight was 2 *misqāl*s, reduced in 1593 to 7.8 g. The *shāhī*s (each worth 50 *dīnār*s) and the *muhammadī*s (each worth 100 *dīnār*s) also continued to be minted. A smaller silver coin, the *bīstī* (valued at 20 *dīnār*s), was also introduced.[40]

In the second half of the seventeenth century silver mintage seems to have expanded once again. The *hazār* (known also as the *panj-ᶜabbāsī*) and the *dahshāhī*, worth 1,000 and 500 *dīnār*s respectively, were added to the minted money.[41] In Shāh ᶜAbbās II's reign (1642–66) the Persian silver coins were reputed to be 'very pure', and the ᶜ*abbāsī*, in particular, to be of accurate weight. According to Thevenot (1664–7) much care was taken at the mints to maintain this accuracy.[42] Shāh Sulaymān (1666–94) started issuing a slightly heavier ᶜ*abbāsī* worth 250 *dīnār*s without discontinuing the older ᶜ*abbāsī*. The categories of the coins that were actually minted, therefore, increased considerably and they continued to be minted until the end of the Safavid empire in 1722. The weights and values of the coin officially remained unaltered, except for the weight of the smaller ᶜ*abbāsī* of 200 *dīnār*s which was reduced in weight to 5.4 g under Shāh Sulaymān.[43] In 1622 the Safavid coinage was extended to Hormuz and the earlier currency circulating there depreciated and disappeared progressively.[44]

This multiplicity of coins and the insistence on accuracy of weights seem to have necessitated the presence of expert money-testers as well as money-changers. Whether owing to their exemption from Islamic restrictions on any open practice of usury or to their expertise in money-changing, the Indian *banya*s (traders and bankers by caste) became fairly numerous in Persia, becoming closely associated with the mints. Credit was also greatly influenced by the multitude of Indian usurers (in Isfahan alone there were over 10,000 *banya*s in the seventeenth century). Shāh ᶜAbbās I prevented them from settling permanently in Persia, but Shāh Safī I (1629–42) relaxed the restrictions.[45] Jean Chardin (who was in Persia between 1665 and 1677) alleges that they were responsible for Persia losing good money: 'These Indians, like true leeches, extract all the gold and silver of the country

[39] Rabino, 1945, p. 15.
[40] Fragner, 1986, p. 562.
[41] Ibid., p. 562.
[42] Thevenot, 1664–7, Vol. 2, pp. 305–6, quoted from Rabino, 1945, p. 4.
[43] Fryer, 1986, pp. 56, 560–3.
[44] Ibid., p. 564.
[45] Minorsky (ed. and tr.), 1943, p. 19.

and send it to their own [country] so that in the year 1677 when I departed from Persia one could not see any good money.'[46] This phenomenon of 'bad money driving out the good' had been noted earlier by Du Mans (1660).[47]

In the reign of Shāh Sulaymān a very serious crisis was caused by the shortage of silver around 1684. It is possible that since India was drawing away silver from other parts of the world, the *banya*s were particularly marked out as the villains, because in the transfers of Iranian silver money and bullion to India they must have played an important part.[48] The scarcity of silver led to the issuing of short-in-weight coins by many mint-masters. The Armenian merchant Hovhannes suffered a large loss in 1684 at Hormuz owing to this cause: 'The money I brought from Shiraz comprised 5 *tuman*s, 5,000 *dian*s, *ᶜabbāsī*s and *mahmūdī*s [*muhammadī*s?]. The chief of the port would not take the money. I gave the sum incurring a loss of 600 *dian*s per *tuman*. Thus my loss totalled 3,300 *dian*s.'[49]

The scarcity of silver and the ensuing problems resulted in an unsuccessful ban on the export of bullion and specie from Bandar ᶜAbbās and in the debasement of coinage and the crisis of 1684, both of which led to a severe disruption of commerce.[50] Much of the problem from underweight or debased coinage was the result of giving mints out on farm. The *Tazkiratu'l mulūk* [Account of Rulers] gives a detailed account of the functioning of mints, but how far the prescribed checks were effective is not clear. Mints issuing silver were situated in all important cities, and the *muᶜayyiru'l mamālik* (superintendent of the assay) had the authority to lease out these mints to the highest bidder.[51] According to Dupree, the mint at Isfahan was farmed out at 2,000–2,500 *tuman*s a year and at Yazd at 600 *tuman*s a year. The unscrupulous farmer of Yazd was dismissed and a heavy fine of 4,000 *tuman*s was imposed on him later on.[52]

Table 7 gives the number of active mints during each reign, as shown by the surviving coins.

The more active mints were clearly those of Isfahan, Tabriz, Qazvin and Mashhad.

The seigniorage and minting charges in Safavid Persia were fairly high. According to Chardin, these were 'higher than in any other country' and amounted to 7.5 per cent.[53] The *Tazkiratu'l mulūk* states that the seigniorage (called *māl-i wājib*) was originally fixed in gold at 30 *dīnār*s per *misqāl*, and silver at 2 *dīnār*s per *misqāl*, but the department of

[46] Chardin, 1988, Vol. 6, p. 164, quoted from Haider, 1996, p. 307.
[47] Du Mans, quoted from Fragner, 1986, p. 485.
[48] Rabino, 1945, p. 7.
[49] Khachikian, 1966, p. 178.
[50] Fragner, 1986, p. 485; see Haider, 1996, pp. 308–9.
[51] Minorsky, 1943, p. 59.
[52] Dupree [Dupré] quoted from Rabino, 1945, p. 11.
[53] Chardin, 1927, p. 187.

TABLE 7. Active mints according to reign (1501–1717)

Ruler	No. of mints
Ismāᶜīl I (1501–24)	51
Tahmāsp I (1524–1575)	40
Ismāᶜīl II (1576–7)	9
Muhammad Khudābanda (1578–87)	19
ᶜAbbās I (1587–1629)	30
Safī I (1629–42)	18
ᶜAbbās II (1642–66)	19
Sulaymān (1666–94)	5
Sultān Husayn (1694–1722)	14

Source: Rabino, 1945, Table III.

the *dīwān* (state chancellery) gradually increased it: in gold to 50 *dīnār*s per *misqāl*, and in silver to 5 *dīnār*s per *misqāl*. This change was realized partly by reducing the weight of the coin, as can be inferred from the fact that under Sultān Husayn in 1721 the *muᶜayyiru'l mamālik* reduced the weight of the ᶜ*abbāsī* by 1 *dāng* and added the *dāng* to the *wājibī*.[54]

According to d'Alessandri and Chardin, gold coinage in Persia had a very limited circulation. It was generally minted for presentations at Nawruz and on other similar occasions.[55] ᶜAbbās II struck a gold ᶜ*abbāsī* of 144 grains and later reduced the weight to 120 grains. It was further reduced to 114 and 84 grains by Sulaymān and Sultān Husayn. It was commonly known as the *ashrafī*. However, Nādir Shāh (1736–47) in 1737 introduced a *muhr ashrafī* of 171 grains (almost identical in weight with the Indian *muhr*) that continued to be minted till 1788.[56]

Copper coins were minted to serve fractional money. Shāh Tahmāsp I's copper *dīnār* weighed 72 grains, judging from the surviving coins.[57] From the available evidence it has been surmised that each Iranian city had its own copper mint for issuing copper coins called *qaz* or *qazbaqī* (each worth 5 *dīnār*s). But these coins enjoyed full value only in the region where they were minted and elsewhere suffered a discount; they were often re-minted every year.[58]

[54] Minorsky (ed. and tr.), 1943, pp. 58–9.
[55] Rabino, 1945, p. 14.
[56] Ibid., pp. 14–15.
[57] Ibid., p. 17.
[58] Fragner, 1986, p. 562.

Part Four

THE MONETARY SYSTEM AND PRICE MOVEMENTS IN INDIA

(*S. Moosvi*)

Prior to the establishment of a highly centralized uniform currency under the Mughal emperor Akbar (1556–1605), a number of coins of different weights and varying standards, mainly of billon or copper, were in circulation in northern India and present-day Pakistan. In the area of Punjab and Delhi, the principal coin was the *tanka-i sikandari*, issued by Sikandar Lodī (1488–1517). It was a billon coin, its weight fluctuating below 146 grains; according to assay results, the silver content in it progressively declined until the end of the Lodī dynasty in 1526.[59] Within Rajasthan the Rana of Mewar, Sanghram Singh (1508–29), issued copper coins that curiously bore Persian and Arabic inscriptions on one face and the ruler's name and the Samvat year on the other.[60]

The scarcity of silver that affected Eurasia from the latter half of the fourteenth century is often held to be the cause of the decline of silver coinage of this period.[61] The situation eased when the silver from Spain's American colonies started finding its way to the East, mainly through the Mediterranean. In December 1525 and January 1526, Bābur (who reigned from 1526 to 1530) recorded the receiving of gold *ashrafī*s and [billon] *tanka*s from the revenues of Lahore and in *peshkash* (tribute and offerings);[62] but there is no mention of any silver currency. It is, therefore, interesting that soon after his victory at Panipat in 1526, Bābur began issuing coins of pure silver from four mints, Kabul, Agra, Lahore and Jaunpur. Eighty of these coins are preserved in major museum collections.[63] These silver coins were around 72 grains in weight and were modelled after Central Asian *shāhrukhī*s, though these are not described as such in our sources.[64] Instead, the coin was officially known as *bāburī*.[65]

[59] Wright, 1936, p. 408; Haider, 1990, p. 233.
[60] Cunningham, 1967, p. 96.
[61] Habib, 1987, pp. 26–7.
[62] Bābur, 1989, Vol. 2, pp. 446, 460.
[63] Haider, 1990, p. 233.
[64] Deyell, 1987, p. 14.
[65] Abū'l Fazl, 1867–77, Vol. 1, p. 588.

Humāyūn (first part of reign, 1530–9) continued to issue silver coins of the same weight and style, and the number of mints increased to seven. He started issuing gold coins as well, though these did not exceed 15 grains each in weight. Bābur and Humāyūn both struck copper *tanka*s of around 140 grains each, i.e. of the same weight as the old billon *tanka*s. This seems to have been the basic coin for market transactions and tax-collection. In his memoirs, Bābur records his Indian dominions' revenues in billon *tanka*s.[66]

In spite of early attempts by Bābur and Humāyūn to strike pure silver coins, the credit for formally introducing the classical trimetallic system of coinage untainted by any element of debasement belongs to the Sūr ruler Sher Shāh (1540–5), who overthrew Humāyūn in 1540. Abandoning the billon coinage, he issued a pure silver coin called the *rūpya* (rupee) of probably 178.25 grains.[67] He also issued gold *ashrafī*s, but these were rare. He minted a copper coin called the *paisa*. He extended the issuing of this coinage on a uniform basis from all his 15 mints.[68]

The trimetallic system of Sher Shāh became permanent when it was adopted by Akbar with certain minor modifications. The standard Mughal coinage had a gold *muhr* or *ashrafī*, practically 100 per cent pure, weighing 169 grains; a silver rupee in which the content of alloy did not ever exceed 4 per cent, with its weight fixed at 178 grains; and finally the copper *dām* of 323 grains. By Akbar's later years, 40 *dām*s went to the rupee, and 9 rupees to the *muhr*.[69] These weights and standards were maintained well into the eighteenth century. Jahāngīr (1605–27) at his accession introduced certain innovations, most of which did not affect market transactions. The changes in the weight of the rupee, which did affect the market, were withdrawn on the explicit ground of public inconvenience.[70]

Aurangzeb (1659–1707) made a minor alteration in the weight of the rupee, raising it to 180 grains, and introduced a corresponding addition in the weight of the *muhr* as well. The major change introduced by Aurangzeb was in respect of the copper *dām*: owing to the rising price of copper, he reduced the weight of the *dām* by a third, from 1663–4 onwards.[71] In 1595–6 gold coins were struck at 4 mints, silver coins at 14, and copper *dām*s at 42.[72] But the number of copper mints declined sharply thereafter, while those of silver increased, as is evident from the relative numbers of surviving coins.[73] Clearly,

[66] Bābur, 1922, Vol. 2, p. 520.
[67] Thomas, 1967, p. 406.
[68] Wright, 1936, pp. 362–3.
[69] Abū'l Fazl, 1867–77, Vol. 1, p. 26; cf. Hodivala, 1923, pp. 224–5, for an exhaustive study. See also Habib, 1961, pp. 1–2.
[70] Jahāngīr, 1803–4, pp. 5, 96.
[71] See Habib, 1961, p. 11.
[72] Abū'l Fazl, 1867–77, Vol. 1, p. 26.
[73] Deyell, 1987, pp. 161–3.

silver coinage was pushing out copper: the area for which Abū'l Fazl had recorded 14 rupee mints in the second half of the sixteenth century had 24 by 1700.[74] As silver influx from the New World depressed its price in the seventeenth century, the fractional silver-piece, the *anna* (*āna*), worth onesixteenth of a rupee, began to supplant the copper *dām* in even petty transactions.[75]

The number of silver mints also increased owing to the imposition of Mughal currency in new areas as Mughal arms brought these under imperial control. Sind, which had formally accepted Mughal suzerainty much earlier, was annexed in 1592. Even before this year, foreign trade had brought considerable bullion and specie to Sind.[76] Yet its rulers did not issue silver or gold coins, but simply allowed Portuguese xeraphins (*ashrafī*s) and other foreign coins like *lārī*s and *begī*s to circulate. Only one copper coin, the *ʿīsāī*, was minted under Mīrzā ʿĪsā Tarkhān (1555–65) and this continued under Muhammad Bāqī (1565–85). Jānī Beg (1585–92) replaced the *ʿīsāī* with his own copper *mīrī*.[77] But once Sind was annexed by Akbar, the mint at its capital Thatta began issuing the Mughal rupee,[78] and prices of commodities, rates for bills of exchange and amounts of loans all started being quoted in it.[79]

Kashmir was annexed to the Mughal empire in 1586, but the earliest surviving coins from the Srinagar mint (later to be styled Kashmir) date from 1011/1602–3.[80] Perhaps until then the Lahore mint also served Kashmir. Prior to the Mughal conquest, Kashmir had a silver coin called the *rup sansu* that was worth one-quarter of a Mughal rupee, and a copper coin called the *panjuhu* that was worth a quarter-*dām*.[81] In Kandahar, under Bābur and Humāyūn, the silver *bāburī* was in vogue. Akbar does not seem to have opened a mint at Kandahar after its occupation in 1595, and the *tuman* (equivalent to 800 *dām*s=20 rupees) and the *dīnār* (18 *dīnār*s=1 *tuman*) continued to be in use probably mainly as money of account.[82] But in Jahāngīr's reign, a Mughal mint started issuing rupees from Kandahar until it was lost to Iran in 1622.[83]

When the armies of Shāh Jahān (1628–58) occupied Balkh and Badakhshan in 1646–7, Shāh Jahān first ordered the minting of silver rupees, to supplant the *khānī*s. But he was

[74] Hasan, 1968, pp. 332, 334.
[75] Habib, 1982, p. 361.
[76] Magalhaes-Godinho, 1969, pp. 514–15, quoted from Haider, 1999, p. 332.
[77] Tahir, 1964, p. 170.
[78] Rupees minted at Thatta from 1593 regularly every year turn up in Uttar Pradesh coin finds. See Srivastava, 1980; and personal inspection; see Hasan, 1968, p. 332, for Thatta coins in museum collections.
[79] Cf. Haider, 1999, p. 332.
[80] Hasan, 1968, pp. 332, 334.
[81] Abū'l Fazl, 1867–77, Vol. 1, p. 564.
[82] Ibid., p. 486.
[83] Hasan, 1968, pp. 332, 334.

forced to reverse his order when it was found that, since that area's main trade was with Transoxania, the local people wanted, not rupees, but *khānī*s; he therefore ordered his own *khānī*s to be struck, each reckoned to be equal to a quarter of a rupee.[84] This had no sequel, however, since the two provinces were soon lost to the Uzbeks.

Mughal mints worked on the basis of 'free' coinage, that is, anyone could take gold, silver or copper to the mint and have it converted into coin of that metal on payment of seigniorage and minting charges. The costs amounted to about 5.6 per cent of the value of the rupees minted.[85] Though Akbar had fixed the exchange ratios of his coins (1 *muhr*=9 rupees; 1 rupee=40 *dām*s), these official rates could not be sustained for long, and the exchange values went on altering with the market prices of the currency metals.

In the Mughal system of 'free' coinage only the freshly issued coins, called *sikka*s or *tāza sikka*s, were of full value, while the coins issued in the previous years of the same reign (*chalanī*s) and the coins of the preceding reigns (*khazāna*s) were subject to certain discounts. The *sikka* enjoyed a premium of 1–2 per cent over a *chalanī*, which in turn had a premium of 1–3 per cent over the *khazāna* rupee. The *sikka* had a premium of around 5 per cent over silver bullion.[86]

The varying values of Mughal coins, by age and sometimes by mint, called for an army of expert money-changers, called *sarrāf*s (*shroff*s). Their certification of values of coins in sealed bags was indispensable in larger transactions, including revenue-collection. Jean-Baptiste Tavernier, indeed, remarked in the late seventeenth century that'in India a village must be very small indeed, if it has not a money-changer, called *shroff*, who acts as banker to make remittances of money and issue letters of exchange'.[87]

The letters of exchange spoken of by Tavernier were bills of exchange known as *hundī*s. The *hundī*s used by merchants as well as the government were not only a means of transmitting money, but were also instruments for raising short-term credit. The *sarrāf*s issued and discounted *hundī*s drawn on places far and near, and since they were endorsable they easily changed hands by sale and purchase.[88] By the mid-eighteenth century *hundī*s had come to be used as substitutes for coins to a considerable extent.[89] The *sarrāf*s also accepted deposits at interest,[90] so that a rudimentary system of deposit-banking existed, with even credit- money being created by payments through bankers' books. In the early

[84] Lāhorī, 1866–72, Vol. 2, pp. 562–3.
[85] Abū'l Fazl, 1867–77, Vol. 1, p. 32; see for actual calculations Habib, 1961, p. 3.
[86] Habib, 1961, pp. 4–5.
[87] Tavernier, 1925, p. 24.
[88] Habib, 1960, pp. 8–14.
[89] Ali Muhammad Khan, 1927, pp. 410–11.
[90] Foster, 1922, p. 303.

nineteenth century Malcolm describes a considerable creation of book credit by the *sarrāf*s.[91]

The coin output of the Mughal mints has been used to estimate the amount of money in circulation.[92] Since there was 'free' coinage and the rupee became the principal currency, the amount of money in circulation should have depended essentially upon silver supplies. India had some copper mines, but no silver mines and the entire silver came from imports.[93] Hasan has shown a close correspondence between Hamilton's histogram of Spanish silver imports and the histogram of Mughal coined stock estimated on the basis of catalogued silver coins. The evidence of treasure-trove reports broadly supports her inferences in respect of the main trends, but her estimated increase in coined stock may need to be reduced from 200 per cent between 1592 and 1705, to 138 per cent during about the same period.[94]

The question of the impact of such an increase in money supply on price movements has provoked some debate. Habib has suggested, mainly on the basis of silver prices in gold and copper, that prices remained more or less stable until the 1610s, in spite of a large influx of silver. He argues that the increase in silver currency output was absorbed by the replacement of copper currency by silver.[95] But then a decline in silver value began. The increase in silver value of copper and gold by 1707 was calculated at 110 per cent and 33 per cent respectively of what it was in 1595.[96] Data from eastern Rajasthan indicate a sharp rise in the price of copper in terms of silver from 1725 to 1750. Agricultural prices appear to have fluctuated very sharply in the same region, but on the whole they register an increase, which is particularly marked from 1729 to 1737.[97]

After 1739 the Mughals rapidly lost most of the areas that can reasonably be held to belong to Central Asia. By 1761 the Mughal court had lost its position even in Delhi. But the Mughal rupee continued to be the model for coinages of the successor governments. Both Nādir Shāh of Persia, in 1739, in his Indian dominions, and Ahmad Shāh, the founder of the Durrānī dynasty of Afghanistan (1747–72), in Lahore, Multan, Kabul and other places, issued rupees of the Mughal standard.[98] Sikh rupees, known as *nanakshāhī*s, began to be issued from Punjab from 1764 onwards and continued until 1848,

[91] Malcolm, 1924, Vol. 3, p. 90.
[92] Hasan, 1969, pp. 85–116; Moosvi, 1987*b*, pp. 351–61; for a critique of the method, see Deyell, 1976, pp. 375–92.
[93] Cf. Habib, 1960, p. 4.
[94] Hasan, 1969, pp. 85–91; Moosvi, 1987*a*, pp. 47–94; for a criticism of these estimates, see Haider, 1999, pp. 323–4.
[95] Habib, 1987, pp. 140–7.
[96] Moosvi, 1987*a*, pp. 84–8.
[97] Gupta and Moosvi, 1975, pp. 190–2.
[98] Whitehead, 1934, pp. XXII–XXVI; XXXIII–XXXV. Ahmad Shāh's gold and copper coins from his Kabul and Indian mints also conformed strictly to the Mughal standard (cf. Ganda Singh, 1959, pp. 265–373).

notably under the famous Maharaja Ranjit Singh (1799–1839). The East India Company rupees (the 'Calcutta *siccas*') also circulated in the area; all of these too conformed to the Mughal standard.[99]

One major feature of the latter half of the eighteenth century was the virtual cessation of silver imports after the battle of Plassey (1757). Purchases of Indian goods by the East India Company now began to be financed from India's own internal revenues. The cessation of silver imports had a depressing effect on prices even outside the Company's territories, although unfortunately the eighteenth-century price history of the regions included in Central Asia has been little worked on.[100]

[99] Brown, 1922, pp. 106–8.
[100] Moosvi, 2000, pp. 350–4.